



Network Manager
nominated by
the European Commission



Monthly Network Operations Report

Analysis – October 2016



TABLE OF CONTENTS

TABLE OF CONTENTS	2
NOTICE	2
1. TOTAL TRAFFIC	3
2. ATFM DELAY AND ATTRIBUTIONS	6
3. EN-ROUTE ATFM DELAYS	7
En-Route ATFM Delay per Location	7
En-Route ATFM Delay per Delay Group	8
En-Route ATFM Delay per Flight	9
En-Route ATFM Delay Year-To-Date	10
4. AIRPORT/TMA ATFM DELAYS	11
Airport/TMA ATFM Delay per Location	11
Airport/TMA ATFM Delay per Delay Groups	11
Airport/TMA ATFM Delay per Flight	12
Airport/TMA ATFM Delay Year-To-Date	12
5. DAILY EVOLUTION	12
6. ALL AIR TRANSPORT DELAYS (SOURCE: CODA)	13
7. ATFM SLOT ADHERENCE	14
8. SIGNIFICANT EVENTS AND ISSUES	14
Planned Events	14
ACC	14
Airports	14
Disruptions	15
9. NM ADDED VALUE	16

NOTICE

Traffic and Delay Comparisons















All traffic and delay comparisons are between report month and equivalent month of previous year, unless otherwise stated.

NM Area

All figures presented in this report are for the geographical area that is within Network Manager's responsibility (NM area).

Regulation Reason Groupings

The table below shows the colour coding used in the report charts.

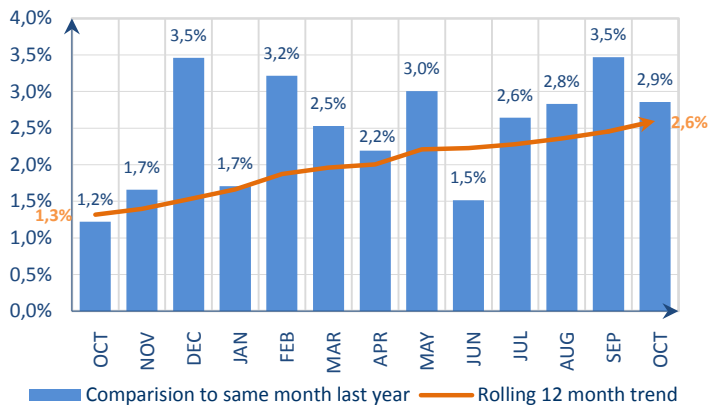
	EN-ROUTE CAPACITY (ATC)		AIRPORT CAPACITY (ATC)
	EN-ROUTE STAFFING (ATC)		AIRPORT STAFFING (ATC)
	EN-ROUTE DISRUPTIONS (ATC)		AIRPORT DISRUPTIONS (ATC)
	EN-ROUTE CAPACITY		AIRPORT CAPACITY
	EN-ROUTE DISRUPTIONS		AIRPORT DISRUPTIONS
	EN-ROUTE EVENTS		AIRPORT EVENTS
	EN-ROUTE WEATHER		AIRPORT WEATHER

Reporting Assumptions and Descriptions

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

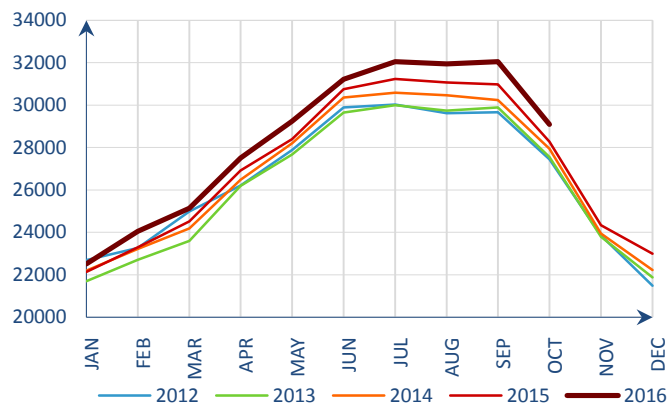
1. TOTAL TRAFFIC

Monthly traffic trend



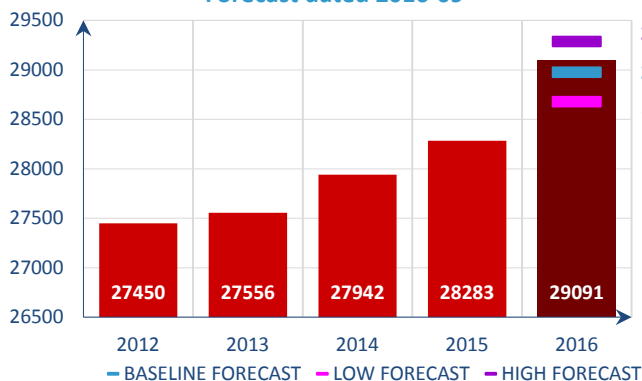
Traffic increased by 2.9 % in October 2016ⁱ.

Average daily traffic for last 5 Years



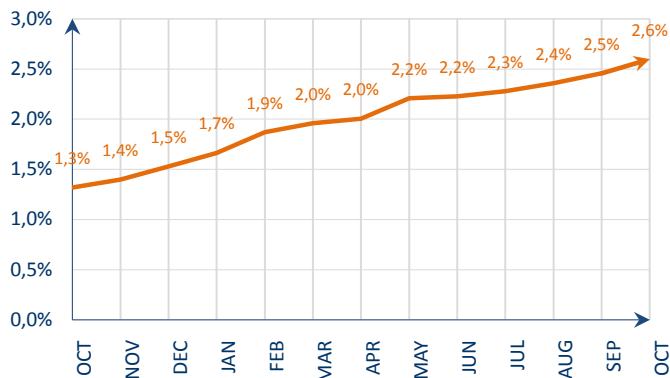
Average daily traffic in October 2016 was the highest ever for the month of October.

Average daily traffic in October for last 5 Years
Forecast dated 2016-09



The traffic increase of 2.9% for October was in line with the baseline forecast updated in September 2016.

12 months rolling traffic trend



This graph shows the variation in average daily traffic for the last 12-month period relative to the previous 12-months. The average daily traffic from November 2015 to October 2016 was 2.6% higher than the average from November 2014 to October 2015. The trend shows a continuous growth in traffic.

In October, twelve states contributed more than 50 additional daily flights to the European local traffic[i] growth. UK and Spain each added more than 300 daily flights to the network thanks to sustained growth in both countries' international arrival and departure flows. Italy (+138 flights/day), Portugal (excl. Azores) (+105 flights/day) and Greece (+99 flights/day) completed the top 5 contributors. The following five countries added together 424 flights to the network: Netherlands (+95 flights/day), Poland (+94 flights/day), Canary Islands (+79 flights/day), Romania (+79 flights/day) and Germany (+77 flights/day). Cyprus had the most significant growth in October 2016 (vs. October 2015) with 30% local traffic growth, mainly due to the growth on its flows from/to the Russian Federation, UK, Israel and Greece. Ukraine was the 12th contributor with 51 extra flights per day in October 2016 (vs. October 2015), recording 350 daily flights (excluding overflights) though still 30% below the pre-2014 traffic levels. With 161 fewer daily flights in October, Turkey hit its sixth consecutive month of reduced flights although its internal traffic improved and was up 5% on October 2015. Norway had 68 fewer flights per day due to a weak domestic flow, which went down 5%.

The top three extra-European partners in average daily flights on flows in both directions were the United States (993 flights, up 7%), the Russian Federation (744 flights, down 4%) and the United Arab Emirates (325 flights, up 5%). Traffic flows between Europe and Egypt declined by 27% to 156 flights per day.

Low-cost was the strongest market segment with a steady growth rate of 7.5%, followed by the traditional scheduled segment, which grew 2.6%. All the other market segments declined, with charter down 9.1%, all-cargo down 2.8% and business aviation down 1.3% in October.

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

Eight of the top ten airports had positive traffic growth. Overall, the largest traffic increases in October 2016 were at Malaga, Birmingham, Tel Aviv/Ben Gurion, Palma and Warsaw airports. The largest traffic decreases were at Antalya, Helsinki, Berlin/Tegel, Brussels and Milano/Linate airports. The increase at Birmingham airport is explained by a high demand on charter destinations and the opening of new direct routes to the Middle East and the Caribbean. The traffic variation at Warsaw airport is due to the opening of new connections to Canada and Eastern Europe.

Five of the top ten aircraft operators had more traffic compared to October 2015. The operators with the highest traffic growth were Qatar, LOT/Polish, Transavia, Ukraine International and Transavia France airlines. Germanwings, Aegean, Wideroe, Finnair and Condor recorded the highest traffic decrease.

Norwegian Air Shuttle and Norwegian Air International traffic variations are due to a shift of the callsigns from NAX to IBK. The traffic variation of Olympic and Aegean is due to Aegean flights operated with Olympic callsign. LOT/Polish airline increase of traffic is due to the opening of new routes inside Europe. The Transavia and Transavia France traffic increase is mainly due to Northern European growth with direct links between UK and European capitals.

