



Network Manager
nominated by
the European Commission



Monthly Network Operations Report

Analysis – August 2016



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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.

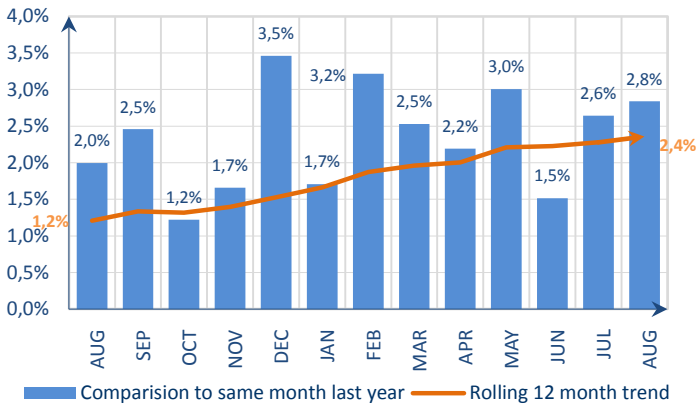
	EN-ROUTE CAPACITY (ATC)		AIRPORT CAPACITY (ATC)
	EN-ROUTE STAFFING (ATC)		AIRPORT STAFFING (ATC)
	EN-ROUTE DISRUPTIONS (ATC)		AIRPORT DISRUPTIONS (ATC)
	EN-ROUTE CAPACITY		AIRPORT CAPACITY
	EN-ROUTE DISRUPTIONS		AIRPORT DISRUPTIONS
	EN-ROUTE EVENTS		AIRPORT EVENTS
	EN-ROUTE WEATHER		AIRPORT WEATHER

- 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>.

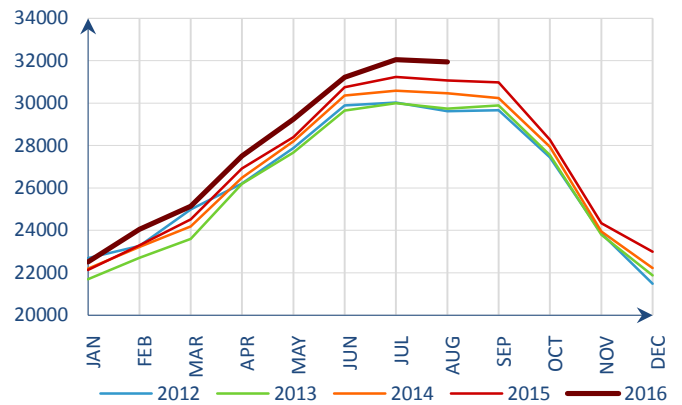
1. TOTAL TRAFFIC

Monthly traffic trend



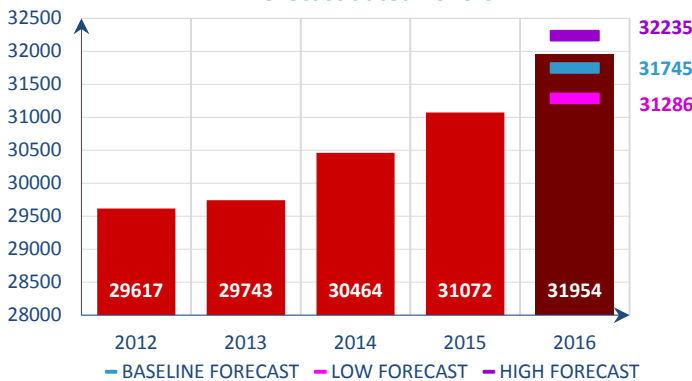
Traffic increased by 2.8 % in August 2016ⁱ.

Average daily traffic for last 5 Years



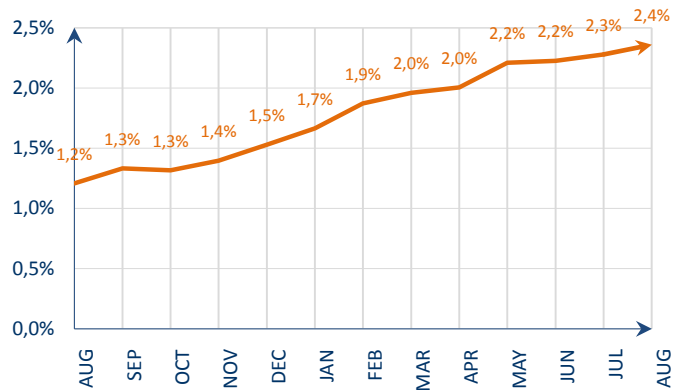
Average daily traffic in August 2016 was the highest ever for the month of August.

Average daily traffic in August for last 5 Years
Forecast dated 2016-02



The traffic increase of 2.8% for August was above the baseline forecast updated in February 2016.

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 September 2015 to August 2016 was 2.4% higher than the average from September 2014 to August 2015. The trend shows a continuous recovery in traffic.

A sustained growth of European flights led to a 2.8% increase in total traffic in August.

Security concerns continued to affect the tourism industry in Turkey, which saw 415 fewer daily flights; a decrease of 12% in the state's local traffic. Charter traffic to/from Turkey decreased by 56% in August. On the positive side, most of the states contributed to the sustained growth of traffic in Europe, with 13 states adding more than 50 daily flights to the networkⁱⁱ. Five states added more than 100 flights per day with UK as the top contributor (+ 418 daily flights), followed by Spain (+ 290 daily flights), Italy (+ 147 daily flights), Germany (+ 132 daily flights) and the Netherlands (+ 104 daily flights). The downturn in traffic to Turkish holiday resorts helped Canary Islands, Portugal (excl. Azores), Greece and Cyprus to switch together 319 flights per day to the network.

As regards extra-European traffic (in average daily flights on flows in both directions), the United States (1,110 flights, up 7%) remained Europe's main partner and was followed by the Russian Federation (872 flights, down 22%) and Israel (383 flights, up 8%). Morocco came next with 356 daily flights, a decrease of 2% on August 2015.

No sign of recovery was observed for traffic flows between Europe and Egypt which continued to decline and were down 37% to 140 flights per day on average. The decrease of traffic flows between Europe and Tunisia was reduced from -25% on average during the first half of the year to -3% and 163 daily flights in August.

Low-cost operators were the top three airlines adding the most flights to the network on a daily basis and were Ryanair (+194 flights), easyJet (+79 flights) and Wizz Air (+53 flights).

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

Seven of the top ten airports had positive traffic growth. Overall, the largest traffic increases in August 2016 were at Birmingham, Warsaw, Bucharest, Manchester and Lisbon airports. The largest traffic decreases were at Antalya, Rome/Fiumicino, Istanbul/Sabiha Gökçen, Frankfurt and Nice 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.

Seven of the top ten aircraft operators had more traffic compared to August 2015. The operators with the highest traffic growth were Olympic, LOT/Polish airlines, Qatar, Volotea, Transavia, Ukraine International, Wizz Air, European air transport, Flybe, Jet.com and Ryanair airlines. Germanwings, Norwegian Air Shuttle and Aegean recorded the highest traffic decrease.

Norwegian Air Shuttle traffic reduction for their NAX callsign is caused by a shift to the new IBK callsign. The traffic variation of Olympic and Aegean is due to Aegean flights operated with Olympic callsign. Volotea and LOT/Polish airline increases of traffic are due to the opening of new routes inside Europe. Ryanair's increase is due to an increase in fleet size, which is due to continue throughout 2016, although it slowed down during summer.

