

ERA 2024 Operational Statistics

FATHOM



Introduction

This report was developed by ERA using data from EUROCONTROL's FATHOM tool, which provides detailed insights into traffic trends, punctuality, ATFM delays, fuel efficiency, and operational performance. The flight metric data is calculated by ETFMS (Enhanced Tactical Flow Management System) based on flight profiles and Bada reference tables.

Each year, ERA produces this report to analyse the performance of its member airlines, offering key metrics and trends for the sector. By leveraging FATHOM, this report not only highlights operational performance for 2024 but also demonstrates how ERA members can utilise this powerful tool to optimise their own operations.

FATHOM is available to ERA members, offering tailored analytics to support informed decision-making. Discover more about FATHOM and how it can enhance your operations [here](#).

Summary

- **Traffic Growth:** ERA members total traffic in 2024 **increased by 2%** compared to 2023, with 1,029,033 flights, reflecting consistent recovery and growth. August saw the busiest month, with 3,140 average daily flights, while March traffic showed the highest improvement.
- **Efficiency Gains:** The rolling excess fuel burn percentage (YTD) shows an **overall improvement in flight efficiency of 0.6%**, with a decline in the first half of the year and stabilisation in later months.
- **Delays and Punctuality:**
 - **Delays:** ATFM delays totalled 1,988,656 minutes, an 8.7% increase year-on-year, dominated by weather and capacity issues.
 - **Departure Punctuality:** Reached 74.5% (14.10 minutes)
 - **Arrival Punctuality:** Slightly better at 75.1%, with shorter delays (13.51 minutes).
- **Rerouting and Savings:** AO updates using own software contributed the most savings, followed by dynamic rerouting using NM client tools.

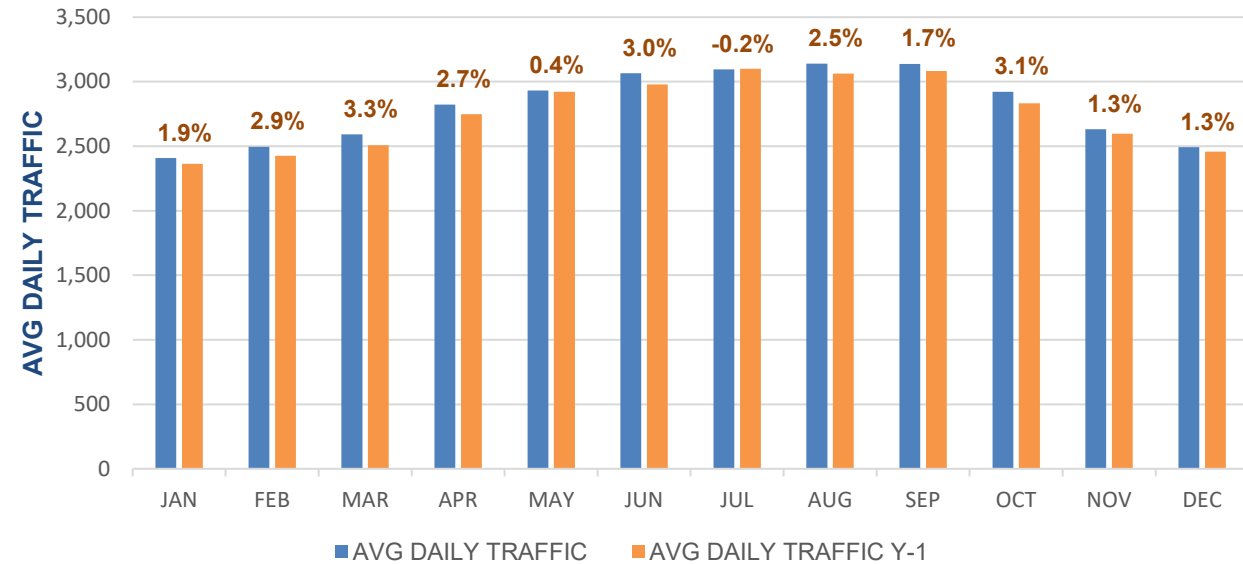
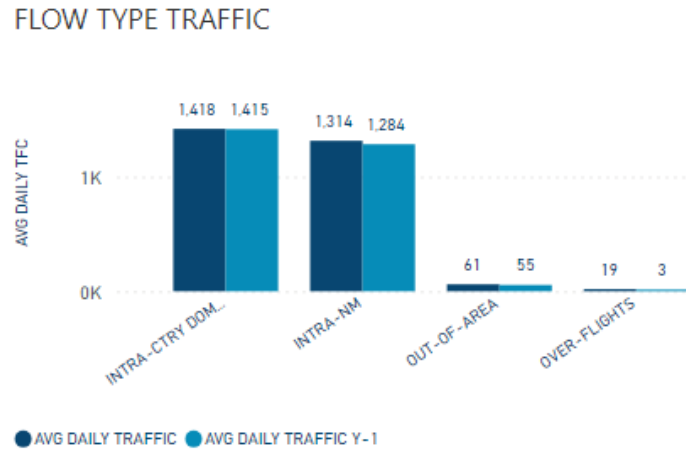


