Network Manager
nominated by
the European Commission

EUROCONTROL

Monthly Network Operations Report

Analysis - November 2014

Contents

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) 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

Month	Value
NOV	23797
DEC	21876
JAN	22189
FEB	23213
MAR	24186
APR	26475
MAY	28205
JUN	30358
JUL	30593
AUG	30464
SEP	30241
OCT	27942
NOV	23938
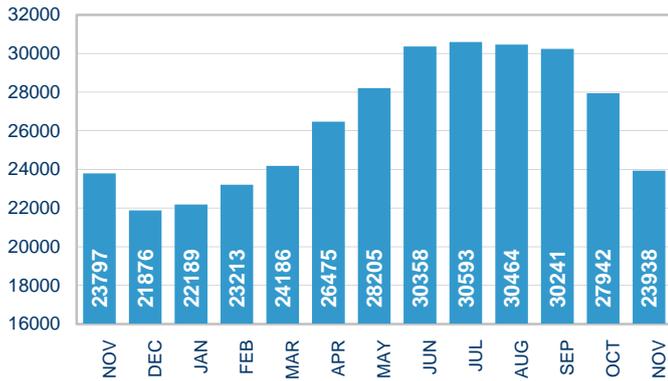
Traffic increased by 0.6% in November 2014 compared to November 2013.

Average daily traffic for last 5 Years

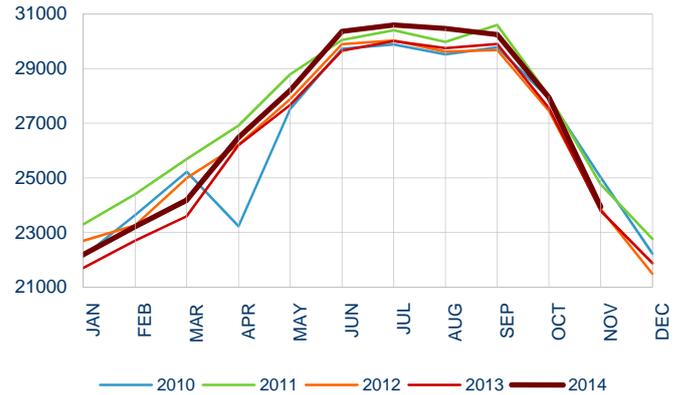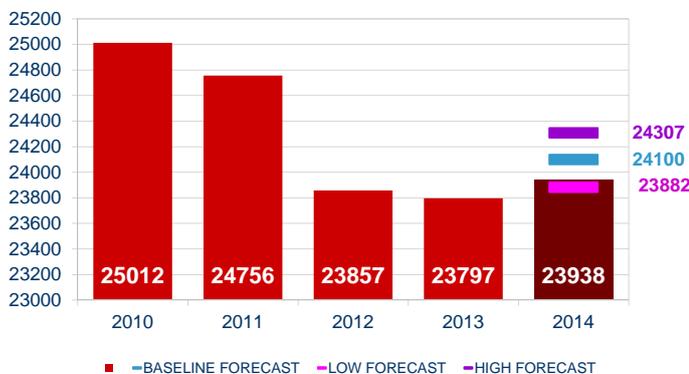Average daily traffic in November remains marginally above 2013 and 2012 levels but below 2010 and 2011.

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

24307
24100
23882

Year	Value
2010	25012
2011	24756
2012	23857
2013	23797
2014	23938

■ ─BASELINE FORECAST   ─LOW FORECAST   ─HIGH FORECAST

12 months rolling traffic trend

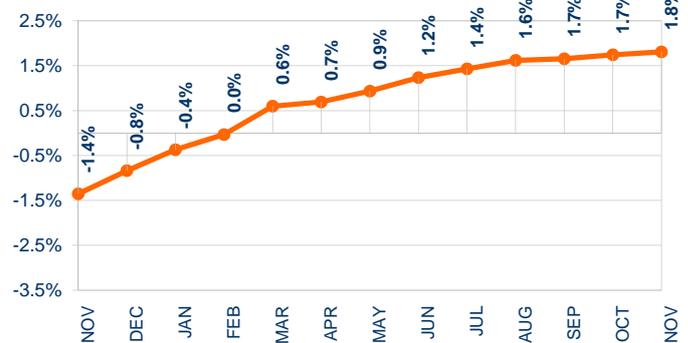| Month	Value
NOV	-1.4%
DEC	-0.8%
JAN	-0.4%
FEB	0.0%
MAR	0.6%
APR	0.7%
MAY	0.9%
JUN	1.2%
JUL	1.4%
AUG	1.6%
SEP	1.7%
OCT	1.7%
NOV	1.8%

November traffic was on the low-side of the forecast range.
The low-cost segment maintained its dominant position with an increase of 7.6% compared to November 2013. Apart from the all-cargo segment which showed a small increase of 0.1%, all the other segments declined. The charter segment slumped 15.7%; business aviation and traditional scheduled were both down by 3% and 1% respectively.
Turkey, Germany and United Kingdom were the top contributors to local[1] traffic on the European network in November (vs Nov 2013) with 280 additional daily flights between them. Belgium/Luxembourg, Portugal, Italy, Greece and Ireland each added 50 daily flights followed by Poland, Romania and the Netherlands, with each state adding 30 daily flights to the network. At the other end of the scale, Ukraine lost 190 daily flights and was followed by France with 75 fewer daily flights (mainly internal). Norway, Sweden and Denmark together were down 140 daily flights compared with November 2013.
The overall traffic decrease in Ukraine was 61% representing a fall of 36% in the state's local traffic and a fall of 88% in its overflights (vs. Nov 2013). Re-routings to avoid the Ukrainian airspace led to further increases of overflights in the neighbouring countries namely Bulgaria (+40%), Turkey (+28%), Romania (+20%). On the other hand, overflights decreased by 64% for Moldova and by 29% for Armenia, with Azerbaijan being also affected by the situation in Ukraine.
FYROM continues to recover traffic following the re-opening of the KFOR sector and went from a 34% overflights growth in April to 57% growth in November (vs. 2013). Closure of the Libyan airspace resulted in a decline of 33% overflights for Malta.

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

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 December 2013 to November 2014 was 1.8% higher than the average from December 2012 to November 2013.

The trend shows a continuous recovery in traffic that dates back to April 2013.

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[1] Internals, international departures and arrivals, excluding overflights

Four of the top 10 airports recorded positive traffic growth compared to November 2013. Overall, the largest traffic increases in November 2014 were at London/Stansted, Istanbul/Sabiha Gokcen, Athens, London/City, Lisbon and Brussels/National. The largest decreases in traffic were at Bergen/Flesland, Lyon/St Exupery, Marseille/Provence, Toulouse/Blagnac and Milan/Malpensa.

Five of the top 10 aircraft operators had more traffic compared to November 2013. Overall, the operators with the highest traffic growth were Germanwings, Aegean Airlines, CityFlyer Express, Vueling and Wizz Air. Ukraine International, HOP! and Lufthansa recorded the highest traffic reduction compared to November 2013.

The transfer of certain Lufthansa flights to Germanwings 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 November 2013 following an increase in fleet size.

N°	ADEP	ADEP NAME	201411	%
1	EGLL	LONDON/HEATHROW	632	-1.6%
2	EDDF	FRANKFURT MAIN	618	-1.9%
3	LFPG	PARIS CH DE GAULLE	607	-0.8%
4	LTBA	ISTANBUL-ATATURK	578	7.2%
5	EHAM	AMSTERDAM/SCHIPHOL	574	2.9%
6	EDDM	MUENCHEN	512	0.0%
7	LEMD	ADOLFO SUAREZ MADRID-BARAJA	462	4.8%
8	LIRF	ROMA/FIUMICINO	391	5.4%
9	ENGM	OSLO/GARDERMOEN	328	-3.8%
10	EKCH	KOBENHAVN/KASTRUP	327	-3.5%
11	LSZH	ZURICH	326	1.2%
12	LEBL	BARCELONA/EL PRAT	323	-1.5%
13	LOWW	WIEN SCHWECHAT	320	-1.5%
14	ESSA	STOCKHOLM-ARLANDA	308	-3.1%
15	LFPO	PARIS ORLY	296	-3.0%
16	EBBR	BRUSSELS NATIONAL	295	10.1%
17	EGKK	LONDON/GATWICK	291	1.0%
18	EDDL	DUESSELDORF	274	-0.4%
19	EDDT	BERLIN-TEGEL	244	1.2%
20	LTFJ	ISTANBUL/SABIHA GOKCEN	243	18.0%
21	EIDW	DUBLIN	231	9.5%
22	EFHK	HELSINKI-VANTAA	224	0.0%
23	LSGG	GENEVA	219	1.4%
24	EGSS	LONDON/STANSTED	210	18.0%
25	EDDH	HAMBURG	201	8.1%
26	EGCC	MANCHESTER	199	-0.5%
27	LPPT	LISBOA	196	11.4%
28	LIMC	MILANO MALPENSA	194	-4.9%
29	EPWA	CHOPINA W WARSZAWIE	180	7.1%
30	LGAV	ATHINAI/ELEFTHERIOS VENIZELOS	174	16.0%
31	EDDK	KOELN-BONN	152	0.7%
32	LIML	MILANO LINATE	152	0.0%
33	GCLP	GRAN CANARIA	150	-2.6%
34	EDDS	STUTTGART	145	0.0%
35	LKPR	PRAHA RUZYNE	142	-3.4%
36	LTAI	ANTALYA	138	7.0%
37	LFMN	NICE-COTE D'AZUR	137	-3.5%
38	EGPH	EDINBURGH	134	0.0%
39	LFLL	LYON SAINT-EXUPERY	134	-6.3%
40	ENBR	BERGEN/FLESLAND	131	-8.4%
41	EGGW	LONDON/LUTON	123	6.0%
42	LFML	MARSEILLE PROVENCE	122	-6.2%
43	LROP	BUCURESTI/HENRI COANDA	122	0.0%
44	LLBG	TEL AVIV/BEN GURION	117	4.5%
45	LTAC	ANKARA-ESENBOGA	117	0.0%
46	EGBB	BIRMINGHAM	116	4.5%
47	LFBO	TOULOUSE BLAGNAC	116	-5.7%
48	EGLC	LONDON/CITY	116	12.6%
49	LEPA	PALMA DE MALLORCA	115	2.7%
50	ENZV	STAVANGER/SOLA	112	0.0%
	TOTALS and % TOTAL TRAFFIC		12568	52.5%

