Monthly Network Operations Report

Overview November 2024

1.   Summary

There were 773,344 flights in November, 5.1% more than November 2023. With the start of the winter schedule, traffic decreased as expected compared to October 2024 (- 6,200 flights/day).

The network had an average of 26,000 flights/day in November, about 1,250 flights/day more than in November 2023. The busiest day was Friday 08 November with 28,575 flights, which exceeded the busiest day of November 2023 (27,822 flights). The intra-NM southwest axis saw 5.6% growth compared to 2023 and the southeast axis 6.5%, which influenced the network growth of 5.1%.

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 November 2024 compared to November 2023, adding 648 daily flights (+8.7%) to the network.

Among the Top 20 ACCs, only Paris ACC saw a decrease in traffic compared to November 2023 due to the ongoing implementation of the new ATM system (4 Flight). Notably, Budapest registered a double-digit growth.

Ryanair remained the busiest operator averaging 2,491 movements per day (+10.7%) followed by Turkish Airlines (1,347), easyJet (1,204), Lufthansa (1,079) and Air France (882).

Istanbul Airport resumed its position as the busiest airport, with an average of 1,339 flights per day, followed by London Heathrow (1,276 flights/day), Amsterdam Schiphol (1,263 flights/day), Paris Charles de Gaulle (1,184 flights/day), and Frankfurt (1,161 flights/day).

Network departure punctuality (73.2%) and arrival punctuality (78.5%) were higher than in November 2023. The network was mainly impacted by airport weather and en-route ATC capacity issues. Domestic routes had a departure punctuality of 79.3%, which was higher than the network level. Punctuality on the south-east axis was 76.4% which is an increase of 1 percentage point (p.p.) compared to November 2023. Network first rotation departure punctuality was 81.4%, stable compared to 2023. Arrival punctuality improved by 1.3 p.p., reaching 86.1%. Improving first rotation punctuality remains a key objective for the Network Manager (NM).
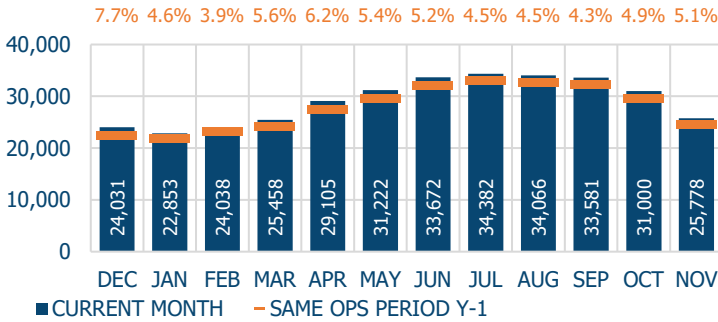
There were 1.1 million minutes of ATFM delay in November, +22.8% compared to November 2023. En-route ATFM delay represented 46.6% of these ATFM delays and airport 53.4%. The average en-route ATFM delay per flight for the network was 1.4 minutes in November. Total airport ATFM delays increased by +51.3% and total en-route ATFM delays increased by +1.0%. Airport weather and ATC capacity were the main issues in November. Seasonal weather - snow, low visibility, strong winds – impacted operations strongly at Amsterdam/Schiphol and London/Heathrow airports. Heavy rain impacted Barcelona airport on 03 and 04 November. Storm Bert brought a spell of heavy rain and strong winds in Ireland and in the United Kingdom on 23 and 24 November. ATC capacity issues were recorded in the southwest axis sectors due to high demand.

NM's Operational Centre reduced en-route ATFM delays by 13.5% and airport ATFM delays by 8.9% through direct actions.

NM estimates that 2.6 million tonnes of fuel was burnt in the en-route flight phase in the NM area in November 2024.

2.   Traffic evolution

Last 12 months average daily traffic

7.7% 4.6% 3.9% 5.6% 6.2% 5.4% 5.2% 4.5% 4.5% 4.3% 4.9% 5.1%

	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
CURRENT MONTH	24,031	22,853	24,038	25,458	29,105	31,222	33,672	34,382	34,066	33,581	31,000	25,778

■ CURRENT MONTH — SAME OPS PERIOD Y-1

There were 773,344 flights throughout Europe in November 2024, 5.1% up compared to the same period last year.
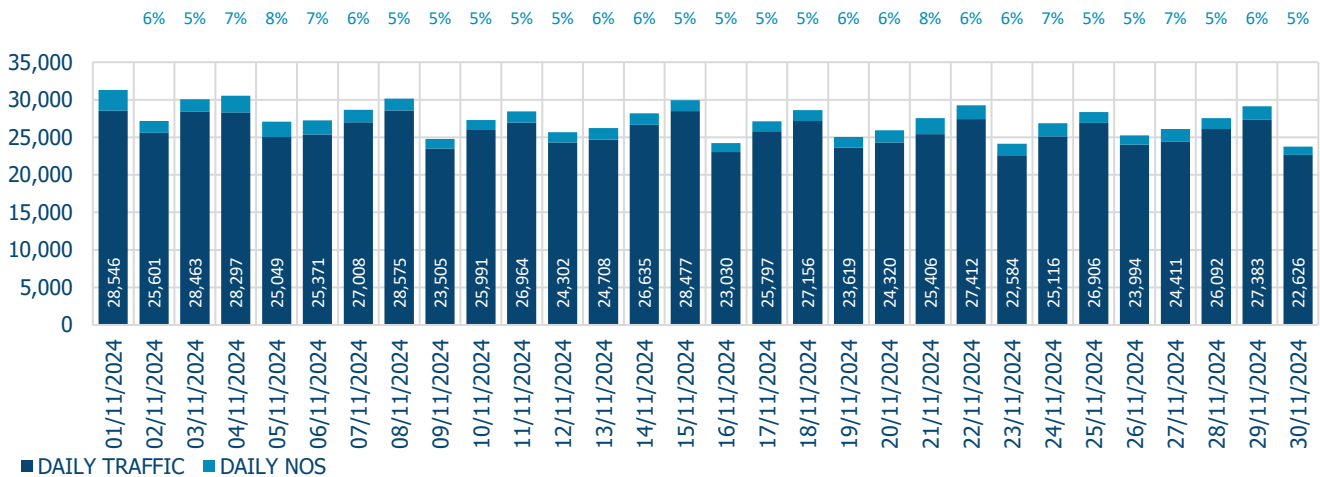
With the start of the winter schedule, traffic decreased as expected compared to October 2024 (- 6,200 flights/day).

In November 2024, the Low-cost segment continued to lead flight growth, contributing an additional 648 flights per day (+8.7%), followed by the Mainline segment, which added 409 daily flights (+4.4%).

Conversely, the Regional segment saw a decline of 2.1%, largely due to fewer daily domestic flights in Sweden (-43), the UK (-38), France (-21), Denmark (-16), and Germany (-16). Business aviation showed modest growth, up 1.7% (+28 flights/day) compared to November 2023. The Charter segment saw a significant rise, increasing by 9.7% compared to November 2023. This growth was driven in part by additional daily flights between Germany and Serbia/Montenegro (+8), Egypt and Russia (+6), UK domestic (+6), and Israel domestic (+4), which offset reductions in Türkiye daily domestic flights (-13). All-cargo segment remained unchanged from the previous year.