N°	ADEP	ADEP NAME	201610	%	N°	ICAO	AIR OPERATOR	201610	%
1	EHAM	AMSTERDAM/SCHIPHOL	715	7,2%	1	RYR	RYANAIR	1967	10,6%
2	EDDF	FRANKFURT MAIN	676	-1,4%	2	DLH	DEUTSCHE LUFTHANSA	1432	-1,7%
3	LFPG	PARIS CH DE GAULLE	676	0,6%	3	EZY	EASYJET	1335	11,2%
4	EGLL	LONDON/HEATHROW	666	1,5%	4	THY	TURKISH AIRLINES	1265	-0,6%
5	LTBA	ISTANBUL-ATATURK	628	-1,9%	5	SAS	SCANDINAVIAN AIRLINES SYSTEM	937	1,9%
6	EDDM	MUENCHEN	583	5,0%	6	AFR	AIR FRANCE	921	-2,6%
7	LEMD	ADOLFO SUAREZ MADRID-BARAJA	527	1,7%	7	BAW	BRITISH AIRWAYS	718	3,5%
8	LIRF	ROMA/FIUMICINO	460	3,1%	8	KLM	KLM ROYAL DUTCH AIRL	667	6,3%
9	LEBL	BARCELONA/EL PRAT	441	7,8%	9	BER	AIR BERLIN, INC.	590	-2,3%
10	EGKK	LONDON/GATWICK	410	6,2%	10	AZA	ALITALIA	555	-2,7%
11	EKCH	KOBENHAVN/KASTRUP	390	4,5%	11	VLG	VUELING AIRLINES SA	514	6,3%
12	LSZH	ZURICH	379	1,8%	12	PGT	PEGASUS HAVA TASI	445	9,1%
13	ENGM	OSLO/GARDERMOEN	359	0,3%	13	BEE	JERSEY EUROPEAN TIA FLYBE	432	10,5%
14	LOWW	WIEN SCHWECHAT	350	1,5%	14	SWR	SWISS INTERNATIONAL	412	0,5%
15	ESSA	STOCKHOLM-ARLANDA	348	4,1%	15	NAX	NORWEGIAN AIR SHUTTLE	401	-19,0%
16	LFPO	PARIS ORLY	343	2,7%	16	WZZ	WIZZ AIR	394	11,7%
17	EDDL	DUESSELDORF	333	5,0%	17	AUA	AUSTRIAN AIRLINES	367	9,0%
18	LEPA	PALMA DE MALLORCA	328	14,5%	18	WIF	WIDEROE	348	-8,6%
19	EBBR	BRUSSELS NATIONAL	324	-2,3%	19	GWI	GERMAN WINGS	342	-27,0%
20	LTJF	ISTANBUL/SABIHA GOKCEN	315	1,0%	20	TAP	TAP/AIR PORTUGAL	322	4,0%
21	EIDW	DUBLIN	306	7,4%	21	FIN	FINNAIR OY	299	-8,0%
22	EGCC	MANCHESTER	283	11,8%	22	AFL	AEROFLOT-RUSSIAN	268	5,8%
23	LPPT	LISBOA	264	12,9%	23	IBE	IBERIA	239	5,1%
24	EDDT	BERLIN-TEGEL	262	-2,6%	24	BEL	BRUSSELS AIRLINES	234	5,7%
25	EGSS	LONDON/STANSTED	256	6,3%	25	LOT	LOT-POLISH AIRLINES	233	26,8%
26	LGAV	ATHINA/ELEFTHERIOS VENIZELOS	247	4,7%	26	HOP	HOP (MERGE OF BZH + RAE + RLA)	232	-4,2%
27	LSGG	GENEVA	244	-1,2%	27	AEA	AIR EUROPA	227	1,6%
28	LIMC	MILANO MALPENSA	236	4,2%	28	ANE	AIR NOSTRUM	222	1,7%
29	EFHK	HELSINKI-VANTAA	235	-4,5%	29	AEE	AEGEAN AIRLINES	212	-16,5%
30	LTAI	ANTALYA	234	-18,7%	30	EIN	AER LINGUS TEORANTA	201	-1,6%
31	EDDH	HAMBURG	227	0,8%	31	RAM	ROYAL AIR MAROC	189	0,7%
32	EPWA	CHOPINA W WARSZAWIE	219	14,1%	32	UAE	EMIRATES	187	2,6%
33	EDDK	KOELN-BONN	199	1,4%	33	IBK	NORWEGIAN AIR INTERNATIONAL	185	562,8%
34	EGGW	LONDON/LUTON	195	12,9%	34	QTR	QATAR AIRWAYS COMP.	185	26,8%
35	LEMG	MALAGA/COSTA DEL SOL	193	18,6%	35	TRA	TRANSAVIA.COM	178	23,3%
36	LFMN	NICE-COTE D'AZUR	192	5,2%	36	TOM	THOMSON FLY LTD	175	-0,5%
37	LKPR	PRAHA RUZYNE	186	6,3%	37	EWG	EUROWINGS AG	166	512,0%
38	LLBG	TEL AVIV/BEN GURION	180	15,4%	38	BCS	EUROPEAN AIR TRANSP.	149	-1,6%
39	EDDS	STUTTGART	176	-1,6%	39	EZS	EASY JET SWITZERLAND	148	-1,3%
40	EGPH	EDINBURGH	174	9,3%	40	AUI	UKRAINE INTERNATIONAL	144	22,2%
41	EGBB	BIRMINGHAM	167	17,2%	41	SXS	SUNEXPRESS AIRLINES	142	-6,2%
42	LFLL	LYON SAINT-EXUPERY	160	3,4%	42	EXS	JET2.COM	140	7,3%
43	LIML	MILANO Linate	159	-2,1%	43	UAL	UNITED AIRLINES INC.	135	0,4%
44	LROP	BUCURESTI/HENRI COANDA	153	14,1%	44	DAL	DELTA AIR LINES INC.	128	5,6%
45	GCLP	GRAN CANARIA	148	9,3%	45	MON	MONARCH AIRLINES LTD	128	6,9%
46	EDDB	SCHOENEFELD-BERLIN	146	0,0%	46	BTI	AIR BALTIC CORPORAT.	125	1,5%
47	LTAC	ANKARA-ESENBOGA	140	8,0%	47	NJE	NETJETS	124	1,4%
48	LHBP	BUDAPEST LISZT FERENC INT.	137	2,9%	48	CFG	CONDOR FLUGDIENST	116	-8,0%
49	EGPF	GLASGOW	136	0,0%	49	SHT	BAW SHUTTLE	114	2,5%
50	LEAL	ALICANTE	136	0,0%	50	TVF	TRANSAVIA FRANCE	113	22,1%
TOTALS and % TOTAL TRAFFIC			15241	58,2%	TOTALS and % TOTAL TRAFFIC			19702	67,7%

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

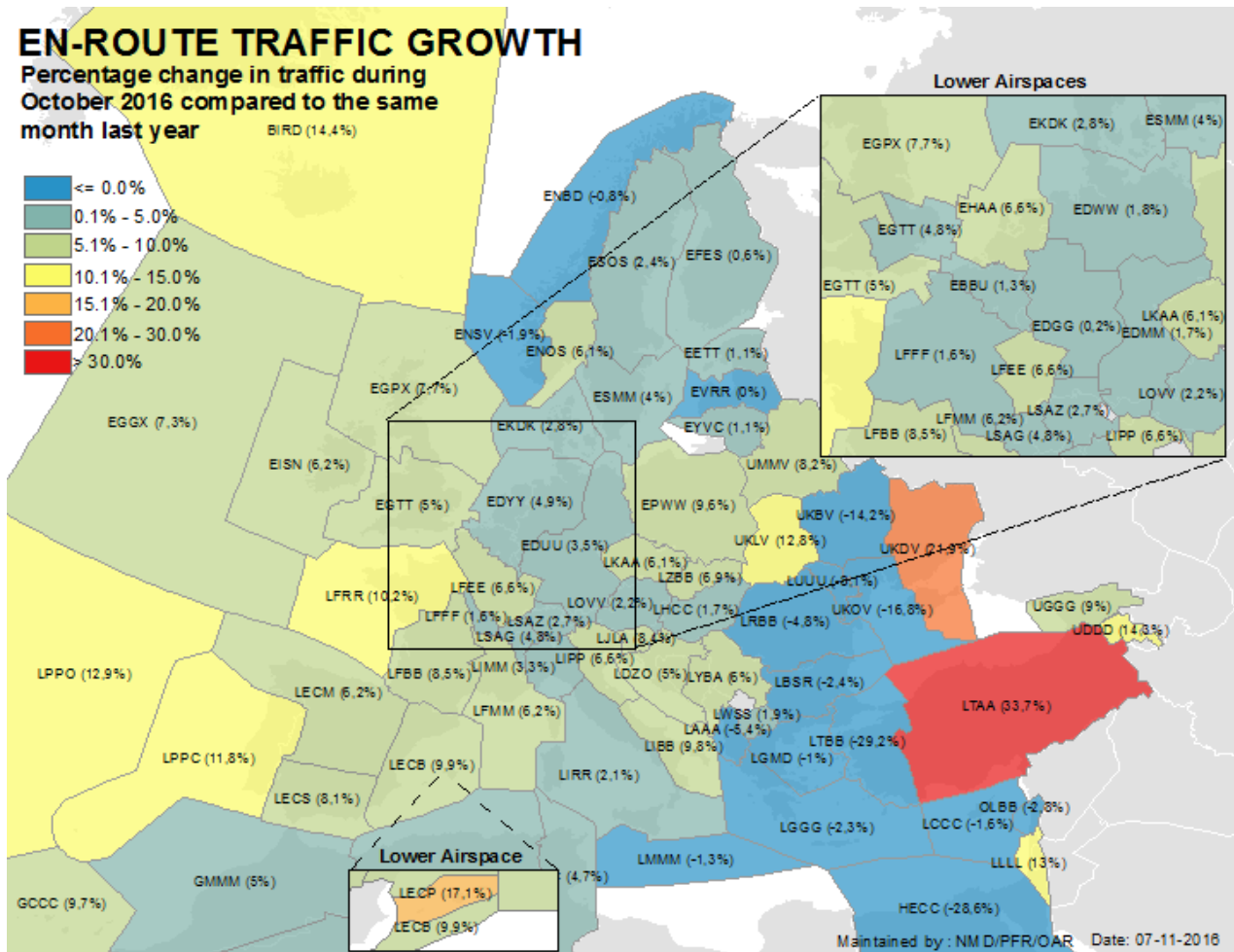
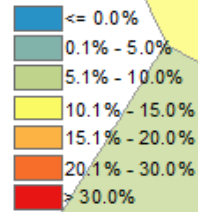
Top 50 Air Operators with average daily traffic and percentage compared to same period of previous year

N°	ICAO	AIR OPERATOR	201610	%
		Unidentified	2048	-5,6%

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 change in traffic during October 2016 compared to the same month last year