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

N°	ICAO	AIR OPERATOR	201411	%
1	DLH	DEUTSCHE LUFTHANSA	1381	-13.3%
2	RYR	RYANAIR	1284	13.1%
3	THY	TURKISH AIRLINES	1064	5.3%
4	AFR	AIR FRANCE	914	-4.4%
5	EZY	EASYJET	893	2.8%
6	SAS	SCANDINAVIAN AIRLINES SYSTEM	844	-1.7%
7	BAW	BRITISH AIRWAYS	625	-1.6%
8	KLM	KLM ROYAL DUTCH AIRL	573	-0.1%
9	BER	AIR BERLIN, INC.	501	2.2%
10	AZA	ALITALIA	465	3.9%
11	NAX	NORWEGIAN AIR SHUTTLE	448	-1.7%
12	GWI	GERMAN WINGS	398	61.6%
13	WIF	WIDEROE	366	0.9%
14	SWR	SWISS INTERNATIONAL	362	-5.5%
15	BEE	JERSEY EUROPEAN T/A FLYBE	360	5.7%
16	VLG	VUELING AIRLINES SA	351	21.2%
17	PGT	PEGASUS HAVA TASI.	307	12.3%
18	AUA	AUSTRIAN AIRLINES	305	-5.8%
19	TAP	TAP/AIR PORTUGAL	266	-0.8%
20	WZZ	WIZZ AIR	257	20.3%
21	AFL	AEROFLOT-RUSSIAN	238	-0.7%
22	HOP	HOP (MERGE OF BZH + RAE + RLA)	216	-14.9%
23	IBE	IBERIA	204	1.3%
24	AEA	AIR EUROPA	200	10.1%
25	ANE	AIR NOSTRUM	199	8.7%
26	BEL	BRUSSELS AIRLINES	190	6.1%
27	AEE	AEGEAN AIRLINES	184	48.9%
28	LOT	LOT-POLISH AIRLINES	172	-6.4%
29	UAE	EMIRATES	170	16.4%
30	EIN	AER LINGUS TEORANTA	163	-3.7%
31	RAM	ROYAL AIR MAROC	161	2.7%
32	FCM	FINNISH COMMUTER AIRLINES OY(RENAME)	150	-6.8%
33	FIN	FINNAIR OY	142	8.3%
34	BCS	EUROPEAN AIR TRANSP.	132	0.5%
35	QTR	QATAR AIRWAYS COMP.	125	13.9%
36	UAL	UNITED AIRLINES INC.	120	-3.4%
37	EZS	EASY JET SWITZERLAND	116	-4.2%
38	SHT	BAW SHUTTLE	108	-6.4%
39	NJE	NETJETS	102	-4.8%
40	DAL	DELTA AIR LINES INC.	100	2.2%
41	ROT	TAROM	97	1.7%
42	BTI	AIR BALTIC CORPORAT.	96	-7.7%
43	LOG	LOGANAIR	92	8.2%
44	SXS	SUNEXPRESS AIRLINES	91	5.5%
45	AUI	UKRAINE INTERNATIONA	88	-17.6%
46	TOM	THOMSON FLY LTD	86	-2.0%
47	VIR	VIRGIN ATLANTIC LTD.	84	3.6%
48	TAY	TNT INTERNATIONAL	82	-0.7%
49	CFE	CITYFLYER EXPRESS	82	21.6%
50	EZE	EASTERN AIRWAYS UK	81	-0.7%
	TOTALS and % TOTAL TRAFFIC		16035	66.9%

Top 50 Air Operators with average daily traffic and percentage

N°	ICAO	AIR OPERATOR	201411	%
		Unidentified	1997	-3.4%

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 November 2014 compared to the same month last year**

▦	<= 0.0%
▦	0.1% - 5.0%
▦	5.1% - 10.0%
▦	10.1% - 15.0%
▦	15.1% - 20.0%
▦	20.1% - 30.0%
▦	> 30.0%

Lower Airspaces

Maintained by : NMD/PFR/OAR   Date: 02/Dec/2014
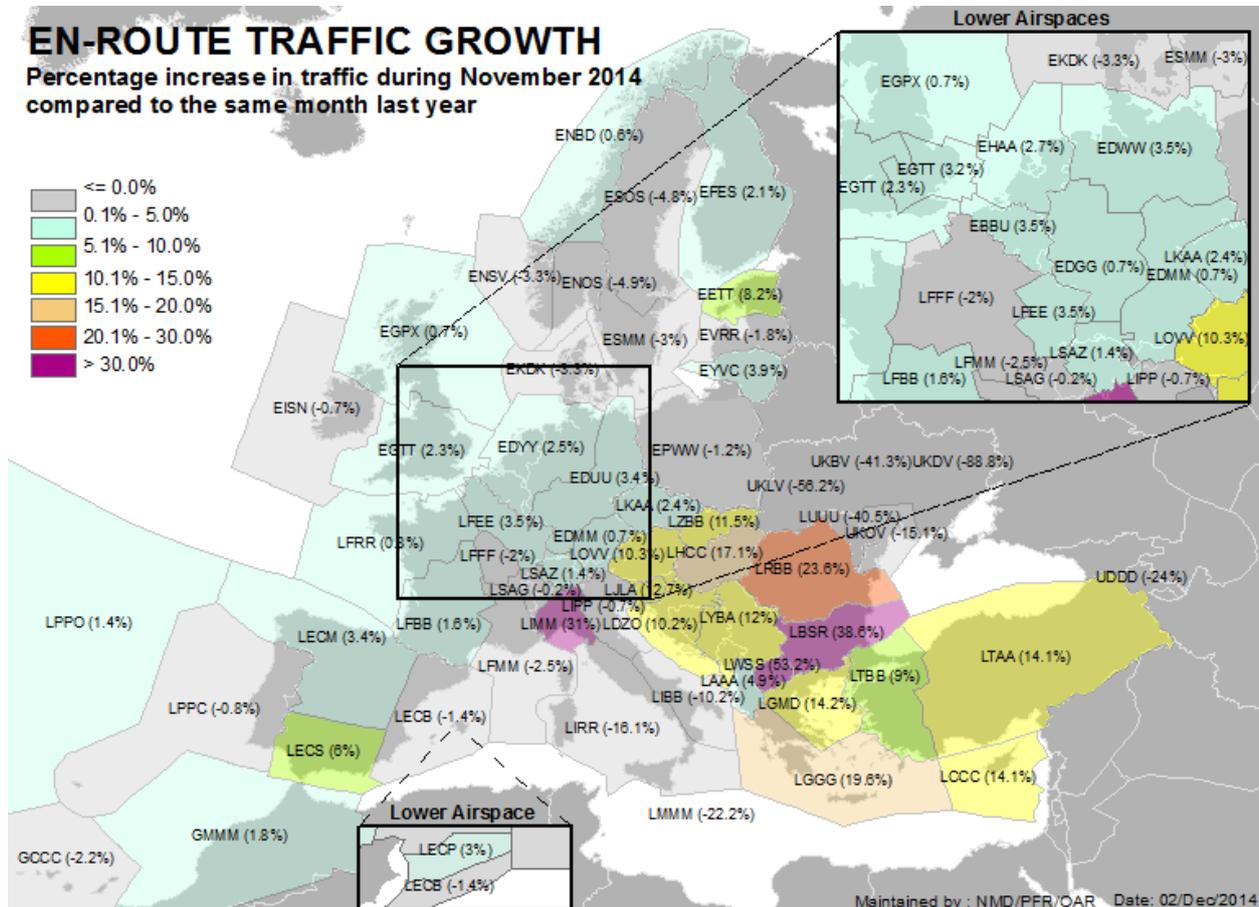
N°	ASP ID	ASP NAME	201411	%	N°	ASP ID	ASP NAME	201411	%
1	BIRDACC	REYKJAVIK ACC	269	0.0%	39	LFBBALL	BORDEAUX ALL ACC	1889	1.6%
2	DAAAACC	ALGERS ACC	420	0.0%	40	LFEEACC	REIMS U/ACC	2185	3.5%
3	DTTCACC	TUNIS ACC	241	0.0%	41	LFFFALL	PARIS ALL ACC	2778	-2.1%
4	EBBUACC	BRUSSELS CANAC	1396	3.5%	42	LFMMACC	MARSEILLE ACC	2096	-2.6%
5	EDGGALL	LANGEN ACC_FIR	3148	0.7%	43	LFRRACC	BREST U/ACC	2072	0.8%
6	EDMMACC	MUNCHEN ACC	2685	0.7%	44	LGGGACC	ATHINAI CONTROL	936	19.5%
7	EDUUUAC	KARLSRUHE UAC	4118	3.4%	45	LGMDACC	MAKEDONIA CONTROL	717	14.2%
8	EDWWACC	BREMEN ACC	1640	3.5%	46	LHCCACC	BUDAPEST ACC	1514	17.1%
9	EDYYUAC	MAASTRICHT UAC	4210	2.5%	47	LIBBACC	BRINDISI ACC	531	-10.2%
10	EETTACC	TALLIN ACC	475	8.2%	48	LIMMACC	MILANO ACC	1761	31.0%
11	EFESACC	TAMPERE ACC	455	2.0%	49	LIPPACC	PADOVA ACC	1393	-0.7%
12	EGGXOCA	SHANWICK OACC	1015	2.3%	50	LIRRACC	ROMA ACC	1742	-16.1%
13	EGPXALL	SCOTTISH ACC	2184	0.7%	51	LJLAACC	LJUBLJANA ACC	566	12.8%
14	EGTTACC	LONDON ACC	4420	2.3%	52	LKAAACC	PRAGUE ACC	1606	2.4%
15	EGTTTC	LONDON TMA TC	3252	3.2%	53	LLLLACC	TEL AVIV ACC	292	0.0%
16	EHAAACC	AMSTERDAM ACC(245-)	1348	2.7%	54	LMMMACC	MALTA ACC	212	-22.3%
17	EIDWACC	DUBLIN ACC	495	7.8%	55	LOVVACC	WIEN ACC	1757	10.3%
18	EISNACC	SHANNON ACC	935	-0.7%	56	LPPCACC	LISBOA ACC/UAC	1111	-0.8%
19	EKDKACC	COPENHAGEN ACC	1366	-3.3%	57	LPPOOAC	SANTA MARIA OACC	287	1.4%
20	ENBDACC	BODO ACC	580	0.7%	58	LQSBACC	BOSNIA-HERZEGOVINA	43	2050.0%
21	ENOSACC	OSLO ATCC	904	-4.9%	59	LRBBACC	BUCURESTI ACC	1437	23.7%
22	ENSVACC	STAVANGER ATCC	654	-3.3%	60	LSAGACC	GENEVA ACC	1319	-0.2%
23	EPWWACC	WARSZAWA ACC	1593	-1.1%	61	LSAZACC	ZURICH ACC	1716	1.4%
24	ESMMACC	MALMO ACC	1298	-3.0%	62	LTAAACC	ANKARA ACC	2120	14.1%
25	ESOSACC	STOCKHOLM ACC	1057	-4.8%	63	LTBBACC	ISTANBUL ACC	2141	9.0%
26	EVRRACC	RIGA ACC	580	-1.9%	64	LUUUACC	CHISINAU ACC	96	-40.4%
27	EYVCACC	VILNIUS ACC	542	3.8%	65	LWSSACC	SKOPJE ACC	267	53.5%
28	GCCCACC	CANARIAS ACC/FIC	804	-2.2%	66	LYBAACC	BEOGRADE ACC	1132	12.0%
29	GMMMACC	CASABLANCA ACC	1003	1.7%	67	LZBBACC	BRATISLAVA ACC	956	11.6%
30	HECCACC	CAIROACC	686	0.0%	68	OLBBACC	BEIRUT ACC	123	0.0%
31	LAAAACC	TIRANA ACC	405	4.9%	69	UDDDACC	YEREVAN ACC	113	-24.2%
32	LBSRACC	SOFIA ACC	1567	38.6%	70	UGGGACC	TBILISI ACC	324	0.0%
33	LCCCACC	NICOSIA ACC	778	14.1%	71	UKBVACC	KIEV ACC	359	-41.2%
34	LDZOACC	ZAGREB ACC	989	10.3%	72	UKDVACC	DNIPROPETROVSK ACC	48	-88.8%
35	LECBACC	BARCELONA ACC	1437	-1.4%	73	UKLVACC	L'VIV ACC	194	-56.2%
36	LECMALL	MADRID ALL ACC	2333	3.4%	74	UKOVACC	ODESSA ACC	202	-15.1%
37	LECPACC	PALMA ACC	298	3.1%	75	UMMVACC	MINSK ACC	627	0.0%
38	LECSACC	SEVILLA ACC	828	5.9%	76				