Traffic – Trends

TOTAL TRAFFIC
1,029,033

TOTAL TFC Y-1
1,009,246

% TRAFFIC DIFF
2.0%



- ➔ **Traffic Growth:** ERA members total traffic increased by 2% in 2024 compared to 2023, with 1,029,033 flights.
- ➔ **Flow Type:** Stable traffic for domestic operations and improvement on intra-European (NM) traffic.

- ➔ **Regional Traffic Decline only in July:** A 0.2% drop in July 2024 vs 2023 average daily traffic reflects disruptions from a sharp increase in Air Traffic Flow Management (ATFM) regulations and delays, which disrupted schedules and operations.

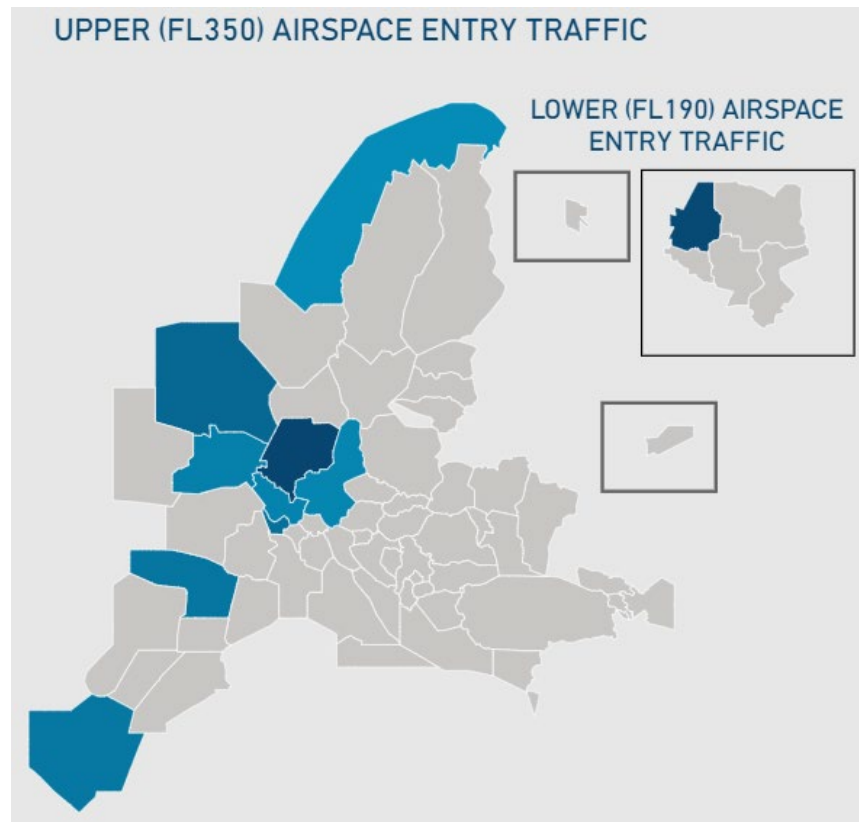
Traffic - Departure and Arrival Airport

ADEP	DEPARTURE AIRPORT	AVG DAILY TFC	AVG DAILY TFC Y-1	% DIFF
EHAM	Amsterdam/Schiphol	194	174	↑ 11.1%
LFPG	Paris/Charles De Gaulle	109	102	↑ 7.6%
GCLP	Gran Canaria Airport	80	72	↑ 11.5%
EFHK	Helsinki/Vantaa	78	73	↑ 6.6%
LEMD	Madrid/Barajas	75	60	↑ 25.8%
LGAV	Athens Airport	68	63	↑ 7.2%
GCXO	Tenerife Norte Airport	65	59	↑ 10.6%
LYBE	Belgrade Nikola Tesla Airport	54	54	↓ -0.4%
ENBR	Bergen/Flesland	51	53	↓ -3.7%
LPPT	Lisbon Airport	48	47	↑ 2.7%
ELLX	Luxembourg-Findel International Airport	46	47	↓ -1.6%

DEPARTURE AIRPORT	ARRIVAL AIRPORT	AVG DAILY TFC	AVG DAILY TFC Y-1	% DIFF Y-1