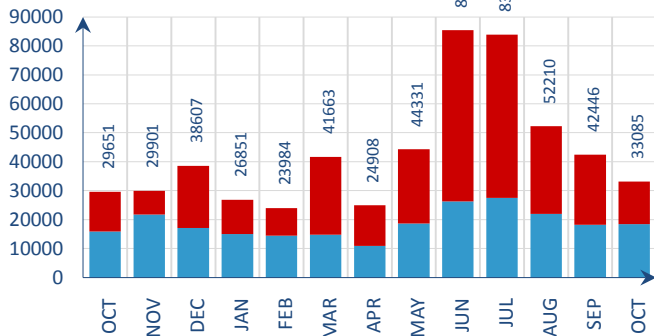
Nº	ASP ID	ASP NAME	201610	%
1	BIRDACC	REYKJAVIK ACC	365	14,4%
2	DAAAACC	ALGERS ACC	442	0,5%
3	DTTCACC	TUNIS ACC	267	4,7%
4	EBBUACC	BRUSSELS CANAC	1715	1,3%
5	EDGGALL	LANGEN ACC_FIR	3656	0,2%
6	EDMMACC	MUNCHEN ACC	3202	1,7%
7	EDUUUAC	KARLSRUHE UAC	5266	3,5%
8	EDWWACC	BREMEN ACC	1924	1,9%
9	EDYYUAC	MAASTRICHT UAC	5193	4,9%
10	EETTACC	TALLIN ACC	545	1,1%
11	EFESACC	TAMPERE ACC	470	0,6%
12	EGGXOCA	SHANWICK OACC	1350	7,3%
13	EGPXALL	SCOTTISH ACC	2758	7,7%
14	EGTTACC	LONDON ACC	5745	5,0%
15	EGTTTC	LONDON TMA TC	3969	4,8%
16	EHAACC	AMSTERDAM ACC(245-)	1690	6,6%
17	EIDWACC	DUBLIN ACC	666	9,0%
18	EISNACC	SHANNON ACC	1294	6,2%
19	EKDKACC	COPENHAGEN ACC	1595	2,8%
20	ENBDACC	BODO ACC	605	-0,8%
21	ENOSACC	OSLO ATCC	1039	6,1%
22	ENSVACC	STAVANGER ATCC	660	-1,9%
23	EPWWACC	WARSAWA ACC	2039	9,6%
24	ESMMACC	MALMO ACC	1524	4,0%
25	ESOSACC	STOCKHOLM ACC	1181	2,4%
26	EVRACC	RIGA ACC	691	0,0%
27	EYVACC	VILNIUS ACC	625	1,1%
28	GCCCACC	CANARIAS ACC/FIC	859	9,7%
29	GMMMACC	CASABLANCA ACC	1058	5,0%
30	HECCACC	CAIROACC	536	-28,6%
31	LAAAACC	TIRANA ACC	528	-5,4%
32	LBSRACC	SOFIA ACC	2165	-2,4%
33	LCCCACC	NICOSIA ACC	932	-1,6%
34	LDZOACC	ZAGREB ACC	1507	5,0%
35	LECBACC	BARCELONA ACC	2450	9,9%
36	LECMALL	MADRID ALL ACC	2953	6,2%
37	LECPACC	PALMA ACC	911	17,1%
38	LECSACC	SEVILLA ACC	1044	8,1%

Nº	ASP ID	ASP NAME	201610	%
39	LFBALL	BORDEAUX ALL ACC	2707	8,5%
40	LFEACC	REIMS U/ACC	2883	6,6%
41	LFFFALL	PARIS ALL ACC	3405	1,6%
42	LFMMACC	MARSEILLE ACC	2993	6,2%
43	LFMMAPP	MARSEILLE TMA	846	0,4%
44	LFRRACC	BREST U/ACC	2995	10,2%
45	LGGGACC	ATHINAI CONTROL	1362	-2,3%
46	LGMACC	MAKEDONIA CONTROL	1155	-1,0%
47	LHCCACC	BUDAPEST ACC	2124	1,7%
48	LIBBACC	BRINDISI ACC	752	9,8%
49	LIMMACC	MILANO ACC	2300	3,3%
50	LIPPACC	PADOVA ACC	1924	6,6%
51	LIRRACC	ROMA ACC	2194	2,1%
52	LJLAACC	LJUBLJANA ACC	850	8,4%
53	LKAAACC	PRAGUE ACC	2251	6,1%
54	LLLLACC	TEL AVIV ACC	426	13,0%
55	LMMMACC	MALTA ACC	301	-1,3%
56	LOVACC	WIEN ACC	2305	2,2%
57	LPPCACC	LISBOA ACC/UAC	1522	11,8%
58	LPPOACC	SANTA MARIA OACC	367	12,9%
59	LQSBACC	BOSNIA-HERZEGOVINA	107	3,9%
60	LRBBACC	BUCURESTI ACC	1720	-4,8%
61	LSAGACC	GENEVA ACC	1853	4,8%
62	LSAZACC	ZURICH ACC	2155	2,7%
63	LTAACC	ANKARA ACC	3676	33,7%
64	LTBBACC	ISTANBUL ACC	2060	-29,2%
65	LUUUACC	CHISINAU ACC	114	-8,1%
66	LWSSACC	SKOPJE ACC	427	1,9%
67	LYBAACC	BEOGRADE ACC	1842	6,0%
68	LZBBACC	BRATISLAVA ACC	1389	6,9%
69	OLBBACC	BEIRUT ACC	141	-2,8%
70	UDDACC	YEREVAN ACC	112	14,3%
71	UGGGACC	TBILISI ACC	364	9,0%
72	UKBVACC	KIEV ACC	357	-14,2%
73	UKDVACC	DNIPROPETROVSK ACC	50	22,0%
74	UKLVACC	L'VIV ACC	273	12,8%
75	UKOVACC	ODESSA ACC	218	-16,8%
76	UMMVACC	MINSK ACC	723	8,2%

The highest traffic increases in October 2016 were in Ankara, Palma, Reykjavik, Tel Aviv and Santa Maria ACCs. Airspace realignment in Ankara and Istanbul ACCs accounts for the variation. Reykjavik ACC variation is due to increased international arrivals/departures as well as weather patterns which resulted in transatlantic flights adopting more northerly routes. The Santa Maria and Lisbon ACCs variation is due to increased traffic to/from the Canary Islands and the Azores, and South American destinations.

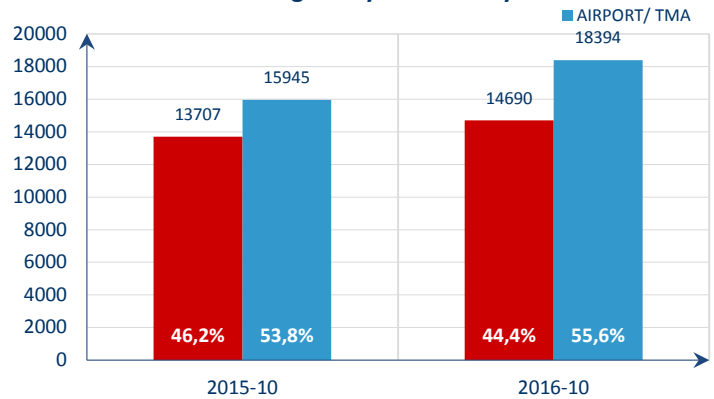
2. ATFM DELAY AND ATTRIBUTIONS

Average daily ATFM delay



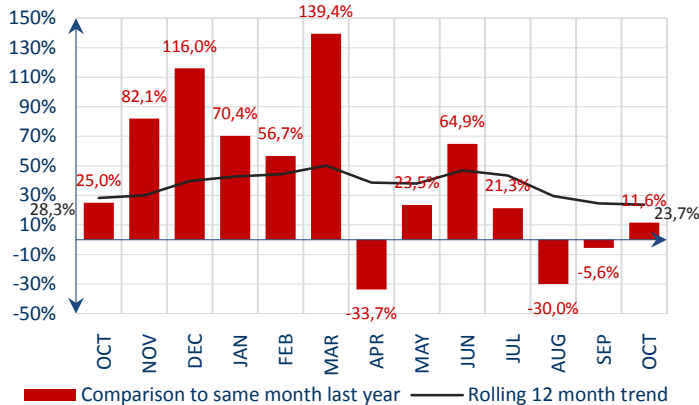
Total ATFM delays increased by 11.6% in October 2016¹.

Average daily ATFM delays



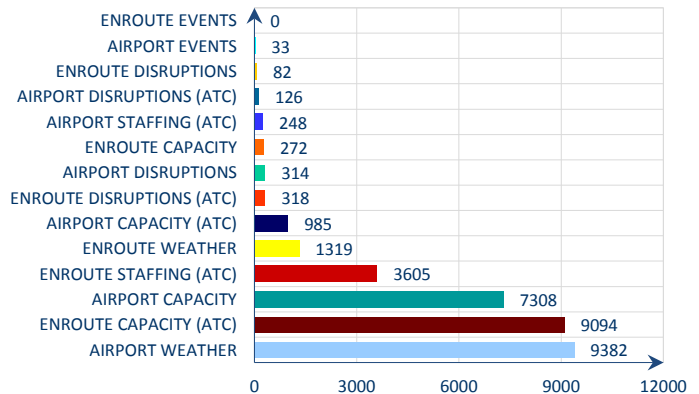
En-route ATFM delays increased by 7.2% and airport ATFM delays increased by 15.4%.

Monthly ATFM delays trend



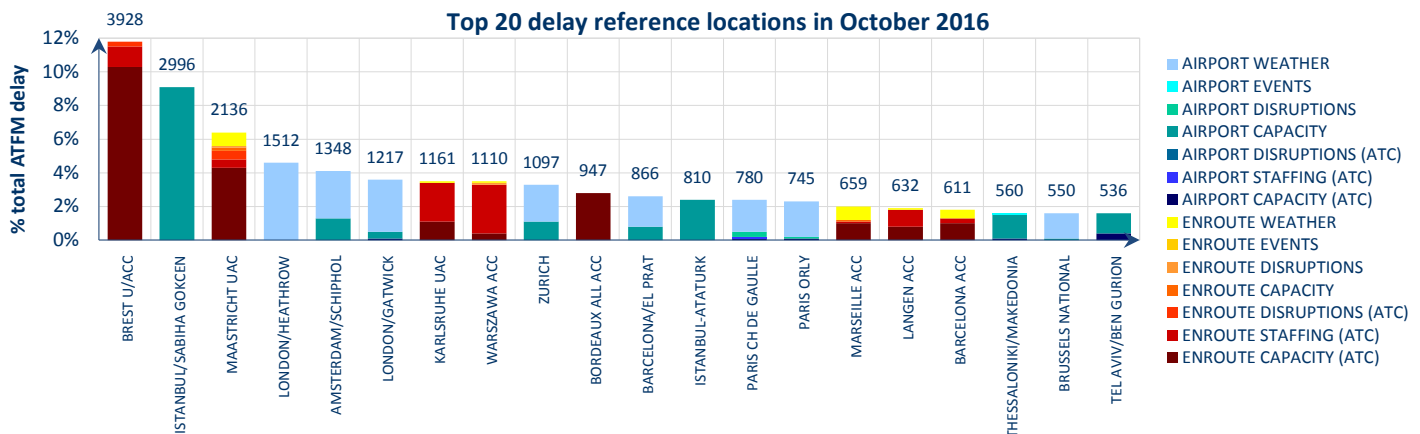
The rolling 12-month trend shows that ATFM delay was 23.7% higher during the period November 2015 – October 2016 compared to November 2014 – October 2015.