N°	ADEP	ADEP NAME	201608	%	N°	ICAO	AIR OPERATOR	201608	%
1	EHAM	AMSTERDAM/SCHIPHOL	751	7,8%	1	RYR	RYANAIR	2058	10,4%
2	LFPG	PARIS CD DE GAULLE	726	2,0%	2	THY	TURKISH AIRLINES	1432	2,0%
3	EGLL	LONDON/HEATHROW	679	0,5%	3	EZY	EASYJET	1395	6,0%
4	LTBA	ISTANBUL-ATATURK	676	-0,3%	4	DLH	DEUTSCHE LUFTHANSA	1366	-2,9%
5	EDDF	FRANKFURT MAIN	674	-2,3%	5	AFR	AIR FRANCE	887	-4,5%
6	EDDM	MUENCHEN	544	4,5%	6	SAS	SCANDINAVIAN AIRLINES SYSTEM	848	2,5%
7	LEMD	ADOLFO SUAREZ MADRID-BARAJA	535	3,1%	7	BAW	BRITISH AIRWAYS	743	3,2%
8	LEBL	BARCELONA/EL PRAT	491	4,1%	8	VLG	VUELING AIRLINES SA	713	1,8%
9	LIRF	ROMA/FIUMICINO	489	-4,0%	9	KLM	KLM ROYAL DUTCH AIRL	675	4,8%
10	EGKK	LONDON/GATWICK	456	3,0%	10	AZA	ALITALIA	629	-1,4%
11	LEPA	PALMA DE MALLORCA	453	9,0%	11	BER	AIR BERLIN, INC.	623	0,4%
12	LSZH	ZURICH	392	1,6%	12	PGT	PEGASUS HAVA TASI.	460	2,7%
13	EKCH	KOBENHAVN/KASTRUP	380	4,9%	13	BEE	JERSEY EUROPEAN T/A FLYBE	459	12,2%
14	LOWW	WIEN SCHWECHAT	352	-1,2%	14	WZZ	WIZZ AIR	436	13,7%
15	ENGM	OSLO/GARDERMOEN	352	3,1%	15	SWR	SWISS INTERNATIONAL	431	0,1%
16	LTFJ	ISTANBUL/SABIHA GOKCEN	340	-3,4%	16	NAX	NORWEGIAN AIR SHUTTLE	399	-24,3%
17	LFPO	PARIS ORLY	335	0,1%	17	AUA	AUSTRIAN AIRLINES	364	3,9%
18	EBBR	BRUSSELS NATIONAL	332	0,4%	18	GWJ	GERMAN WINGS	361	-28,8%
19	LGAV	ATHINA/AELEFTHERIOS VENIZELOS	330	9,2%	19	WIF	WIDEROE	350	-1,3%
20	EIDW	DUBLIN	328	9,9%	20	TAP	TAP/AIR PORTUGAL	341	0,1%
21	EDDL	DUESSELDORF	326	4,8%	21	FIN	FINNAIR O/Y	307	-2,2%
22	ESSA	STOCKHOLM-ARLANDA	321	4,9%	22	AEE	AEGEAN AIRLINES	278	-21,9%
23	EGCC	MANCHESTER	318	11,7%	23	AFL	AEROFLOT-RUSSIAN	268	3,0%
24	LPPT	LISBOA	289	11,2%	24	AEA	AIR EUROPA	255	2,1%
25	EGSS	LONDON/STANSTED	270	10,0%	25	RAM	ROYAL AIR MAROC	252	7,1%
26	LTAI	ANTALYA	265	-34,9%	26	ANE	AIR NOSTRUM	244	2,1%
27	EDDT	BERLIN-TEGEL	256	-0,4%	27	IBE	IBERIA	244	1,2%
28	LFMN	NICE-COTE D'AZUR	255	-1,9%	28	LOT	LOT-POLISH AIRLINES	242	26,9%
29	LIMC	MILANO MALPENSA	252	3,9%	29	TOM	THOMSON FLY LTD	238	0,8%
30	LSGG	GENEVA	250	-0,2%	30	EIN	AER LINGUS TEORANTA	233	0,6%
31	EFHK	HELSINKI-VANTAA	235	-1,4%	31	BEL	BRUSSELS AIRLINES	222	8,0%
32	EPWA	CHOPINA W WARSZAWIE	235	13,9%	32	EXS	JET2.COM	218	12,2%
33	LEMG	MALAGA/COSTA DEL SOL	226	10,1%	33	TRA	TRANSVIA.COM	217	19,9%
34	EDDH	HAMBURG	220	2,8%	34	UAE	EMIRATES	193	8,6%
35	LLBG	TEL AVIV/BEN GURION	214	7,5%	35	IBK	NORWEGIAN AIR INTERNATIONAL	187	
36	LKPR	PRAHA RUZYNE	213	7,4%	36	QTR	QATAR AIRWAYS COMP.	183	26,0%
37	LEIB	IBIZA	203	4,4%	37	VOE	VOLOTEA	178	20,9%
38	EDDK	KOELN-BONN	201	10,6%	38	TVS	TRAVEL SERVIS	166	5,2%
39	EGGW	LONDON/LUTON	197	10,7%	39	DAL	DELTA AIR LINES INC.	163	0,6%
40	EGPH	EDINBURGH	189	9,8%	40	UAL	UNITED AIRLINES INC.	160	0,6%
41	EDDS	STUTTGART	177	-0,2%	41	EWG	EUROWINGS AG	159	0,0%
42	EGBB	BIRMINGHAM	172	15,4%	42	AUI	UKRAINE INTERNATIONAL	159	15,8%
43	LROP	BUCURESTI/HENRI COANDA	163	13,8%	43	OAL	OLYMPIC	156	154,4%
44	LEAL	ALICANTE	156	0,0%	44	SXS	SUNEXPRESS AIRLINES	152	-5,9%
45	LIML	MILANO LINATE	155	4,4%	45	EZS	EASY JET SWITZERLAND	151	-5,4%
46	LIPZ	VENEZIA TESSERA	151	0,0%	46	HOP	HOP (MERGE OF BZH + RAE + RLA)	148	-5,3%
47	LFLL	LYON SAINT-EXUPERY	147	4,2%	47	TCX	THOMAS COOK AIT LTD	145	5,9%
48	LGIR	IRAKLION/NIKOS KAZANTZAKIS	146	6,4%	48	BCS	EUROPEAN AIR TRANSP.	143	12,4%
49	LHBP	BUDAPEST LISZT FERENC INT.	145	3,5%	49	NJE	NETJETS	140	-3,3%
50	GCLP	GRAN CANARIA	144	0,0%	50	MON	MONARCH AIRLINES LTD	136	1,6%
TOTALS and % TOTAL TRAFFIC			16106	56,2%	TOTALS and % TOTAL TRAFFIC			20907	65,4%

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

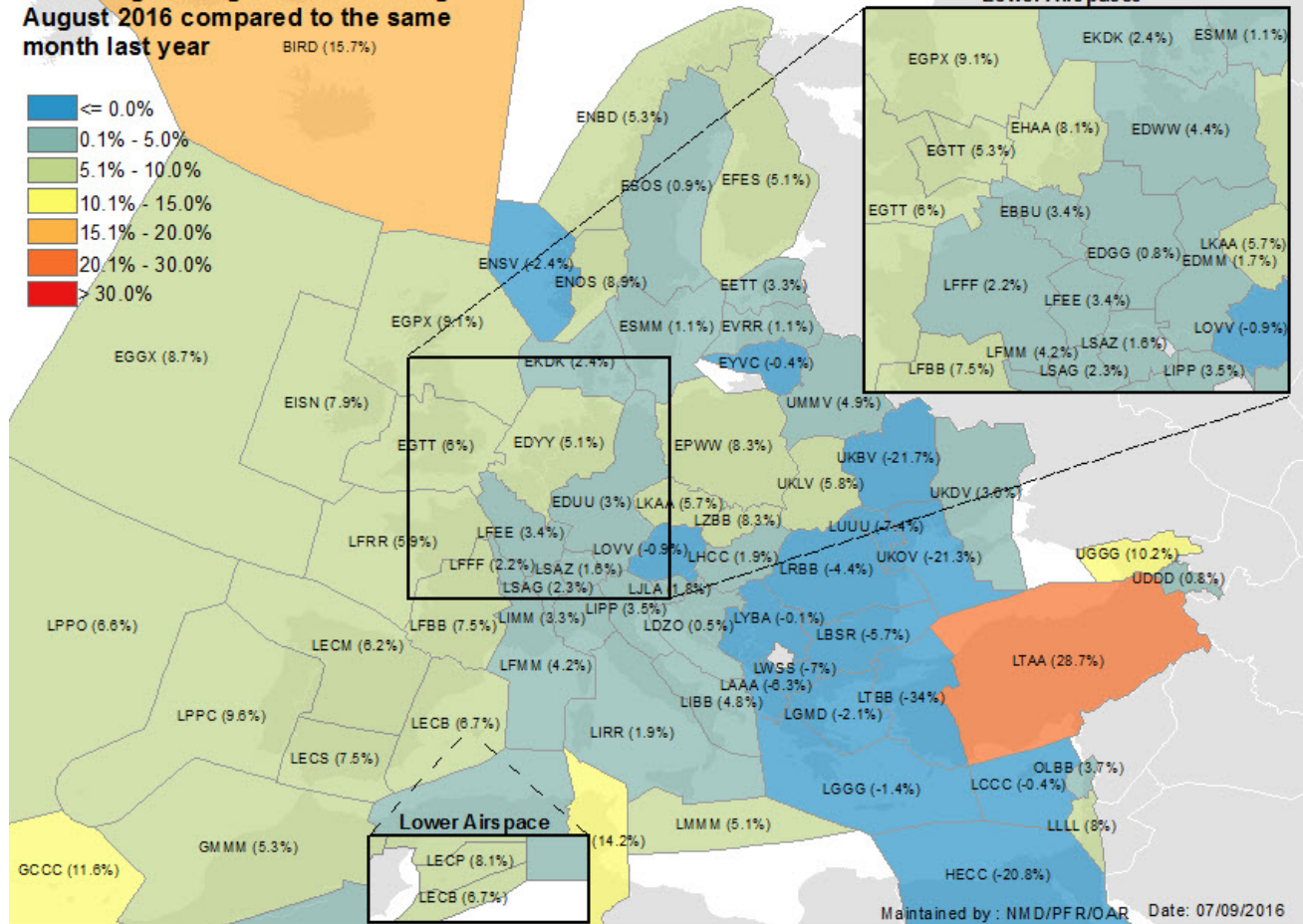
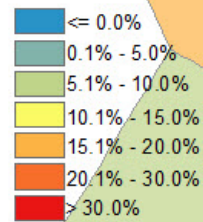
N°	ICAO	AIR OPERATOR	201608	%
		Unidentified	2192	-5,4%