The large traffic changes in the Italian ACCs are due to resectorisation in June and November 2014.

Traffic avoiding the Ukraine airspace continues to distort traditional traffic flows with Sofia and Bucharest ACCs showing in excess of 20% traffic growth in November due to traffic rerouting, but with a significant traffic decline continuing in Chisinau and Yerevan ACCs.

Skopje ACC traffic increase continued in November 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.

2. ATFM DELAY AND ATTRIBUTIONS

Average daily ATFM delays
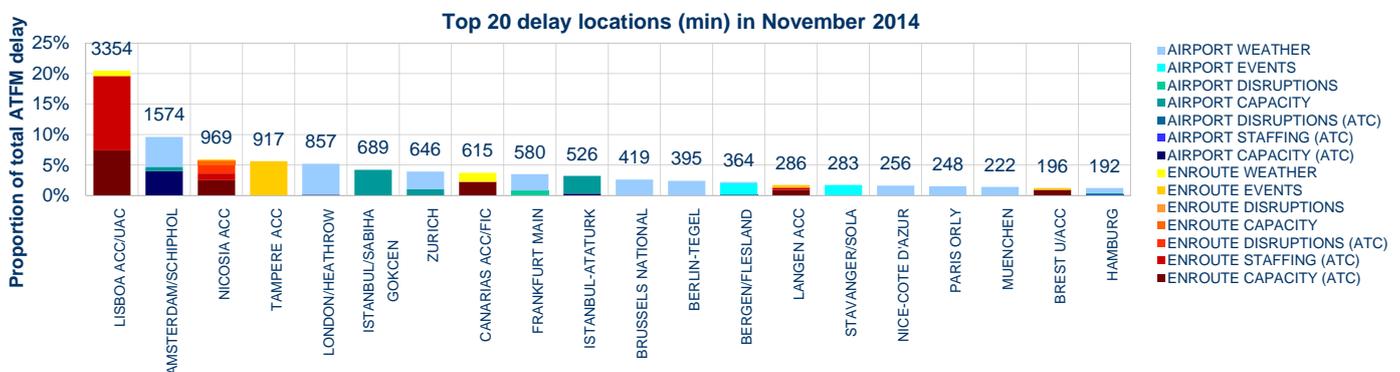

Average daily ATFM delays
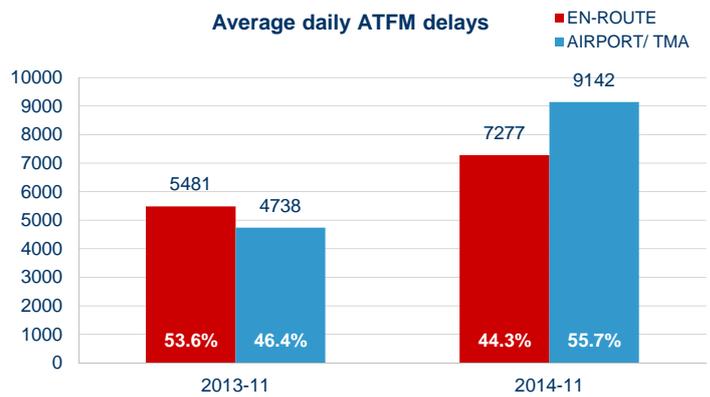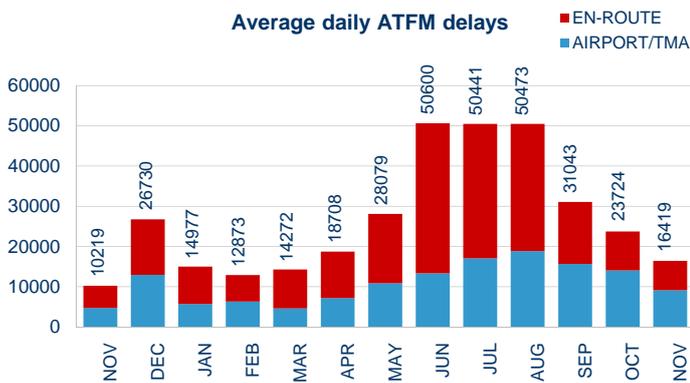
Total ATFM delays in November 2014 increased by 60.7% compared to November 2013.

En-route ATFM delays increased by 32.8% and airport ATFM delays increased by 93% compared to November 2013.

Monthly ATFM delays trend

Proportion of ATFM delays in November 2014
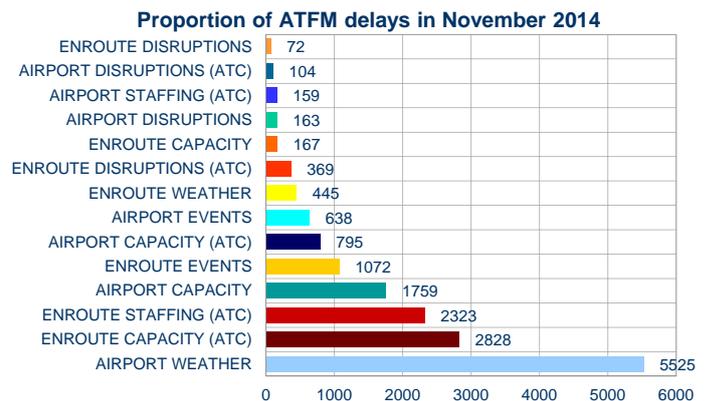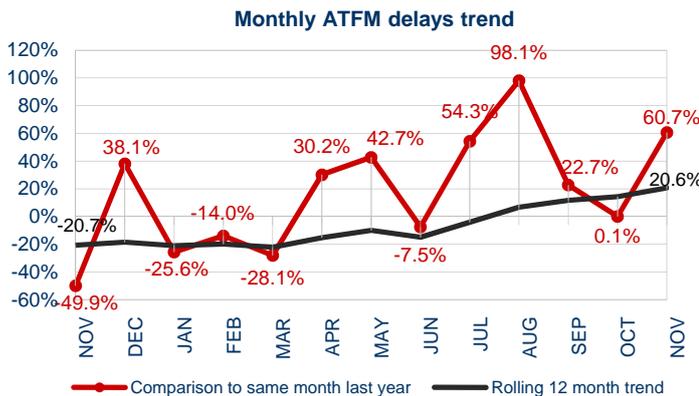
The 12-month rolling trend of ATFM delay continues to show increasing levels of delay for the fourth month in succession, influenced in particular by delays between June and September and then November 2014.

Airport weather (33.7%) was the biggest contributor to ATFM delays in November, followed by en-route ATC capacity (17.2%), en-route ATC staffing (14.2%) and airport capacity (10.7%).