Proportion of ATFM delays in October 2016



Airport weather (28.4%), en-route ATC capacity (27.5%) and airport capacity (22.1%) were the main causes of ATFM delays in October 2016.

Top 20 delay reference locations in October 2016

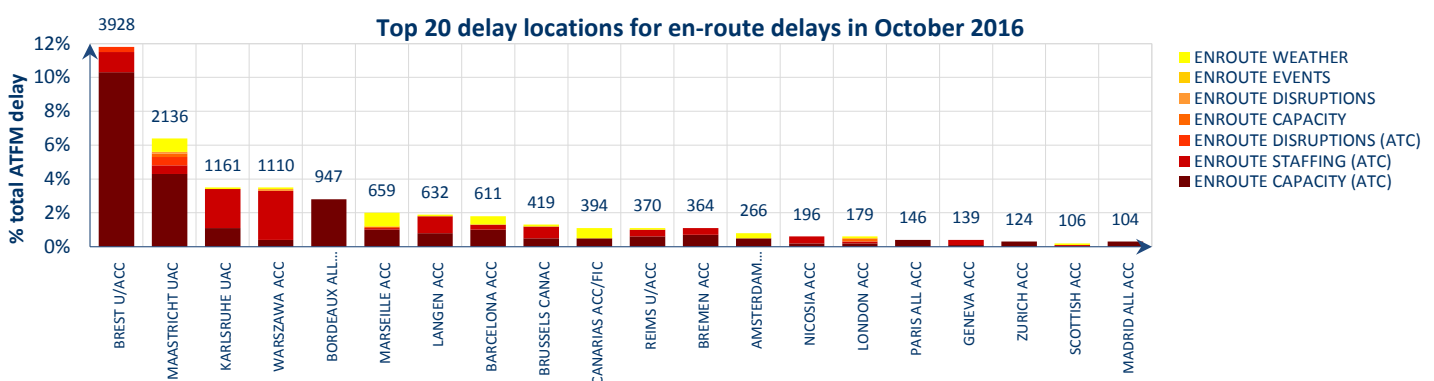
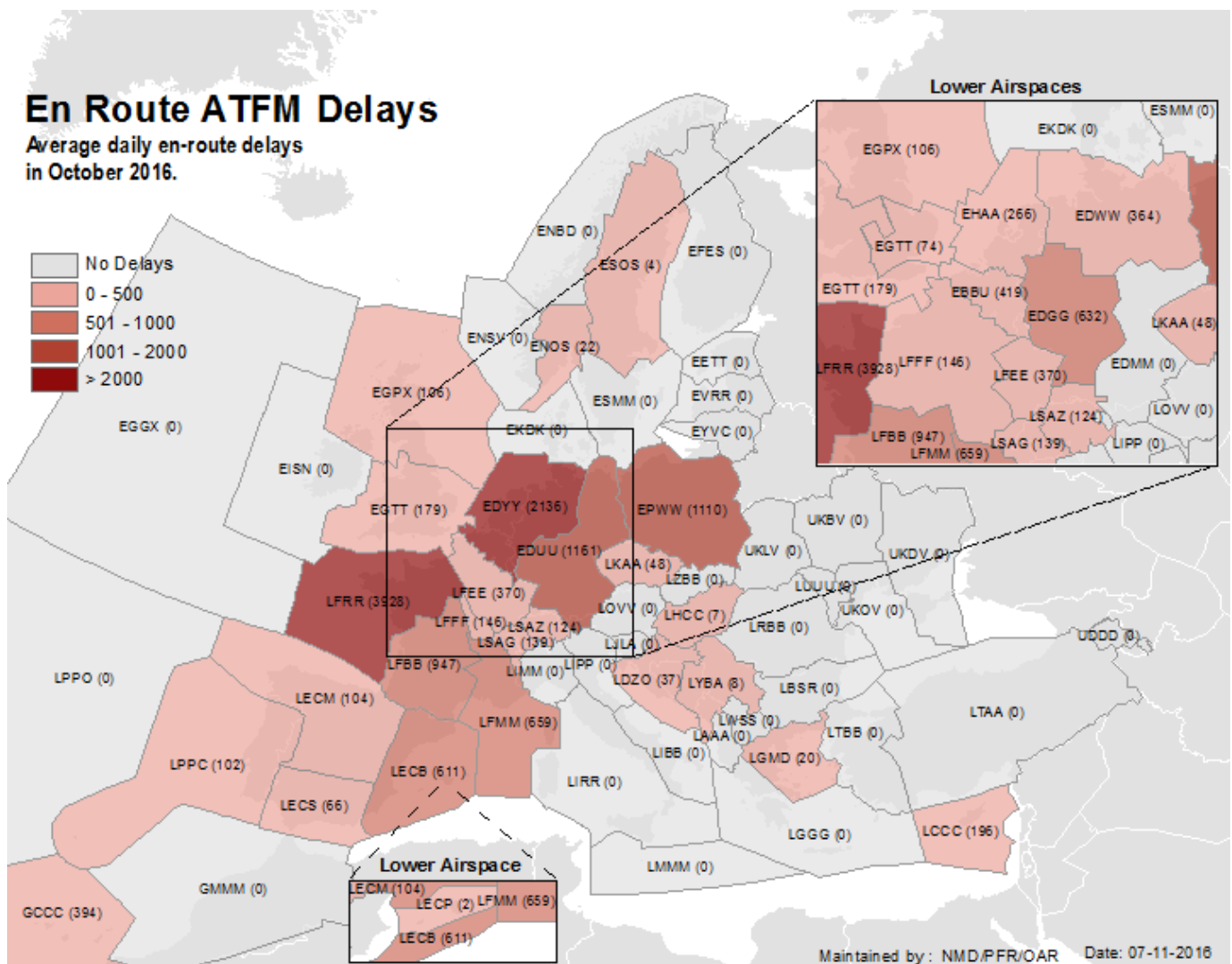


These are the top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

- En-route ATC capacity and ATC staffing delays in Brest, Maastricht, Karlsruhe, Warsaw, Bordeaux, Marseille, Langen and Barcelona ACCs;
- Aerodrome capacity issues generated delays at Istanbul/Sabiha Gökçen, Amsterdam, Zurich, Barcelona and Istanbul/Ataturk airports;
- Seasonal weather affected Maastricht, Marseille and Barcelona ACCs; heavy rain and/or low visibility impacted London/Heathrow, Amsterdam, London/Gatwick, Zurich, Barcelona, Paris/Charles de Gaulle, Paris/Orly and Brussels airports;
- Runway maintenance at Thessaloniki airport generated 14,838 minutes of ATFM delay.

3. EN-ROUTE ATFM DELAYS

EN-ROUTE ATFM DELAY PER LOCATION

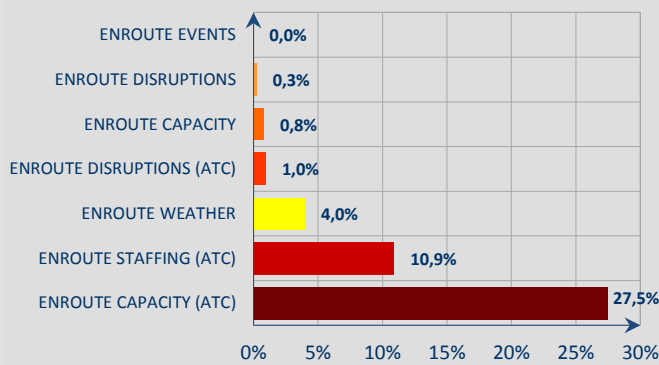


These are the top 20 en-route ATFM delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

The top 20 en-route ATFM delay locations generated **41.9%** of the monthly total (network) ATFM delay. The top 5 en-route ATFM delay locations generated **28%** of the monthly total (network) ATFM delay.

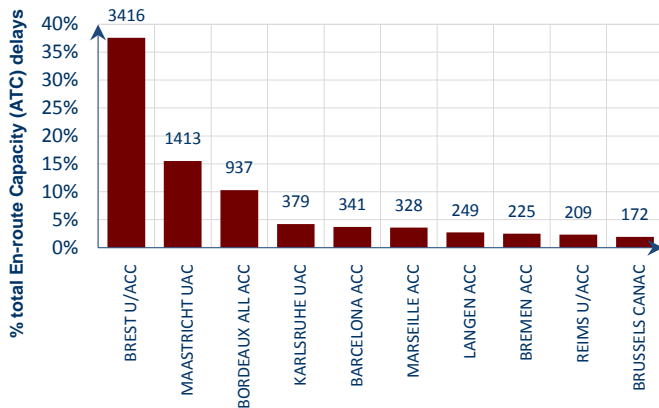
EN-ROUTE ATFM DELAY PER DELAY GROUP

Reasons for en-route delays in October 2016

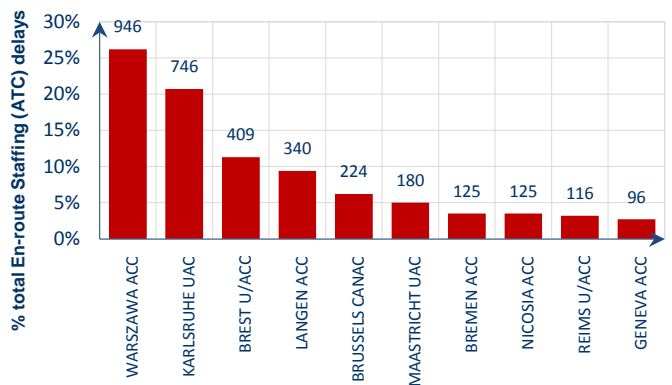


En-route ATFM delays accounted for 44.4% of all ATFM delays. Most of this delay was caused by en-route ATC capacity, en-route ATC staffing and en-route weather as explained in detail below. The other causes: *En-route ATC disruptions*; Trial of new VCS equipment in Maastricht ACC on 27 October generated delays. Frequency failure in Brest ACC on 16 October; *En-route capacity*; Military activity took place in London and Maastricht ACCs; *En-route disruptions*; Minor delays in Maastricht ACC due to locally reported weather issues in London ACC on 31 October.