Amsterdam/Schiphol	London City Airport	7	6	↑ 9.4%
	Lisbon Airport	2	1	↑ 200%
	Strasbourg Airport	0	2	↓ -100%
Paris/Charles De Gaulle	Frankfurt/Main	4	5	↓ -6.4%
	Valencia Airport	3	1	↑ 101.7%
	London/Luton	0	1	↓ -100%
Gran Canaria Airport	Tenerife Norte Airport	21	19	↑ 7.2%
	Madrid/Barajas	4	0	↑ 2818.4%
	Munich Airport	0	1	↓ -100%

- ➔ **Top Airports:** Amsterdam Schiphol, Paris Charles de Gaulle, and Gran Canaria Airport ranked as the top 3 departure airports by average daily traffic among ERA members in 2024.
- ➔ **Movers and Shakers:** For each of these top departure airports, the top arrival airport is highlighted first, followed by one with most significant growth and one with the highest decline in traffic.
- ➔ **Unified Visual:** A single visual represents both departures and arrivals, as traffic patterns for top airports are consistent

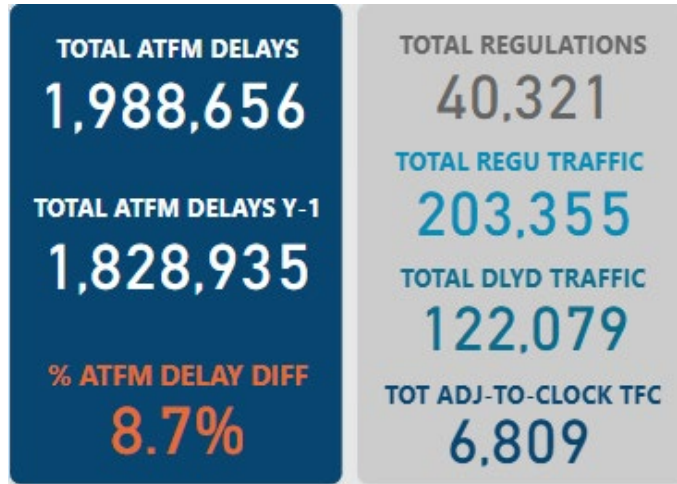
Traffic – Top 10 Busiest Area Control Centres (ACCs)



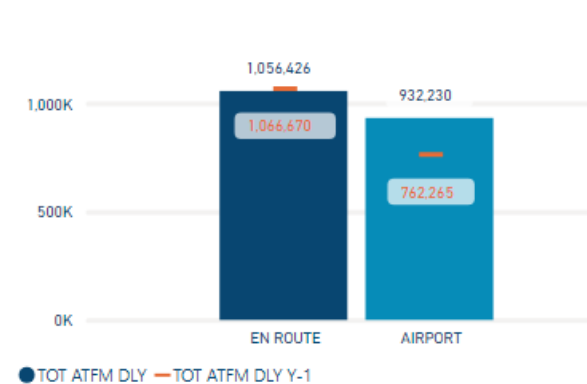
ACC NAME	ENTRY TRAFFIC
MAASTRICHT UAC	146,870
AMSTERDAM ACC	142,789
SCOTTISH ACC	114,044
PARIS ACC	104,704
MADRID ACC	100,442
CANARIAS ACC	98,685
LONDON ACC	90,975
REIMS ACC	87,737
KARLSRUHE UAC	85,112
BODO ACC	78,839