Only the Low-cost segment (+5.5%) and Business aviation (+4.8%) surpassed their October 2019 flight levels in November 2024. Overall, total traffic in November 2024 remained 3.8% below November 2019 levels.
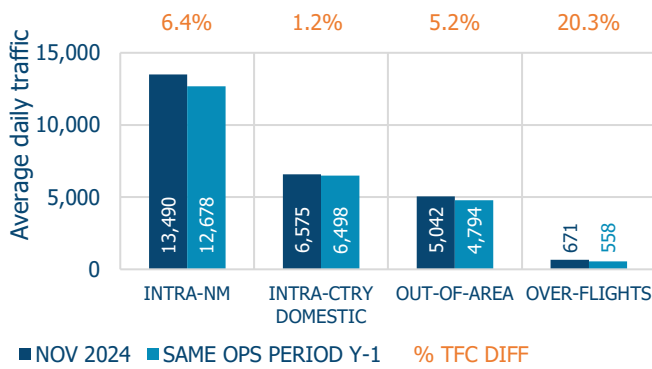
Daily network traffic evolution

6% 5% 7% 8% 7% 6% 5% 5% 5% 5% 5% 6% 6% 5% 5% 5% 5% 6% 6% 8% 6% 6% 7% 5% 5% 7% 5% 6% 5%

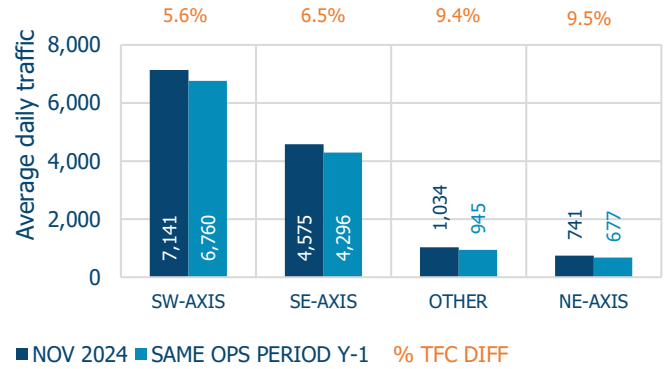| Date	Daily Traffic
01/11/2024	28,546
02/11/2024	25,601
03/11/2024	28,463
04/11/2024	28,297
05/11/2024	25,049
06/11/2024	25,371
07/11/2024	27,008
08/11/2024	28,575
09/11/2024	23,505
10/11/2024	25,991
11/11/2024	26,964
12/11/2024	24,302
13/11/2024	24,708
14/11/2024	26,635
15/11/2024	28,477
16/11/2024	23,030
17/11/2024	25,797
18/11/2024	27,156
19/11/2024	23,619
20/11/2024	24,320
21/11/2024	25,406
22/11/2024	27,412
23/11/2024	22,584
24/11/2024	25,116
25/11/2024	26,906
26/11/2024	23,994
27/11/2024	24,411
28/11/2024	26,092
29/11/2024	27,383
30/11/2024	22,626

■ DAILY TRAFFIC ■ DAILY NOS

The busiest day was Friday 08 November (28,575 flights), which exceeded the busiest day of October 2023 (27,822 flights).

On average, 6.1% of scheduled traffic did not operate in November (see Non-Operated Schedules, NOS, above).
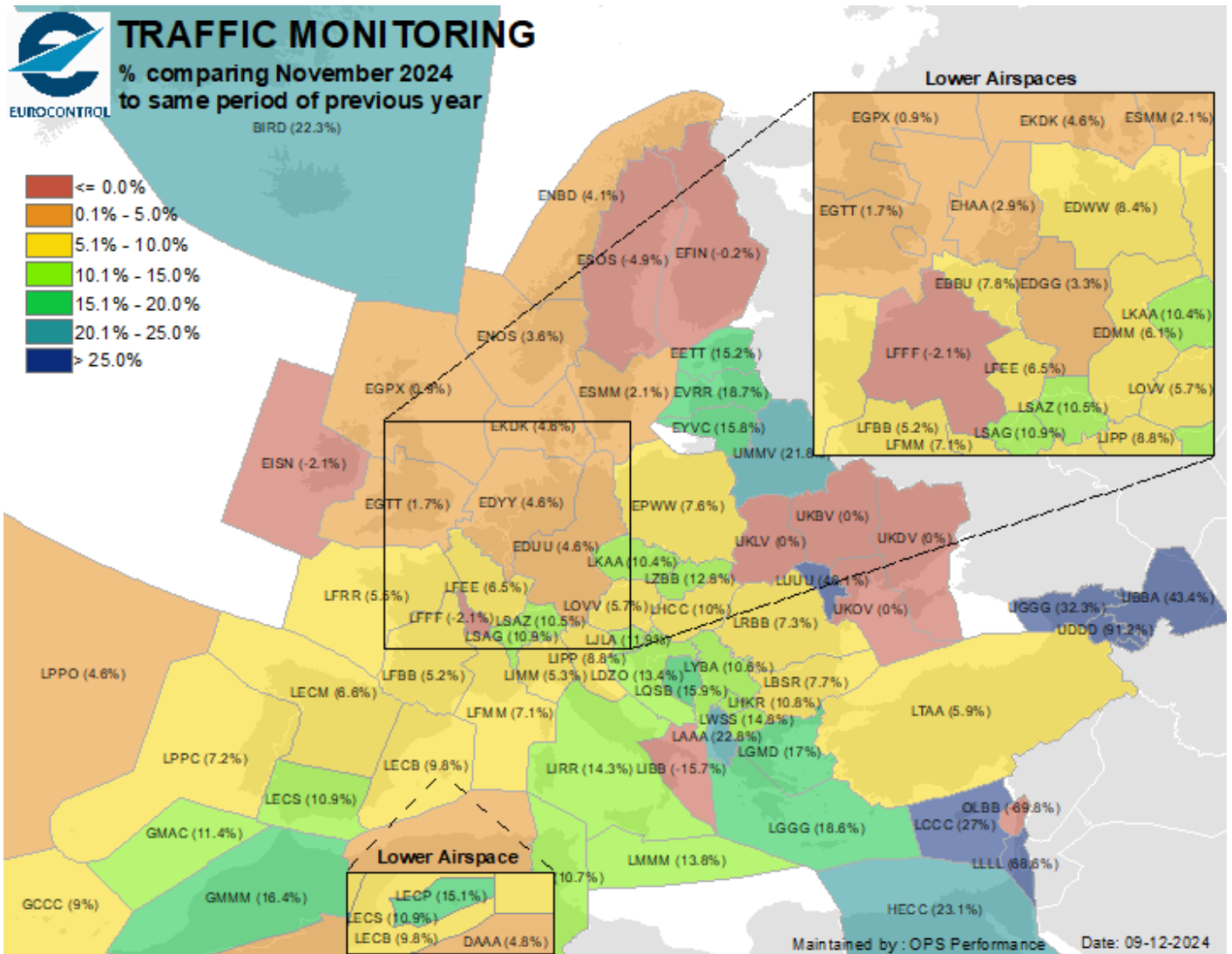
Traffic per flow