Top en-route Capacity (ATC) delays in October 2016



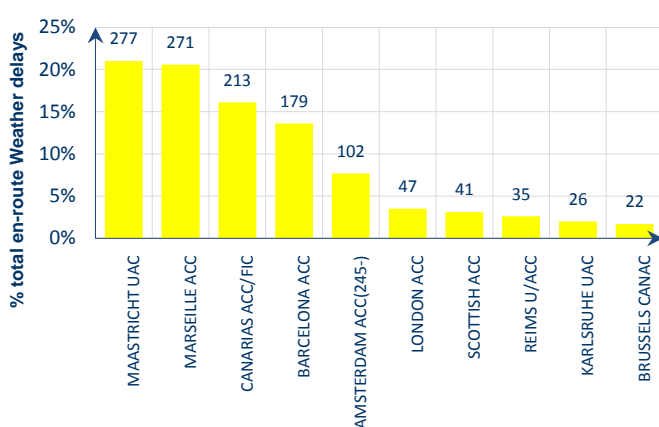
Top en-route Staffing (ATC) delays in October 2016



Delays increased in Brest ACC particularly during weekends. En-route ATC capacity delays decreased in Maastricht, Bordeaux, Karlsruhe and Barcelona ACCs.

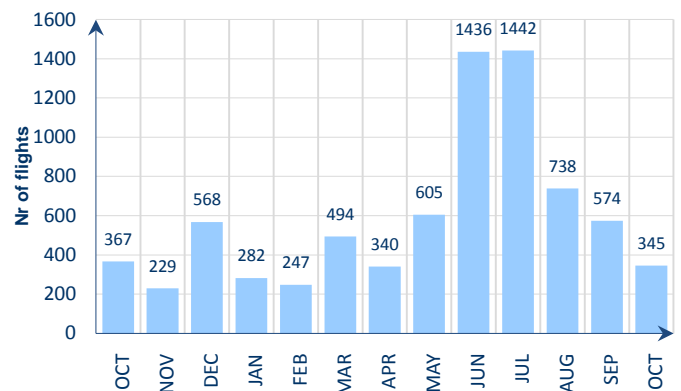
Warsaw and Karlsruhe ACCs were the biggest generators of en-route ATC staffing delays in October but these delays decreased compared to October 2015. Brest ACC entered the top 10 at the third place due to staffing issues generating 12,680 minutes of delay on 28 October.

Top en-route Weather delays in October 2016



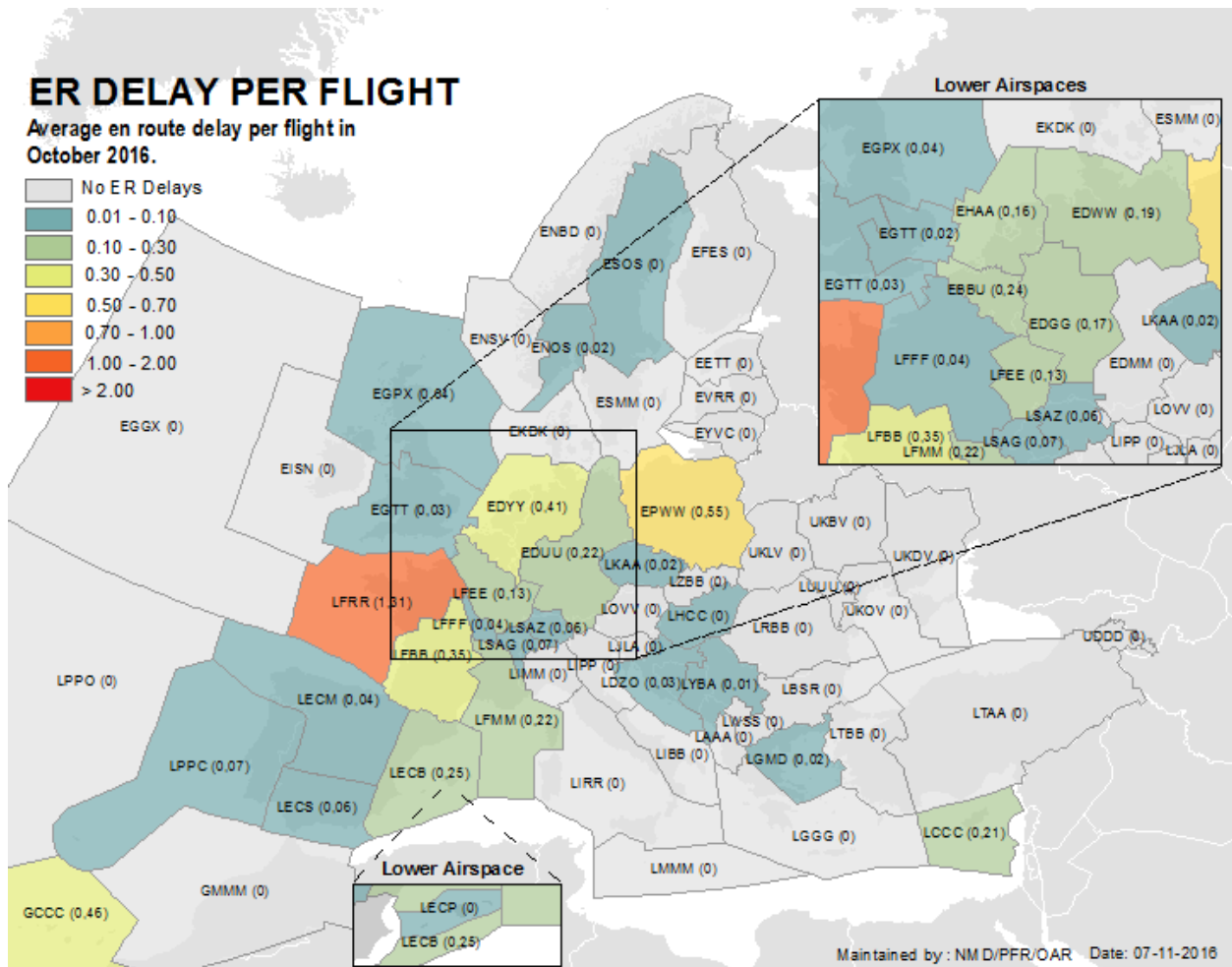
Thunderstorms generated delays in several ACCs. Weather impacted operations strongly on 14 October in Maastricht (5,034 minutes of delay) and Marseille (6,871 minutes of delay) ACCs.

Average daily flights >= 15 min en-route delay

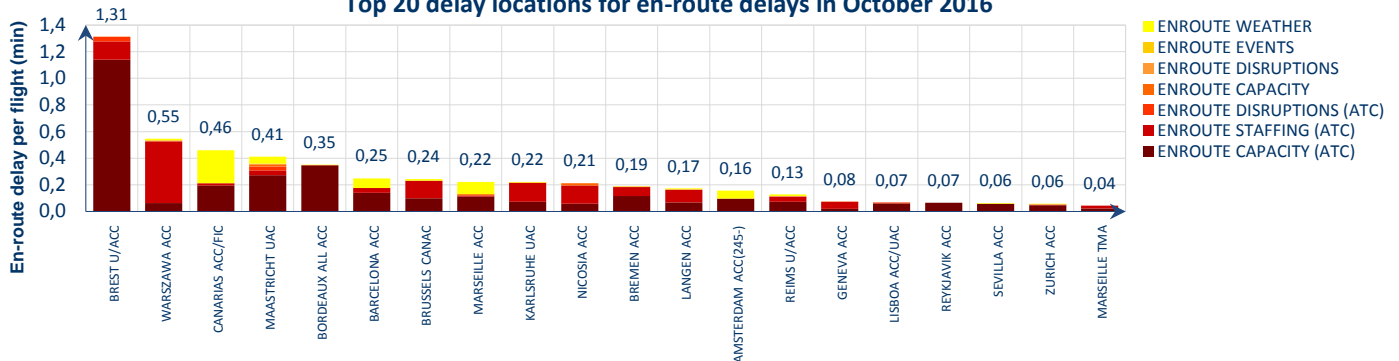


Despite an increase of 11.6% of ATFM delay in October 2016 compared to October 2015, the average daily flights with an en-route ATFM delay of at least 15 minutes decreased from 367 flights/day in October 2015 to 345 flights/day in October 2016.

EN-ROUTE ATFM DELAY PER FLIGHT



Top 20 delay locations for en-route delays in October 2016



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

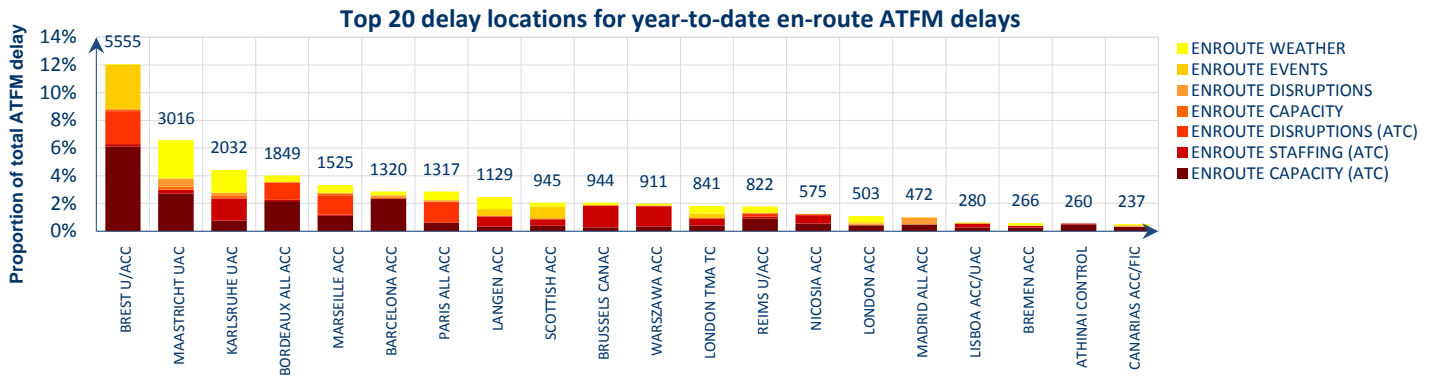
ATFM delay decreased for eight of the TOP10 airports compared to September 2016.

Brest ACC average en-route ATFM delay/flight increased from 0.50 min/flt in September 2016 to 1.31 min/flt in October 2016, with the worst days during weekends.

Canarias ACC average increased from 0.04 min/flt in September 2016 to 0.46 min/flt in October 2016 mainly due to en-route weather issues at the end of the month.

More detailed information available in the Monthly per ACC Summary Report via the [NM ATFCM Statistics website](#).