- **Traffic Concentration:** The busiest 10 ACCs handled 658,338 entries in 2024, representing 66.9% of the total entry traffic.
- **Maastricht UAC:** The Maastricht Upper Area Control Centre (UAC) was the busiest ACC for ERA airlines, managing upper airspace over Belgium, the Netherlands, Luxembourg, and north-west Germany.
- **Amsterdam ACC:** Amsterdam Schiphol, as the primary airport for ERA member airlines, influences the high traffic volume in Amsterdam ACC, which manages lower airspace.

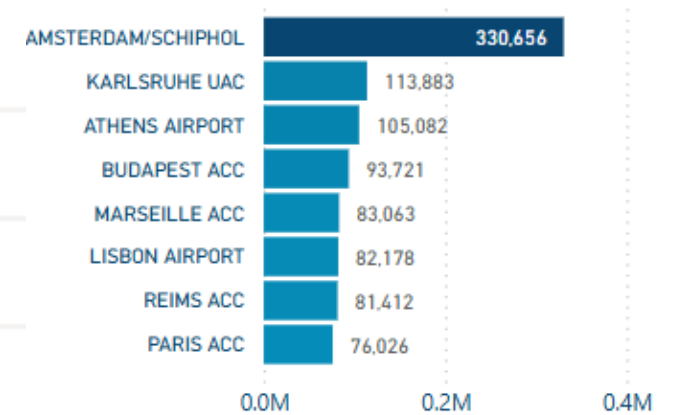
Delays and Regulations



REGULATION LOCATION TYPE



MOST PENALISING REGULATION LOCATIONS

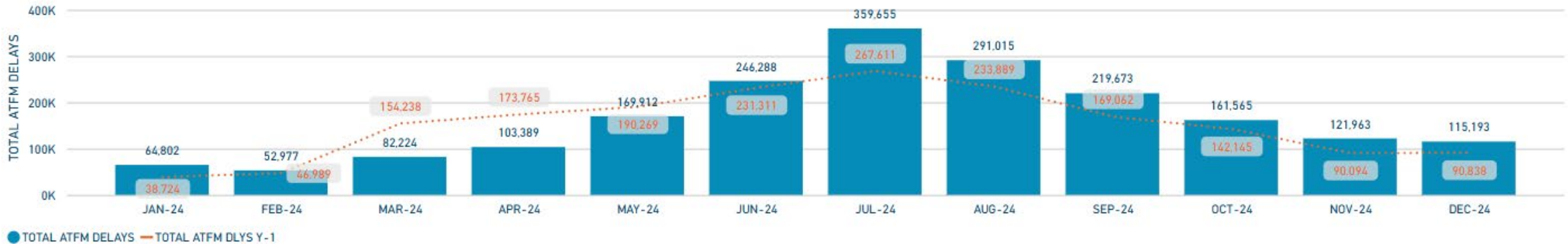


- **Total ATFM Delays:** 2024 presented 1,988,656 minutes of delay, an 8.7% increase from 2023.
- **Flights Impacted:** 203,355 flights faced regulations, with 122,079 experiencing delays, representing 19.8% and 11.9% of 2024 total ERA traffic (1,029,033 flights), respectively.
- **Regulation Comparison:** 2024 saw a 22.3% increase in airport regulations and a 1% decrease in en route regulations. However, en route regulations remain the primary type of regulation with ATC capacity and weather as the primary causes.
- **Regulation Focus:** Amsterdam Schiphol was the most penalising with a 60% increase from 2023.