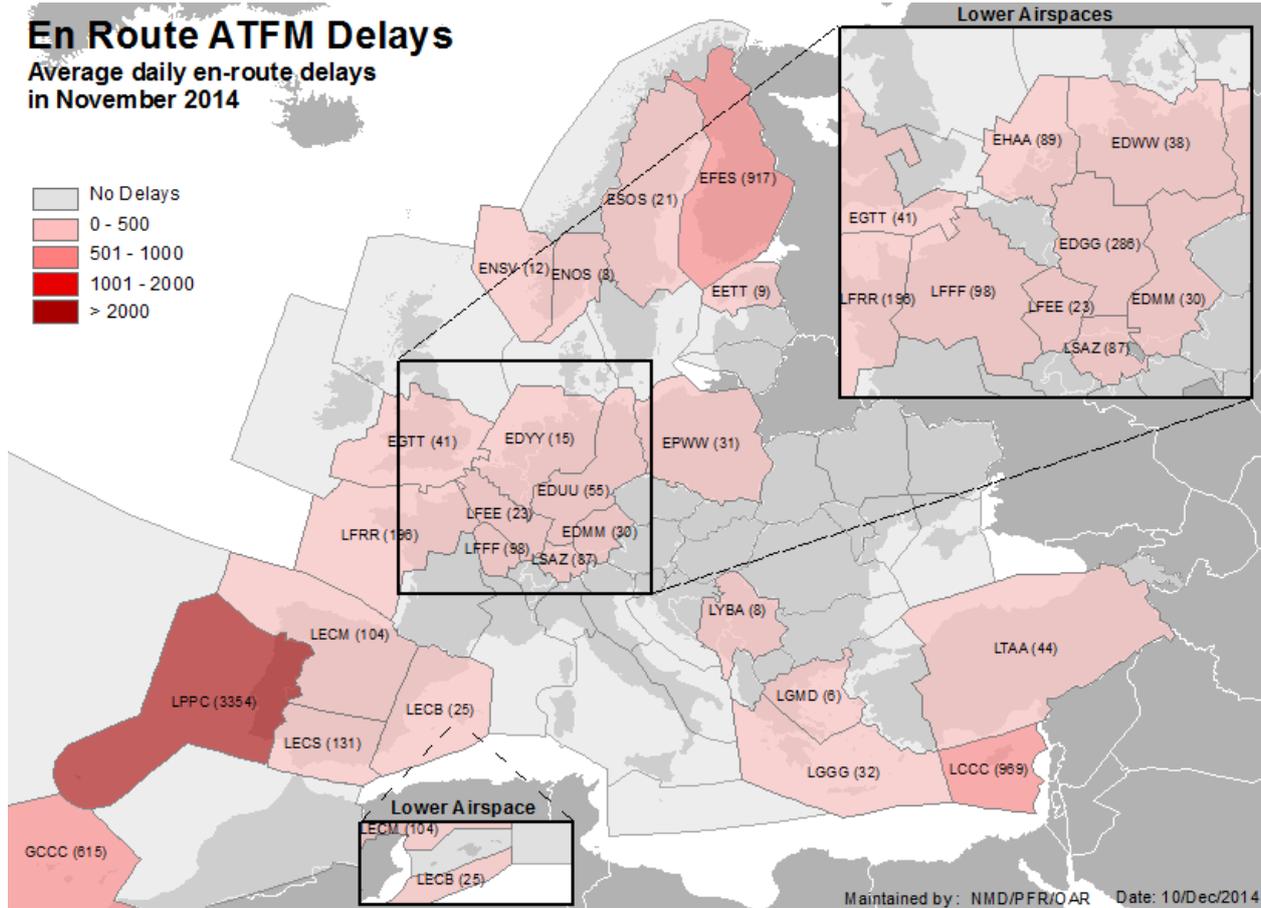**Top 20 delay locations (min) in November 2014**

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.

- Lisbon ACC was particularly impacted by en-route ATC capacity and staffing issues. Jetstreams during the middle of the month contributed to an increase in demand.
- Weather impacted airport operations, particularly at London/Heathrow, Amsterdam/Schiphol, Zurich, Frankfurt/Main, Brussels/National and Berlin/Tegel airports. Amsterdam/Schiphol was also affected by airport ATC capacity issues.
- Nicosia ACC generated some delay due to ATC equipment (ATM system upgrade), en-route ATC capacity and ATC staffing issues.
- Reorganisation of Tampere ACC airspace generated en-route ATFM delays. Implementation of Southern Norway Airspace Project (SNAP) generated delays at Bergen/Flesland and Stavanger/Sola airports.
- Istanbul/Sabiha Gokcen, Istanbul/Ataturk (runway configuration) and Zurich airports experienced delays due to aerodrome capacity issues.
- Canarias, Langen and Brest ACCs experienced ATC capacity issues. Canarias ACC generated additional delays due to en-route weather (strong winds at Tenerife/South airport).
- Langen ACC (PSS implementation) and Brest ACC (operational training) generated some delays due to ATM system improvements.

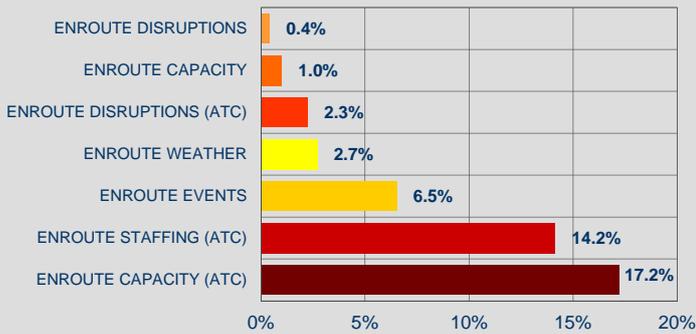# 3. EN-ROUTE ATFM DELAYS
EN-ROUTE ATFM DELAY PER LOCATION

En Route ATFM Delays
Average daily en-route delays
in November 2014

No Delays
0 - 500
501 - 1000
1001 - 2000
> 2000

Lower Airspaces

EHAA (89)   EDWW (38)
EGTT (41)
EDGG (286)
LFRR (196)   LFFF (98)   LFEE (23)   EDMM (30)
LSAZ (87)

ZSOS (21)   EFES (917)
ENSV (12)   ENOS (8)   EETT (9)
EGTT (41)   EDYY (15)   EPWW (31)
EDUU (55)
LFEE (23)   EDMM (30)
LFRR (196)   LFFF (98)   LSAZ (87)
LYBA (8)
LECM (104)   LTAA (44)
LPPC (3354)   LECB (25)   LGMD (6)
LECS (131)
LGGG (32)   LCCC (969)
GCCC (615)

Lower Airspace
LECM (104)
LECB (25)

Maintained by : NMD/PFR/OAR   Date: 10/Dec/2014

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

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

3354	969	917	615	286	196	131	104	98	89	87	55	44	41	38	32	31	30	25	23

LISBOA ACC/UAC, NICOSIA ACC, TAMPERE ACC, CANARIAS ACC/FIC, LANGEN ACC, BREST U/ACC, SEVILLA ACC, MADRID ALL ACC, PARIS ALL ACC, AMSTERDAM..., ZURICH ACC, KARLSRUHE UAC, ANKARA ACC, LONDON ACC, BREMEN ACC, ATHINAI CONTROL, WARSZAWA ACC, MUNCHEN ACC, BARCELONA ACC, REIMS U/ACC

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 **43.7%** of the monthly total (network) ATFM delay.
The top 5 en-route delay locations generated **37.4%** of the monthly total (network) ATFM delay.

EN-ROUTE ATFM DELAY PER DELAY GROUP

**Reasons for en-route delays in November 2014**

ENROUTE DISRUPTIONS	0.4%
ENROUTE CAPACITY	1.0%
ENROUTE DISRUPTIONS (ATC)	2.3%
ENROUTE WEATHER	2.7%
ENROUTE EVENTS	6.5%
ENROUTE STAFFING (ATC)	14.2%
ENROUTE CAPACITY (ATC)	17.2%

En-route delays accounted for 44.3% of all ATFM delays. Most of this delay was caused by en-route ATC capacity, en-route ATC staffing and en-route events issues as explained in detail below. The other causes were:

- **En-route Weather**: Operations were impacted at Canarias ACC (thunderstorms, strong winds and turbulence) and Lisbon ACC (turbulence in UIR).
- **En-route Disruptions (ATC)**: Nicosia ACC (ATM system upgrade, 6,928 mins) and London ACC (radar problems, 1,241 mins) experienced technical issues
- **En-route Capacity**: Nicosia ACC (3,522 mins) generated delays due to military activity.
- **En-route Disruptions**: Madrid ACC (777 mins) and Canarias (533 mins) ACC applied protective measures due to Lisbon ACC staffing issues.

Top 10 delay locations for En-route Capacity (ATC) in November 2014
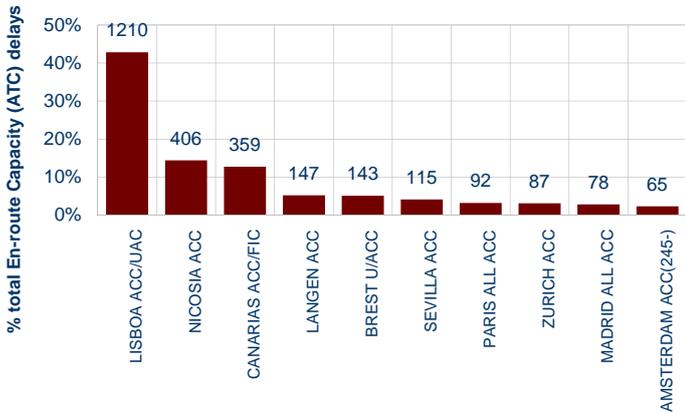
Top 10 delay locations for En-route Staffing (ATC) in November 2014
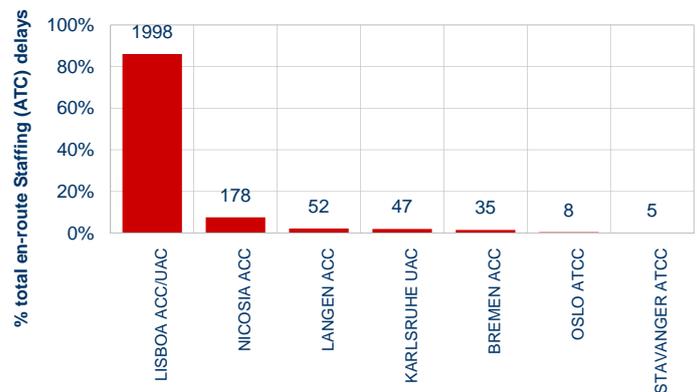
Jetstreams during the middle of the month contributed to an increase in demand in Lisbon ACC, with increased traffic also observed in Canarias, Seville and Madrid ACCs.

73% of the top 3 ACCs en-route ATC capacity delay was generated between Thursday and Sunday.

