



**Network Manager**  
nominated by  
the European Commission



# Monthly Network Operations Report















**Analysis - December 2014**



# Contents

1.	<b>TOTAL TRAFFIC</b> .....	2
2.	<b>ATFM DELAY AND ATTRIBUTIONS</b> .....	5
3.	<b>EN-ROUTE ATFM DELAYS</b> .....	6
	EN-ROUTE ATFM DELAY PER LOCATION .....	6
	EN-ROUTE ATFM DELAY PER DELAY GROUP .....	7
	EN-ROUTE ATFM DELAY PER FLIGHT .....	8
	EN-ROUTE ATFM DELAY YEAR-TO-DATE .....	9
4.	<b>AIRPORT/TMA ATFM DELAYS</b> .....	10
	AIRPORT/TMA ATFM DELAY PER LOCATION .....	10
	AIRPORT/TMA ATFM DELAY PER DELAY GROUPS .....	10
	AIRPORT/TMA ATFM DELAY PER FLIGHT .....	11
	AIRPORT/TMA ATFM DELAY YEAR-TO-DATE .....	11
5.	<b>DAILY EVOLUTION</b> .....	11
6.	<b>ALL AIR TRANSPORT DELAYS (SOURCE: CODA)</b> .....	12
7.	<b>ATFM SLOT ADHERENCE</b> .....	13
8.	<b>SIGNIFICANT EVENTS AND ISSUES</b> .....	13
	PLANNED EVENTS .....	13
	DISRUPTIONS .....	14
9.	<b>NM ADDED VALUE</b> .....	15
	RRP DIRECT DELAY SAVINGS .....	15
	FLIGHTS WITH DELAY > 30' .....	15

The table below shows the colour coding used in the report charts. The grouping of regulation reasons into the categories is explained in the Reporting Assumptions and Descriptions available on the EUROCONTROL website at ([http://www.eurocontrol.int/sites/default/files/publication/performance/\\_docs/assumptions\\_latest.pdf](http://www.eurocontrol.int/sites/default/files/publication/performance/_docs/assumptions_latest.pdf)) document.

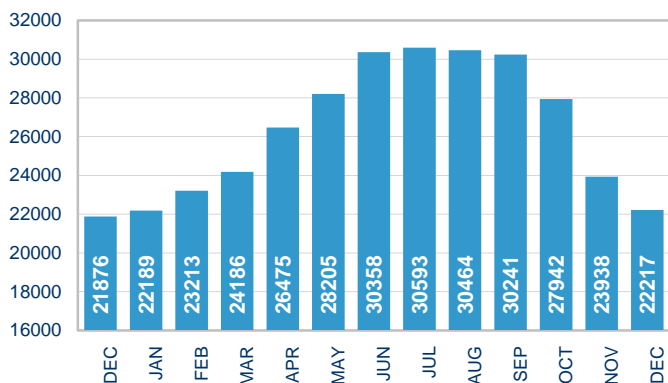
	ENROUTE CAPACITY (ATC)		AIRPORT CAPACITY (ATC)
	ENROUTE STAFFING (ATC)		AIRPORT STAFFING (ATC)
	ENROUTE DISRUPTIONS (ATC)		AIRPORT DISRUPTIONS (ATC)
	ENROUTE CAPACITY		AIRPORT CAPACITY
	ENROUTE DISRUPTIONS		AIRPORT DISRUPTIONS
	ENROUTE EVENTS		AIRPORT EVENTS
	ENROUTE WEATHER		AIRPORT WEATHER

## NOTICE:

All figures presented in this report are for the geographical area that is within Network Manager's responsibility (NM area). See ACC coverage on page 4.

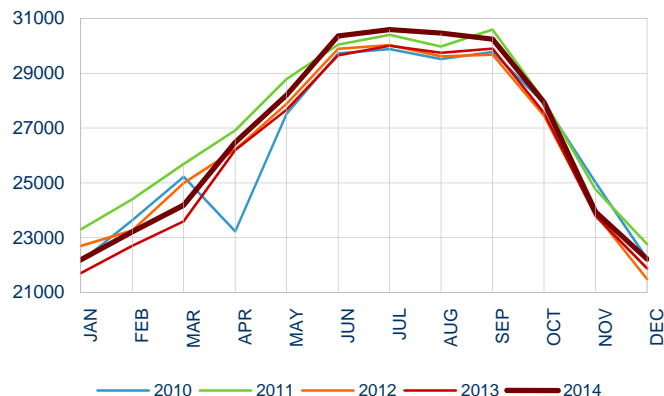
# 1. TOTAL TRAFFIC

Last 13 months average daily traffic



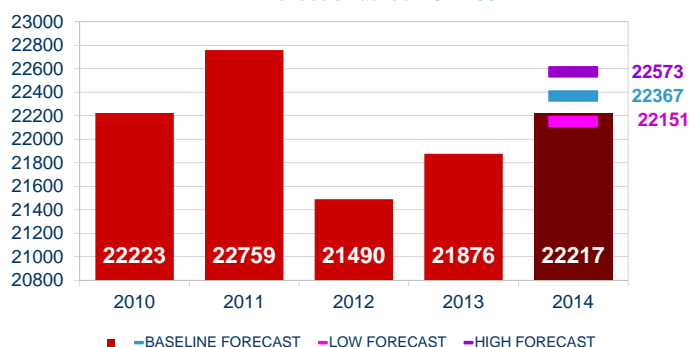
Traffic increased by 1.6% in December 2014 compared to December 2013.

Average daily traffic for last 5 Years



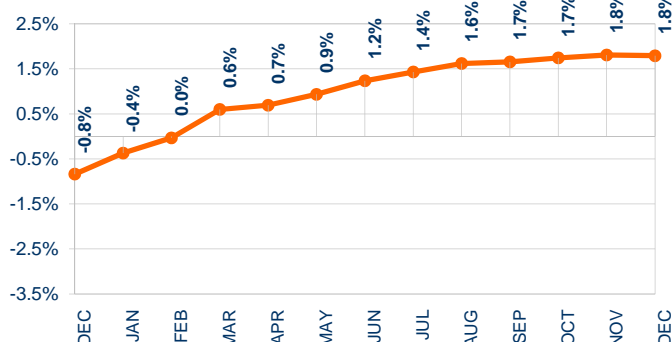
Average daily traffic in December is above 2013 and 2012 levels.

Average daily traffic in December for last 5 Years  
Forecast dated 2014-09



Based on preliminary data, December traffic was in line with the low forecast.

12 months rolling traffic trend



This graph shows the variation in average daily traffic for the last 12-month period relative to previous 12-months. The average daily traffic from January to December 2014 was 1.8% higher than the average from January to December 2013. That is the first indicator of the annual traffic growth. The trend shows a continuous recovery in traffic that dates back to April 2013.

The low-cost segment continued its dominant position with an increase of 7.4% compared with December 2013. Like last month, the charter segment continued to decline (-14.4%). The All-cargo segment grew by 3.3% on December 2013 while Business Aviation and Traditional Scheduled remained stable (+0.4% and +0.1% respectively on same month last year).

The United Kingdom overtook Turkey as the top contributor to local<sup>1</sup> traffic on the European network in December (vs Dec 2013) adding 183 daily flights to the network thanks to solid increases in international arrivals/departures (+4%) and internals (+5%) compared with the same month last year. Turkey added 157 daily flights to the network (vs Dec 2013) and remains a major contributor adding even more daily flights than last month. There is a clear gap between UK/Turkey and the other contributing States. In December, Germany added 66 daily flights followed by Greece (adding 59 daily flights), Poland (adding 54 daily flights) and Spain (adding 47 daily flights), compared with December last year. At the other end of the scale, Ukraine is still impacted by events of April 2014. It lost 166 daily flights (based on preliminary data) compared with December 2013.

The overall traffic decrease in Ukraine was 76% (based on preliminary data) representing a fall of 39% in the state's local traffic and a near suspension in its overflight traffic with fall of 98% (vs Dec 2013): only 475 flights flew over Ukraine in December 2014 (vs ~22,900 in Dec 2013). Re-routings of flows between North-West Europe and Middle-East/South-East Asia to avoid the Ukrainian airspace continued to result in increases of overflights in Hungary (+16%), Romania (+25%), Bulgaria (+48%) and Turkey (+24%). Overflights continued to decrease in Moldova (-66%) and Armenia (-29%), with Azerbaijan also affected by the situation in Ukraine.

Baltic States, Poland and Slovakia are gaining overflights from the re-routed flows between Russian Federation and Egypt (avoiding Ukraine), even though the growth of the flow fell by 7% in December 2014 (vs Dec 2013).

Closure of Libyan airspace since July resulted in a 35% fall in overflights for Malta. In particular, the flows between North-West Europe and Southern Africa/Eastern Africa are bypassing the Libyan airspace which, on the other hand, contributes to increases in Greek overflights (+15.7%).

1. Internals, international departures and arrivals, excluding overflights

For more information on EUROCONTROL Forecasts, go to <http://www.eurocontrol.int/articles/forecasts>

Six of the top 10 airports recorded positive traffic growth compared to December 2013. Overall, the largest traffic increases in December 2014 were at London/City, Istanbul/Sabiha Gokcen, Athens, London/Stansted, Hamburg, London/Luton and Warsaw/Chopin airports. The traffic increased significantly at London/City mainly because of Flybe started to operate there. The largest decreases in traffic were at Milano/Malpensa, Praha/Ruzyne, Frankfurt/Main, Bergen/Flesland and Lyon/St Exupery.

Seven of the top 10 aircraft operators had more traffic compared to December 2013. Overall, the operators with the highest traffic growth were German Wings, Aegean Airlines, Etihad, Wizz Air and Vueling. Ukraine International, Lufthansa and HOP recorded the highest traffic reduction compared to December 2013.

Industrial action reduced the number of flights operated by Lufthansa (short-haul and continental on 1-2 December and long-haul on 4 December) and TAP/Air Portugal on 2 December. National industrial action in Italy (12 December) and Belgium (8 and 15 December) also resulted in a reduction in traffic. The transfer of certain Lufthansa flights to German Wings accounted for some of the variation in traffic in these carriers. Ukraine International continues to be affected by the Ukrainian crisis. Pegasus continued to record an increase in flights compared to December 2013 following an increase in fleet size.