Average daily traffic

	6.4%	1.2%	5.2%	20.3%
INTRA-NM	13,490 / 12,678			
INTRA-CTRY DOMESTIC		6,575 / 6,498		
OUT-OF-AREA			5,042 / 4,794	
OVER-FLIGHTS				671 / 558

■ NOV 2024 ■ SAME OPS PERIOD Y-1 % TFC DIFF

Intra-NM daily traffic

Average daily traffic

	5.6%	6.5%	9.4%	9.5%
SW-AXIS	7,141 / 6,760			
SE-AXIS		4,575 / 4,296		
OTHER			1,034 / 945	
NE-AXIS				741 / 677

■ NOV 2024 ■ SAME OPS PERIOD Y-1 % TFC DIFF

The intra-NM southwest axis saw 5.6% growth compared to 2023 and southeast axis 6.5%, which influenced the network growth of 5.1%.

TRAFFIC MONITORING
% comparing November 2024 to same period of previous year

EUROCONTROL

Legend:
- <= 0.0%
- 0.1% – 5.0%
- 5.1% – 10.0%
- 10.1% – 15.0%
- 15.1% – 20.0%
- 20.1% – 25.0%
- > 25.0%

Lower Airspaces:
EGPX (0.9%), EKDK (4.6%), ESMM (2.1%), EGTT (1.7%), EHAA (2.9%), EDWW (8.4%), EBBU (7.8%), EDGG (3.3%), LKAA (10.4%), EDMM (6.1%), LFFF (-2.1%), LFEE (6.5%), LOVV (5.7%), LFBB (5.2%), LSAZ (10.5%), LFMM (7.1%), LSAG (10.9%), LIPP (8.8%)

BIRD (22.3%), ENBD (4.1%), ENOS (-4.9%), EFIN (-0.2%), ENOS (3.6%), EETT (15.2%), ESMM (2.1%), EVRR (18.7%), EGPX (0.9%), EKDK (4.6%), EYVC (15.8%), EISN (-2.1%), UMMV (21.8%), EGTT (1.7%), EDYY (4.6%), EPWW (7.6%), UKBV (0%), EDUU (4.6%), UKLV (0%), UKDV (0%), LKAA (10.4%), LFRR (5.6%), LFEE (6.5%), LZBB (12.8%), LUUU (48.1%), LFFF (-2.1%), LSAZ (10.5%), LOVV (5.7%), LHCC (10%), UKOV (0%), LGGG (32.3%), UBBA (43.4%), LSAG (10.9%), LJLA (11.9%), LRBB (7.3%), UDDD (91.2%), LPPO (4.6%), LFBB (5.2%), LIPP (8.8%), LYBA (10.6%), LIMM (5.3%), LDZO (13.4%), LBSR (7.7%), LECM (6.6%), LQSB (15.9%), LHKR (10.8%), LTAA (5.9%), LFMM (7.1%), LWSS (14.8%), LAAA (22.8%), LGMD (17%), LPPC (7.2%), LIRR (14.3%), LIBB (-15.7%), LECB (9.8%), OLBB (69.8%), LECS (10.9%), LGGG (18.6%), LCCC (27%), GMAC (11.4%), LLLL (88.8%), LMMM (13.8%), GCCC (9%), GMMM (16.4%), HECC (23.1%)

Lower Airspace: LECP (15.1%), LECS (10.9%), LECB (9.8%), DAAA (4.8%)

Maintained by : OPS Performance   Date: 09-12-2024

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 .[i]