Delays and Regulations

- ➔ **A Challenging Start to 2024:** January 2024 delays were 67.3% higher than January 2023, driven by strong winds at Amsterdam Schiphol, flight trials at Paris CDG, and low visibility in Lisbon.
- ➔ **Better March and April:** Delays in March and April 2024 decreased by 46.7% and 40.5% respectively compared to 2023, which was heavily impacted by ATC industrial action in France and Italy.
- ➔ **Focus on peak-period:** The June-August period saw the highest delays, with July 2024 experiencing a 34.4% increase from 2023 due to weather conditions and en route ATC capacity constraints.
- ➔ **Amsterdam Weather Challenges:** Near-daily weather disruptions, including high winds, low visibility, and arrival capacity issues, affected Amsterdam Schiphol in the last months of 2024.



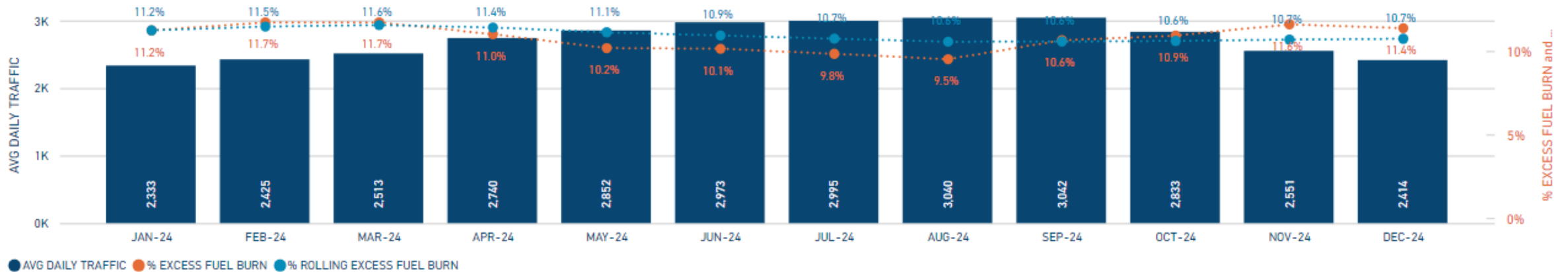
Period: 2024

Results sourced from the [Network Manager interactive analysis tool \(FATHOM\) | EUROCONTROL](#)
 Causes of delay sourced from the [All-causes delay analysis | EUROCONTROL](#)



Fuel Burn

EXCESS FUEL BURN PERFORMANCE

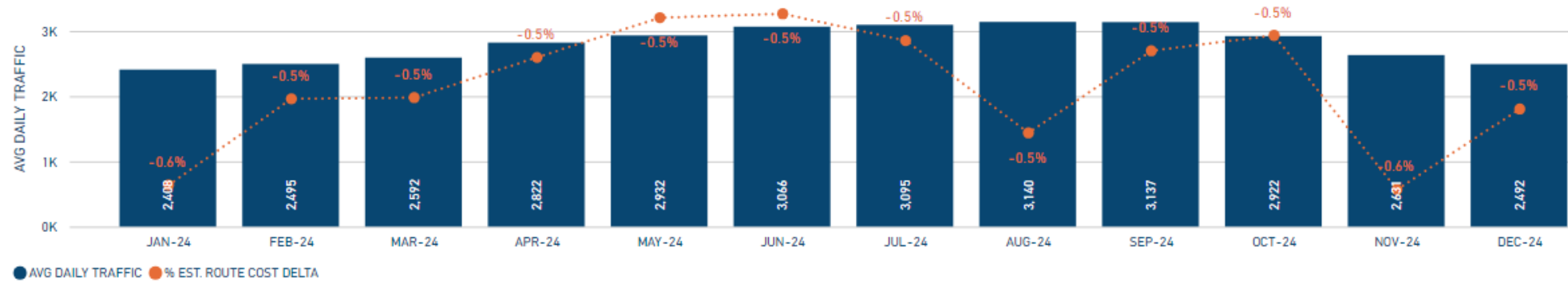


- ➔ **Excess Fuel Burn Trends:** The lowest excess fuel burn was 9.5% in August, while the highest was 11.7% in February and March.
- ➔ **Rolling Excess Fuel Burn Performance:** The rolling excess fuel burn percentage indicates overall improvement in flight efficiency, with a decline in the first half of the year and stabilisation around 10.7% in later months.
- ➔ **Factors Influencing Excess Fuel Burn:** The decrease in summer months may be due to more intra-NM traffic, leading to better route efficiency, while the increase in winter could be linked to higher ATFM restrictions and adverse weather conditions.