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

BIRD (15.7%)



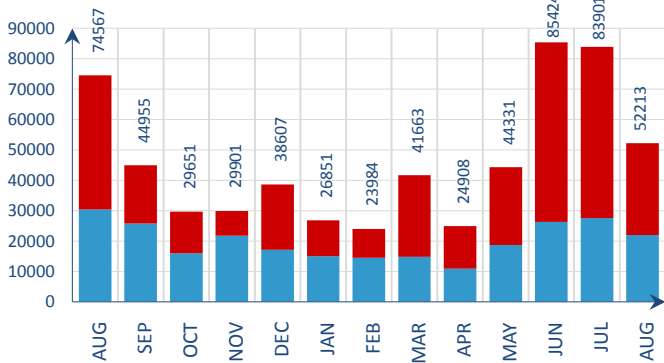
Maintained by : NMD/PFR/OAR Date: 07/09/2016

Nº	ASP ID	ASP NAME	201608	%	Nº	ASP ID	ASP NAME	201608	%
1	BIRDACC	REYKJAVIK ACC	435	15,7%	39	LFBBALL	BORDEAUX ALL ACC	3038	7,5%
2	DAAAACC	ALGERS ACC	512	4,3%	40	LFFEACC	REIMS U/ACC	3061	3,4%
3	DTTCACC	TUNIS ACC	346	14,2%	41	LFFFALL	PARIS ALL ACC	3558	2,2%
4	EBBUACC	BRUSSELS CANAC	1789	3,4%	42	LFMMACC	MARSEILLE ACC	3742	4,2%
5	EDGGALL	LANGEN ACC_FIR	3637	0,8%	43	LFMMAPP	MARSEILLE TMA	1040	-1,1%
6	EDMMACC	MUNCHEN ACC	3196	1,7%	44	LFRRACC	BREST U/ACC	3332	6,0%
7	EDUUUAC	KARLSRUHE UAC	5534	3,0%	45	LGGGACC	ATHINAI CONTROL	2107	-1,4%
8	EDWWACC	BREMEN ACC	1845	4,4%	46	LGMDACC	MAKEDONIA CONTROL	1653	-2,1%
9	EDYYUAC	MAASTRICHT UAC	5324	5,1%	47	LHCCACC	BUDAPEST ACC	2659	1,9%
10	EETTACC	TALLIN ACC	601	3,3%	48	LIBBACC	BRINDISI ACC	1112	4,8%
11	EFESACC	TAMPERE ACC	452	5,1%	49	LIMMACC	MILANO ACC	2673	3,3%
12	EGGXOCA	SHANWICK OACC	1513	8,7%	50	LIPPACC	PADOVA ACC	2389	3,5%
13	EGPXALL	SCOTTISH ACC	2975	9,1%	51	LIRRACC	ROMA ACC	2906	1,9%
14	EGTTACC	LONDON ACC	6254	6,1%	52	LJLAACC	LJUBLJANA ACC	1055	1,8%
15	EGTTTC	LONDON TMA TC	4149	5,3%	53	LKAAACC	PRAGUE ACC	2511	5,7%
16	EHAACC	AMSTERDAM ACC(245-)	1754	8,1%	54	LLLLACC	TEL AVIV ACC	511	8,0%
17	EIDWACC	DUBLIN ACC	722	11,8%	55	LMMMACC	MALTA ACC	348	5,5%
18	EISNACC	SHANNON ACC	1436	7,9%	56	LOVVACC	WIEN ACC	2650	-0,9%
19	EKDKACC	COPENHAGEN ACC	1601	2,4%	57	LPPCACC	LISBOA ACC/UAC	1622	9,6%
20	ENBDACC	BODO ACC	642	5,3%	58	LPOOACC	SANTA MARIA OACC	403	6,3%
21	ENOSACC	OSLO ATCC	1061	8,9%	59	LQSBACC	BOSNIA-HERZEGOVINA	150	6,4%
22	ENSVACC	STAVANGER ATCC	685	-2,4%	60	LRRBACC	BUCURESTI ACC	2120	-4,4%
23	EPWWACC	WARSAWA ACC	2344	8,3%	61	LSAGACC	GENEVA ACC	1942	2,3%
24	ESMMACC	MALMO ACC	1522	1,1%	62	LSAZACC	ZURICH ACC	2347	1,6%
25	ESOSACC	STOCKHOLM ACC	1097	0,9%	63	LTAACC	ANKARA ACC	4086	28,8%
26	EVRACC	RIGA ACC	763	1,1%	64	LTBBACC	ISTANBUL ACC	2279	-34,0%
27	EYVACC	VILNIUS ACC	685	-0,4%	65	LUUUACC	CHISINAU ACC	150	-7,4%
28	GCCCACC	CANARIAS ACC/FIC	878	11,6%	66	LWSSACC	SKOPJE ACC	647	-7,0%
29	GMMMACC	CASABLANCA ACC	1161	5,3%	67	LYBAACC	BEOGRADE ACC	2398	-0,1%
30	HECCACC	CAIROACC	579	-20,7%	68	LZBBACC	BRATISLAVA ACC	1771	8,3%
31	LAAAACC	TIRANA ACC	793	-6,3%	69	OLBBACC	BEIRUT ACC	195	3,7%
32	LBSRACC	SOFIA ACC	2675	-5,7%	70	UDDDACC	YEREVAN ACC	127	0,0%
33	LCCCACC	NICOSIA ACC	1100	-0,4%	71	UGGGACC	TBILISI ACC	412	10,5%
34	LDZOACC	ZAGREB ACC	2040	0,5%	72	UKBVACC	KIEV ACC	426	-21,7%
35	LECBACC	BARCELONA ACC	3190	6,7%	73	UKDVACC	DNIPROPETROVSK ACC	58	3,6%
36	LECMALL	MADRID ALL ACC	3120	6,2%	74	UKLVACC	L'VIV ACC	345	5,8%
37	LECPACC	PALMA ACC	1492	8,1%	75	UKOVACC	ODESSA ACC	274	-21,3%
38	LECSACC	SEVILLA ACC	1196	7,5%	76	UMMVACC	MINSK ACC	842	4,9%

The highest traffic increases in August 2016 were in Ankara, Reykjavik, Tunis, Dublin, Canarias, Tbilisi, Lisbon and Scottish 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. There was significant traffic increase in Tunis, Tel Aviv, Casablanca and Algiers ACC, the majority of which traverses European airspace.