N°	ADEP	ADEP NAME	201412	%
1	EGLL	LONDON/HEATHROW	604	1.9%
2	LFPG	PARIS CD DE GAULLE	599	0.0%
3	LTBA	ISTANBUL-ATATURK	575	8.7%
4	EHAM	AMSTERDAM/SCHIPHOL	540	3.3%
5	EDDF	FRANKFURT MAIN	530	-5.2%
6	LEMD	ADOLFO SUAREZ MADRID-BARAJA	445	5.7%
7	EDDM	MUENCHEN	436	-1.1%
8	LIRF	ROMA/FIUMICINO	370	1.7%
9	LSZH	ZURICH	313	2.6%
10	LEBL	BARCELONA/EL PRAT	306	-1.3%
11	EGKK	LONDON/GATWICK	297	2.4%
12	LFPO	PARIS ORLY	295	0.0%
13	LOWW	WIEN SCHWECHAT	288	-3.4%
14	EKCH	KOBENHAVN/KASTRUP	280	-1.4%
15	ENGM	OSLO/GARDERMOEN	274	-3.2%
16	ESSA	STOCKHOLM-ARLANDA	264	0.0%
17	EBBR	BRUSSELS NATIONAL	254	3.7%
18	EDDL	DUESSELDORF	239	6.2%
19	LTFJ	ISTANBUL/SABIHA GOKCEN	237	18.5%
20	LSGG	GENEVA	233	4.5%
21	EIDW	DUBLIN	220	8.9%
22	EDDT	BERLIN-TEGEL	213	3.9%
23	EFHK	HELSINKI-VANTAA	201	1.0%
24	EGSS	LONDON/STANSTED	201	12.9%
25	LPPT	LISBOA	199	7.0%
26	EGCC	MANCHESTER	189	3.3%
27	LIMC	MILANO MALPENSA	186	-7.9%
28	EDDH	HAMBURG	175	11.5%
29	LGAV	ATHINA/ELEFTHERIOS VENIZELOS	174	17.6%
30	EPWA	CHOPINA W WARSZAWIE	167	10.6%
31	GCLP	GRAN CANARIA	147	-2.0%
32	EDDK	KOELN-BONN	139	4.5%
33	LIML	MILANO LINATE	139	1.5%
34	LFMN	NICE-COTE D'AZUR	136	3.0%
35	LKPR	PRAHA RUZYNE	133	-5.7%
36	LFLL	LYON SAINT-EXUPERY	130	-5.1%
37	EDDS	STUTTGART	126	4.1%
38	EGPH	EDINBURGH	125	5.0%
39	EGGW	LONDON/LUTON	124	10.7%
40	LTAC	ANKARA-ESENBOGA	116	0.0%
41	LFML	MARSEILLE PROVENCE	115	-4.2%
42	LROP	BUCURESTI/HENRI COANDA	113	0.0%
43	LLBG	TEL AVIV/BEN GURION	112	4.7%
44	ENBR	BERGEN/FLESLAND	111	-5.1%
45	LFBO	TOULOUSE BLAGNAC	109	-3.5%
46	LHBP	BUDAPEST LISZT FERENC INT.	107	8.1%
47	EGBB	BIRMINGHAM	105	5.0%
48	EGLC	LONDON/CITY	105	31.3%
49	LEPA	PALMA DE MALLORCA	98	5.4%
50	LEMG	MALAGA/COSTA DEL SOL	94	0.0%
<b>TOTALS and % TOTAL TRAFFIC</b>			<b>11688</b>	<b>52.6%</b>

Top 50 Departure Airports with average daily traffic and percentage compared to same period of previous year

N°	ICAO	AIR OPERATOR	201412	%
1	RYR	RYANAIR	1185	10.9%
2	DLH	DEUTSCHE LUFTHANSA	1131	-16.5%
3	THY	TURKISH AIRLINES	1065	7.6%
4	EZY	EASYJET	927	2.4%
5	AFR	AIR FRANCE	906	-2.9%
6	SAS	SCANDINAVIAN AIRLINES SYSTEM	668	2.2%
7	BAW	BRITISH AIRWAYS	592	2.1%
8	KLM	KLM ROYAL DUTCH AIRL	542	-0.1%
9	AZA	ALITALIA	444	3.4%
10	BER	AIR BERLIN, INC.	434	3.3%
11	NAX	NORWEGIAN AIR SHUTTLE	388	-3.5%
12	GWI	GERMAN WINGS	374	66.9%
13	SWR	SWISS INTERNATIONAL	358	-3.3%
14	VLG	VUELING AIRLINES SA	341	20.3%
15	WIF	WIDEROE	330	6.8%
16	BEE	JERSEY EUROPEAN TIA FLYBE	317	5.8%
17	PGT	PEGASUS HAVA TASI	308	13.8%
18	TAP	TAP/AIR PORTUGAL	279	-0.9%
19	AUA	AUSTRIAN AIRLINES	272	-8.4%
20	WZZ	WIZZ AIR	259	21.3%
21	AFL	AEROFLOT-RUSSIAN	234	-0.2%
22	HOP	HOP (MERGE OF BZH + RAE + RLA)	206	-10.1%
23	AEA	AIR EUROPA	202	9.1%
24	IBE	IBERIA	191	3.6%
25	AEE	AEGEAN AIRLINES	186	52.9%
26	AME	AIR NOSTRUM	185	6.0%
27	RAM	ROYAL AIR MAROC	169	4.5%
28	UAE	EMIRATES	166	12.6%
29	BEL	BRUSSELS AIRLINES	164	-1.7%
30	LOT	LOT-POLISH AIRLINES	163	-3.0%
31	EIN	AER LINGUS TEORANTA	162	-2.1%
32	FIN	FINNAIR OY	134	6.4%
33	FCM	FINNISH COMMUTER AIRLINES OY(RENAME)	129	-4.5%
34	BCS	EUROPEAN AIR TRANSP.	129	6.4%
35	QTR	QATAR AIRWAYS COMP.	127	15.3%
36	EZS	EASY JET SWITZERLAND	118	-2.3%
37	UAL	UNITED AIRLINES INC.	113	-2.0%
38	SHT	BAW SHUTTLE	100	1.8%
39	DAL	DELTA AIR LINES INC.	99	-0.3%
40	BTI	AIR BALTIC CORPORAT.	93	-9.2%
41	NJE	NETJETS	89	-6.7%
42	LOG	LOGANAIR	88	13.3%
43	TOM	THOMSON FLY LTD	87	-1.1%
44	AUI	UKRAINE INTERNATIONAL	86	-19.1%
45	ROT	TAROM	85	-1.5%
46	DAH	AIR ALGERIE	80	5.4%
47	NAY	NAYSIA	80	-1.0%
48	ETD	ETIHAD	79	30.7%
49	ASL	AIR SERBIA	79	0.0%
50	VIR	VIRGIN ATLANTIC LTD.	79	-0.9%
<b>TOTALS and % TOTAL TRAFFIC</b>			<b>15022</b>	<b>67.6%</b>

Top 50 Air Operators with average daily traffic and percentage

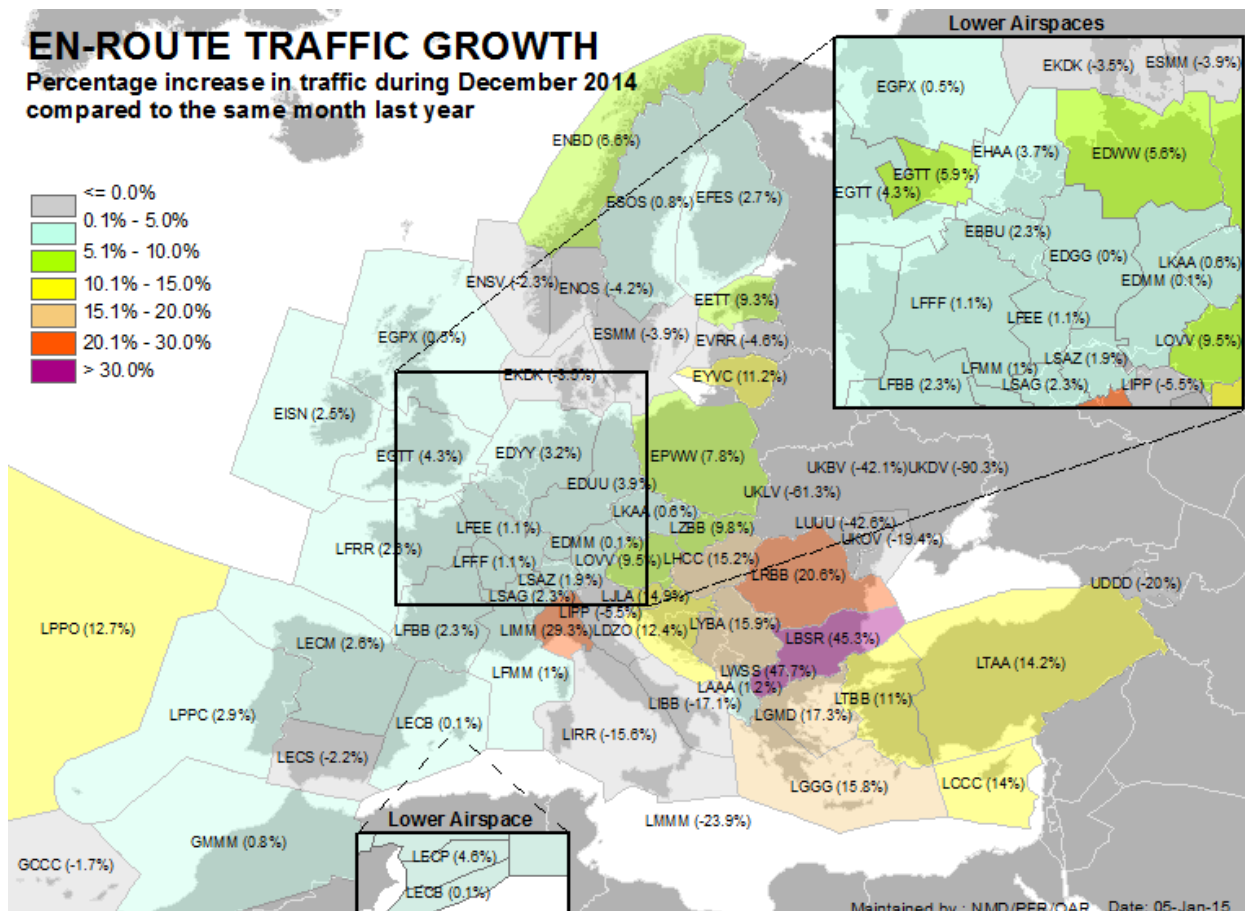
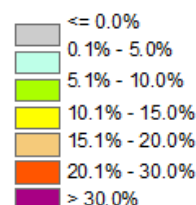
N°	ICAO	AIR OPERATOR	201412	%
		Unidentified	1683	-0.8%

Average daily traffic and percentage compared to same period of previous year for all flights where Air Operators can't be identified



# EN-ROUTE TRAFFIC GROWTH

Percentage increase in traffic during December 2014 compared to the same month last year