Estimated Route Costs

FILED VS ACTUAL ESTIMATED ROUTE COST PERFORMANCE



- **Purpose:** This graph compares planned route costs (operationally estimated by ETFMS) with actual route charges (defined by the Central Route Charges Office, CRCO) to evaluate tactical cost performance.
- **Yearly Stability:** The -0.5% delta remained consistent throughout the year, demonstrating precise alignment between planned and actual route costs.

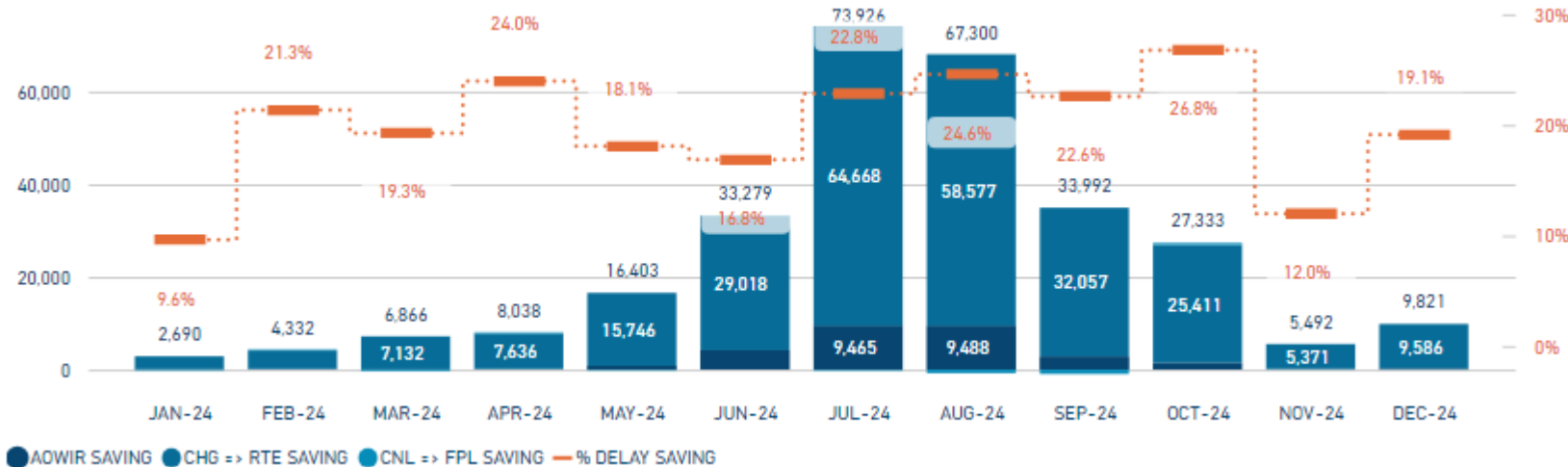


Rerouting

- **CHG Reroute Savings:** AO updates the route using own flight planning software, generating a CHG message.
- **AOWIR Savings:** AO updates the reroute using NM Client tools and B2B, producing an AOWIR message.
- **CNL Refile Savings:** AO cancels and refiles a flight plan using own software, generating CNL and FPL message.
- **En Route Delay Savings:** Achieved 21.4%, with airlines updating their routes using their own flight planning software, contributing the most to the savings (CHG Reroute Saving).

*Savings are categorised based on observed events (CHG, AOWIR, CNL/FPL), without distinguishing whether rerouting was initiated by NMOC or the AO.