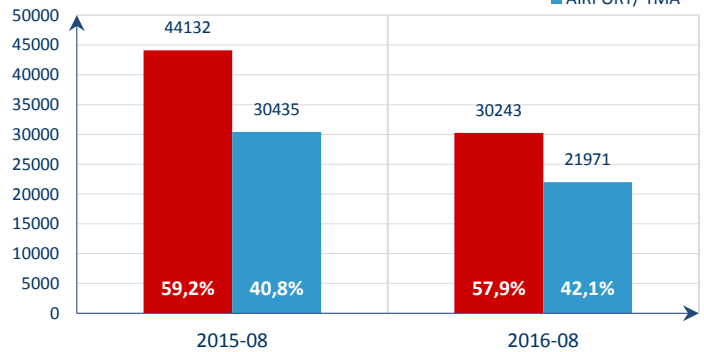
2. ATFM DELAY AND ATTRIBUTIONS

Average daily ATFM delays



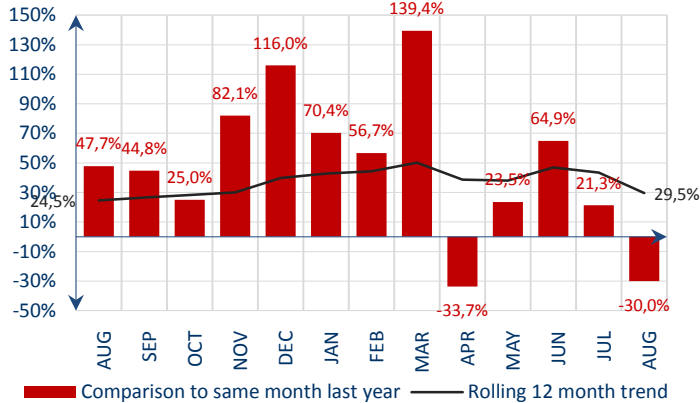
Total ATFM delays decreased by 30% in August 2016.

Average daily ATFM delays



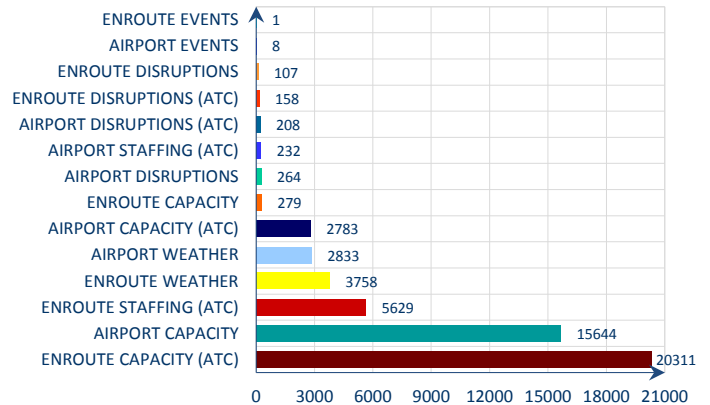
En-route ATFM delays decreased by 31.5% and airport ATFM delays decreased by 27.8%.

Monthly ATFM delays trend



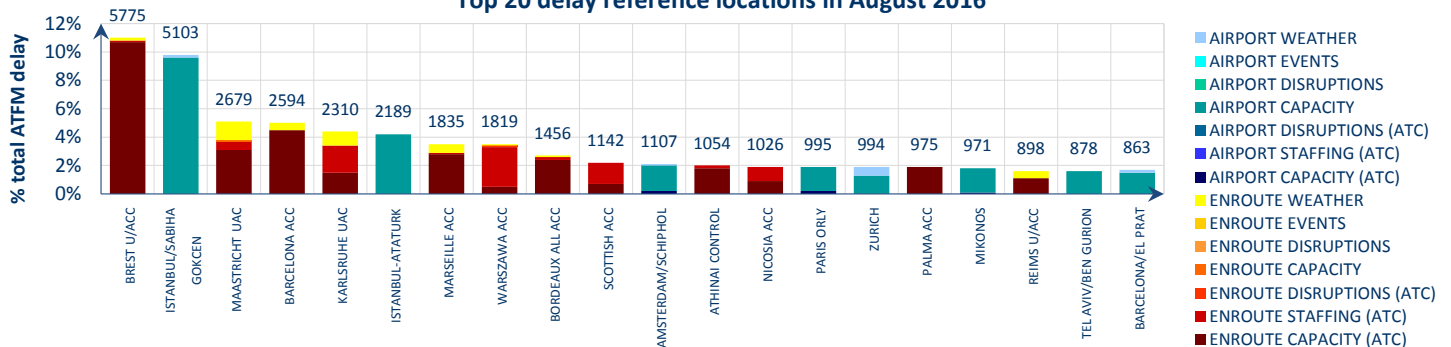
Although there was a decrease of 30%, the rolling 12-month trend shows that ATFM delay was 29.5% higher during the period September 2015 – August 2016 compared to September 2014 – August 2015.

Proportion of ATFM delays in August 2016



En-route ATC capacity (38.9%), airport capacity (30%) and en-route ATC staffing (10.8%) were the main causes of ATFM delays in August 2016.