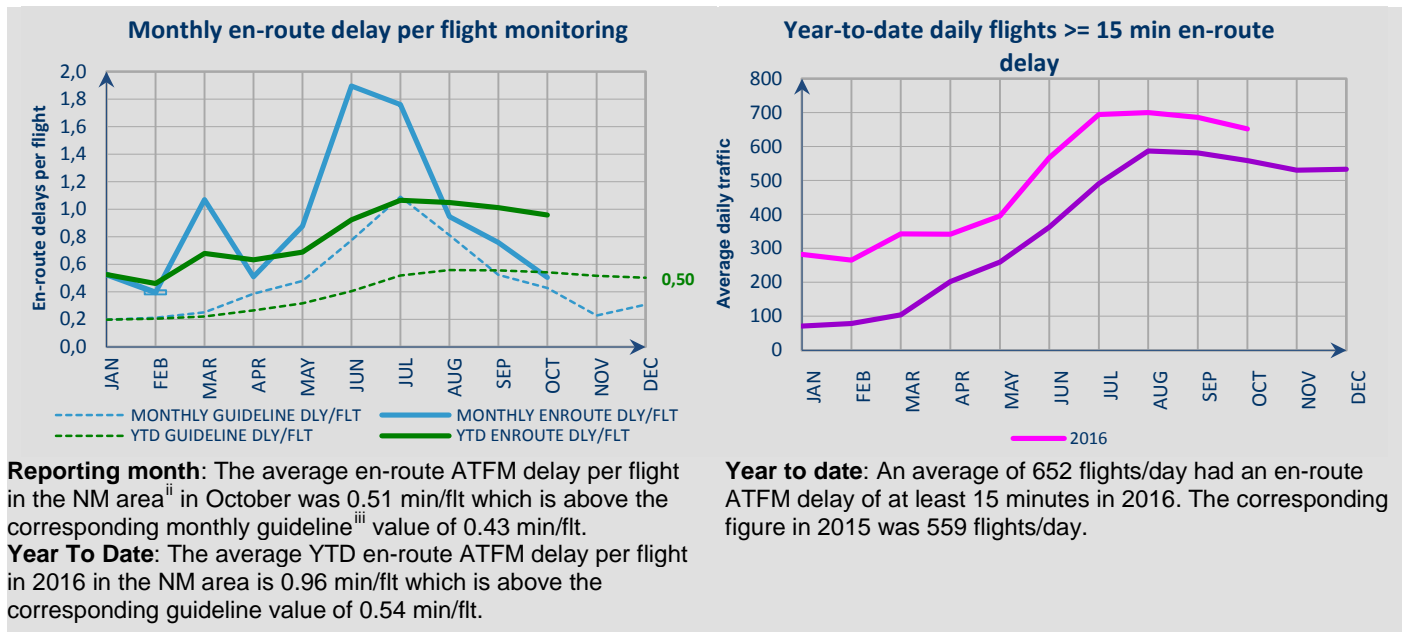
EN-ROUTE ATFM DELAY YEAR-TO-DATE



These are the top 20 en-route delay locations for 2016 with respect to the total ATFM delay. Figures are the average daily en-route delay in minutes for the individual locations.

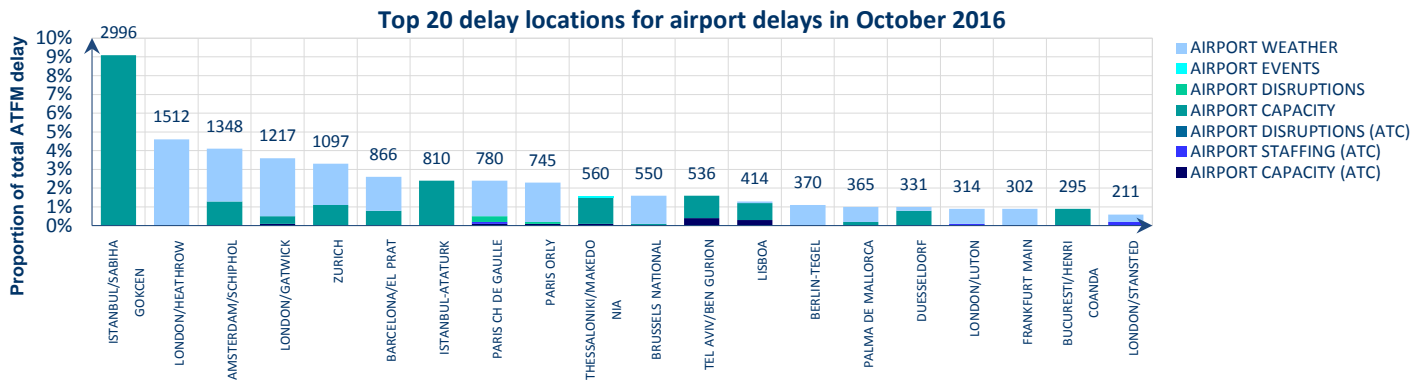
The top 20 en-route delay locations generated **55.5%** of the total ATFM (network) delay.

The top 5 en-route delay locations generated **31.2%** of the total ATFM (network) delay.



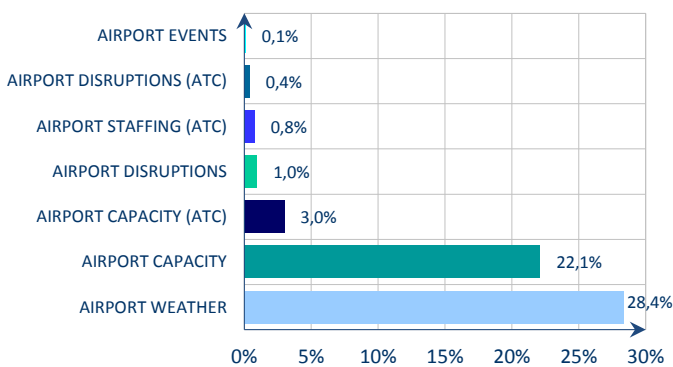
4. AIRPORT/TMA ATFM DELAYS

AIRPORT/TMA ATFM DELAY PER LOCATION

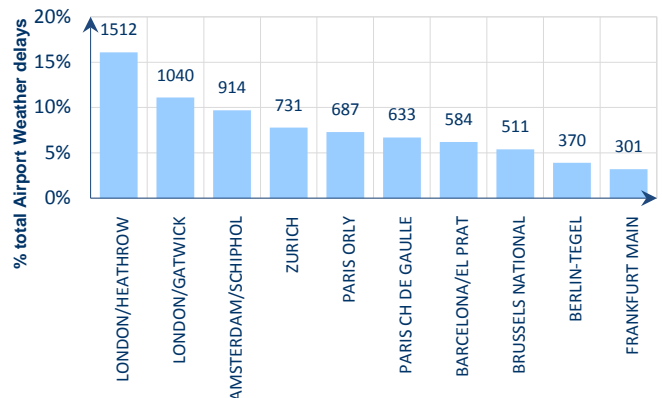


AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for airport delays in October 2016



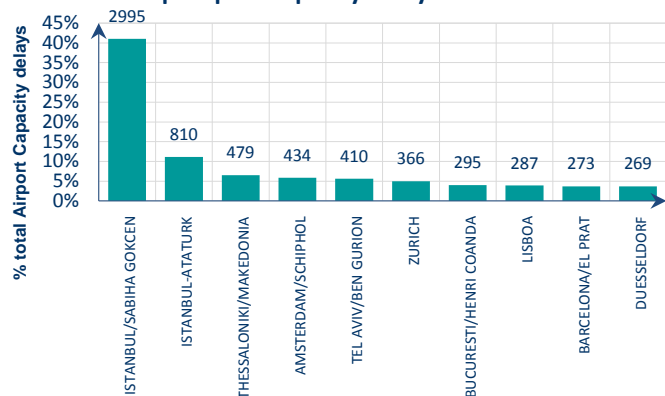
Top Airport Weather delays in October 2016



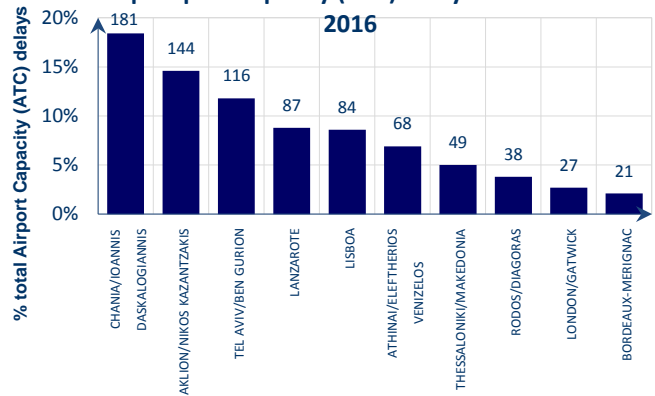
Airports accounted for 55.6% of all ATFM delays in October 2016, mainly due to airport weather and aerodrome capacity.

Adverse seasonal weather impacted operations strongly at London/Heathrow on 30 October with 16,930 minutes of delay, London/Gatwick on 27 October with 15,665 minutes of delay and Amsterdam/Schiphol airports.

Top Airport Capacity delays in October 2016



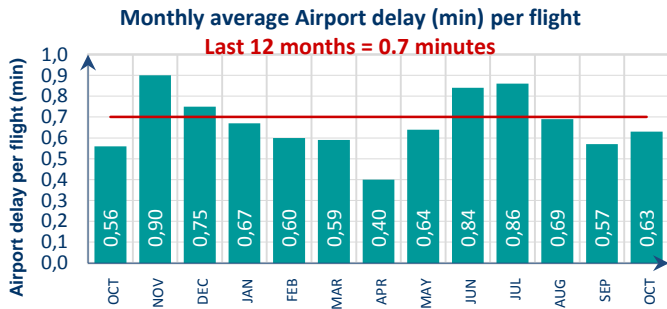
Top Airport Capacity (ATC) delays in October 2016



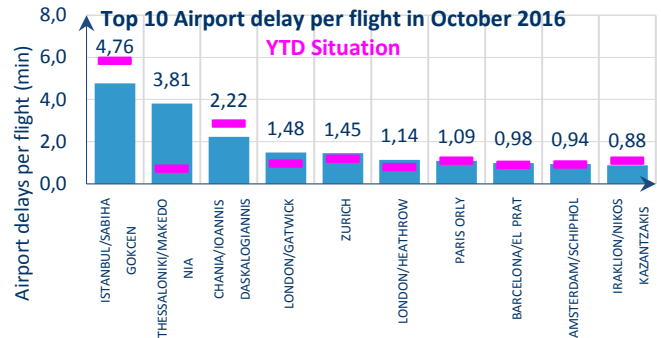
Istanbul Sabiha/Gökçen airport continues to generate high delays due to airport capacity. Delays at Thessaloniki airport due to works on the manoeuvring area.