CHG = Flight plan Changed: AOWIR = Aircraft Operator 'WHAT-IF' Reroute: CNL = Flight Plan Cancellation



TOTAL ATFM DELAY
1,063,451

NR REROUTE EVENTS
19,623

TOTAL DELAY SAVING
289,472

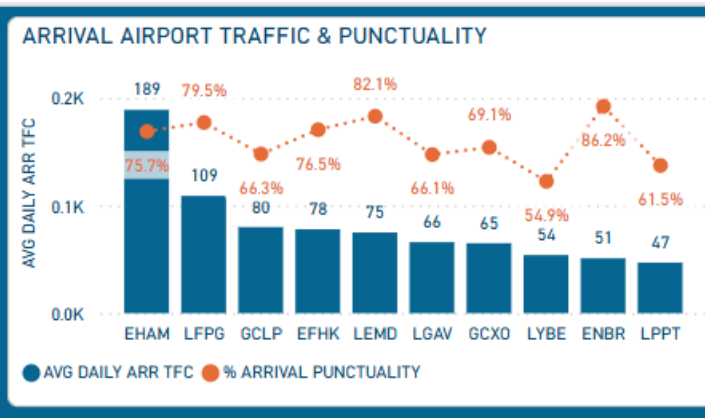
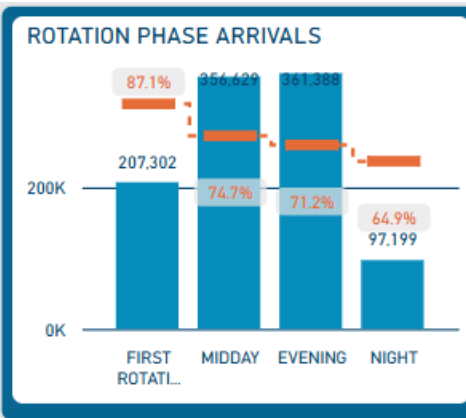
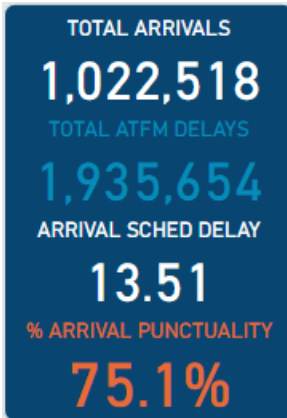
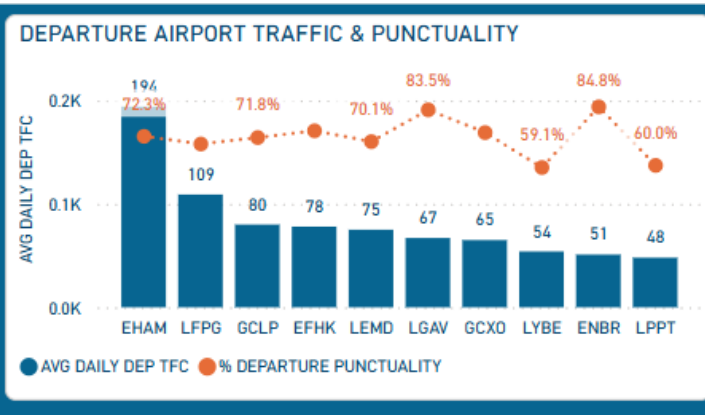
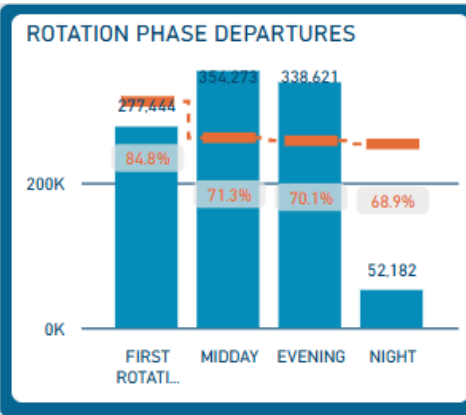
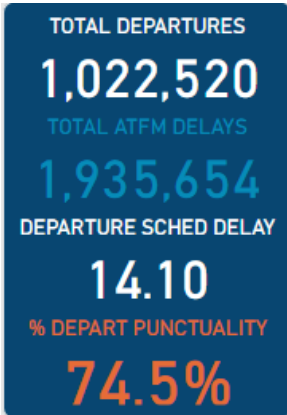
% DELAY SAVING
21.4%