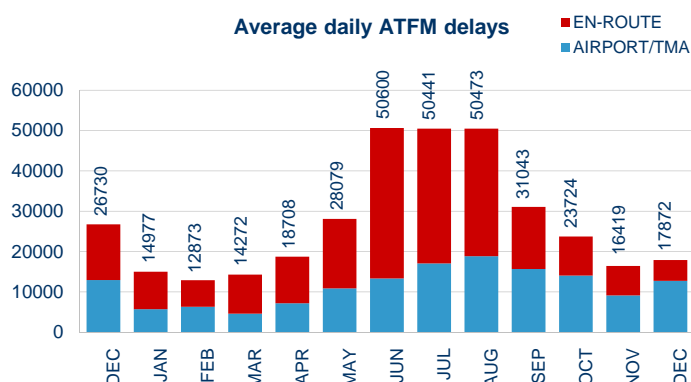
Maintained by: NMD/PFR/OAR Date: 05-Jan-15

N°	ASP ID	ASP NAME	201412	%	N°	ASP ID	ASP NAME	201412	%
1	BIRDACC	REYKJAVIK ACC	251	0.0%	39	LFBBALL	BORDEAUX ALL ACC	1773	2.3%
2	DAAAACC	ALGERS ACC	414	0.0%	40	LFEEACC	REIMS U/ACC	2077	1.1%
3	DTTCACC	TUNIS ACC	217	0.0%	41	LFEEACC	PARIS ALL ACC	2791	1.1%
4	EBBUACC	BRUSSELS CANAC	1265	2.4%	42	LFMMACC	MARSEILLE ACC	2033	0.9%
5	EDGGALL	LANGEN ACC_FIR	2701	0.0%	43	LFRRACC	BREST U/ACC	2002	2.7%
6	EDMMACC	MUNICHEN ACC	2367	0.1%	44	LGGGACC	ATHINA CONTROL	872	15.8%
7	EDUUUAC	KARLSRUHE UAC	3773	3.9%	45	LGMDACC	MAKEDONIA CONTROL	656	17.1%
8	EDVWACC	BREMEN ACC	1404	5.6%	46	LHCCACC	BUDAPEST ACC	1379	15.2%
9	EDYYUAC	MAASTRICHT UAC	3882	3.2%	47	LIBBACC	BRINDISI ACC	506	-17.1%
10	EETTACC	TALLIN ACC	440	9.2%	48	LIMMACC	MILANO ACC	1650	29.3%
11	EFESACC	TAMPERE ACC	425	2.7%	49	LIPPACC	PADOVA ACC	1252	-5.5%
12	EGGXOAC	SHANWICK OACC	988	2.8%	50	LIRRACC	ROMA ACC	1675	-15.6%
13	EGPXALL	SCOTTISH ACC	2021	0.5%	51	LJLAACC	LJUBLJANA ACC	514	14.7%
14	EGTTACC	LONDON ACC	4213	4.3%	52	LKAAACC	PRAGUE ACC	1460	0.6%
15	EGTTTC	LONDON TMA TC	3115	5.9%	53	LLLLACC	TEL AVIV ACC	278	0.0%
16	EHAACC	AMSTERDAM ACC(245-)	1258	3.7%	54	LMMMACC	MALTA ACC	201	-24.2%
17	EIDWACC	DUBLIN ACC	466	6.9%	55	LOVVACC	WIEN ACC	1581	9.5%
18	EISNACC	SHANNON ACC	891	2.4%	56	LPCCACC	LISBOA ACC/UAC	1149	2.9%
19	EKDKACC	COPENHAGEN ACC	1236	-3.5%	57	LPOOACC	SANTA MARIA OACC	337	12.7%
20	ENBDACC	BODO ACC	532	6.6%	58	LQSBACC	BOSNIA-HERZEGOVINA	70	
21	ENOSACC	OSLO ATCC	786	-4.2%	59	LRBBACC	BUCURESTI ACC	1298	20.5%
22	ENSVACC	STAVANGER ATCC	580	-2.4%	60	LSAGACC	GENEVA ACC	1333	2.3%
23	EPWVACC	WARSAWA ACC	1495	7.8%	61	LSAZACC	ZURICH ACC	1620	1.9%
24	ESMMACC	MALMO ACC	1151	-3.9%	62	LTAAACC	ANKARA ACC	1993	14.2%
25	ESOSACC	STOCKHOLM ACC	946	0.8%	63	LTBBACC	ISTANBUL ACC	1999	11.0%
26	EVRRACC	RIGA ACC	546	-4.6%	64	LUUWACC	CHISINAU ACC	92	-42.5%
27	EYVCACC	VILNIUS ACC	518	11.2%	65	LWSSACC	SKOPJE ACC	240	47.2%
28	GCCACC	CANARIAS ACC/FIC	802	-1.8%	66	LYBAACC	BEOGRADE ACC	1069	15.9%
29	GMMMACC	CASABLANCA ACC	1001	0.8%	67	LZBBACC	BRATISLAVA ACC	884	9.7%
30	HECCACC	CAIRO ACC	652	0.0%	68	OLBBACC	BEIRUT ACC	130	0.0%
31	LAAAACC	TIRANA ACC	385	1.1%	69	UDDACC	YEREVAN ACC	119	-19.6%
32	LBSRACC	SOFIA ACC	1426	45.2%	70	UGGGACC	TBILISI ACC	308	0.0%
33	LCCCACC	NICOSIA ACC	731	14.0%	71	UKBVACC	KIEV ACC	335	-42.0%
34	LDZOACC	ZAGREB ACC	937	12.5%	72	UKOVACC	DNIPROPETROVSK ACC	38	-90.3%
35	LECBACC	BARCELONA ACC	1323	0.2%	73	UKLVACC	L'VIV ACC	178	-61.3%
36	LECMACC	MADRID ALL ACC	2238	2.6%	74	UKOVACC	ODESSA ACC	179	-19.4%
37	LECPACC	PALMA ACC	260	4.8%	75	UMMYACC	MINSK ACC	609	0.0%
38	LECSACC	SEVILLA ACC	738	-2.1%	76				

The large traffic changes in the Italian ACCs are due to resectorisation in June and November 2014 and the industrial action of 12 December. As noted page 2, traffic avoiding the Ukraine airspace continues to increase traffic flows in Sofia and Bucharest ACCs, but with a significant traffic decline continuing in Chisinau and Yerevan ACCs. Skopje ACC's traffic increase continued in December following the re-opening of the Kosovo KFOR sector in April 2014 and an increase in traffic to Skopje airport. Increased traffic in Athens and Makedonia ACCs is due to traffic avoiding Libya and Syria. Malta ACC continues to be affected by the changes in Libyan airspace availability. Bosnia Herzegovina growth is very high due to the airspace changes in November.

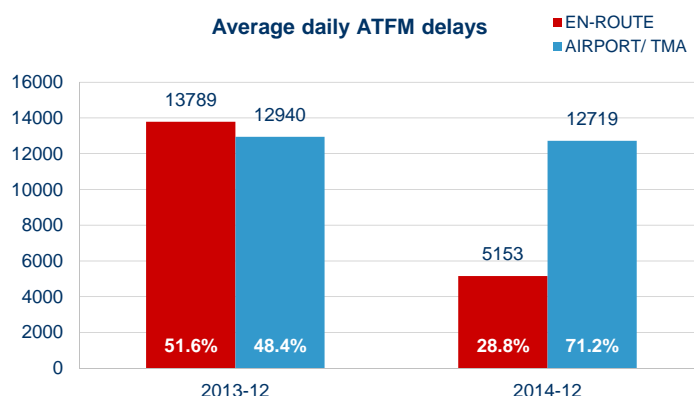
## 2. ATFM DELAY AND ATTRIBUTIONS

Average daily ATFM delays



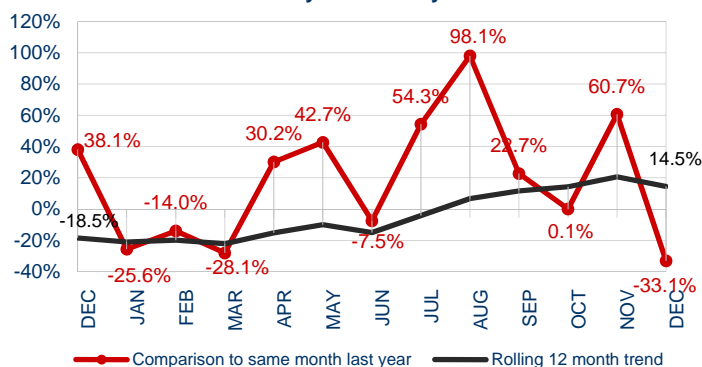
Total ATFM delays in December 2014 decreased by 33.1% compared to December 2013.

Average daily ATFM delays



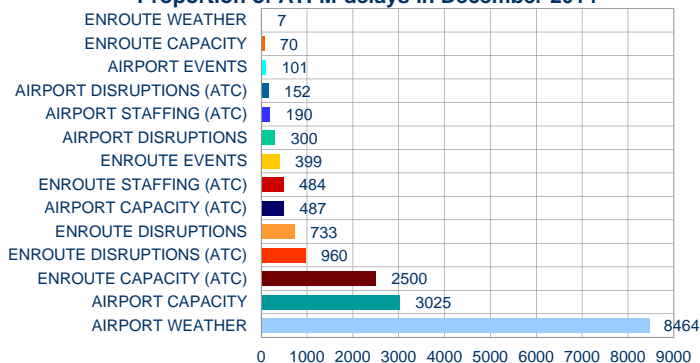
En-route ATFM delays decreased by 62.6% and airport ATFM delays decreased slightly by 1.7% compared to December 2013. Note that en-route ATFM delays were relatively high in December 2013 due to technical failures and ATM system transitions.

Monthly ATFM delays trend



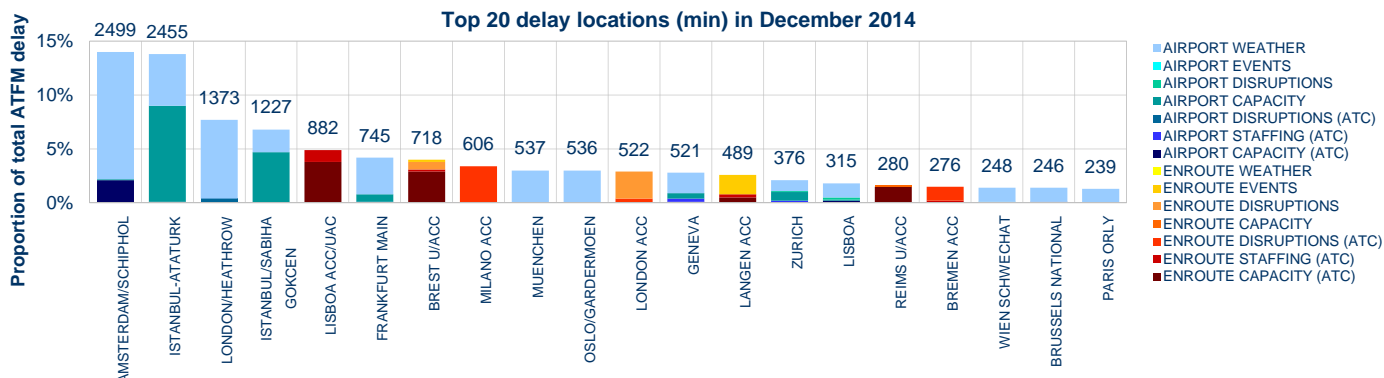
The 12-month rolling trend of ATFM delay decreased for the first time since June 2014.