High demand during weekends still generated delays at Greek island airports, however delays decreased compared to September 2016.

AIRPORT/TMA ATFM DELAY PER FLIGHT

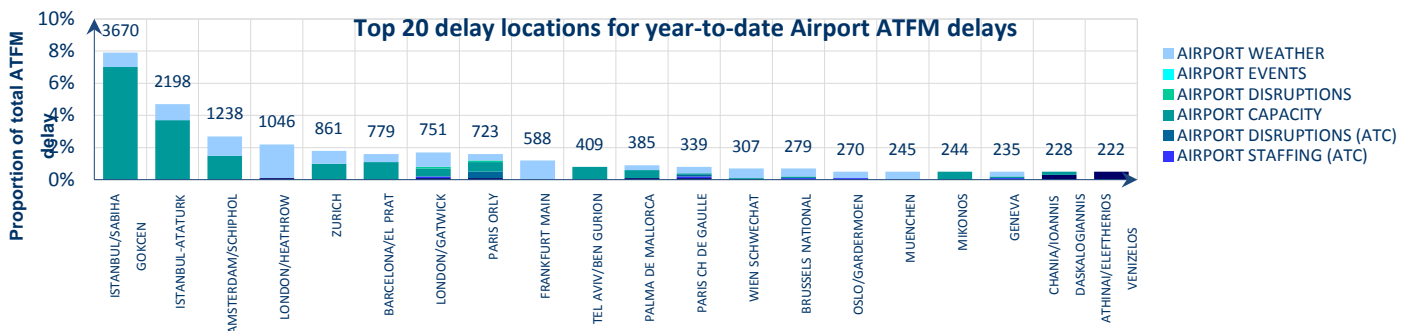


Average airport/TMA delay per flight increased from 0.56 min/ft in October 2015 to 0.63 min/ft in October 2016.



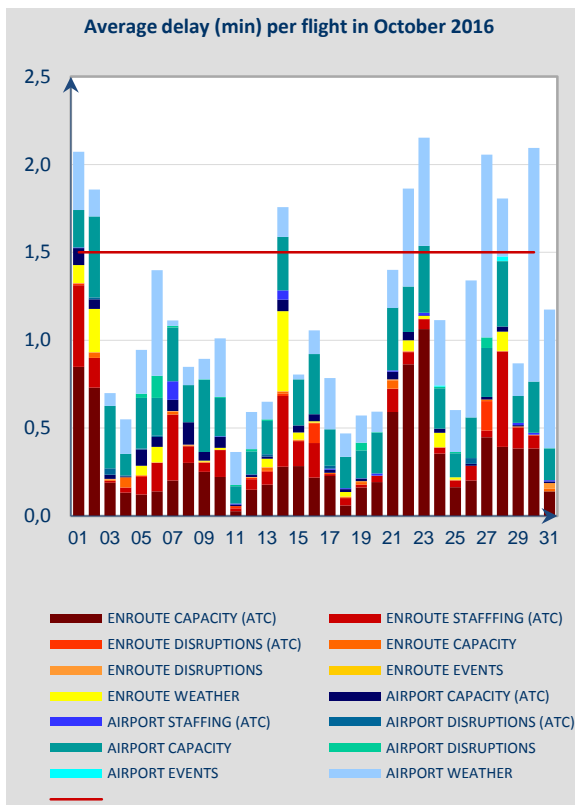
Six of the top 10 delay airports generated a daily average ATFM per flight on or above their year to date values. ATFM delays decreased at Istanbul/Sabiha Gökçen and Chania airports compared to October 2015. Works on the manoeuvring area at Thessaloniki airport generated high delays.

AIRPORT/TMA ATFM DELAY YEAR-TO-DATE



The top 20 Airport/TMA delay locations have generated 32.3% of the total ATFM (network) delay in 2016. The top 5 Airport/TMA delay locations have generated 19.3% of the total ATFM (network) delay in 2016.

5. DAILY EVOLUTION



There were 8 days in October 2016 where average delay/ft exceeded 1.5 min/ft.

01-02 October; En-route ATC capacity delays in Brest, Marseille, Bordeaux and Maastricht ACCs; En-route ATC staffing delays in Warsaw, Karlsruhe and Maastricht ACCs; Airport capacity issues at both Istanbul airports, Palma and Barcelona airports; Seasonal weather particularly impacted operations in Amsterdam, Barcelona and London ACCs; Airport weather delays at Venezia, London/Gatwick, London/Heathrow, Barcelona, Frankfurt and Zurich; ATC capacity issues at Chania, Lanzarote and Iraklion airports.

14 October; High en-route weather delays in Marseille and Maastricht ACCs; ATC staffing issues in Brussels, Langen, Warsaw, Karlsruhe and Bremen ACCs; Aerodrome capacity issues in both Istanbul airport and Amsterdam airports; En-route ATC capacity delays in Maastricht ACC; Weather delays at Brussels and Rome/Fiumicino airports;

22-23 October; High en-route ATC capacity delays in Brest ACC, and to a lesser extent in Bordeaux, Maastricht and Canarias ACCs; Seasonal weather impacted operations strongly at Paris/Charles de Gaulle, Amsterdam, Paris/Orly, London/Heathrow, London/Gatwick and Frankfurt airports; Aerodrome capacity issues at both Istanbul airports, London/Gatwick and Barcelona airports; En-route ATC staffing delays in Karlsruhe ACC;

27 October; High delays due to seasonal weather at London/Gatwick airport, and to a lesser extent at Amsterdam, Paris/Charles de Gaulle, Paris/Orly, London/City and Zurich airports; En-route ATC capacity delays in Brest and Amsterdam ACCs; Istanbul/Sabiha Gökçen airport generated most of the Airport capacity delays; Maastricht ACC generated en-route ATC disruptions delays due to the trial of new VCS equipment; Airport disruptions delays at Paris/Le Bourget due to ILS calibration;

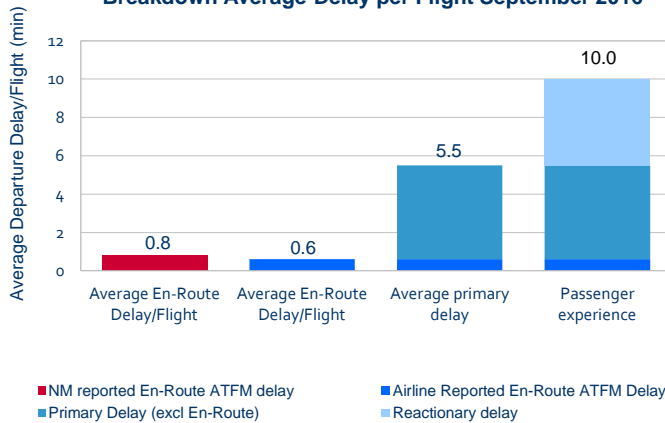
28 October; En-route ATC capacity delays in Bordeaux, Reims, Maastricht and Brest ACCs; Brest ACC generated high delays due to en-route ATC staffing issues; Airport capacity delays in both Istanbul airports, Zurich and Thessaloniki airports; Weather delays at Paris/Charles de Gaulle, Paris/Orly, Munich and Toulouse airports; En-route weather impacted strongly operations in Canarias ACC;

30 October; Low visibility operations due to fog generated high delays at London/Heathrow, London/Gatwick, London/Luton and London/Stansted airports; en-route ATC capacity issues in Brest and Maastricht ACCs; Airport capacity delays at Istanbul/Sabiha Gökçen airport.

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 63% of the commercial flights in the ECAC region for September 2016. 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 remaining amount is the handling delay.

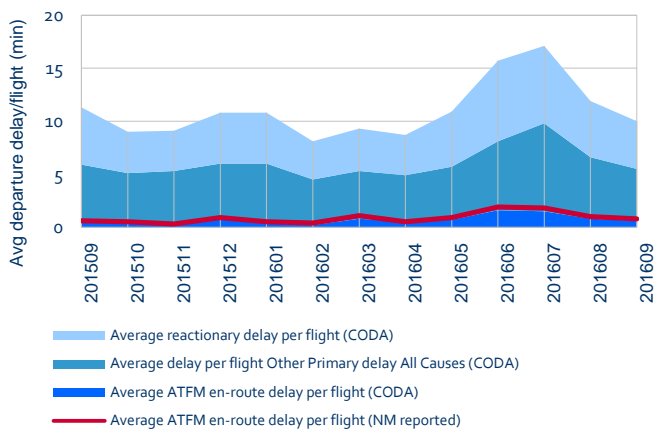
Breakdown Average Delay per Flight September 2016



Based on airline data, the average departure delay per flight from 'All Causes' was 10 minutes per flight, this was a decrease of 8% in comparison to 10.9 minutes per flight in the same month of 2015.

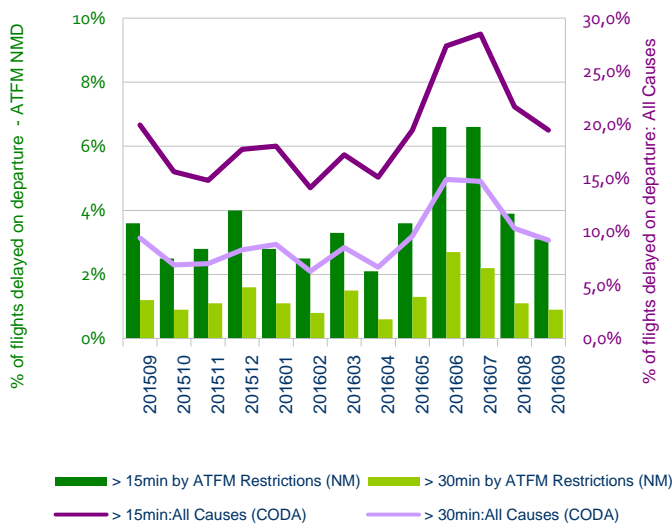
Within all air transport delays, en-route ATFM delays were 0.6 minutes/flight in September 2016. Primary delays counted for 55% (or 5.5 min/ft), with reactionary delays representing the remaining share of 45% at (4.5 min/ft).