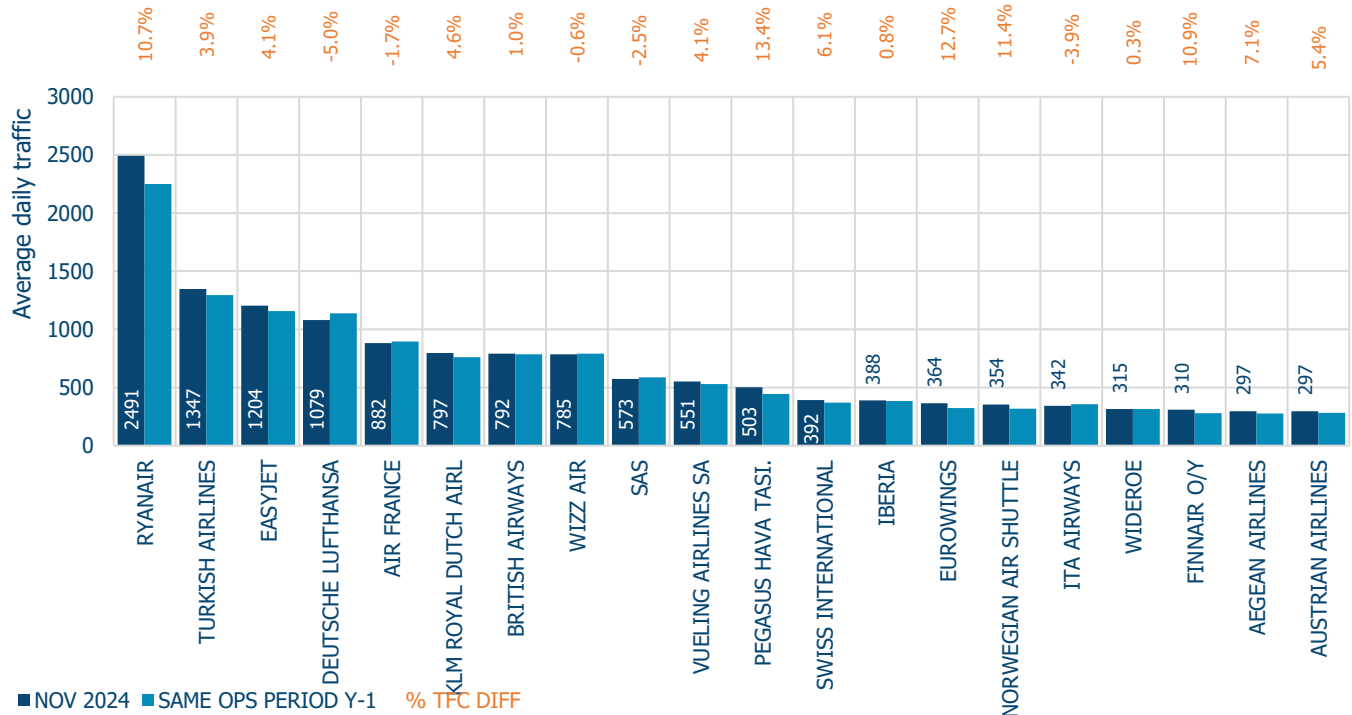## November 2024 | Top 20 ACC daily traffic
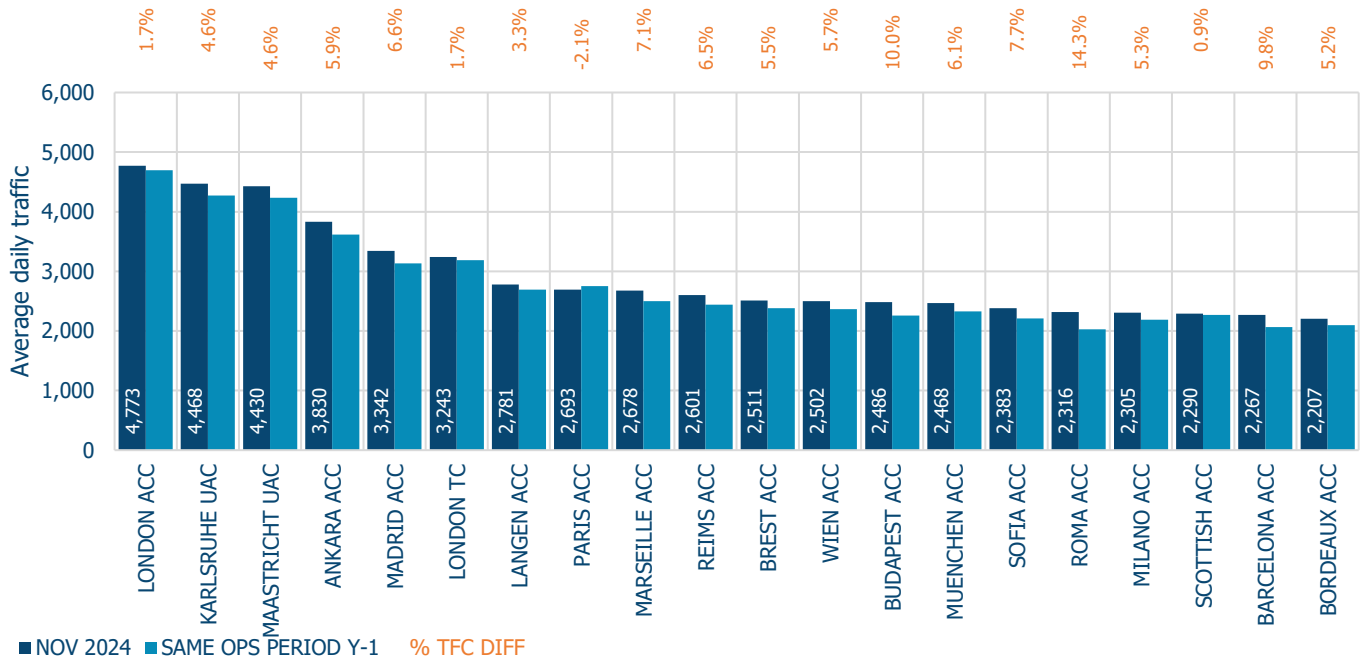
There was no change in the Top 5 ACCs compared to last month. London ACC remained the busiest followed by Karlsruhe UAC, Maastricht UAC, Ankara ACC and London TC. Among the Top 20 ACCs, only Paris ACC saw no increase in traffic compared to November 2023 due to the ongoing implementation of the new ATM system (4 Flight). Budapest registered substantial double-digit growth. Traffic increased in Cairo, Cyprus, Makedonia, Zagreb, Tirana and Athens ACCs were due to aircraft operators avoiding routes through Teheran and Baghdad FIR due to geopolitical tensions in the Middle East.

November 2024 | Top 20 Airports daily traffic
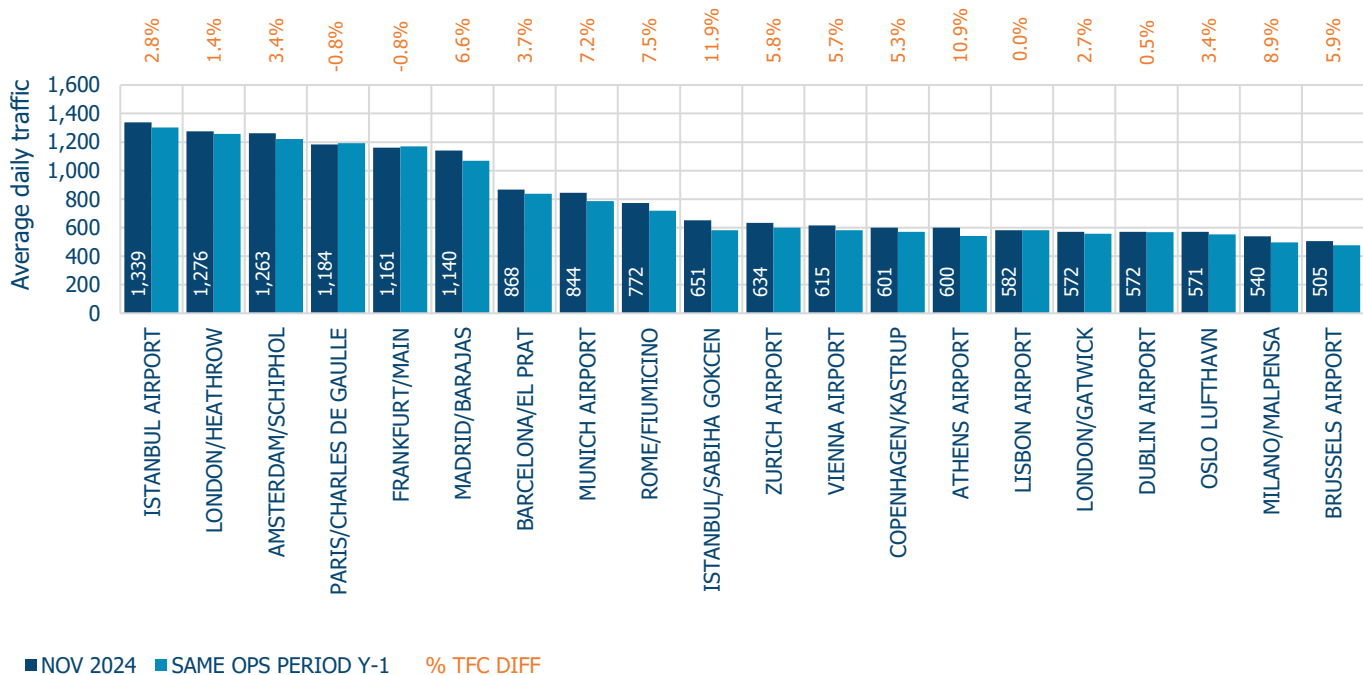
Istanbul Airport resumed its position as the busiest airport, with an average of 1,339 flights per day, followed by London Heathrow (1,276 flights/day), Amsterdam Schiphol (1,263 flights/day), Paris Charles de Gaulle (1,184 flights/day), and Frankfurt (1,161 flights/day). Paris Charles de Gaulle and Frankfurt airports had less traffic compared to the same period last year.