Proportion of ATFM delays in December 2014



Airport weather (47.4%) was the biggest contributor to ATFM delays in December, followed by airport capacity (16.9%), en-route ATC capacity (14%).

Top 20 delay locations (min) in December 2014

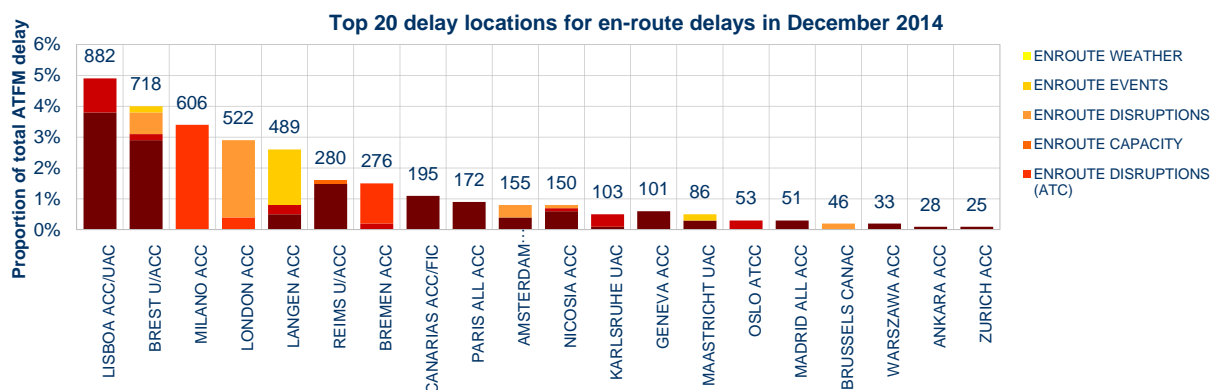
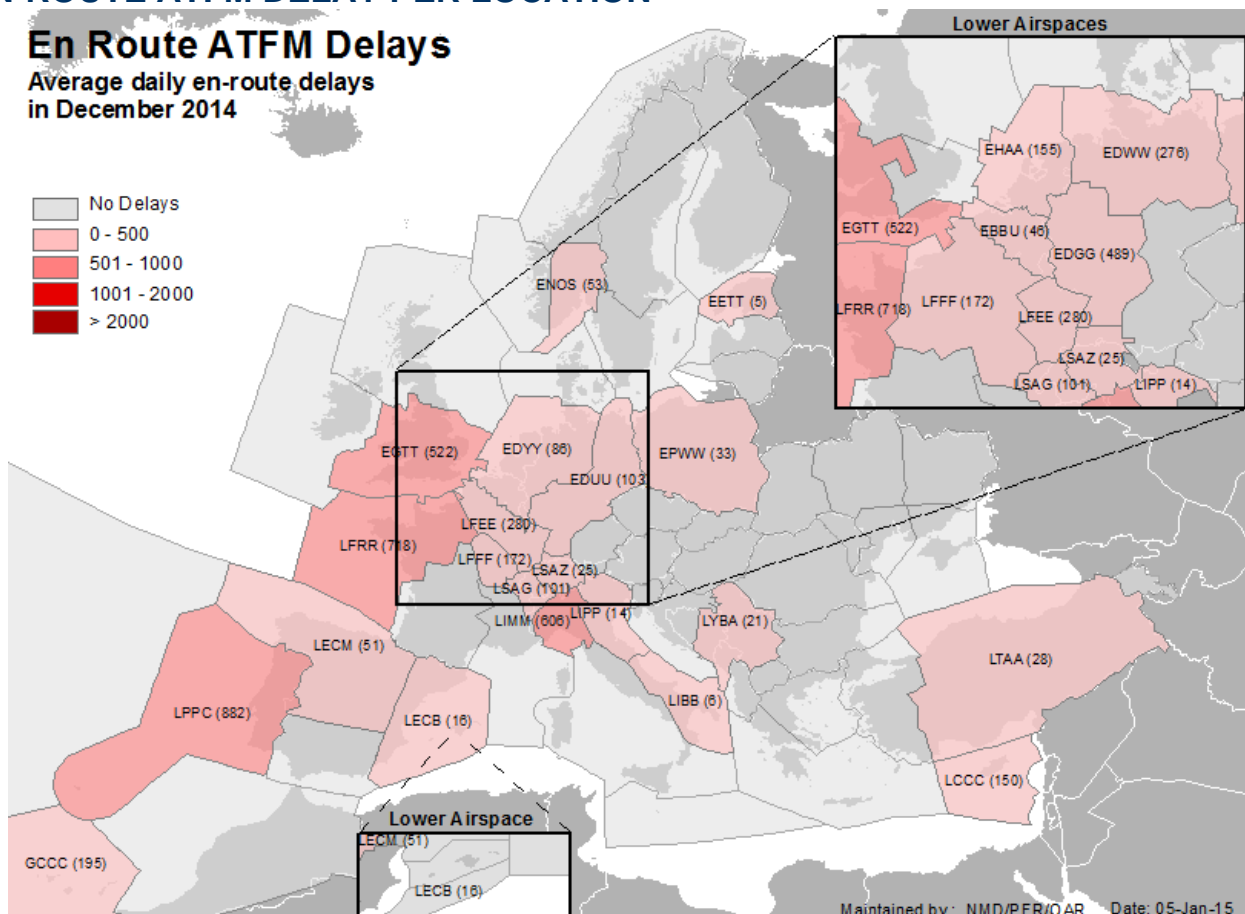


These are the top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

- Weather impacted airport operations, particularly at Amsterdam/Schiphol, London/Heathrow, Istanbul/Ataturk and Frankfurt/Main.
- Istanbul/Sabiha Gokcen and Istanbul/Ataturk (runway configuration) airports experienced delays due to aerodrome capacity issues.
- Lisbon, Brest and Reims ACCs were impacted by en-route ATC capacity issues. Lisbon ACC continued to be affected by ATC staffing issues.
- Technical problems on 12 December (flight data server failure) generated en-route disruption delays at London ACC, with London/Heathrow also impacted. Protective ATFM measures were applied by Brest ACC which also resulted in delays.
- Milan ACC experienced a radar failure on 8 December generating significant delays.
- System implementations and system software update impacted operations at Langen and Bremen ACCs with some delay.

### 3. EN-ROUTE ATFM DELAYS

#### EN-ROUTE ATFM DELAY PER LOCATION

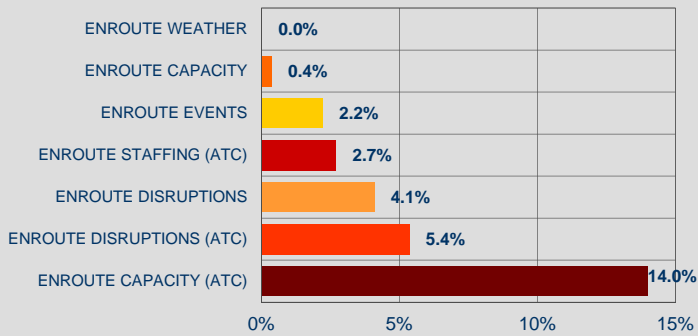


These are the top 20 en-route delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

The top 20 en-route delay locations generated 27.3% of the monthly total (network) ATFM delay.  
The top 5 en-route delay locations generated 17.8% of the monthly total (network) ATFM delay.

## EN-ROUTE ATFM DELAY PER DELAY GROUP

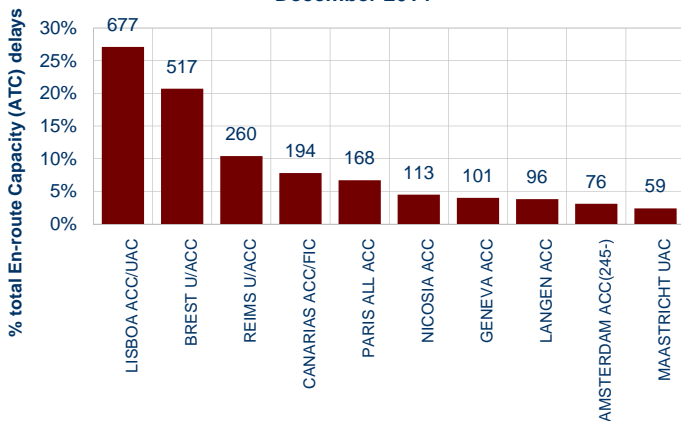
Reasons for en-route delays in December 2014



En-route delays accounted for 28.8% of all ATFM delays. Most of this delay was caused by en-route ATC capacity and en-route disruption issues as explained in detail below. The other causes were:

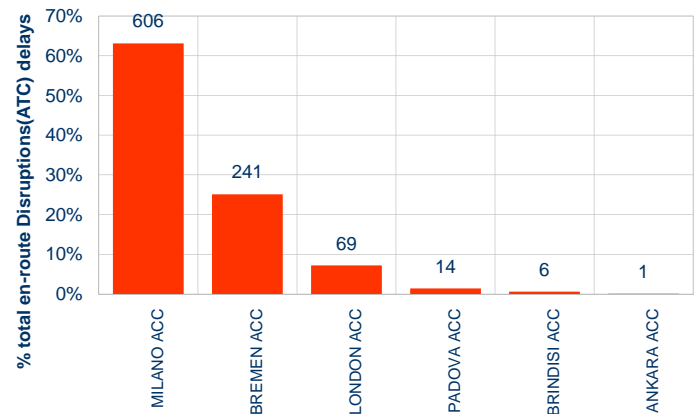
- **En-route ATC Staffing:** Lisbon (6,258 mins), Karlsruhe (2,425 mins) and Langen (1,813 mins) ACCs.
- **En-route Events:** Langen (PSS implementation, 10,201 mins), Brest (system upgrade, 1,342 mins) and Maastricht (airspace divisional flight level change, 830 mins) ACCS generated delays.
- **En-route Capacity:** Military activity in Belgrade ACC (640 mins) generated some delays.
- **En-route Weather:** Thunderstorms at Nicosia ACC generated minor delays.