Average departure delay per flight 2015/2016



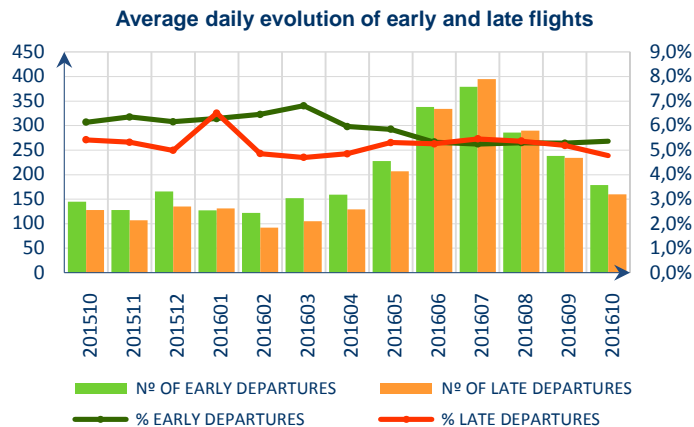
Further analysis of airline data from 'All-Causes' shows that the average en-route ATFM delay was 0.6 minutes per flight. This was lower than the NM reported average en-route ATFM delay of 0.8 minutes per flight.

Percentage of Delayed Flights: ATFM & All Causes



The percentage of flights delayed from 'All-Causes' decreased (those exceeding 15 minutes) by 0.5 percentage points to 19.5% and those (exceeding 30 minutes) by 0.2 points to 9.2% of flights in September 2016.

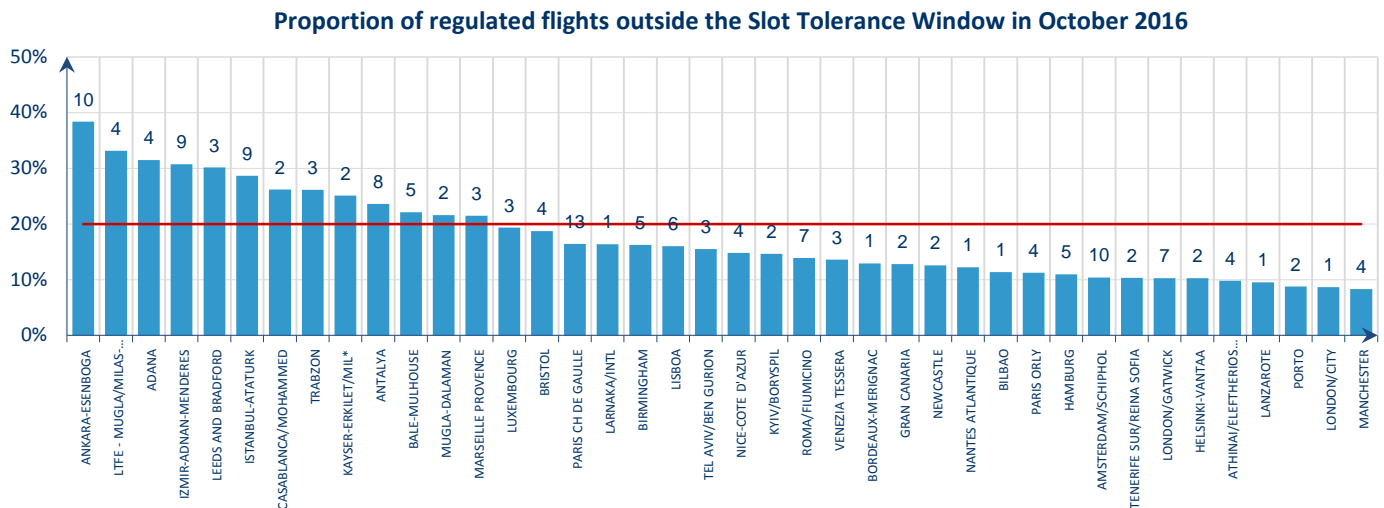
7. ATFM SLOT ADHERENCE



The percentage of early departures for October 2016 is 5.4% of regulated flights, which is a decrease of 0.8 percentage points compared to October 2015.

The percentage of late departures for October 2016 is 4.8% of regulated flights, which is a decrease of 0.6 percentage points compared to October 2015.

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 number of departures outside the slot tolerance window can reduce network predictability.



8. SIGNIFICANT EVENTS AND ISSUES

PLANNED EVENTS

ACC

MAJOR AIRSPACE OR ATM SYSTEM IMPROVEMENT PROJECTS

Coordinated at Network level through Transition Planning Process

L'viv ACC migrated to a new ATM system on 30 October with no ATFM delay. There were no other major airspace/ATM system projects during the reporting period.

Other

Trial of new VCS equipment in the Brussels, Hannover and Deco sectors generated 4,989 minutes of ATFM delay in Maastricht ACC on 27 October.

AIRPORTS

Local Plans in October

A number of airports undertook infrastructure and technical system improvement works during October. These improvements as well as some special events had at most a minor impact on local airport operations unless otherwise stated.

Special Events

- The Sainte-Maxime Free Flight World Masters at Golfe de Saint-Tropez between 6 and 9 (“zero rates” were applied);
- International food fair in Torino between 22 and 26 October;
- Air display by military aircraft at Thessaloniki airport on 24 and 28 October “zero rates” were applied and 1,002 minutes of ATFM delay was generated.

Completed:

- Runway maintenance at Amsterdam/Schiphol, Milano/Malpensa, Paris/Charles de Gaulle and Rome Ciampino airports;
- Taxiway(s) and/or apron(s) improvements at Frankfurt/Main, Helsinki and Stuttgart airports;
- ILS maintenance at Bologna, Gran Canaria and Nice airports.

Ongoing

- Runway maintenance at Bucharest/Henri Coanda (9,153 minutes of ATFM delay), Cologne, East Midlands, Istanbul/Sabiha Gökçen, Kishinev, Krakow, Palma de Mallorca, Tallinn and Thessaloniki (Arrival flow: 10,717 minutes and Departure flow: 4,121 minutes of ATFM delay) airports;
- Taxiway(s) and/or apron(s) improvements at Copenhagen, Hamburg, Lanzarote, Lisbon (6,323 minutes of ATFM delay), London/Heathrow, Malta, Stockholm/Bromma (1,951 minutes of ATFM delay), Tallinn and Venice airports;
- ILS maintenance at Düsseldorf, Malta, Oslo/Gardermoen and Paris/Charles de Gaulle airports;
- Terminal building(s) improvements/works at Belgrade, Bergen, Frankfurt/Main, Ljubljana, and Oslo/Gardermoen airports;
- PRIDEP trial at Zurich airport generated 1,406 minutes of airport ATFM delay.

DISRUPTIONS

Technical

- Runway and taxiway lights problems at Warsaw/Chopin between 6 and 27 October generated 1,143 minutes of ATFM delay;
- Radar problems at Cagliari/Elmas airport between 02 and 04 October generated a total of 1,209 minutes of ATFM delay;
- Frequency issues in Brest ACC on 16 October generated 3,127 minutes of ATFM delay;

Other

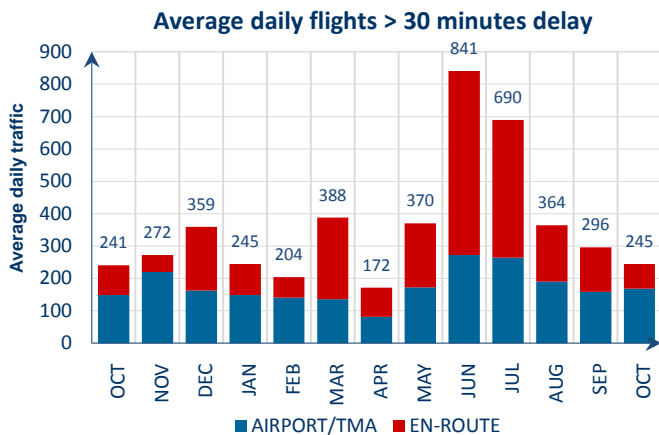
- An observation flight operating under the Open Skies Treaty^{iv} on 6 October necessitated a zero rate on arrivals for Paris/Charles de Gaulle (2,615 minutes of ATFM delay) and a reduced arrival rate for Paris/Orly (909 minutes of ATFM delay);
- Disabled aircraft blocking the runway at Manchester airport on 19 October generated 1,228 minutes of ATFM delay;
- ILS calibration at Paris/Le Bourget airport generated on 27 October 1,654 minutes of ATFM delay.

9. NM ADDED VALUE

FLIGHTS WITH DELAY > 30'

With a traffic increase of 2.9%, the number of flights with more than 30 minutes of ATFM delay remained stable between October 2015 and October 2016.

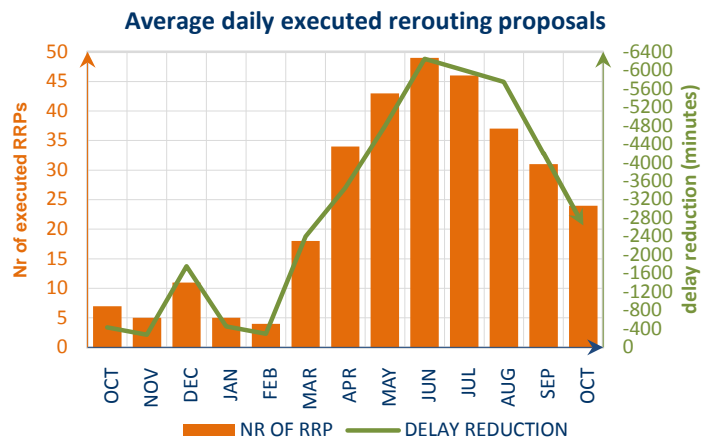
31% of flights with more than 30 minutes of ATFM delay in October 2016 were en-route and 69% were airport.



RRP DIRECT DELAY SAVINGS

A daily average of 34 RRP were offered in October 2016 of which 24 RRP were executed, saving 2,639 minutes of daily delay.

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



© 2016 THE EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION (EUROCONTROL)

This document is published by EUROCONTROL in the interests of exchange of information. It may be copied in whole or in part, providing that the copyright notice and disclaimer are included. The information contained in the document may not be modified without prior written permission from EUROCONTROL. EUROCONTROL makes no warranty, either implied or express, for the information contained in this document, neither does it assume any legal liability or responsibility for the accuracy, completeness or usefulness of this information.

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

e-mail: nm.ops.perf@eurocontrol.int
<http://www.eurocontrol.int/articles/network-operations-monitoring-and-reporting>

i See Notice on page 2 for more information on traffic and delay comparison.

ii See Notice on page 2 for more information on NM Area

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

iv See definition on: https://en.wikipedia.org/wiki/Treaty_on_Open_Skies