November 2024 | Top 20 Air Operator groups daily traffic

Average daily traffic — NOV 2024 vs SAME OPS PERIOD Y-1, with % TFC DIFF

Air Operator	NOV 2024	% TFC DIFF
RYANAIR	2491	10.7%
TURKISH AIRLINES	1347	3.9%
EASYJET	1204	4.1%
DEUTSCHE LUFTHANSA	1079	-5.0%
AIR FRANCE	882	-1.7%
KLM ROYAL DUTCH AIRL	797	4.6%
BRITISH AIRWAYS	792	1.0%
WIZZ AIR	785	-0.6%
SAS	573	-2.5%
VUELING AIRLINES SA	551	4.1%
PEGASUS HAVA TASI.	503	13.4%
SWISS INTERNATIONAL	392	6.1%
IBERIA	388	0.8%
EUROWINGS	364	12.7%
NORWEGIAN AIR SHUTTLE	354	11.4%
ITA AIRWAYS	342	-3.9%
WIDEROE	315	0.3%
FINNAIR O/Y	310	10.9%
AEGEAN AIRLINES	297	7.1%
AUSTRIAN AIRLINES	297	5.4%

■ NOV 2024   ■ SAME OPS PERIOD Y-1   % TFC DIFF

Five air operators had a double-digit percentage traffic growth compared to last year: Ryanair, Pegasus, Eurowings, Norwegian Air Shuttle and Finnair.

Ryanair was the busiest operator with, on average, 2,491 movements per day followed by Turkish Airlines (1,347), easyJet (1,204), Lufthansa (1,079) and Air France (882).

Lufthansa, Air France, Wizz Air, SAS and ITA Airways saw a traffic decrease compared to November 2023.

3. Punctuality

3.1 Departure Punctuality

Network departure punctuality and ATFM delay
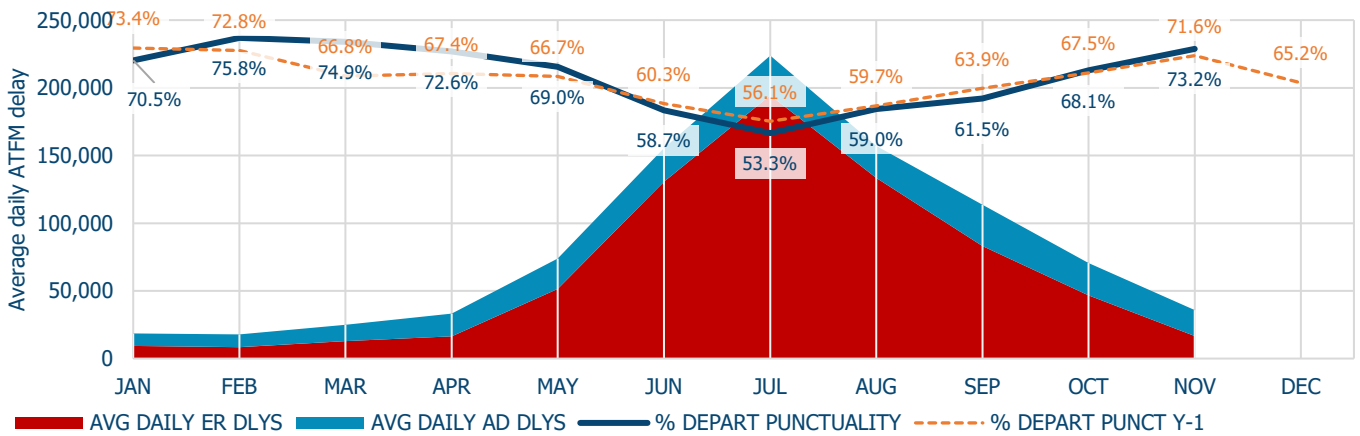
Network departure punctuality (73.2%) increased by 5.1 p.p. compared to October 2024 and was above the level of November 2023.

Punctuality on the domestic routes was higher (79.3%) than punctuality at network level. Punctuality on the south-east axis was 76.4% which is an increase of 1 p.p. compared to November 2023.

Network first rotation departure punctuality was 81.4% and remained stable compared to 2023. 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.

November 2024| Top 20 Airport departure traffic and punctuality
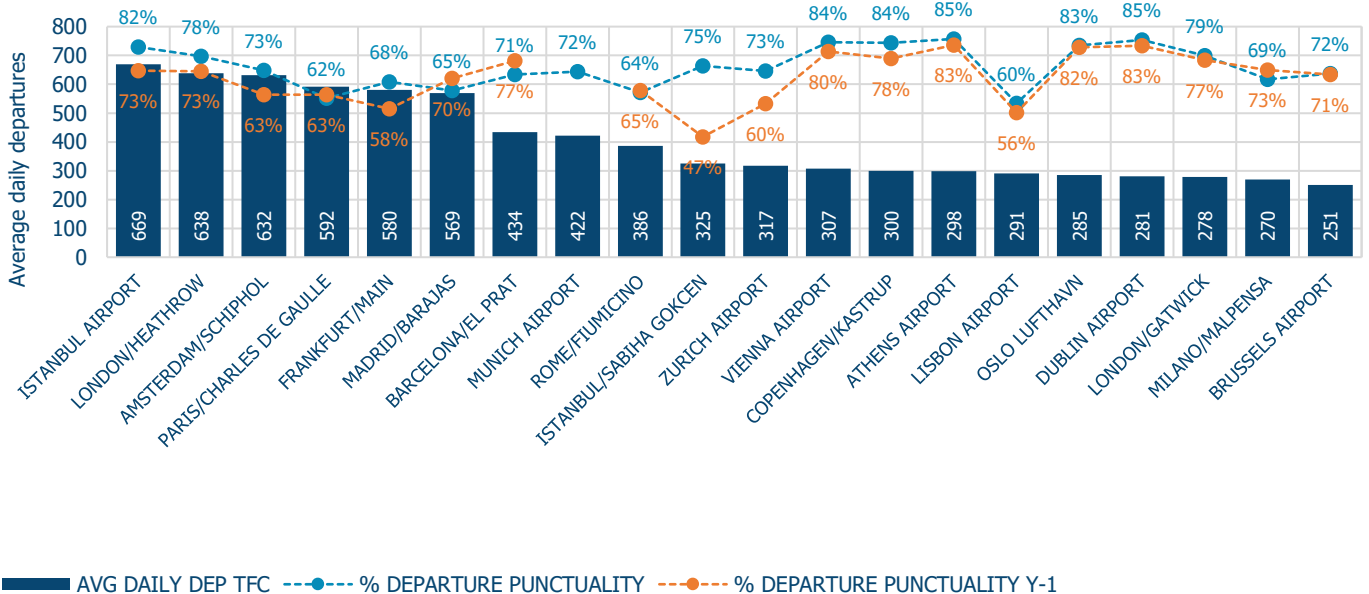
Punctuality in general improved at the Top 20 airports, however seasonal weather (mainly low visibility and snow) impacted airports. Punctuality at both Istanbul airports (LTFM and LTFJ) improved, as less weather affected performance. Paris CDG was affected by snow on 21 November. Frankfurt saw delays due to the closure of RWY25R/07L for WIP as well as low visibility.