Top 10 delay locations for En-route Capacity (ATC) in December 2014



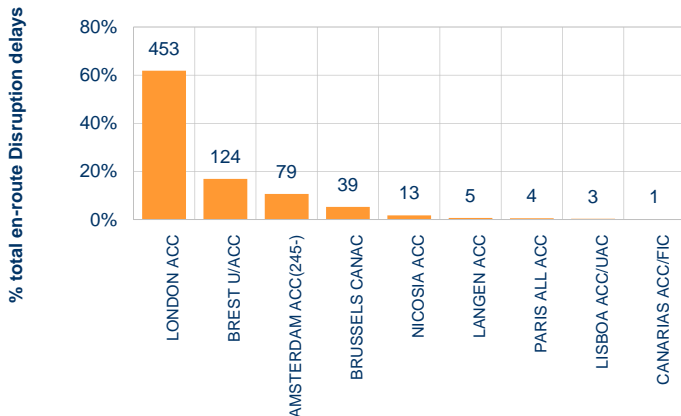
Lisbon and Brest ACCs were the biggest generators of en-route ATC capacity delays in December; most of the delay was generated on Saturdays.

Top delay locations for En-route Disruptions (ATC) in December 2014



Milan ACC (radar failure on 8 December, 18,222 minutes) and Bremen ACC (ATCAS implementation, 7,457 minutes) generated most en-route ATC disruptions delay.

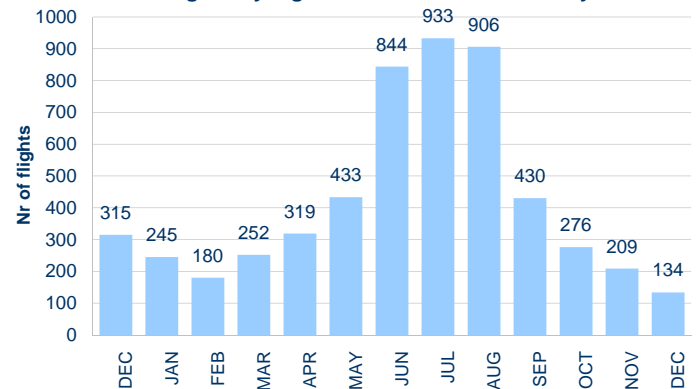
Top 10 delay locations for En-route Disruptions in December 2014



London ACC generated a total of 16,169 minutes of delay on 12 December due to technical problems (flight data server failure and subsequent recovery) with protective ATFM measures applied by Brest ACC generating additional delays (3,849 minutes). Amsterdam ACC generated a total of 2,438 minutes of delay due to protective ATFM measures applied during the industrial action in Belgium on 15 December.

Further information is available in Section 8.

Average daily flights >= 15 min en-route delay



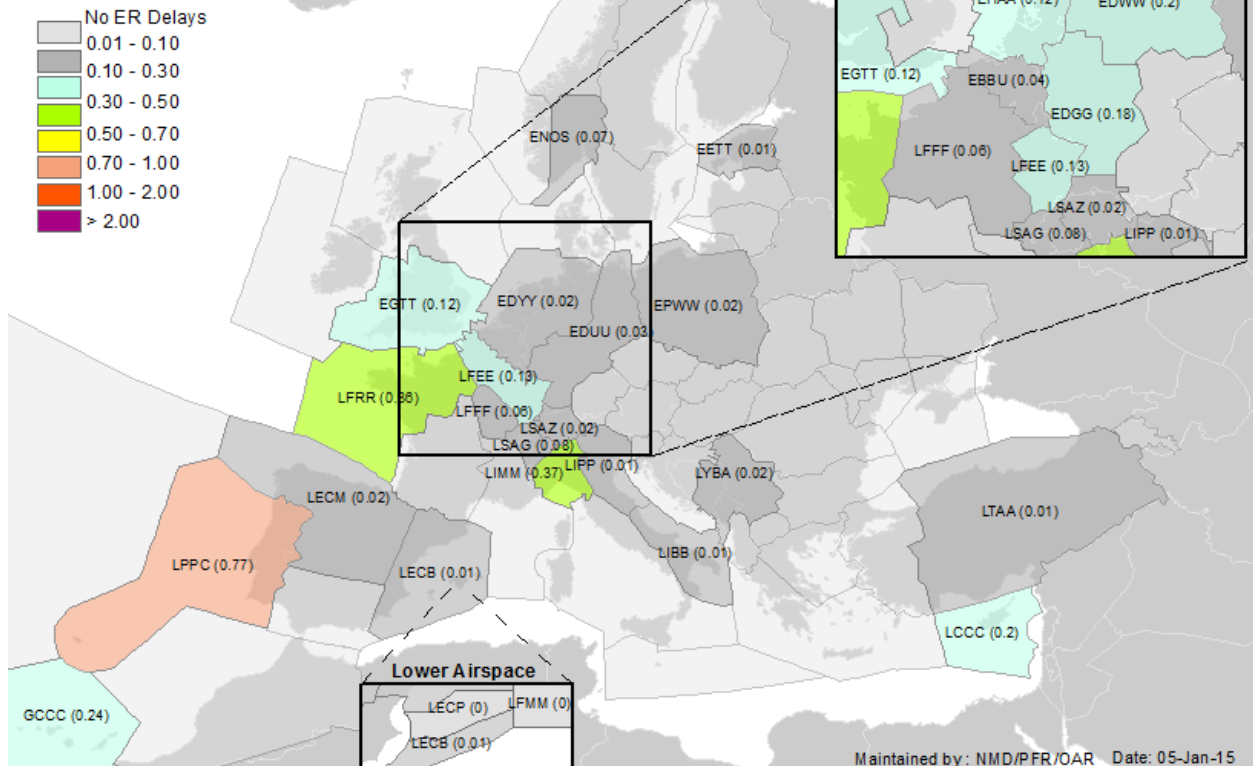
An average of 134 flights per day received an en-route delay of at least 15 mins in December 2014. The corresponding figure for December 2013 was 315 flights.



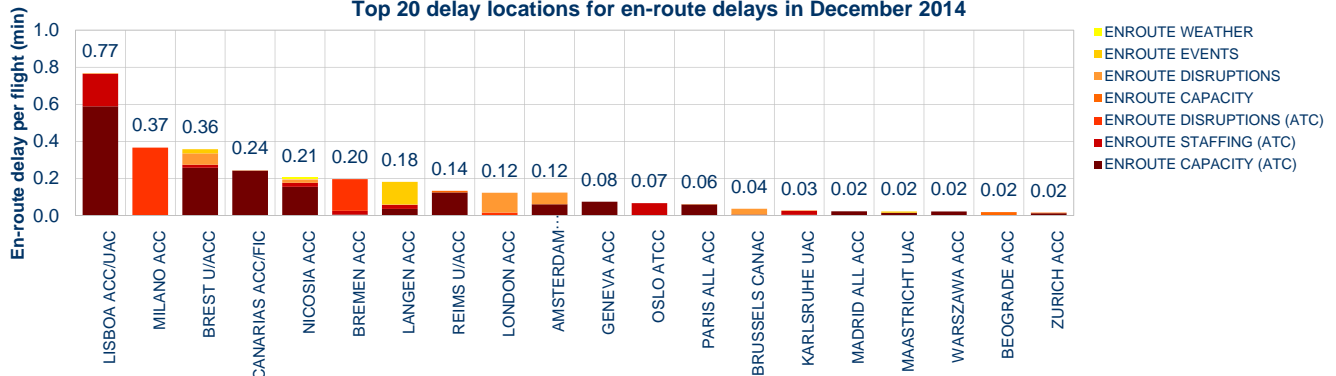
## EN-ROUTE ATFM DELAY PER FLIGHT

### ER DELAY PER FLIGHT

Average en route delay per flight in December 2014



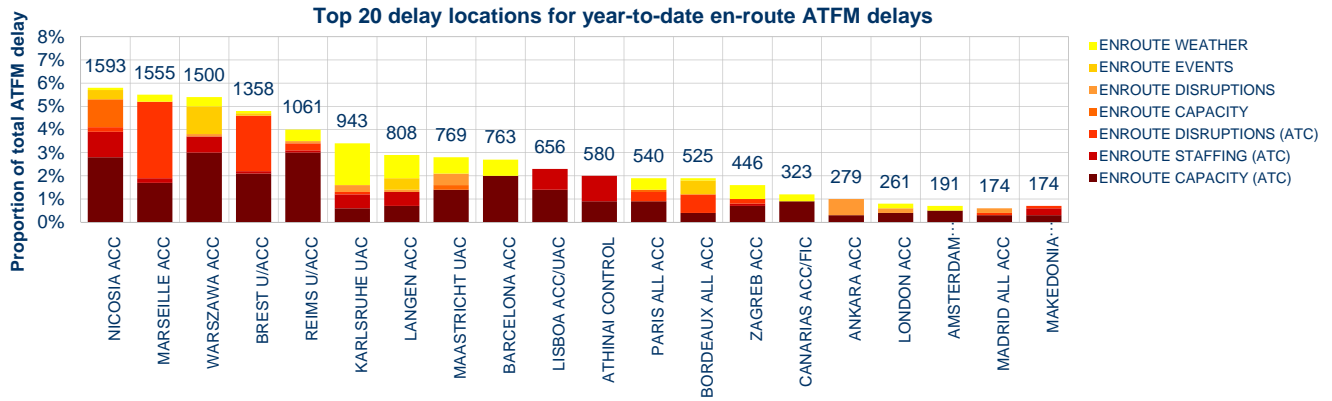
Top 20 delay locations for en-route delays in December 2014



These are the top 20 average en-route delay per flight generating locations for the reporting month with respect to total ATFM delays. Figures are the average en-route delay per flight in minutes for the individual locations.

Lisbon ACC's average en-route delay per flight fell from 3.02 min/flt in November 2014 to 0.77 min/flt in December.