Top 20 delay reference locations in August 2016

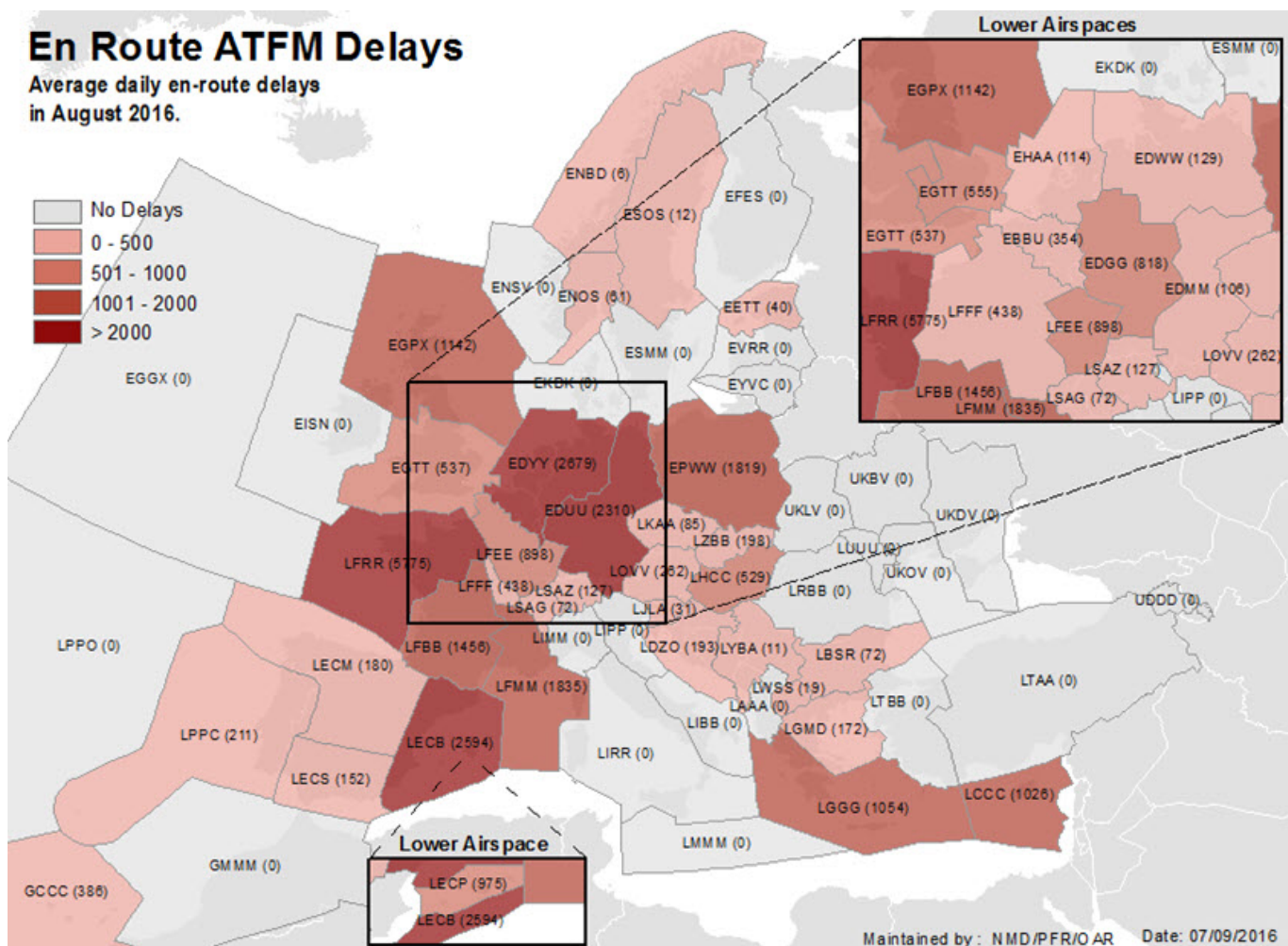


These are the top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

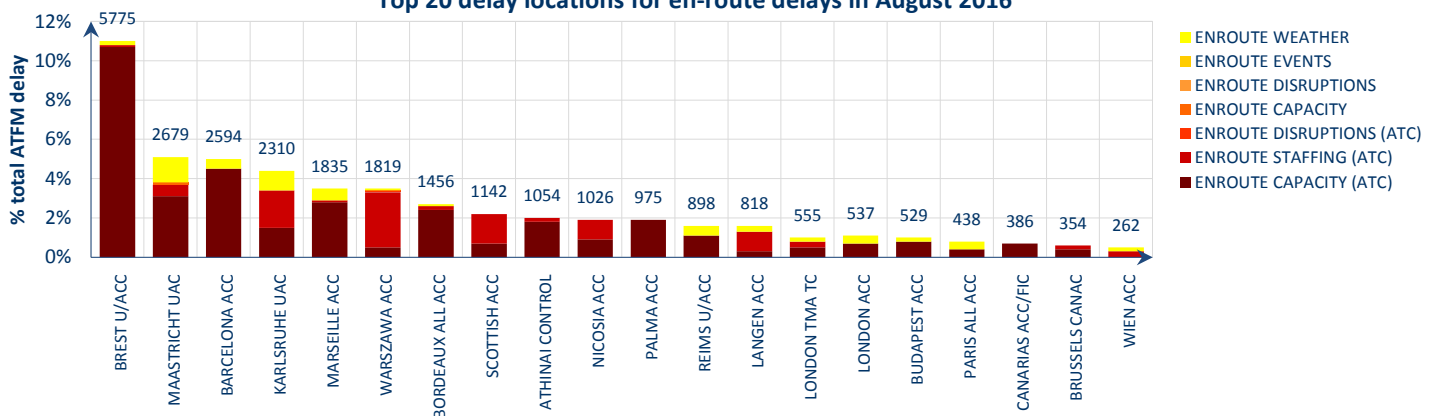
- En-route ATC capacity delays in Brest, Maastricht, Barcelona, Karlsruhe, Marseille, Warsaw, Bordeaux, Scottish, Athens, Nicosia, Palma and Reims ACCs;
- En-route weather generated delays in Brest, Maastricht, Barcelona, Karlsruhe, Marseille and Reims ACCs;
- En-route staffing issues in Maastricht, Karlsruhe, Warsaw, Scottish and Nicosia ACCs;
- Aerodrome capacity issues generated delays at Istanbul/Sabiha Gökçen airport and to a lesser extent at Istanbul/Ataturk, Amsterdam/Schiphol, Paris/Orly, Zurich, Mikonos, Tel Aviv and Barcelona airports;
- Seasonal weather impacted operations at Istanbul/Sabiha Gökçen, Zurich and Barcelona airports.

3. EN-ROUTE ATFM DELAYS

EN-ROUTE ATFM DELAY PER LOCATION



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

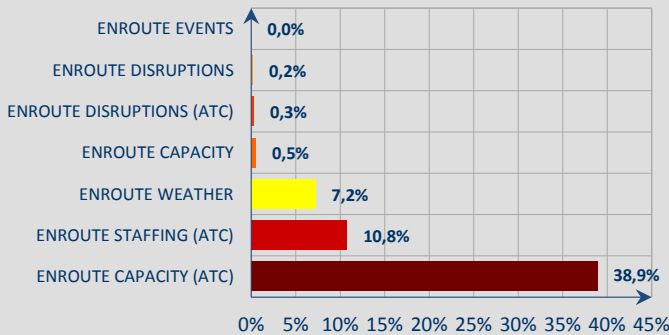


These are the top 20 en-route ATFM delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

The top 20 en-route ATFM delay locations generated **52.7%** of the monthly total (network) ATFM delay. The top 5 en-route ATFM delay locations generated **29%** of the monthly total (network) ATFM delay.

EN-ROUTE ATFM DELAY PER DELAY GROUP

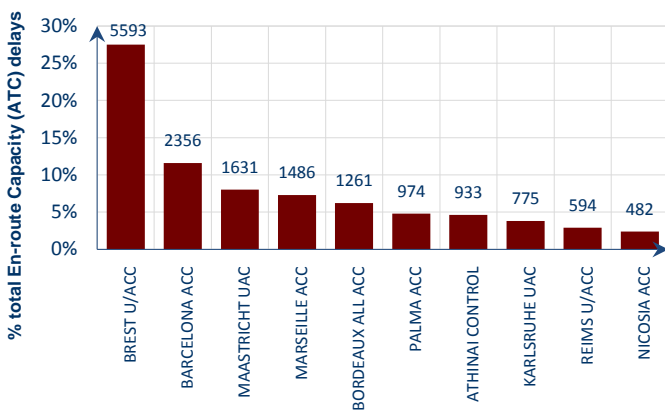
Reasons for en-route delays in August 2016



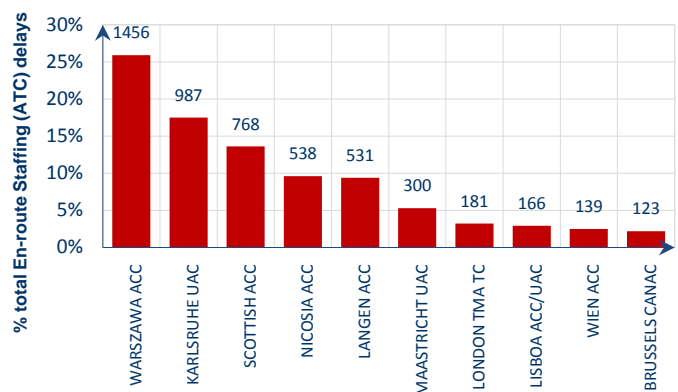
En-route ATFM delays accounted for 57.9% of all ATFM delays. Most of this delay was caused by en-route ATC capacity, en-route ATC staffing and en-route weather as explained in detail below. The other causes accounted for less delays:

En-route capacity; Maastricht ACC generated delays on 12 August due to airspace management; *En-route ATC disruptions*; Technical issues in Vienna COM Centre resulted in the prolonged disruption of flight data messaging and the application of ATFM measures at Vienna airport (2,523 mins) and Ljubljana ACC (966 mins); *En-route disruptions*; Madrid ACC generated some ATFM delays on 20 August due to traffic rerouting.

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



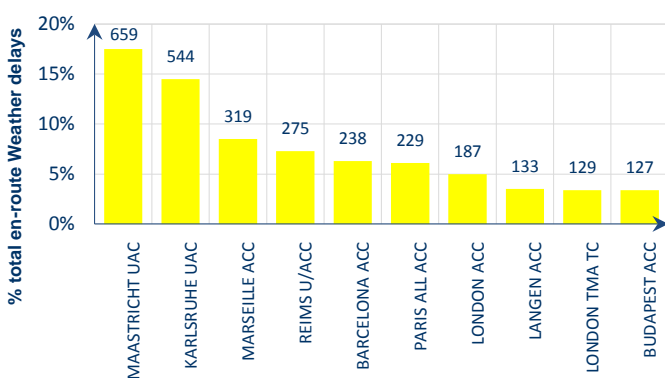
Top en-route Staffing (ATC) delays in August 2016



Although Brest ACC was the biggest generator of en-route ATC capacity delays, Brest delays decreased from 8,746 mins/day in July to 5,593 mins/day. En-route ATC capacity delays also decreased in Barcelona, Maastricht, Marseille, Karlsruhe, Bordeaux and Reims ACCs. Nicosia entered the top 10. Most of the delays were generated during the weekends.