3.2 Arrival Punctuality

Network arrival punctuality and ATFM delay
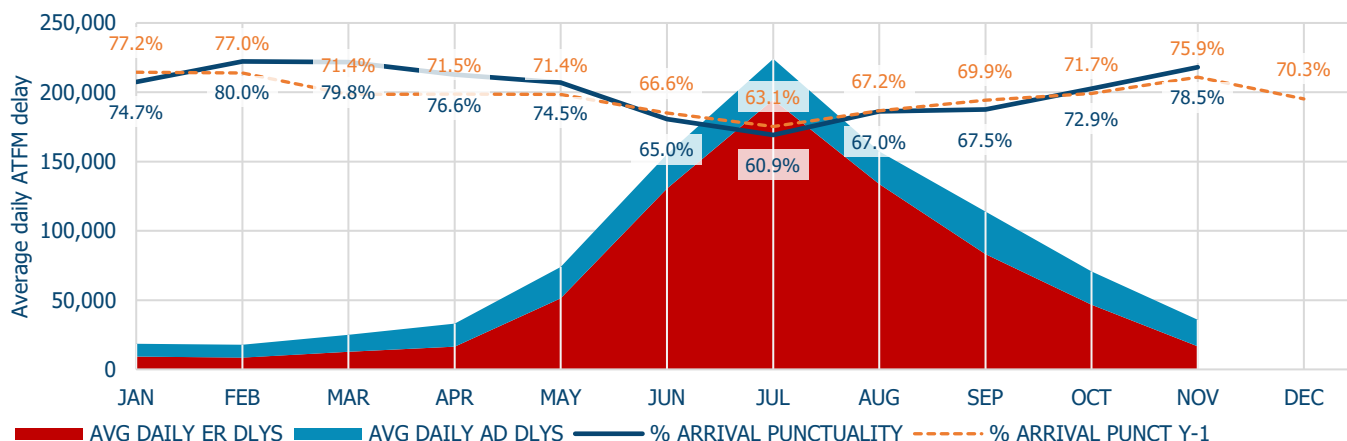
Network arrival punctuality (78.5%) increased by 5.6 p.p. compared to October 2024 and was higher than November 2023 level (+2.6 p.p.).

Domestic routes (80.9%) arrival punctuality was higher than the network level. Punctuality on the south-east axis was 80.1% which is decrease of 6.1 p.p. compared to November 2023.

First rotation arrival punctuality increased by 1.3 p.p. compared to November and was 86.1%.

November 2024 | Top 20 Airport arrival traffic and punctuality
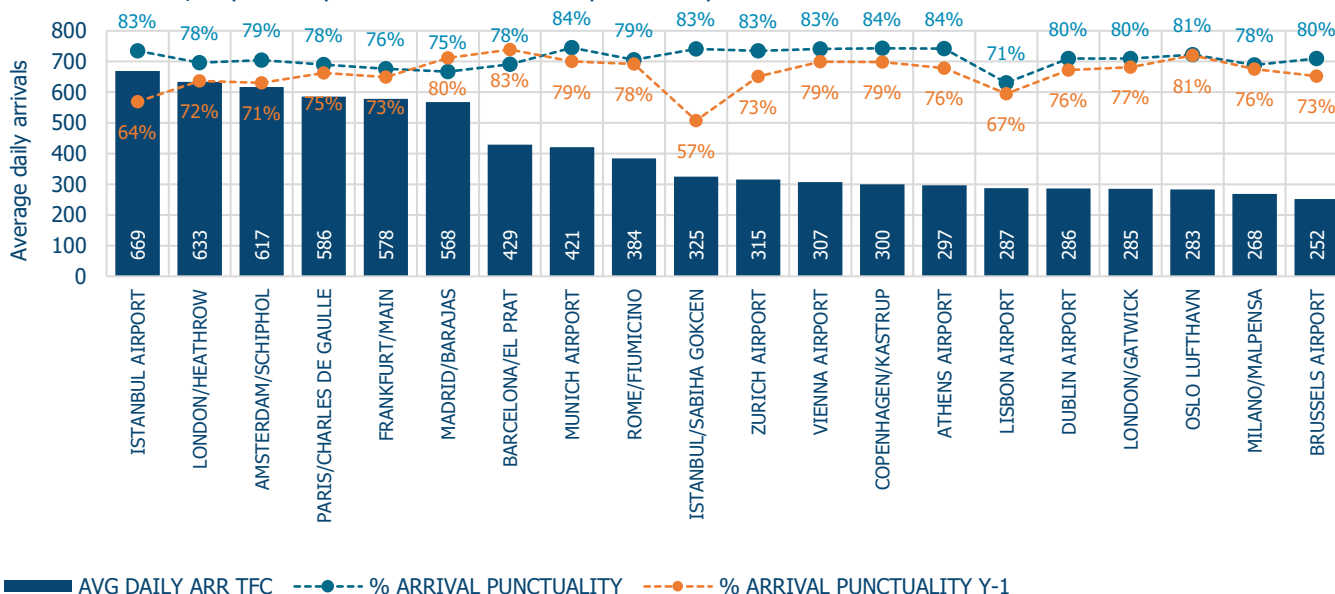
As per the departure section above, seasonal weather (mainly low visibility) also influenced airport arrival punctuality during November. Barcelona airport was significantly impacted by heavy rain and flooding on 03 and 04 November. Almost daily weather regulations occurred at London Heathrow, with Storm Bert causing high delays on 23 and 24 November. Amsterdam Schiphol saw delays due to multi-factors of weather mainly snow and low visibility and aerodrome capacity with 22 November seeing high delays for snow and ice.

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. The Conflict Zone Information Bulletins (CZIB) concerning Israel and Lebanon were both extended on 29 November to the end of January 2025. The CZIB concerning Syrian airspace remains unchanged.

A Volcanic Ash Contingency Exercise, (VOLCEX24) was held Thursday 19 November lead by Portugal with the support of the NM. The exercise simulated an eruption of the Santa Barbara/Terceira Volcano in the Azores. In the context of the exercise, both the EACCC (*European Aviation Crisis Coordination Cell)* and the AOCCC (*Aircraft Operator Crisis Coordination Cell*) were activated.

The NMOC in cooperation with ENAIRE and Barcelona ACC brought together 60+ participants from European ANSPs, airlines, airports and meteorological service providers for a two-day meeting (25-26 November) concerning cross-border weather management during summer 2024. During the meeting participants: evaluated this summer's cross-border weather procedure; addressed network challenges; reviewed initiatives implemented across the network; and explored ways to enhance future collaboration in 2025 and beyond.

Preparations were finalised for SKI Season 2024-25 which began Saturday 28 November, with a focus on the various procedures to be used for the designated 'SKI' airports during different operational circumstances.

NMOC's E-Helpdesk received 26,000 requests in November: 19,000 from AOs, 4,000 from FMPs and 3,000 from Towers. 3,000 of these requests were about flights that the AO considered "critical". The average delay saved per processed request was 26 minutes.

NMOC reduced en-route ATFM delays by 13.5% and airport ATFM delays by 8.9% through direct actions.