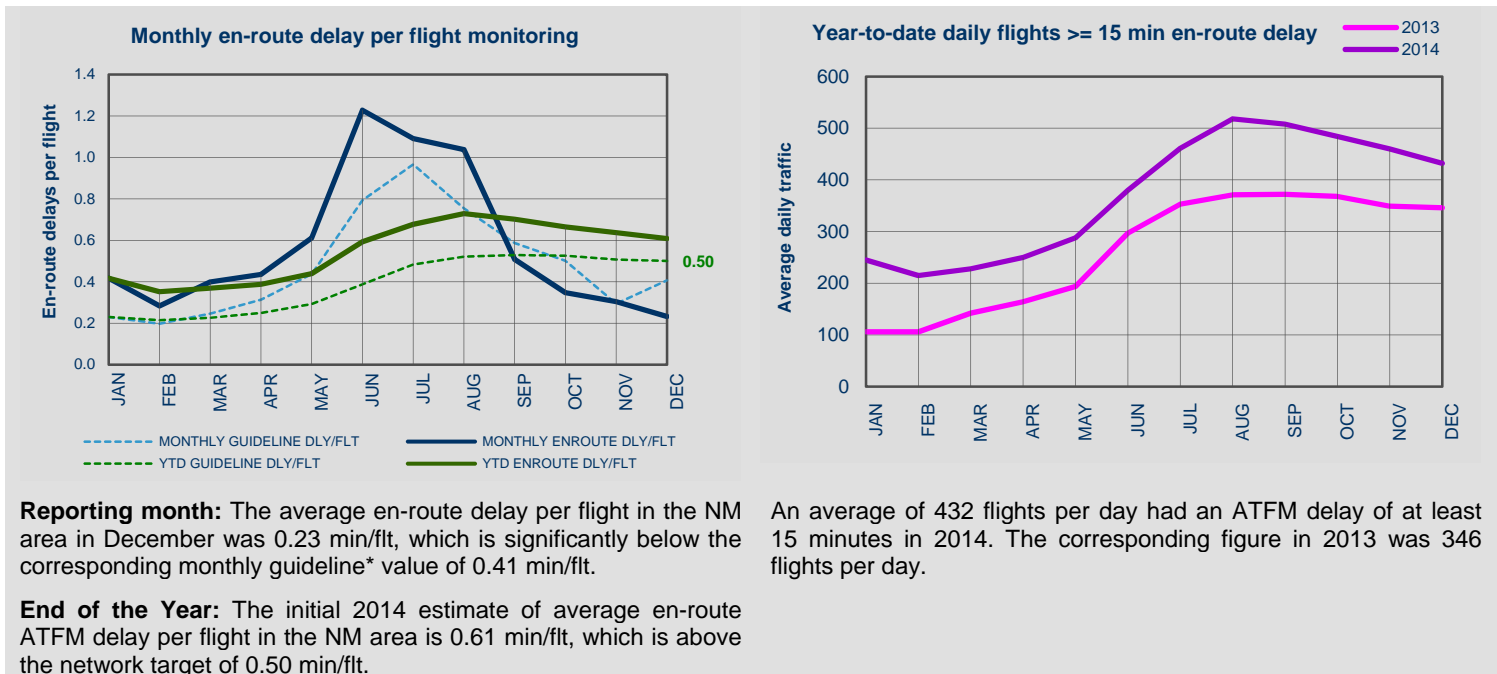
## EN-ROUTE ATFM DELAY YEAR-TO-DATE



These are the top 20 en-route delay locations for 2014 with respect to the total ATFM delay. Figures are the average daily en-route delay in minutes for the individual locations.

The top 20 en-route delay locations generated **52.0%** of the total ATFM (network) delay.

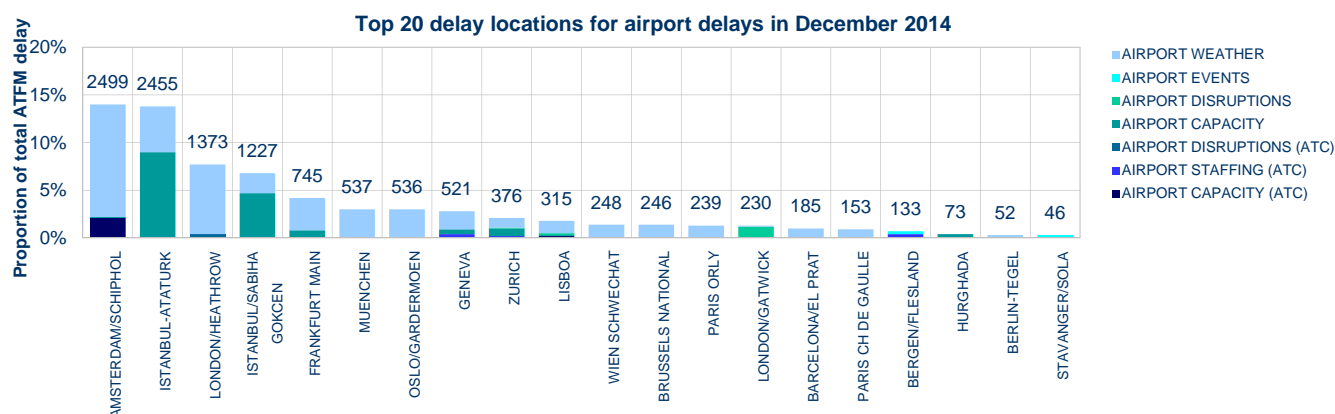
The top 5 en-route delay locations generated **25.5%** of the total ATFM (network) delay.



\* NM's calculation that provides the guideline en-route delay (min) requirements to achieve the annual target (0.5 min/flight).  
NM Network Operations Report – Analysis – December 2014

## 4. AIRPORT/TMA ATFM DELAYS

### AIRPORT/TMA ATFM DELAY PER LOCATION

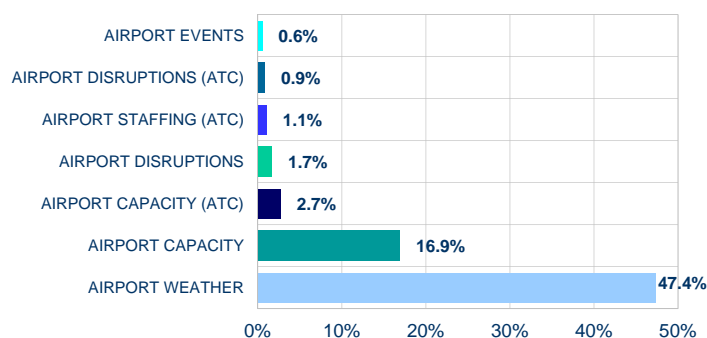


The top 20 Airport/TMA delay locations generated 68.2% of the monthly total ATFM (network) delay.

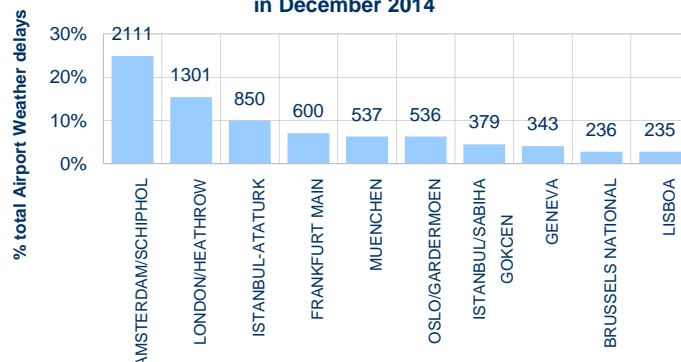
The top 5 Airport/TMA delay locations generated 46.5% of the monthly total ATFM (network) delay.

### AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for airport delays in December 2014



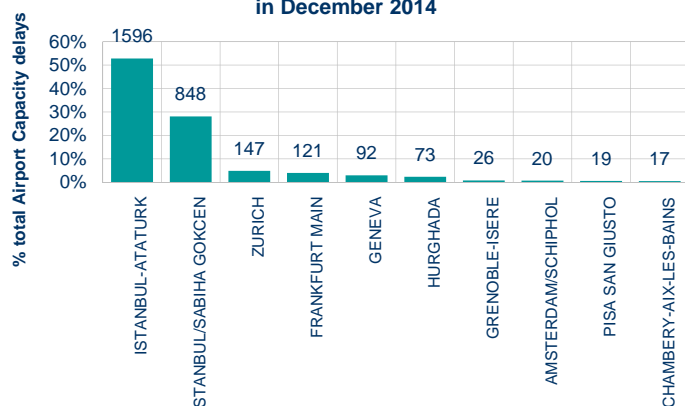
Top 10 delay locations for Airport Weather in December 2014



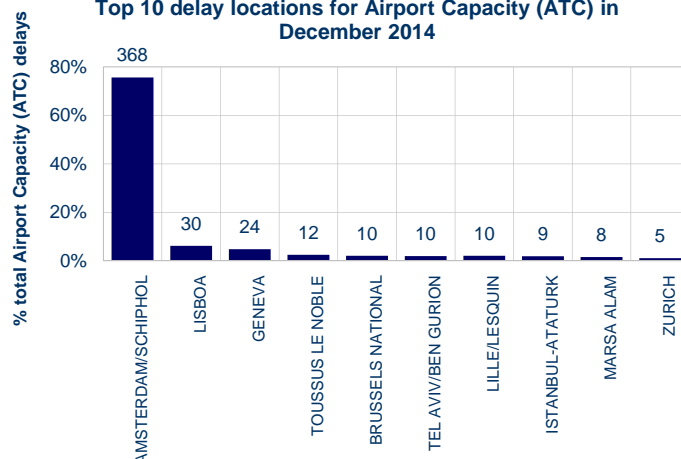
Airports accounted for 71.2% of all ATFM delays in December 2014, mainly due to weather and airport capacity constraints.

Amsterdam/Schiphol, London/Heathrow, Istanbul/Ataturk and Frankfurt/Main were particularly affected by seasonal weather (strong winds, heavy rain). Snow affected operations principally on the 27-30 December at Munich, Geneva, Amsterdam and Istanbul Sabiha Gokcen.

Top 10 delay locations for Airport Capacity in December 2014



Top 10 delay locations for Airport Capacity (ATC) in December 2014

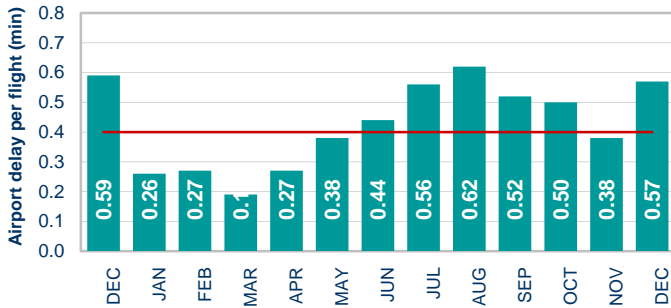


Istanbul/Ataturk (runway configuration and work in progress), and Istanbul/Sabiha Gokcen airports experienced aerodrome capacity issues. Zurich (environmental constraints) also continues to generate delays, a total of 4,555 minutes. Frankfurt recorded a total of 3,738 minutes of delay due to limited parking due to de-icing operations mainly on 28, 29 and 30 December.

Airport ATC capacity delays generated by Amsterdam/Schiphol airport decreased by 43.7% in December, from a daily average of 654 mins/day in November 2014 to 368 mins/day in December.