Both Lisbon and Nicosia ACCs staffing delays increased significantly from October 2014. 85% of the network's en-route ATC staffing delay in November was generated by Lisbon ACC.
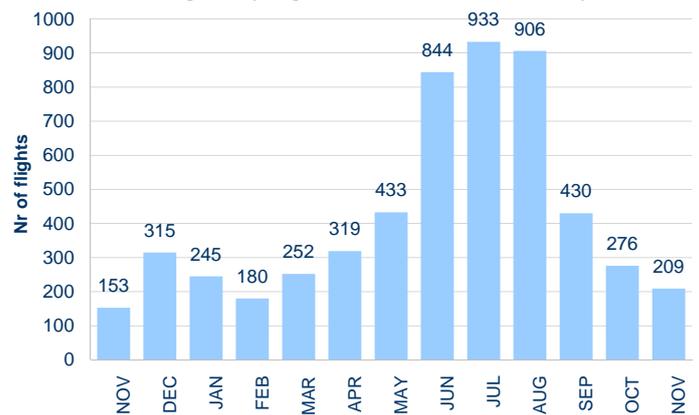
Top delay locations for En-route Events in November 2014

Average daily flights >= 15 min en-route delay
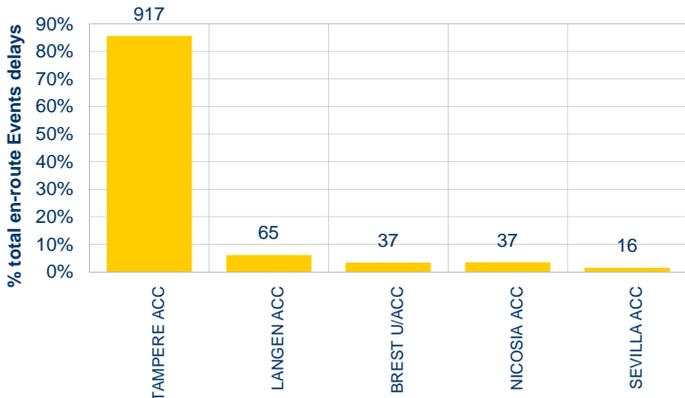
Reorganisation of Tampere ACC airspace generated delays. Nicosia ACC generated some delay due to ATM system upgrade.
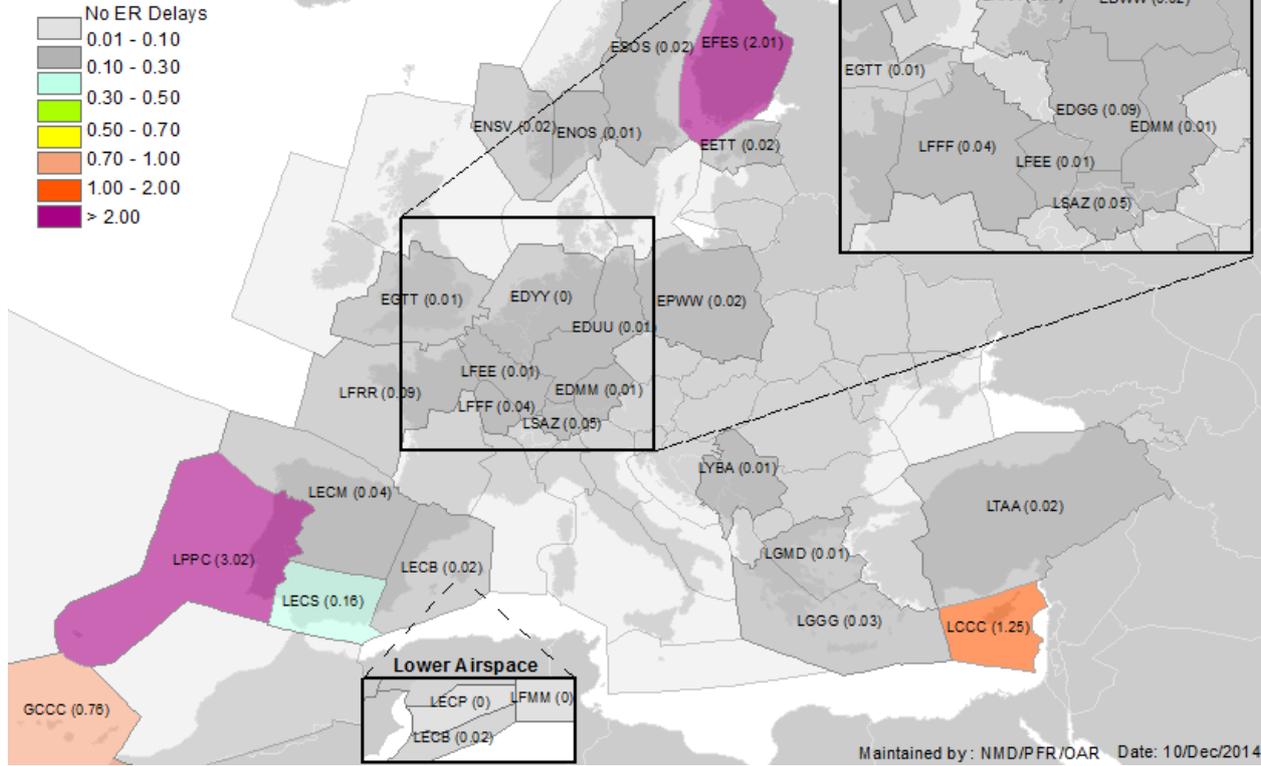
An average of 209 flights per day received an en-route delay of at least 15 mins in November 2014. The corresponding figure for November 2013 was 153 flights.
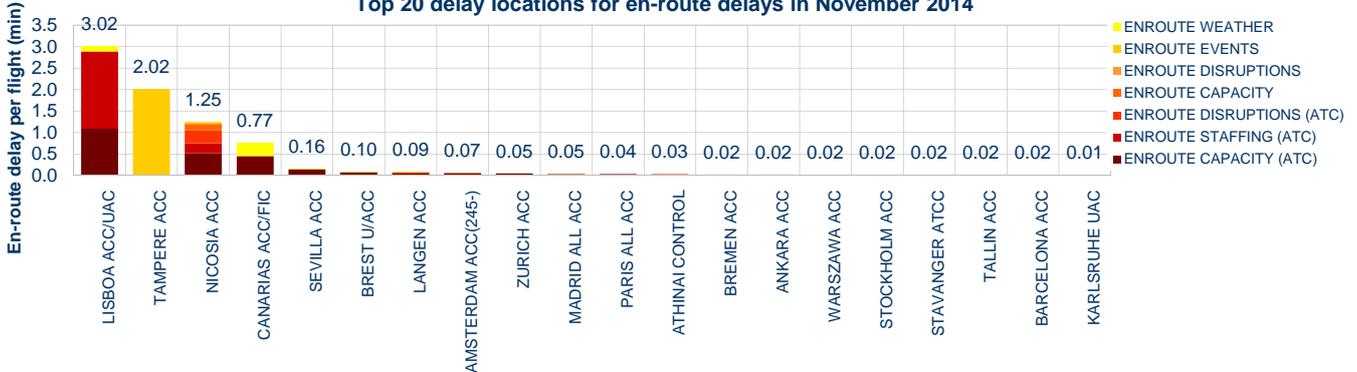
EN-ROUTE ATFM DELAY PER FLIGHT

ER DELAY PER FLIGHT

Average en route delay per flight in November 2014

Legend:
- No ER Delays
- 0.01 - 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.70
- 0.70 - 1.00
- 1.00 - 2.00
- > 2.00

Lower Airspaces

EHAA (0.07) · EDWW (0.02) · EGTT (0.01) · EDGG (0.09) · EDMM (0.01) · LFFF (0.04) · LFEE (0.01) · LSAZ (0.05)

ESOS (0.02) · EFES (2.01) · ENSV (0.02) · ENOS (0.01) · EETT (0.02)

EGTT (0.01) · EDYY (0) · EPWW (0.02) · EDUU (0.01) · LFEE (0.01) · EDMM (0.01) · LFRR (0.09) · LFFF (0.04) · LSAZ (0.05)

LECM (0.04) · LPPC (3.02) · LECS (0.16) · LECB (0.02) · GCCC (0.76)

LYBA (0.01) · LTAA (0.02) · LGMD (0.01) · LGGG (0.03) · LCCC (1.25)

Lower Airspace
LECP (0) · LFMM (0) · LECB (0.02)

Maintained by : NMD/PFR/OAR   Date: 10/Dec/2014

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

En-route delay per flight (min)

Legend:
- ENROUTE WEATHER
- ENROUTE EVENTS
- ENROUTE DISRUPTIONS
- ENROUTE CAPACITY
- ENROUTE DISRUPTIONS (ATC)
- ENROUTE STAFFING (ATC)
- ENROUTE CAPACITY (ATC)

Location	Value
LISBOA ACC/UAC	3.02
TAMPERE ACC	2.02
NICOSIA ACC	1.25
CANARIAS ACC/FIC	0.77
SEVILLA ACC	0.16
BREST U/ACC	0.10
LANGEN ACC	0.09
AMSTERDAM ACC(245-)	0.07
ZURICH ACC	0.05
MADRID ALL ACC	0.05
PARIS ALL ACC	0.04
ATHINAI CONTROL	0.03
BREMEN ACC	0.02
ANKARA ACC	0.02
WARSZAWA ACC	0.02
STOCKHOLM ACC	0.02
STAVANGER ATCC	0.02
TALLIN ACC	0.02
BARCELONA ACC	0.02
KARLSRUHE UAC	0.01

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 continues its upward trend. The average delay per flight increased from 0.2 min/flt in September 2014 to 0.84 min/flt in October and to 3.02 min/flt in November.

Canarias ACC's average en-route delay per flight increased from 0.18 min/flt in October to 0.77 min/flt in November.

Nicosia ACC's average en-route delay per flight decreased from 1.45 min/flt in October to 1.25 min/flt in November. It remains well below the November 2013 level of 2.18 min/flt.