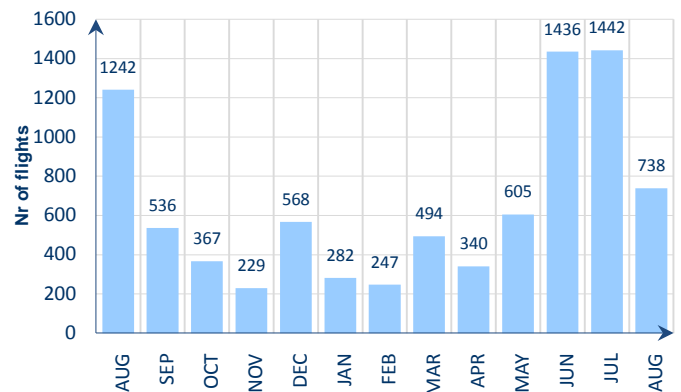
Warsaw, Karlsruhe and Scottish ACCs were the biggest generator of en-route ATC staffing delays in August, nevertheless en-route ATC staffing decreased in Warsaw from 2,460 mins/day in July to 1,456 mins/day, in Karlsruhe from 2,118 mins/day in July to 987 mins/day. En-route ATC staffing increased in Scottish due to capacity reductions associated to the continued controller familiarisation with the new system (iTecⁱⁱⁱ).

Top en-route Weather delays in August 2016



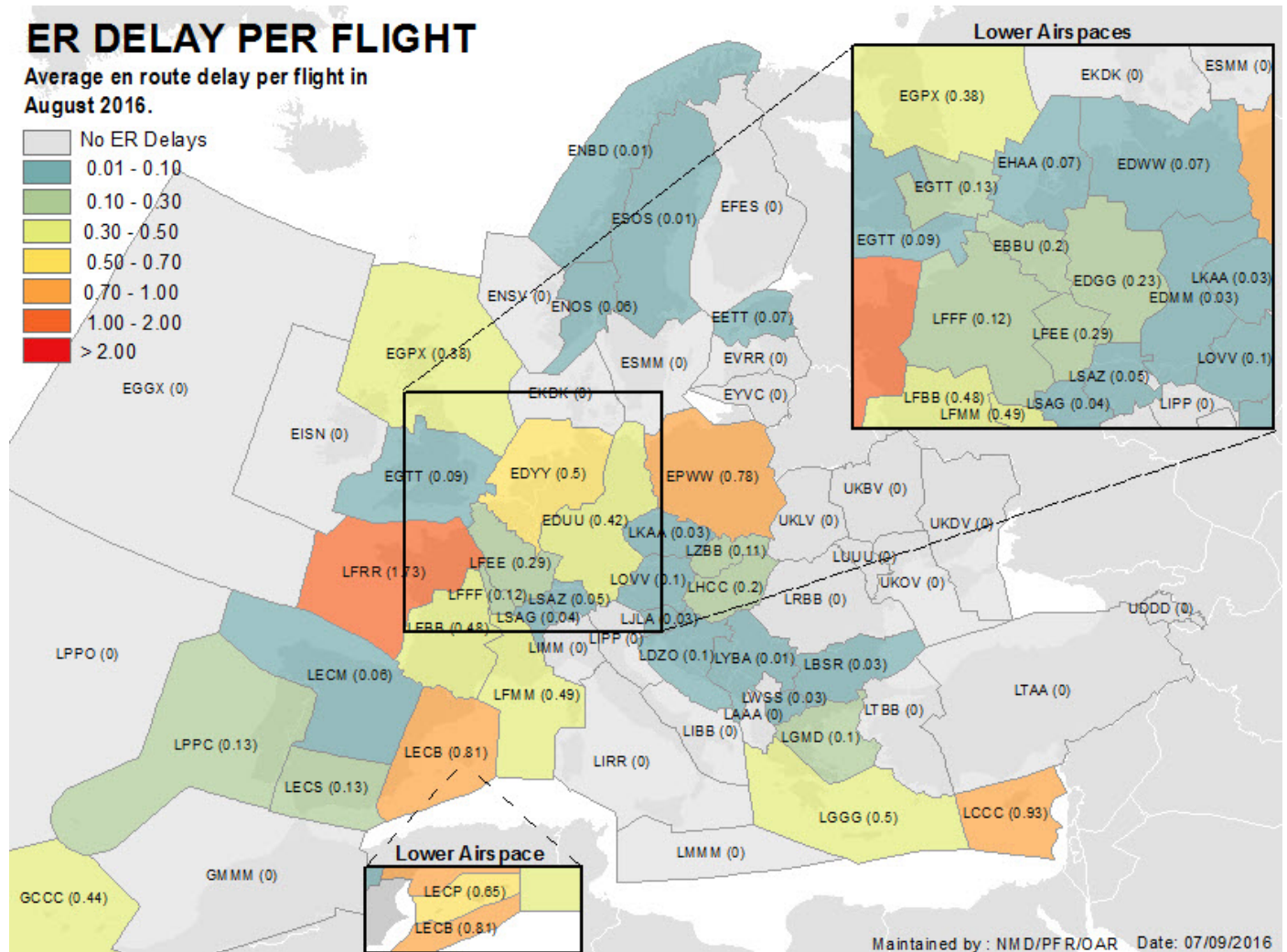
Thunderstorms generated delays in several ACCs. Maastricht and Karlsruhe ACCs were the most impacted throughout the month.

Average daily flights >= 15 min en-route delay

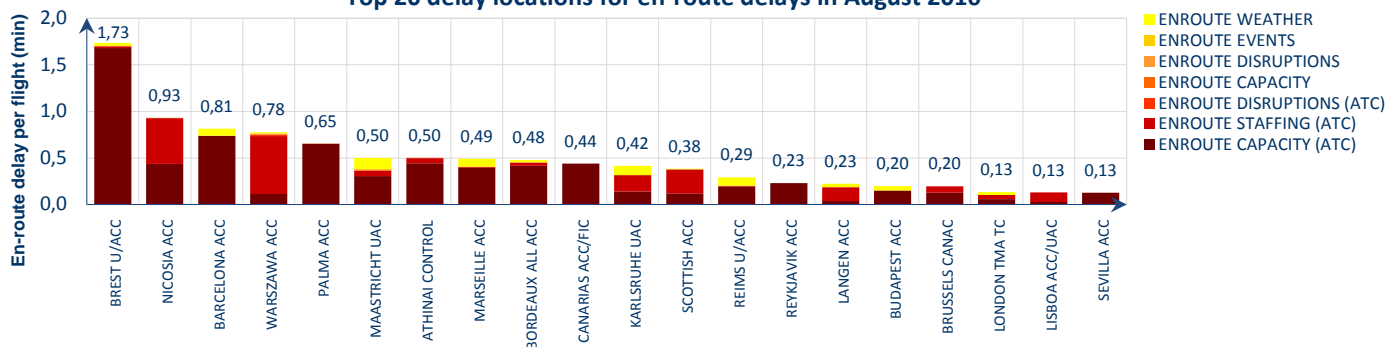


An average of 738 flights/day received an en-route ATFM delay of at least 15 minutes in August 2016. The corresponding figure for August 2015 was 1242 flights/day.

EN-ROUTE ATFM DELAY PER FLIGHT



Top 20 delay locations for en-route delays in August 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.

With a smaller impact of en-route weather throughout the month compared to July 2016, Maastricht, Marseille, Bordeaux and Karlsruhe ACCs average ATFM delay per flight decreased.

Brest ACC average en-route ATFM delay/flight decreased from 2.71 min/flt in July 2016 to 1.73 min/flt in August 2016.

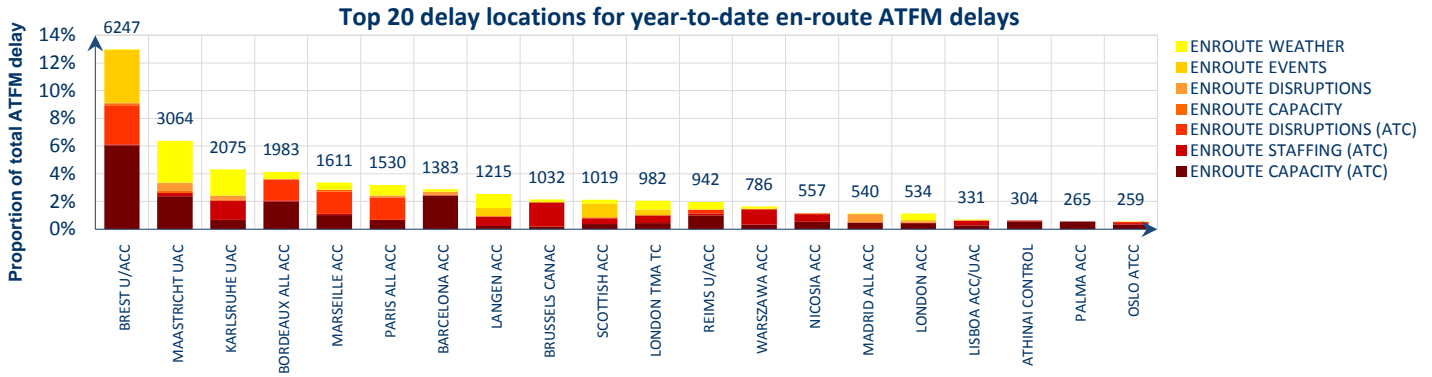
Nicosia ACC average en-route ATFM delay/flight decreased from 1.06 min/flt in July 2016 to 0.93 min/flt in August 2016.