Period: 2024

Results sourced from the [Network Manager interactive analysis tool \(FATHOM\) | EUROCONTROL](#)



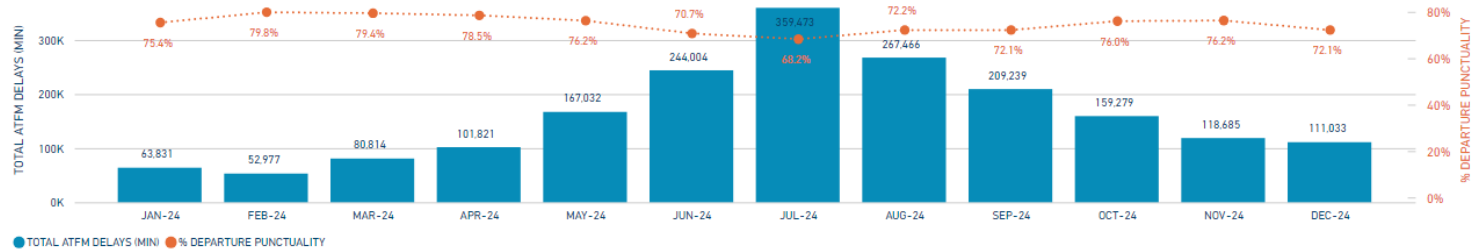
Departure and Arrival Punctuality (I)



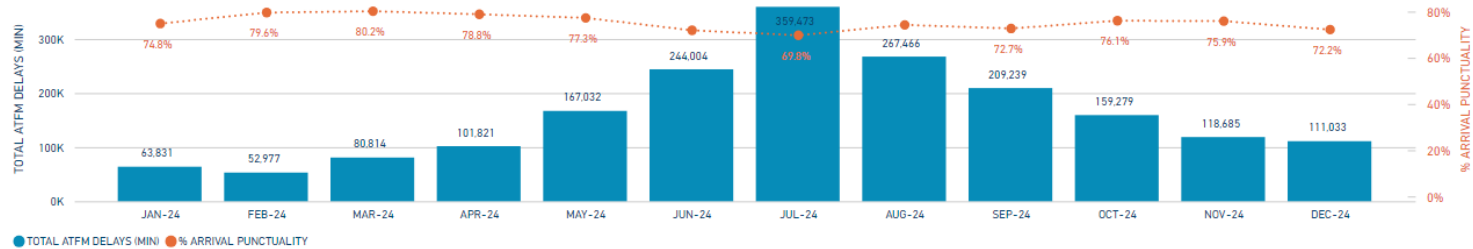
- ➔ **Results 2024:** Departure punctuality was 74.5% with an average delay of 14.10 minutes. Arrival punctuality slightly better, with a shorter average arrival delay of 13.51 minutes
- ➔ **Rotation Phases:** First rotation and midday arrivals outperformed departures, while night arrivals were worse; evening matched closely.
- ➔ **Airport Performance:** Significant variations highlighted a non-linear relationship between traffic and punctuality. Bergen Airport (ENBR) achieved the best punctuality in both departures and arrivals.

Departure and Arrival Punctuality (II)

DEPARTURE PUNCTUALITY & ATFM DELAYS



ARRIVAL PUNCTUALITY & ATFM DELAYS



➔ **Impact of Seasonal Demand:** Punctuality dropped significantly during the summer months, especially in July 2024 (68.2% for departures and 69.9% for arrivals), driven by a sharp increase in ATFM delays due to peak traffic and operational constraints.

➔ **Punctuality Trends:** Punctuality improved after the summer but declined again in December, with average ‘schedule’ delays rising. In December, average departure delays were 15.51 minutes, and arrivals were delayed by 15.27 minutes.

era 