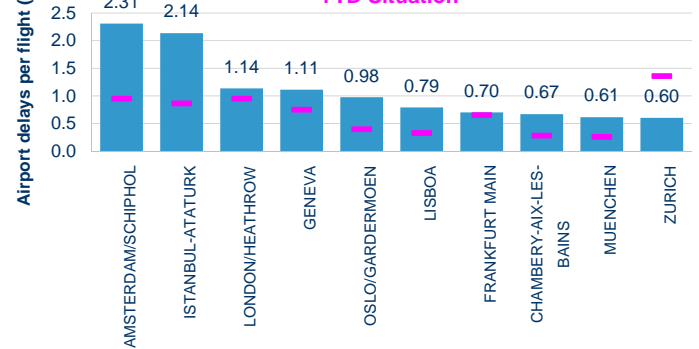
## AIRPORT/TMA ATFM DELAY PER FLIGHT

Monthly average Airport delay (min) per flight  
Last 12 months = 0.4 minutes



Average airport/TMA delay per flight decreased slightly from 0.59 min/ft in December 2013 to 0.57 min/ft in December 2014.

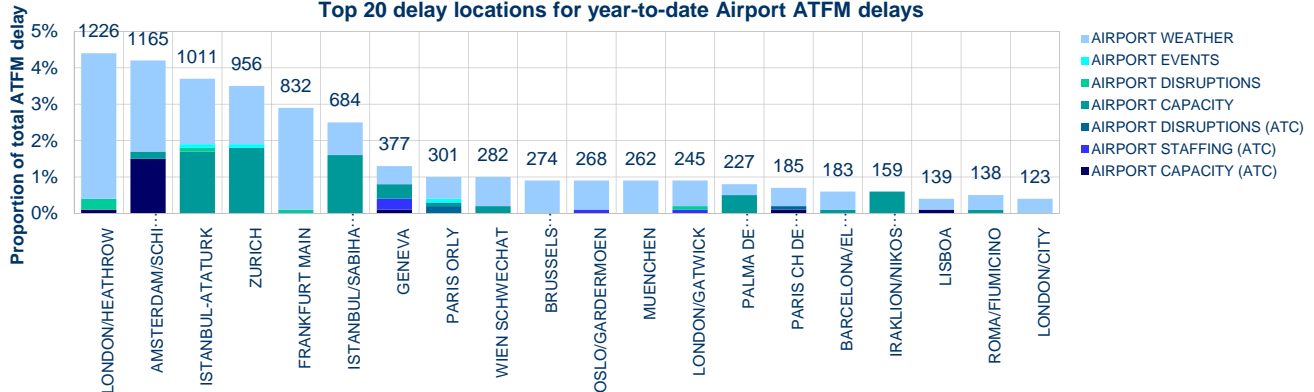
Top 10 Airport delay per flight in December 2014  
YTD Situation



The average delay per flight for Amsterdam/Schiphol increased from 1.39 min/ft in November 2014 to 2.31 min/ft in December, mainly due to weather and airport ATC capacity issues. Istanbul/Ataturk appears in the top 10 mainly due to aerodrome capacity and weather issues. London/Heathrow average delay per flight increased from 0.68 min/ft in November to 1.14 min/ft mainly due to weather, with some airport delay generated by the London ACC technical problems on 12 December.

## AIRPORT/TMA ATFM DELAY YEAR-TO-DATE

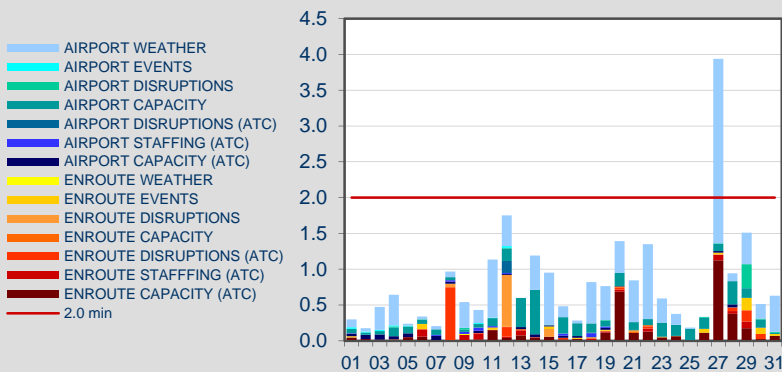
Top 20 delay locations for year-to-date Airport ATFM delays



The top 20 Airport/TMA delay locations have generated **32.1%** of the total ATFM (network) delay in 2014. The top 5 Airport/TMA delay locations have generated **18.7%** of the total ATFM (network) delay in 2014.

## 5. DAILY EVOLUTION

Average delay (min) per flight in December 2014



There was one day in December 2014 where the average delay/ft exceeded the reference value of 2.0 min/ft;

**Saturday 27 December:** De-icing issues at Frankfurt/Main airport (13,519 mins) with snow at Munich (12,398 mins), Geneva (9,560 mins) and Amsterdam/Schiphol (8,687 mins) airports and heavy rain at Istanbul/Ataturk (3,866 mins).

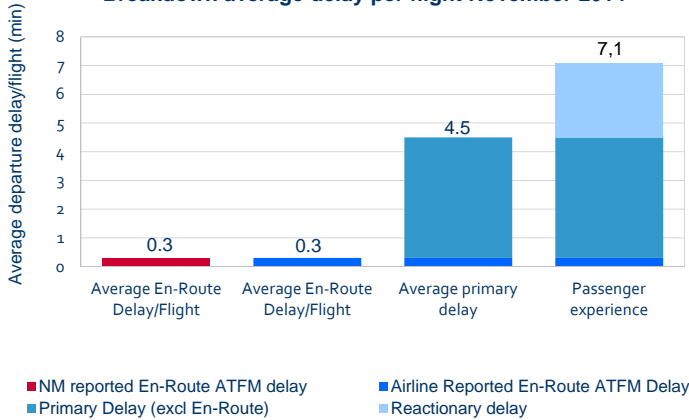
En-route ATC capacity issues at Brest (6,634 mins), Reims (4,174 mins), Lisbon (2,443 mins), Geneva (2,296 mins) and Canarias (2,296 mins) ACCs. En-route ATC staffing at Brest ACC (1,013 mins).



## 6. ALL AIR TRANSPORT DELAYS (Source: CODA)

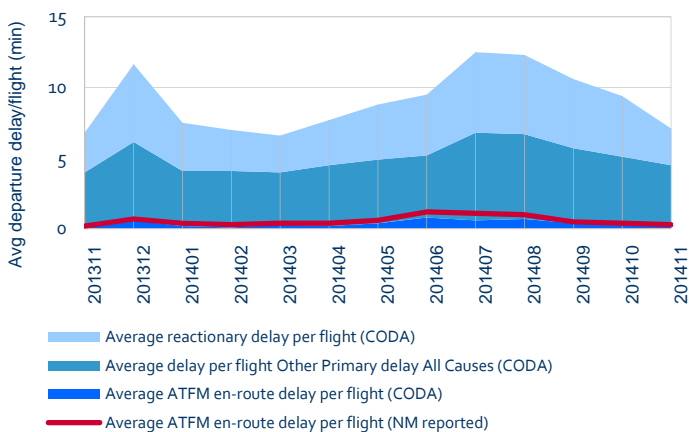
This section presents the all air transport delay situation as seen from the airlines by using the data collected by Central Office for Delay Analysis (CODA) from the airlines. Data coverage is 59% of the commercial flights in the ECAC region for November 2014. ATFM delays reported by airlines may be lower than the NM calculated ATFM delays due to difference in methods: ATFM delays of NM are the (flight) planned “delays”; the airlines report the “actual” experienced ATFM delay on departure. For instance, a flight with an ATFM delay may also have a handling delay absorbed within the ATFM delay. For the airline, a part of this delay is the ATFM delay and the rest is the handling delay.

**Breakdown average delay per flight November 2014**



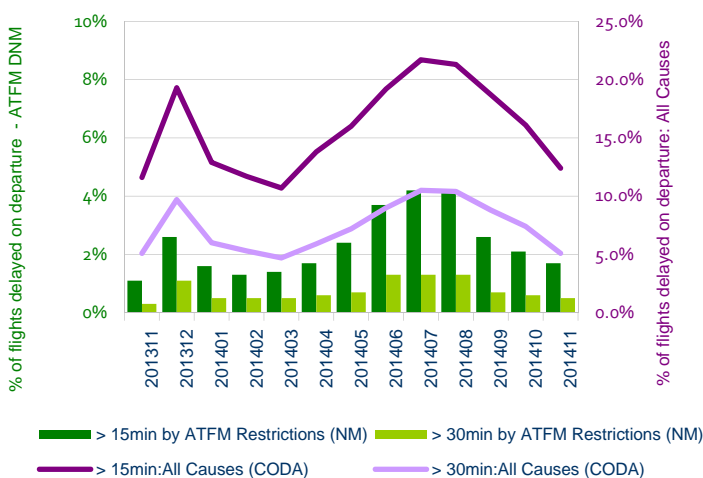
Based on airline data, the average departure delay per flight from all causes was 7.1 minutes per flight, this was a small increase of 1% in comparison to 7.0 minutes per flight in the same month in 2013. Within all air transport delays, en-route ATFM delays were 0.3 minutes/flight in November 2014. Primary delays counted for 63% (or 4.5 min/ft) of which 0.3 min/flight was attributed to en-route ATFM delays, with reactionary delays representing a smaller remaining share of 37% at (2.6 min/ft).

**Average departure delay per flight 2013/2014**



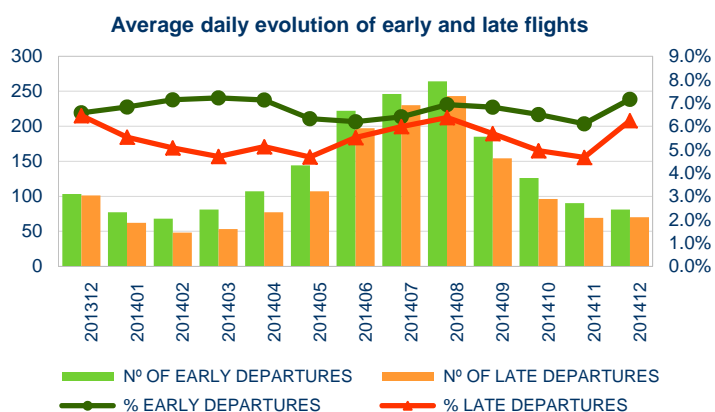
Further analysis of airline data shows that the average en-route ATFM delay was 0.3 minutes per flight. This was the same as the NM reported average en-route ATFM delay of 0.3 minutes per flight.

**Percentage of delayed flights: ATFM & All Causes**



The percentage of flights subject to long ATFM restrictions (those exceeding 15 & 30 minutes) increased with flights with restrictions exceeding 15 minutes at 1.7% (the detail shows a split between 0.9% caused by airport arrival and 0.8% by en-route ATFM restrictions). The percentage of flights delayed from all-causes saw increases (those exceeding 15 minutes) increased by 0.8 percentage points to 12.4% and those (exceeding 30 minutes) remained stable at 5.1%.