Barcelona ACC average en-route ATFM delay/flight decreased from 1.03 min/flt in July 2016 to 0.81 min/flt in August 2016.

Warsaw ACC average en-route ATFM delay/flight decreased from 1.37 min/flt in July 2016 to 0.78 min/flt in August 2016.

Scottish ACC average en-route ATFM delay/flight decreased from 0.77 min/flt in July 2016 to 0.38 min/flt in August 2016.

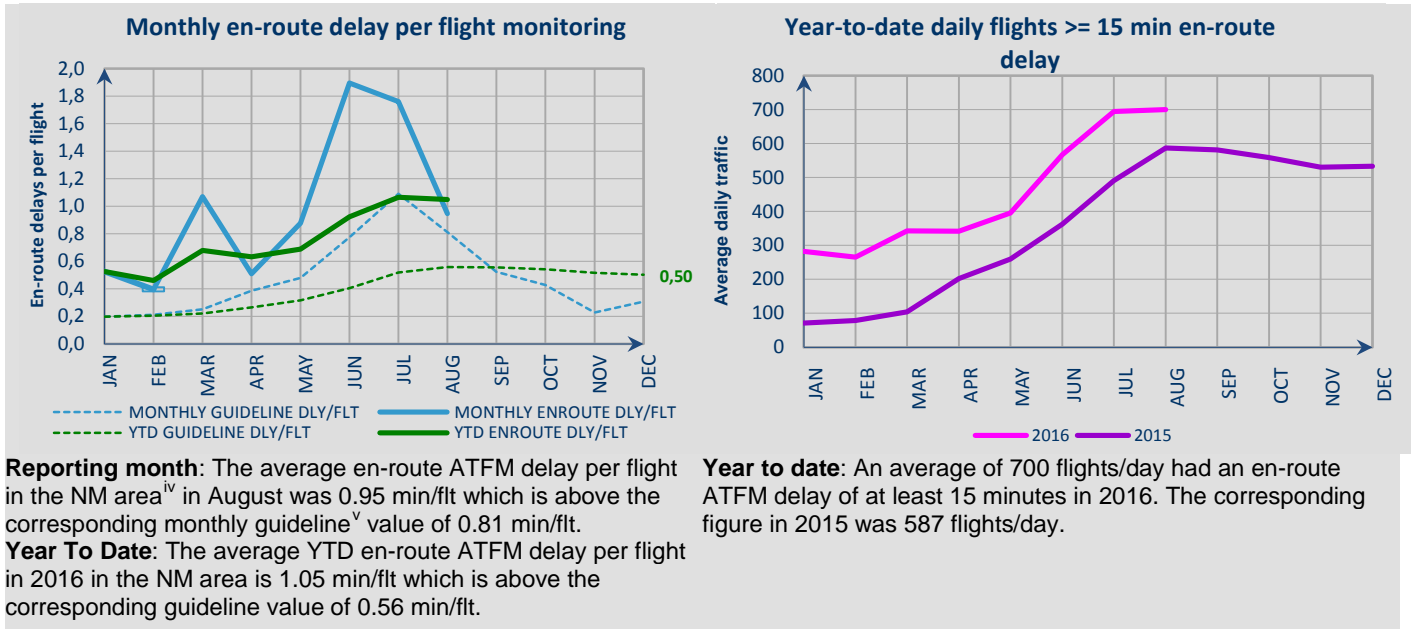
EN-ROUTE ATFM DELAY YEAR-TO-DATE



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.



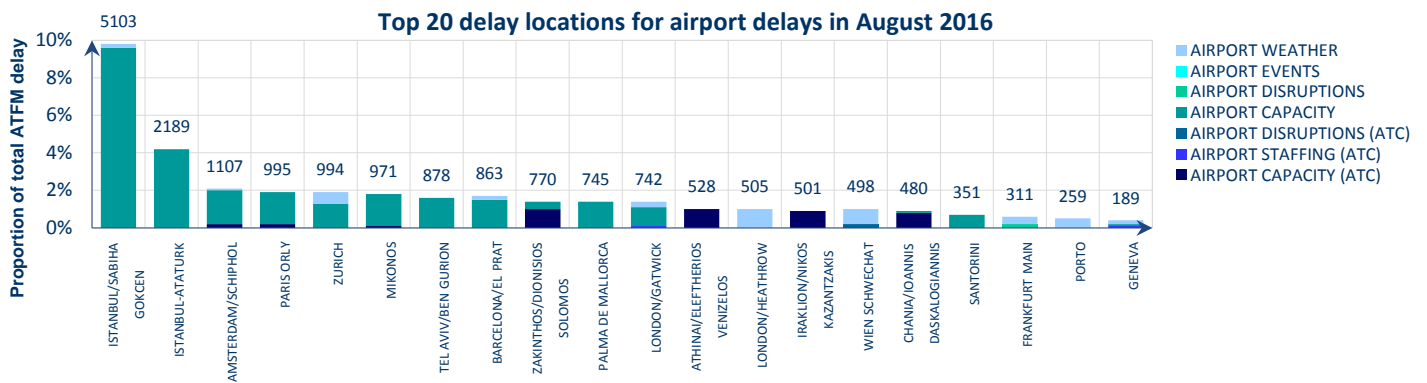
Reporting month: The average en-route ATFM delay per flight in the NM area^{iv} in August was 0.95 min/ft which is above the corresponding monthly guideline^v value of 0.81 min/ft.

Year To Date: The average YTD en-route ATFM delay per flight in 2016 in the NM area is 1.05 min/ft which is above the corresponding guideline value of 0.56 min/ft.

Year to date: An average of 700 flights/day had an en-route ATFM delay of at least 15 minutes in 2016. The corresponding figure in 2015 was 587 flights/day.

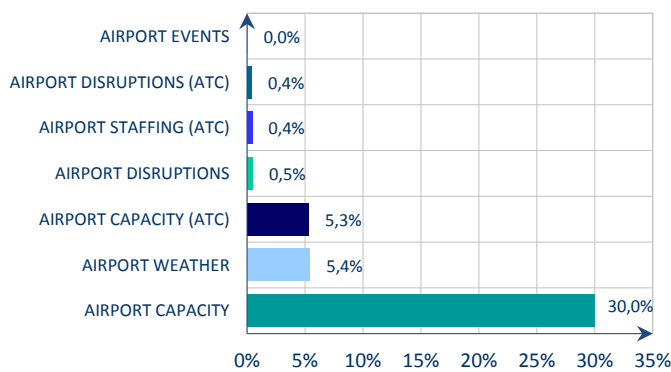
4. AIRPORT/TMA ATFM DELAYS

AIRPORT/TMA ATFM DELAY PER LOCATION

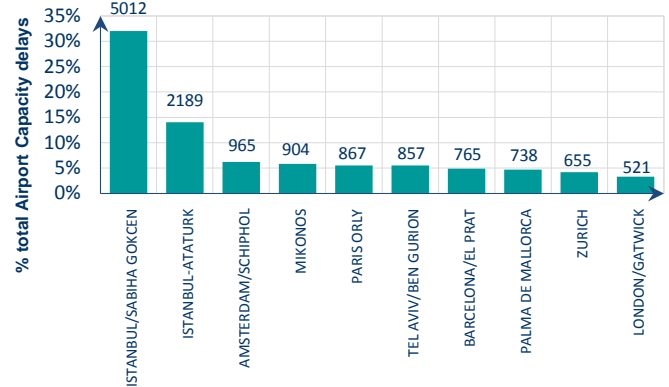


AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for airport delays in August 2016



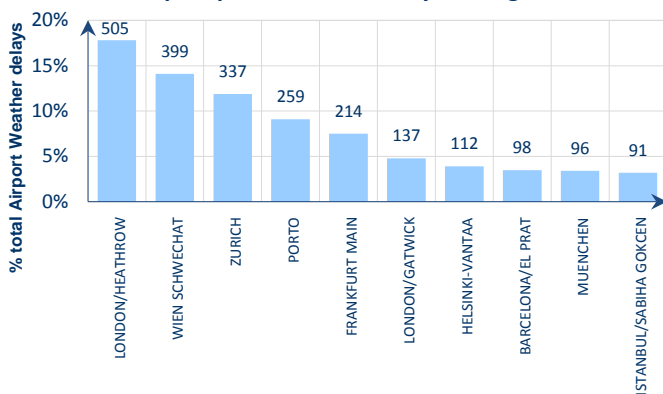
Top Airport Capacity delays in August 2016



Airports accounted for 42.1% of all ATFM delays in August 2016, mainly due to airport capacity.