EN-ROUTE ATFM DELAY YEAR-TO-DATE

Top 20 delay locations for year-to-date en-route ATFM delays
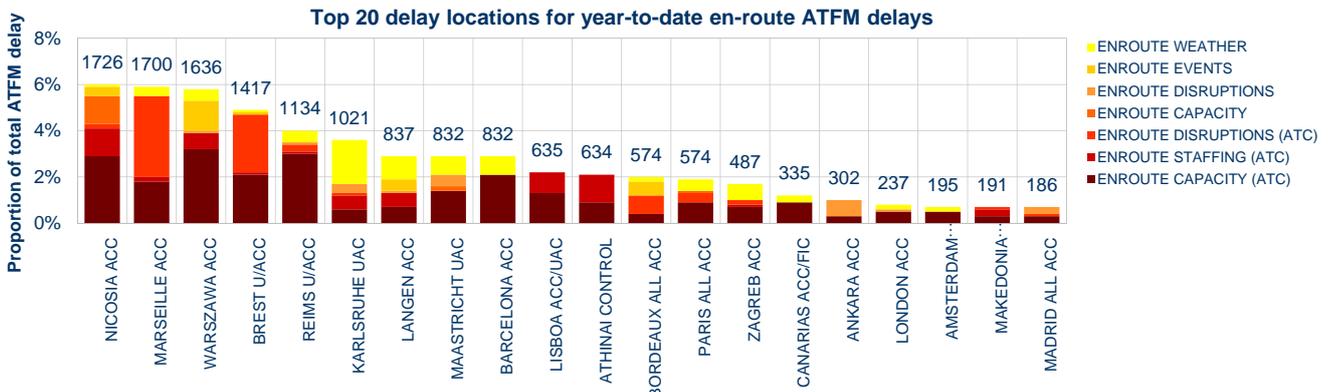
These are the top 20 en-route delay locations for 2014 with respect to the total ATFM delay. Figures are the average daily en-route delay in minutes for the individual locations.
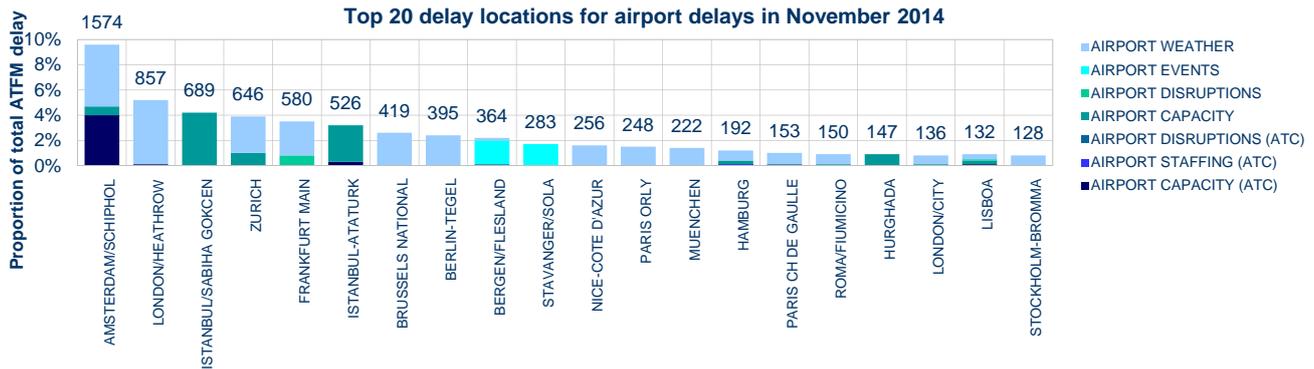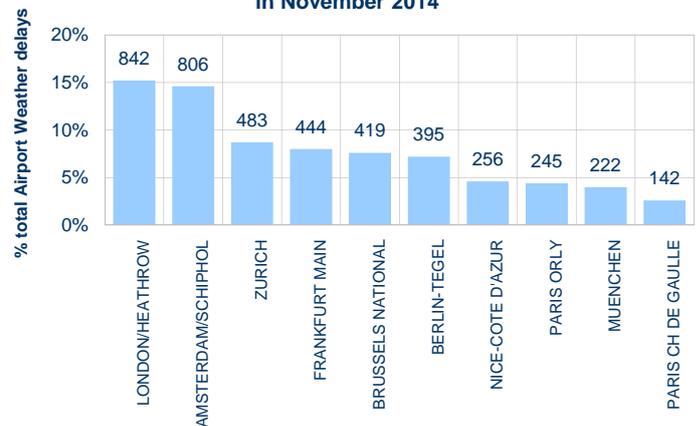
The top 20 en-route delay locations generated **53.9%** of the total ATFM (network) delay.
The top 5 en-route delay locations generated **26.6%** of the total ATFM (network) delay.

Reporting month: The average en-route delay per flight in the NM area in November was 0.30 min/flt, which is slightly above the corresponding monthly guideline* value of 0.29 min/flt.

Year to date: The average en-route delay per flight in the NM area in 2014 to date is 0.64 min/flt which is above the corresponding guideline value of 0.51 min/flt.

An average of 460 flights per day had an ATFM delay of at least 15 minutes in 2014 to date. The corresponding figure in 2013 was 349 flights per day.

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* NM's calculation that provides the guideline en-route delay (min) requirements to achieve the annual target (0.5 min/flight).

4. AIRPORT/TMA ATFM DELAYS

AIRPORT/TMA ATFM DELAY PER LOCATION

Top 20 delay locations for airport delays in November 2014

The top 20 Airport/TMA delay locations generated **49.5%** of the monthly total ATFM (network) delay.
The top 5 Airport/TMA delay locations generated **26.4%** of the monthly total ATFM (network) delay.

AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for airport delays in November 2014

AIRPORT DISRUPTIONS (ATC)	0.6%
AIRPORT STAFFING (ATC)	1.0%
AIRPORT DISRUPTIONS	1.0%
AIRPORT EVENTS	3.9%
AIRPORT CAPACITY (ATC)	4.8%
AIRPORT CAPACITY	10.7%
AIRPORT WEATHER	33.7%
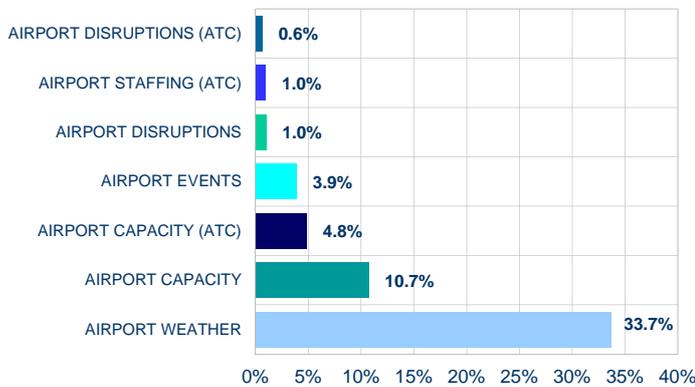
Top 10 delay locations for Airport Weather in November 2014

Airports accounted for 55.7% of all ATFM delays in November 2014, mainly due to weather and airport capacity constraints.

London/Heathrow, Amsterdam/Schiphol, Zurich, Frankfurt/Main, Brussels/National and Berlin/Tegel airports were particularly affected by seasonal weather.

Top 10 delay locations for Airport Capacity in November 2014
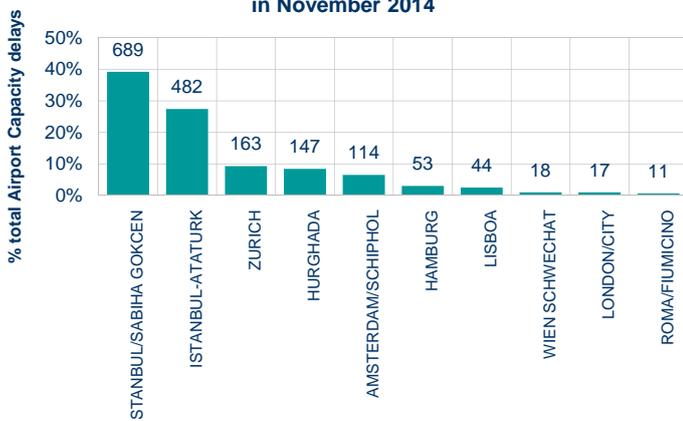
Top 10 delay locations for Airport Capacity (ATC) in November 2014
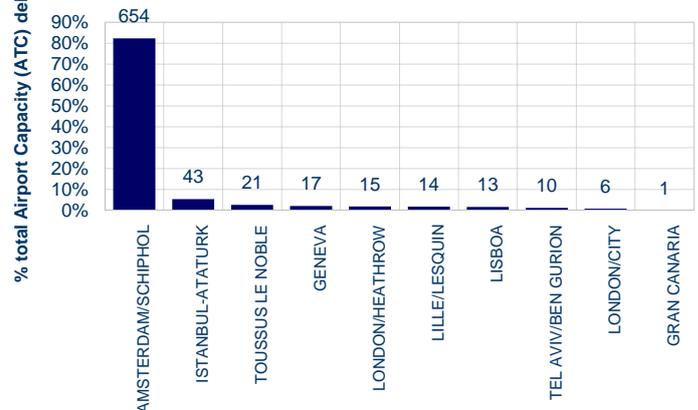
Istanbul/Sabiha Gokcen, Istanbul/Ataturk (runway configuration) and Zurich (environmental constraints) airports experienced aerodrome capacity issues. Military activity at Hurghada airport resulted in a reduction in capacity and associated delays on 27, 29 and 30 November.

Amsterdam/Schiphol airport generated 82% of Airport ATC capacity delays in November. This is 7% of the total airport ATFM delay.

AIRPORT/TMA ATFM DELAY PER FLIGHT

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

Top 10 Airport delay per flight in November 2014
YTD Situation
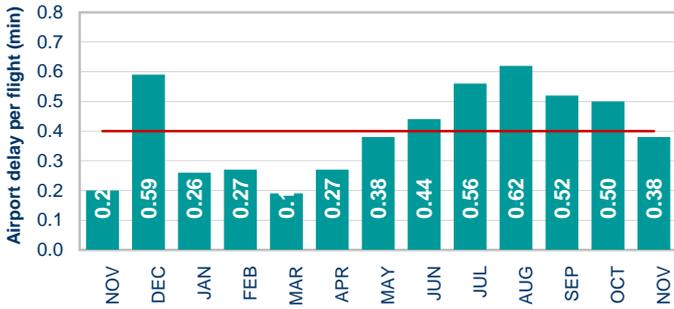
Average airport/TMA delay per flight increased from 0.2 min/flt in November 2013 to 0.38 min/flt in November 2014.
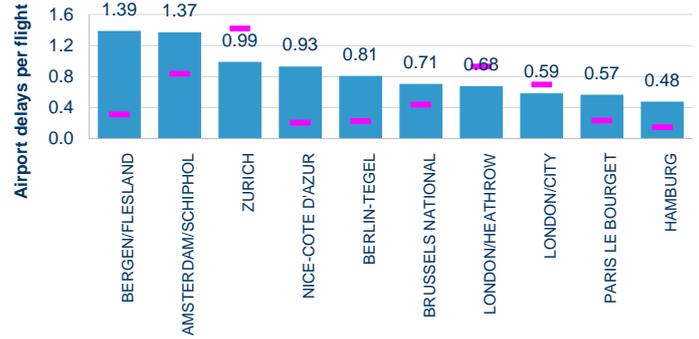
The average delay per flight for London/Heathrow decreased from 2.04 mins/flt in October 2014, to 0.68 mins/flt in November. Bergen/Flesland (new airspace implementation, frequency problems and weather), Amsterdam/Schiphol, Nice/Cote D'Azur, Berlin/Tegel, Brussels/National, Paris/Le Bourget and Hamburg (mainly weather) airports all generated delays above their year-to-date, with Amsterdam/Schiphol additionally affected by airport ATC capacity issues.