4.2   Ground

MIRROR's[i] indicator shows that in November the network (average) available turnaround time remained stable compared to November 2023 as punctuality improved. Available turnaround time sharply fell on 22 November when weather (snow, ice and winds) affected Amsterdam Schiphol. On the flip side, the 26 November available turnaround time exceeded scheduled as delays in the network were lower.
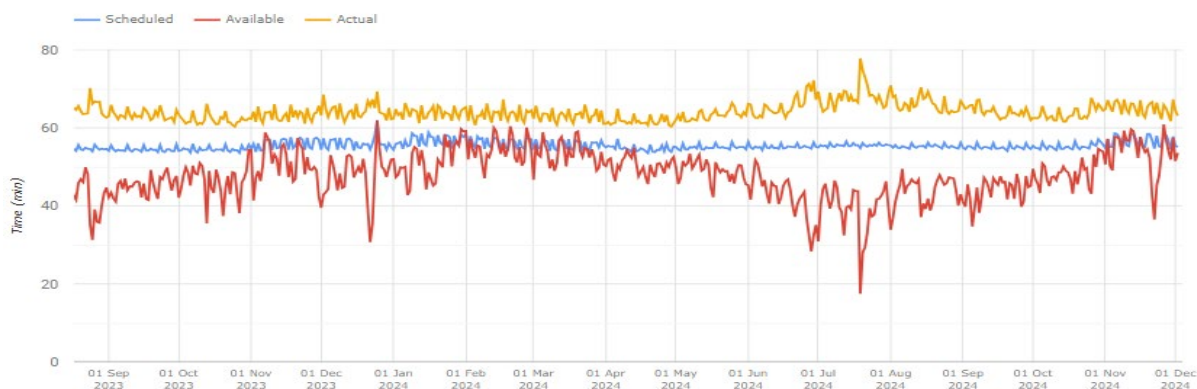
NM is monitoring TTOT[ii] calculation quality for the 32 A-CDM airports. The average error at a network level was 7.8 minutes, and increased by 0.2 minutes compared to October, while decreasing by 0.7 minutes compared to November 2023. Vienna (LOWW) presented the lowest error value among 31 airports – 6.2 minutes. Lisbon (LPPT) continues to present the highest error value at 11.0 minutes, which is 3.1 minutes less as compared to October. 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 1,110,113 minutes of ATFM delay in November, 22.8% higher than November 2023.
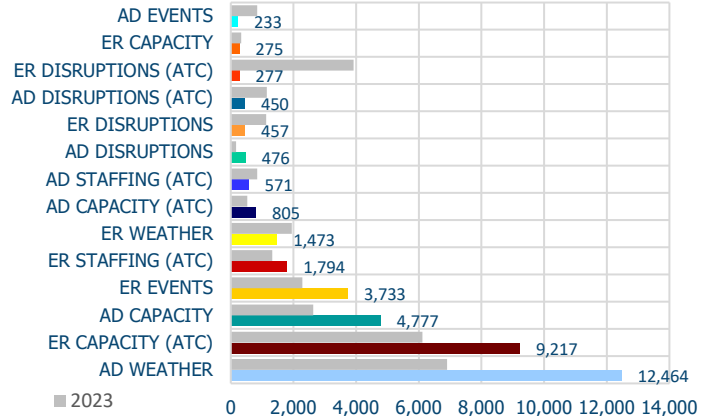
En-route ATFM delays accounted for 46.6% and airport ATFM delays accounted for 53.4%. Most of ATFM delays were due to airport weather and en-route ATC capacity issues.

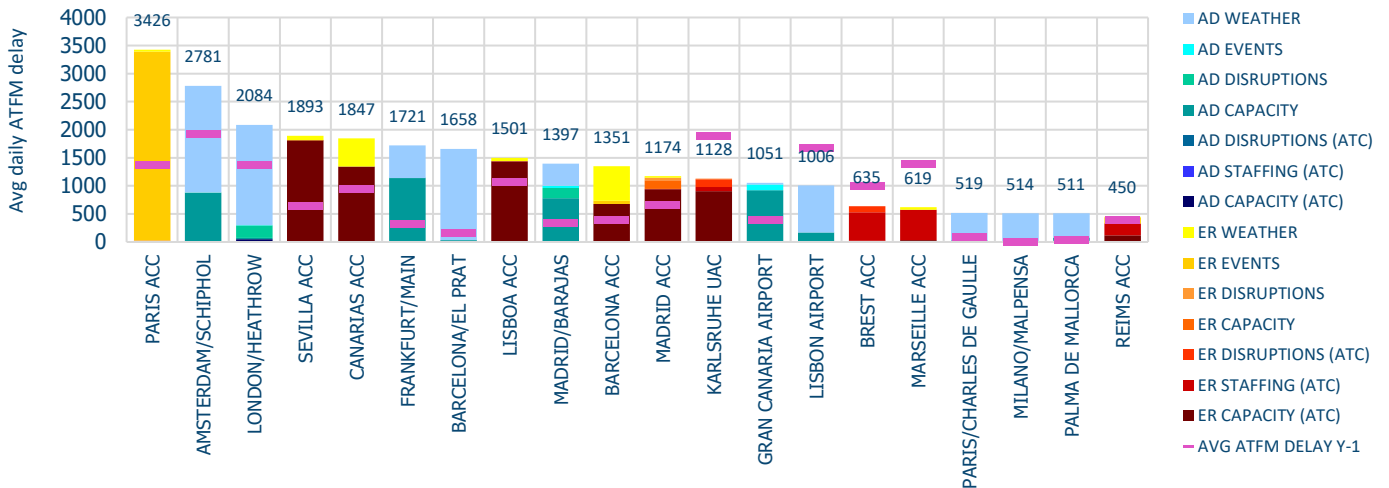The average en-route ATFM delay per flight for the network was 1.4 minutes in November.

Last 12 months average daily ATFM delays
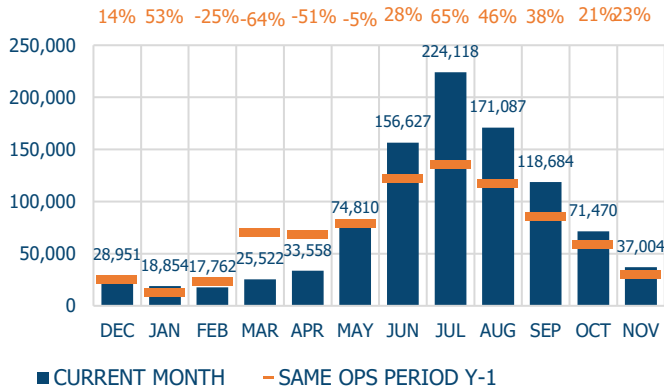
November 2024 | Reasons for ATFM delays

Top 20 delay reference locations in November 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:

- Events in Paris ACC due to ongoing implementation of 4 Flight.
- Seasonal weather - snow, low visibility, strong winds – impacted operations strongly at Amsterdam/Schiphol and London/Heathrow airports. Heavy rains impacted Barcelona airport on 03 and 04 November.
- ATC capacity issues in the south-west Axis – Sevilla, Canarias, Madrid ACCs - due to high demand.
- Airport capacity issue at Frankfurt airport due to work in progress on runway 07L/25R.
- Non- optimal runway configuration due to winds at Gran Canaria airport generated capacity delays.