## 7. ATFM SLOT ADHERENCE

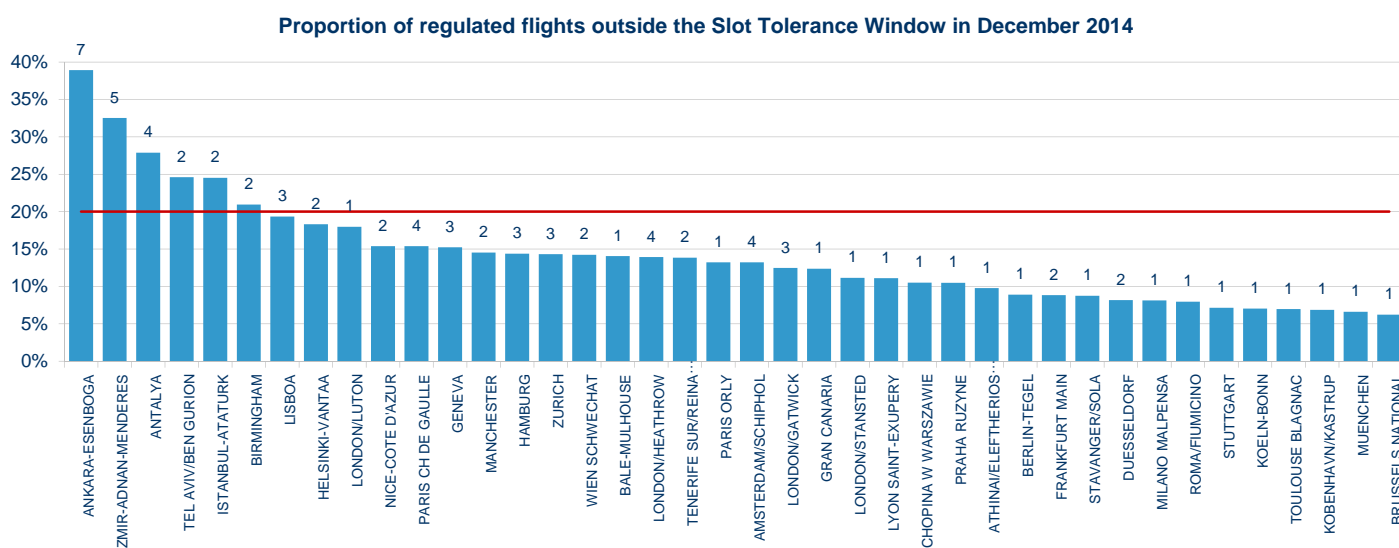


The percentage of early and late departures increases for the first time since August 2014.

The percentage of early departures increased from 6.6% in December 2013 to 7.2% in December 2014.

The percentage of late departures decreased slightly from 6.5% in December 2013 to 6.2% in December 2014.

The chart below shows the airports that have more than 300 regulated flights during the month with their average daily number and proportion of regulated flights that departed outside of the Slot Tolerance Window (STW). Any airport above the red line is non-compliant with the threshold (20%). Those airports with a significant number of departures outside the slot tolerance window can reduce network predictability.



## 8. SIGNIFICANT EVENTS AND ISSUES

### PLANNED EVENTS

#### ACCs

Nine ACCs had either airspace or ATM system related improvement projects during December, all of which were categorised as special, planned events with potential impact on the overall network performance. These events affected the performance as follows:

##### Tampere ACC

Implementation of a new airspace structure in Finland was planned until 7 December with a capacity reduction of 50% with a maximum configuration availability of five sectors.

Implementation of new airspace structure did not generate any delay during December.

##### Langen ACC

Implementation of stripless system (PSS) on sector families EBG 06 went through the last day of the second operational weekend (01 Dec), and the first phase of the transition from 14 December until the end of December. Capacity reductions were estimated at -20%.

The implementation of PSS generated 10,201 minutes of delay in December.

### Bodo and Stavanger ACCs

The implementation and transition of the Southern Airspace Project (SNAP) went through its fourth transition phase until 12 December, with estimated en route capacity reductions of 10%. It had been estimated that the project implementation and the last transition phase would reduce capacities at Trondheim/Vaernes (ENVA), Stavanger/Sola (ENZV), Haugesund/Karmøy (ENHD), and Bergen/Flesland (ENBR) by 10%.

No en-route ATFM delays were generated for either ACC on the account of SNAP. However, as a result of the project implementation and transition, airport ATFM delays were generated at Bergen/Flesland (1,695 mins, 41% of total ATFM monthly delay) and the combined airport reference location for Stavanger/Sola and Haugesund/Karmøy (1,426 mins of delay, 100% of total ATFM monthly delay).

Munich, Zurich, Brest, Bordeaux and Malta ACCs performed training for operational staff for their respective projects. All trainings had been scheduled for the month of December with no estimated impact on the capacity. None of these ACCs generated ATFM delays on the account of the training activities.

## **Airports**

### Special events

#### Local plans

A number of airports undertook infrastructure and technical system improvement work during December. These improvements had at most a minor impact on local airport operations.

#### Completed

- Venice/Marco-Polo participated in live DPI exchange trials on 15 and 16 December (0800-1300 daily).
- Paris/Orly successfully transitioned to ATC Advanced Tower status on 16 December.
- Maneuvering area (runway, taxiways and/or apron) improvements at Frankfurt/Main, Nice/Cote D'Azur, Bergamo/Orio Alserio and Paris/Ch. De Gaulle airports.

#### On-going

- Maneuvering area (runway, taxiways and/or apron) improvements at Barcelona/El Prat, Bari/Palese, Bologna, Dublin, Frankfurt/Main, Gran Canaria, Katowice/Pyrzowice, Krakow/Balice, Lisbon, Manchester, Oslo/Gardermoen, Palma De Mallorca, Paris/Ch. De Gaulle, Rome/Fiumicino, Warsaw/Chopin and Zurich airports;
- Terminal building(s) improvements at Bergen, Budapest/Ferihegy, Gran Canaria, Katowice/Pyrzowice, Krakow/Balice, Munich, Nuremberg, Oslo/Gardermoen and Warsaw/Chopin airports;
- ILS maintenance at Dusseldorf and Palma de Mallorca airport;
- Minimum departure intervals reduction trials at Dublin airport;
- Construction of a new runway at Katowice/Pyrzowice airport;
- PBN implementation (RNP APCH based on GNSS approach) at Belgrade/Nikola Tesla airport.
- High delays at Istanbul/Ataturk, since 14 December a total of 36,414 minutes of delay were recorded due to WIP and runway configuration.

## **DISRUPTIONS**

### Technical

- The London (Swanwick) computer handling Flight Data failed at 1450 UTC on 12 December. The system was restored relatively quickly but it took the rest of the evening to recover the situation. There were 16,169 minutes of delay and a number of flight cancellations were reported, but as yet unquantified. Brest and Paris ACCs applied protective measures and delays were 3,849 minutes and 297 minutes respectively.
- Milan ACC experienced a radar failure on 8 December generating significant delays (18,222 minutes).
- Between 19 and 30 December Bremen ACC had technical issues with new implemented software which generated a total of 7,457 minutes of delay.

### Industrial action

- Industrial action by Lufthansa pilots between 1-2 December (short-haul and continental) and on 4 December (long-haul) resulted in a reduction of approximately 1,500 flights.
- Industrial action by TAP/Air Portugal Cabin Crew on 2 December resulted in a reduction of approximately 95 flights.
- Industrial action took place in Belgium on the 8 and 15 December. On 8 December, an estimated 290 flights did not fly and 1,213 minutes of delay were recorded. On 15 December, an estimated 830 flights did not fly. Amsterdam ACC recorded 2,438 minutes of delay due to traffic onload and there was some impact on Langen ACC.
- Industrial action took place in Italy on the 12 December: Milano, Padova and Brindisi ACCs generated 1,173 minutes of delay; Italian airports generated 1,875 minutes of delay. An estimated 1,000 flights did not fly as direct consequence of the strike.

### Other

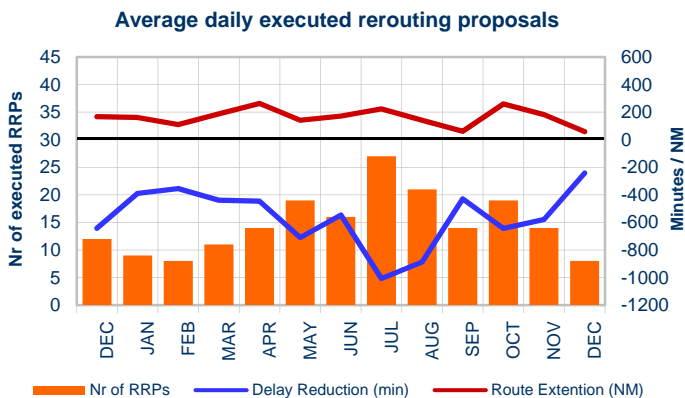
- On Monday 29 December, the runway was blocked at London Gatwick airport due to an aircraft emergency landing, a total of 6,548 minutes of delay.

## 9. NM ADDED VALUE

### RRP DIRECT DELAY SAVINGS

NM proposed alternative routes to an average of 13 flts/day in December 2014, of which 8 were accepted. This saved 242 mins of daily delay at a cost of 59 extra nautical miles.

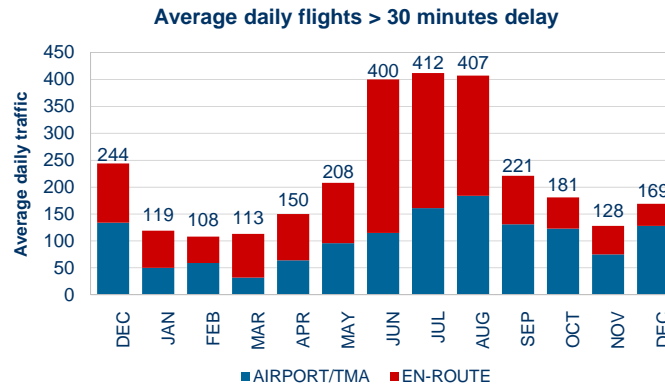
This graph shows the actual daily averages for the previous 13 months period:



### FLIGHTS WITH DELAY > 30'

The number of flights that had more than 30 mins of ATFM delay decreased from 244 flts/day in December 2013 to 169 flts/day in December 2014.

24.3% of flights with more than 30 mins of ATFM delay in December 2014 were en-route and 75.7% were airport.





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Operational Analysis & Reporting,  
Performance, Forecasts and Relations (PFR) Unit,  
Network Manager Directorate (NMD),  
EUROCONTROL,  
96 Rue de la Fusée,  
B - 1130 Brussels

Telephone: +32 (0) 2 729 1155

Fax: +32 (0) 2 729 9189

<mailto:nm.ops.perf@eurocontrol.int>

<http://www.eurocontrol.int/articles/network-operations-monitoring-and-reporting>