AIRPORT/TMA ATFM DELAY YEAR-TO-DATE

Top 20 delay locations for year-to-date Airport ATFM delays
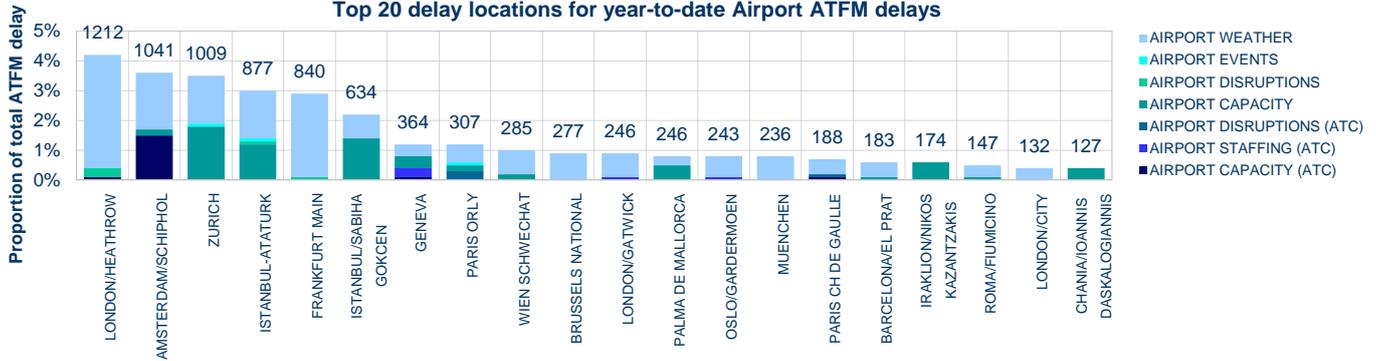
The top 20 Airport/TMA delay locations have generated **30.2%** of the total ATFM (network) delay in 2014.
The top 5 Airport/TMA delay locations have generated **17.2%** of the total ATFM (network) delay in 2014.

5. DAILY EVOLUTION

Average delay (min) per flight in November 2014
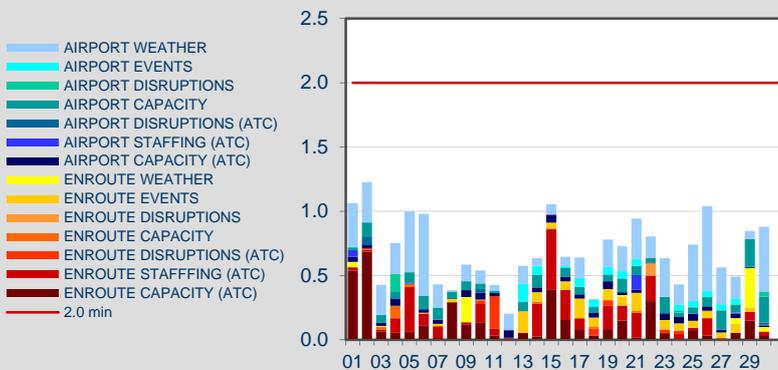
The average delay per flight remained below 1.5 min/flt each day for the second consecutive month. This is below the reference value of 2.0 min/flt.
In November 2014 the following days contributed significant delays;

1 November: En-route ATC capacity issues at Lisbon (7,653 mins) and Canarias (2,412 mins) ACCs. Low visibility/fog at Frankfurt/Main (5,683 mins) and Zurich (1,420 mins) airport.

2 November: En-route ATC capacity issues at Lisbon (6,369 mins), Nicosia (3,100 mins) and Brest (2,982 mins) ACCs. Weather at Frankfurt/Main (2,465 mins) and London/Heathrow (2,461 mins), airport capacity at Istanbul/Sabiha Gokcen (1,503 mins), ILS unavailability/weather at Paris/Le Bourget (1,514 mins)

15 November: En-route ATC staffing issues at Lisbon ACC (8,973 mins), en-route ATC capacity issues in Canarias (2,892 mins) and Seville (2,791 mins) ACCs, with additional complexity due to strong jetstreams.

26 November: Nicosia ACC (ATC staffing, 3,263 mins). Weather at London/Heathrow (5,118 mins), Stockholm/Bromma (3,853 mins) London/City (3,177 mins), Oslo/Gardermoen (2,020 mins) airports.

# 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 61% of the commercial flights in the ECAC region for October 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 October 2014
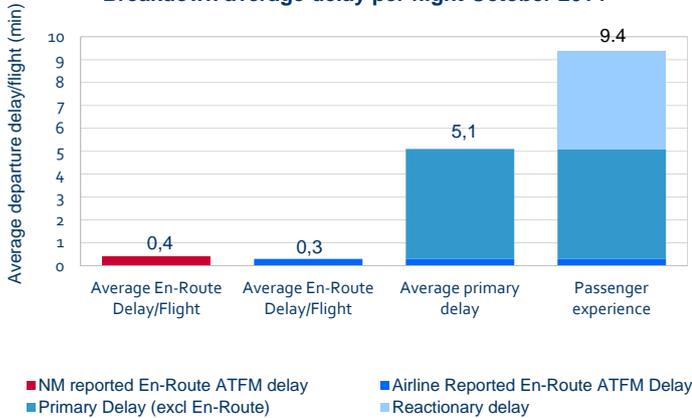
Based on airline data, the average departure delay per flight from "All Causes" was 9.4 minutes per flight, this was an increase of 6% in comparison to 8.9 minutes per flight in October 2013. Within all air transport delays, en-route ATFM delays were 0.4 minutes/flight in October 2014. Primary delays counted for 54% (or 5.1 min/flt) of which 0.3 min/flight was attributed to en-route ATFM delays, with reactionary delays representing the remaining share of 46% at (4.3 min/flt).

Average departure delay per flight 2013/2014
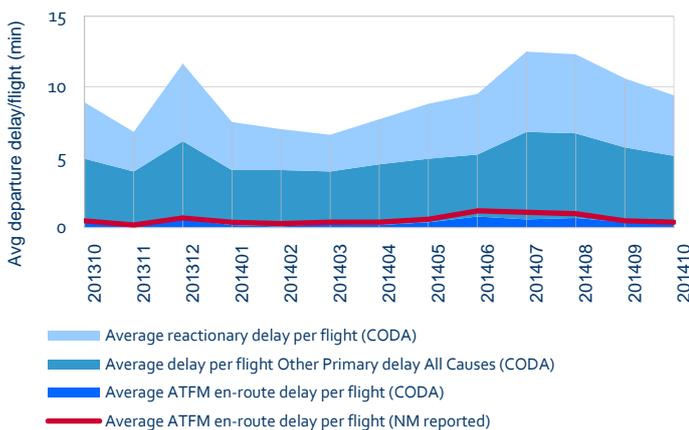
Further analysis of airline data shows that the average en-route ATFM delay was 0.3 minutes per flight. This was slightly below the NM reported average en-route ATFM delay of 0.4 minutes per flight.

Percentage of delayed flights: ATFM & All Causes

The percentage of flights subject to long ATFM restrictions (those exceeding 15 & 30 minutes) remained stable, with flights with restrictions exceeding 15 minutes in October at 2.1% (the detail shows a split between 1.2% caused by airport arrival and 0.9% by en-route ATFM restrictions). The percentage of flights delayed from all-causes saw increases (those exceeding 15 minutes) increased by 1.2 percentage points to 16.1% and those (exceeding 30 minutes) increased by 0.4 points to 7.4%.

7. ATFM SLOT ADHERENCE

**Average daily evolution of early and late flights**
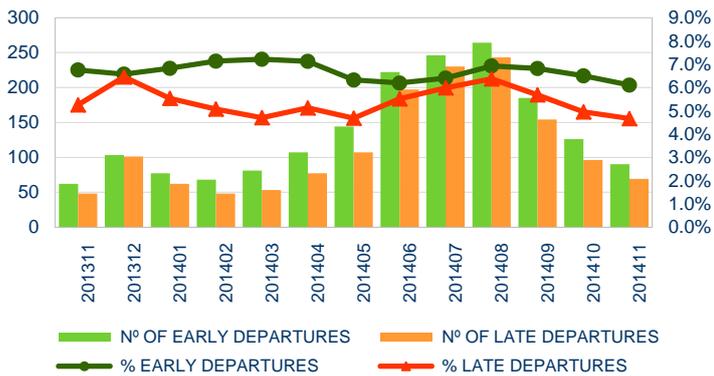
The percentage of early and late departures decreased for the third consecutive month in November.

The early and late departure percentage both show a slight decrease compared to November 2013.

Legend:
- Nº OF EARLY DEPARTURES
- Nº OF LATE DEPARTURES
- % EARLY DEPARTURES
- % LATE DEPARTURES

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.