4.4 Significant Events

Events

- On-going implementation of the new ATM system 4 Flight in Paris ACCs, with capacity reduction of -25% in en-route sectors and a flight reduction program of -5% at Parisian airports, generated 104,314 minutes of ATFM delays. These measures were lifted by early evening on most days.

- Bordeaux and Brest ACCs have started the training and live trial periods in preparation for the implementation of the 4-Flight system. Details (dates and corresponding capacity reductions) are detailed in the European Transition Plan for major projects 2024-2025. The document is available here [European Transition Plan for major projects 2024-2025](#)

- Marrakech Air show 2024 on 01 and 02 November generated 2,310 minutes of ATFM delay at Menara airport.

- Visit of the China's President at Gran Canaria generated 3,190 minutes of ATFM delay at Gran Canaria airport.

- WIC24 military exercise generated 3,147 minutes of ATFM delay in Maastricht UAC.

- TLP military exercise generated 1,612 minutes of ATFM delay in Barcelona ACC.

- PHOENIX fall back exercise generated 2,021 minutes of ATFM delay in Bremen 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 3,245 minutes of ATFM delay.

- Frequency issues at Porto airport from 01 to 05 November generated 6,024 minutes of ATFM delay.

- IT issue in British Airways operations at London/Heathrow on 18 November generated 1,447 minutes of ATFM delay.

- FDPS instability in Karlsruhe UAC on 22 November generated 4,152 minutes of ATFM delay.

- Datalink system issues on 23 November prompted capacity measures in Maastricht UAC and Bordeaux ACC generating 1,523 minutes of ATFM delay.

Industrial action

- ATC Industrial action in Italy on 29 November generated 2,688 minutes of airport ATFM delay.

Other

- Palma airport generated 4,539 minutes of ATFM delay due to local prolongation of summer schedule from 02 to 03 November.

- Aircraft blocked runway 27L at London/Heathrow on 27 November. The incident generated 4,725 minutes of ATFM delay as the airfield did not fully recover before late afternoon. Average ATFM delays peaking mid-morning at 50 min per flight.

- Operations were disrupted at Madrid/Barajas on 06 November due to drones in the vicinity of the airport. Twenty inbound flights diverted to alternate destinations, while several flights stacked in the TMA held for more than one hour before finally arriving at Barajas. The incident generated 5,525 minutes of ATFM delay.

- Budapest ACC recorded 5,301 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.

5. Flight Efficiency

5.1 Fuel Burn

Total fuel burn within NM area (tonnes)
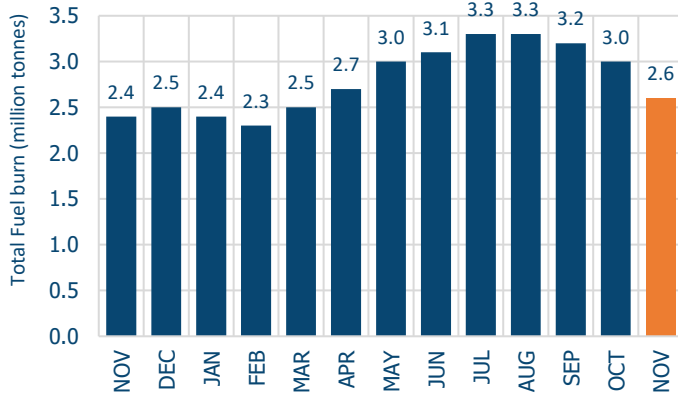
NM estimates that 2.6 million tonnes of fuel was burnt in the en-route flight phase in the NM area in November.

En-route fuel burn was 0.2 p.p. higher than November 2023 with an extra 38,000 flights. NM believes this is due to more efficient narrow body aircraft operating in the network.

5.2 Horizontal Flight Efficiency

There are two horizontal flight efficiency KPIs[iii]. 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 and KEP decreased compared to October 2024.
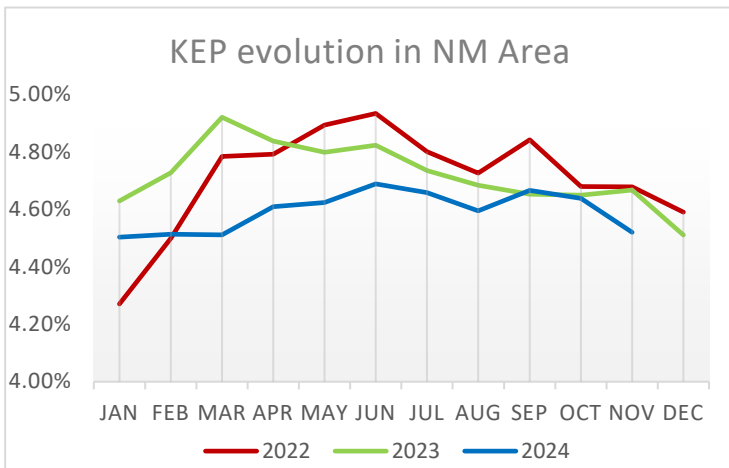
KEP indicator (4.52%) was lower than 2022 and 2023 levels.

NM Flight Efficiency Taskforce continues to support AOs to further improve their flight planning.
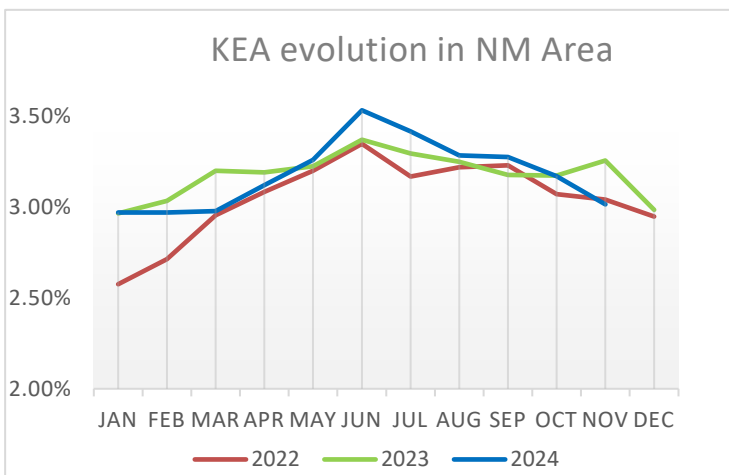
KEA indicator (3.01%) was well below 2023 level and almost at the same level as 2022.

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**

Operational Performance Unit,

Network Management Directorate (NMD),

EUROCONTROL,

96 Rue de la Fusée,

B - 1130 Brussels

mailto: nm.ops.perf@eurocontrol.int

https://www.eurocontrol.int/network-performance

---

[i] *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.*

[ii] *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.*

[iii] *More information on KEP and KEA, see ANS performance page.*

SUPPORTING
EUROPEAN
AVIATION

EUROCONTROL