Proportion of regulated flights outside the Slot Tolerance Window in November 2014
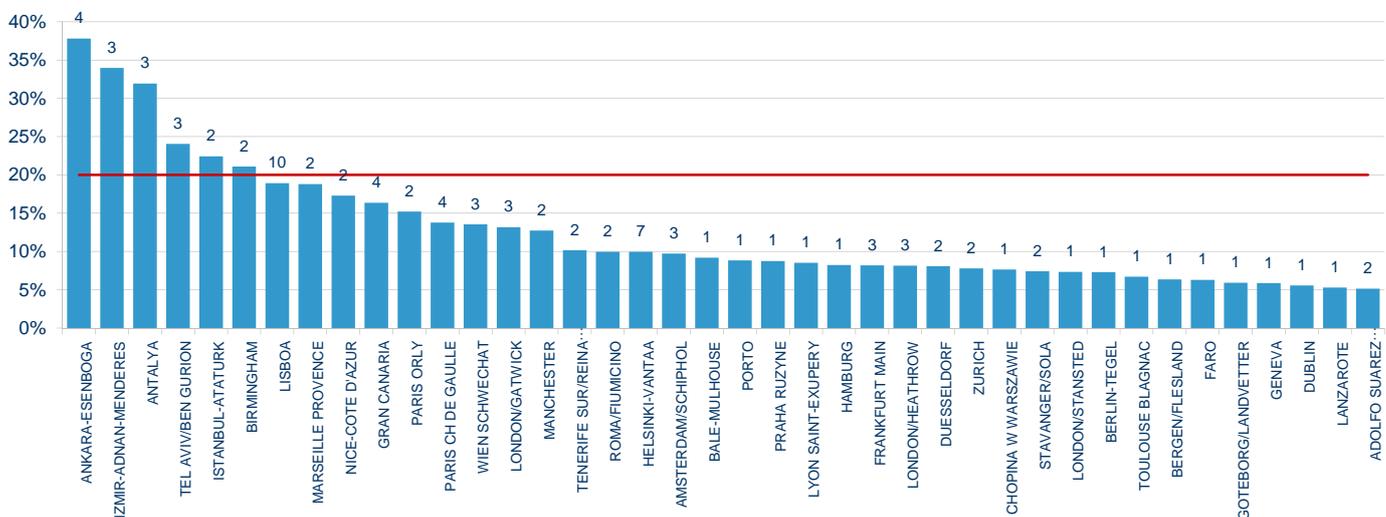
8. SIGNIFICANT EVENTS AND ISSUES

PLANNED EVENTS

ACCs

Eighteen ACCs had active improvement projects during November, 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 from 13 November until the end of the month with a capacity reduction of 50% with a maximum configuration availability of five sectors.
Implementation of new airspace structure generated 27,500 minutes of ATFM delay, which represented 100% of total ATFM delays by Tampere ACC. This also presented 12.6% of total en-route ATFM delay across the network for November.

Langen ACC
Finalisation of the training for the implementation of stripless system (PSS) in EBG 06 sector family was planned for two operational weekends with the new system and with an estimated capacity reduction of 20% during the operational weekends.
The two operational weekends with the new system (14-18 November and 27-30 November) generated 1,955 minutes of ATFM delay which represented 46.5% of total ATFM delay by Langen ACC (4,204min) for November.

Brest ACC
Training for ERATO stripless system was planned for the whole month without capacity reductions.

Total ATFM delay generated due to the training was 1,096 mins, which represented 18.5% of total ATFM delay (5,893 min) generated by Brest ACC for November.

Seville ACC
Implementation and the transition period of the SACTA CF2 ATM system upgrade was planned from 05 to 12 November with a planned capacity reduction of 15%.
The implementation and transition to the upgraded system generated 485 minutes of ATFM delay, which represented 12.3% of total ATFM delay generated by Seville ACC during the reporting period.

Bodo and Stavanger ACCs
The implementation and transition of the Southern Norway Airspace Project (SNAP) (which was preceded by training) was from 13 November until the end of the month with en-route capacity reductions of 10%. It had been estimated that the project implementation and the transition phases would reduce capacities at Trondheim/Vaernes, Stavanger/Sola, Haugesund/Karmoy and Bergen/Flesland airports of between 20% and 50%.
No en-route ATFM delays were generated for either ACC on account of SNAP. However, as a result of project implementation, airport ATFM delays were generated as follows: Bergen/Flesland - 9,278 min (85% of total ATFM delay at the airport); Trondheim/Vaernes - 913 min. Measures applied on the combined airport reference location for Stavanger/Sola and Haugesund/Karmoy airports generated a total ATFM delay of 8,498 min. The airport ATFM delays generated by the project represented 6.8% of total airport ATFM delays recorded during November across the network.

Milano, Padova, Roma ACCs
Implementation of the new airspace organisation was planned for the AIRAC switch on 13 November with a transition until 22 November and capacity reductions of 10%.
No ATFM delays were generated by these ACCs.

Geneva ACC
The implementation of stripless system CH Step 3 was planned for the 13 and 14 November with an estimated capacity reduction of 20%.
No ATFM delays were generated.

Belgrade, Zagreb, Sarajevo ACCs
The implementation of the new Bosnia Herzegovina ACC (BH ACC) and airspace reorganisation up to FL325 was implemented on 13 November.
No ATFM delays were generated by any of the ACCs.

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

Airports

Special events
- Full scale emergency exercise 2014 at Athens/Eleftherios Venizelos held on 6 November resulted in closure of runway 03L/21R and shifting all the traffic to runway 03R/21L (capacity limited to 32 mvts/h).

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

Completed
- London/Gatwick airport implemented full A-CDM operations on 7 November 2014 to become the 15th A-CDM airport.
- Reduction of Minimum Departure Intervals is approved as a permanent procedure at Dublin airport; further initiative started to increase departure capacity.
- Maneuvering area (runway, taxiways and/or apron) improvements at Barcelona/El Prat, Frankfurt/Main, Istanbul/Sabiha Gokcen, Nice/Cote D'Azur and Zurich airports.

On-going
- Maneuvering area (runway, taxiways and/or apron) improvements at Barcelona/El Prat, Bari/Palese, Bergamo/Orio Alserio, Bologna, Dublin, Frankfurt/Main, Gran Canaria, Katowice/Pyrzowice, Krakow/Balice, Manchester, Nice/Cote D'Azur, Palma De Mallorca, Paris/Charles de Gaulle, Rome/Fiumicino, Tenerife/North and Warsaw/Chopin airports.
- Terminal building(s) improvements at Bergen, Budapest/Ferihegy, Gran Canaria, Katowice/Pyrzowice, Krakow/Balice, Munich, Nuernberg, Rome/Fiumicino and Warsaw/Chopin airports.
- ILS maintenance at Dusseldorf and Palma de Mallorca airport.
- Construction of a new runway at Katowice/Pyrzowice airport.
- PBN implementation (RNP APCH based on GNSS approach) at Belgrade/Nikola Tesla airport.
- WIDAO project (relaxation of wake vortex constrains) commenced at Paris/Charles de Gaulle airport.

DISRUPTIONS

Technical
- ILS failure at Paris/Le Bourget airport on 2 and 3 November (total delay: 1,800mins).
- Problems with ATC frequencies at Bergen airport on 10 November triggered departure and arrival regulations from 0800 (total delay: 697 mins).
- A 40% capacity reduction at Nicosia ACC on 11 November due to an upgrade of the ATM system, with further delays generated on 19 November due to additional system upgrades (total delay: 6,928 mins).
- An ILS problem at Paris/Charles de Gaulle airport on 30 November reduced evening capacity necessitating a measure (total delay: 351 mins).

Industrial action
- Industrial action in Greece between 26 and 27 November. Approximately 460 flights were cancelled with 252 mins of ATFM delay being generated by flights which operated at the end of the action.

Other
- Bomb disposal at Frankfurt/Main airport on 4 and 30 November (total delay: 3,433 mins and 665 mins).
- The unavailability of one of the runways at Nice/Cote D'Azur due to the aftermath of a local storm resulted in reduced capacity and an arrival regulation which continued overnight (total delay: 4,544 minutes).

9. NM ADDED VALUE

RRP DIRECT DELAY SAVINGS

NM proposed alternative routes to an average of 25 flts/day in November 2014, of which 14 were accepted. This saved 579 mins of daily delay at a cost of 182 extra nautical miles.
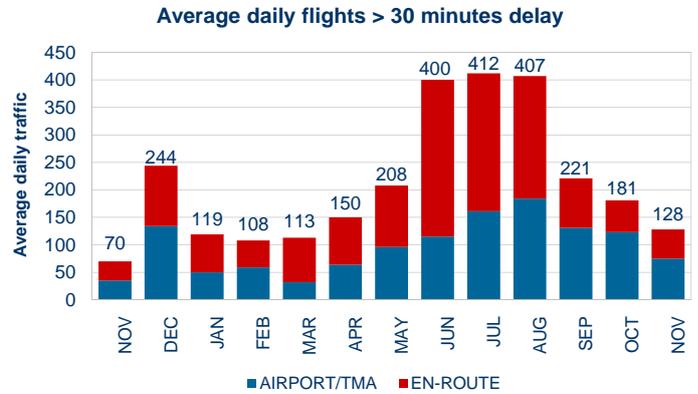
This graph shows the actual daily averages for the previous 13 months period:
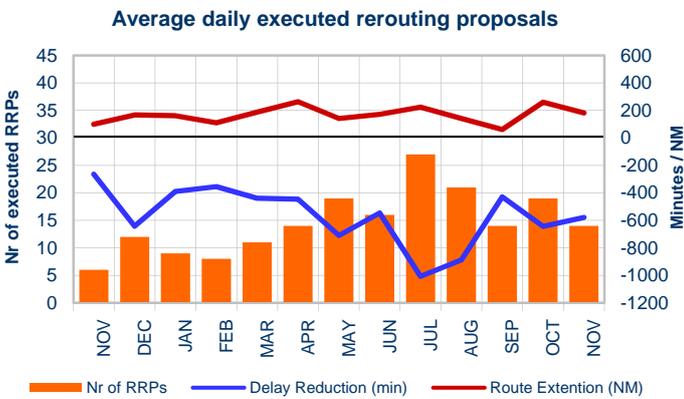
FLIGHTS WITH DELAY > 30'

The number of flights that had more than 30 mins of ATFM delay increased from 70 flts/day in November 2013 to 128 flts/day in November 2014.

41.4% of flights with more than 30 mins of ATFM delay in November 2014 were en-route and 58.6% were airport.

Average daily executed rerouting proposals

Nr of RRPs — Delay Reduction (min) — Route Extention (NM)

Average daily flights > 30 minutes delay

■ AIRPORT/TMA ■ EN-ROUTE