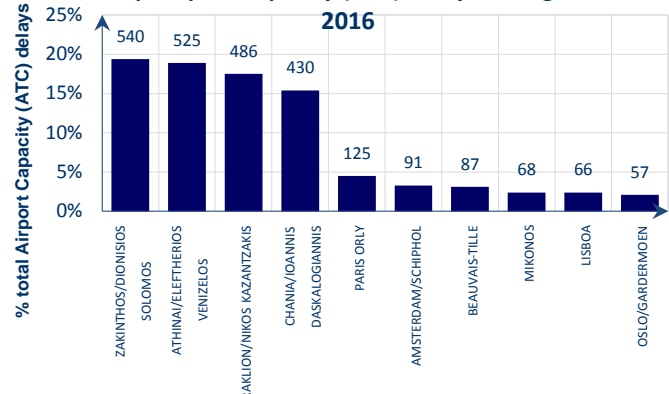
Airport capacity delays increased at Istanbul/Sabiha Gökçen and Istanbul/Ataturk. This was the highest amount of delay for the year for Istanbul/Sabiha Gökçen airport. Delays recorded at Paris/Orly airport were due to runway maintenance.

Top Airport Weather delays in August 2016



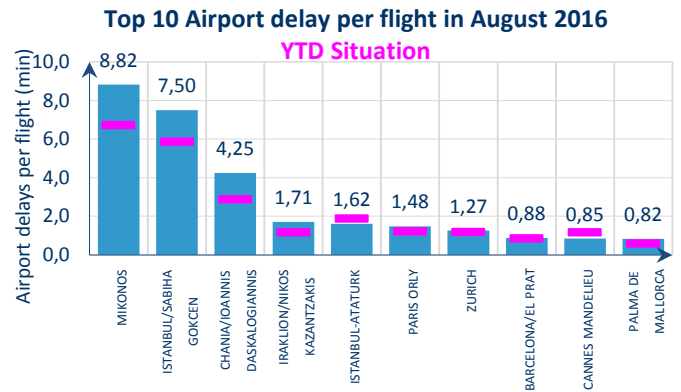
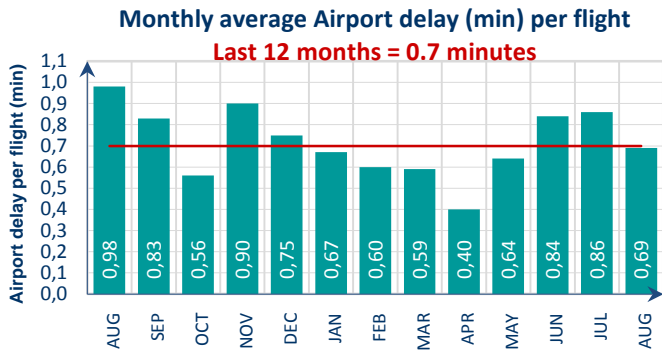
Adverse seasonal weather impacted operations at London/Heathrow, Vienna and Zurich airports.

Top Airport Capacity (ATC) delays in August 2016



Athens and Greek island airports generated delay due to high demand. Airport ATC capacity delays at Athens airport decreased from 682 mins/day in July 2016 to 540 mins/day. Delays increased at Greek island airports compared to July 2016.

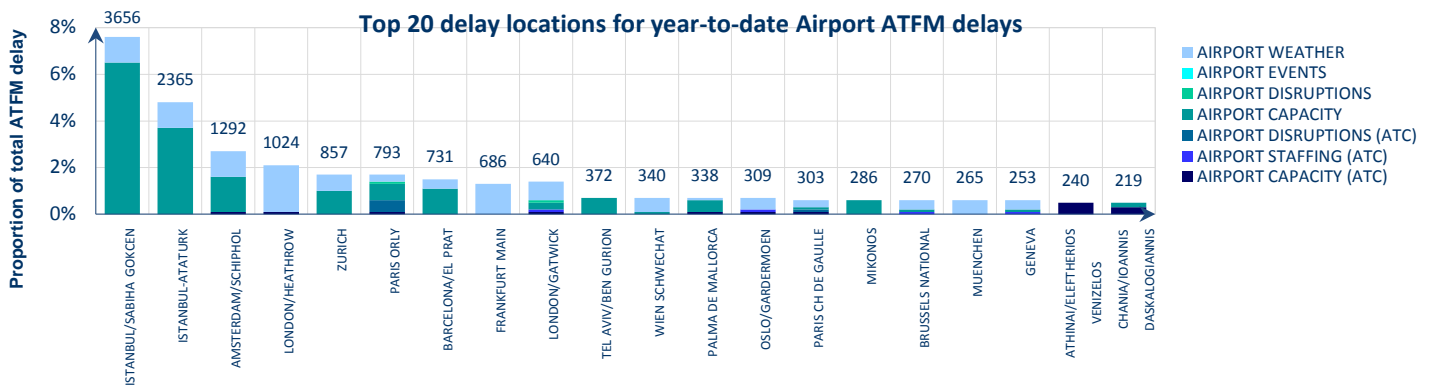
AIRPORT/TMA ATFM DELAY PER FLIGHT



Average airport/TMA delay per flight decreased from 0.98 min/flt in August 2015 to 0.69 min/flt in August 2016.

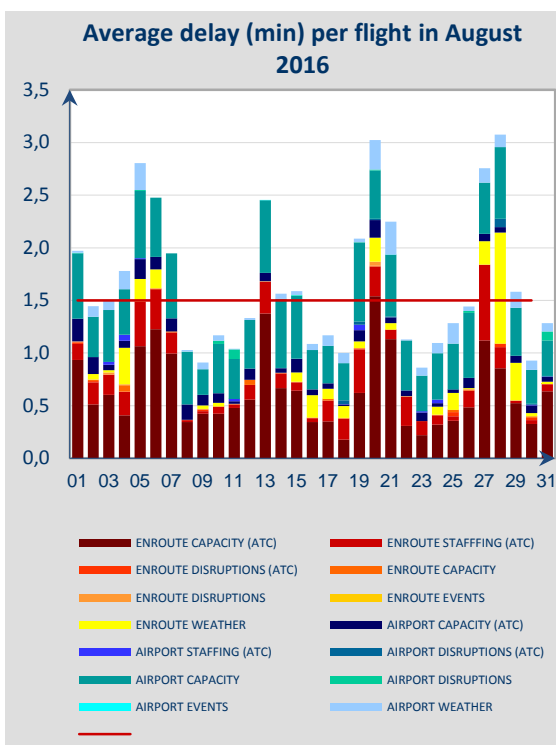
Summer destinations like Mikonos and Chania registered a high delay per flight. Eight of the top 10 delay airports generated a daily average ATFM per flight above their year to date values, Istanbul/Ataturk and Cannes airports decreased.

AIRPORT/TMA ATFM DELAY YEAR-TO-DATE



The top 20 Airport/TMA delay locations have generated **31.6%** of the total ATFM (network) delay in 2016. The top 5 Airport/TMA delay locations have generated **18.9%** of the total ATFM (network) delay in 2016.

5. DAILY EVOLUTION



There were 14 days in August 2016 where average delay/flt exceeded 1.5 min/flt, with the worst days during the weekends. These were the most significant days;

01 August; En-route ATC capacity delays in Brest (14,898 min), and to a lesser extent, Barcelona, Karlsruhe, and London TMA ACCs; Airport capacity issues at both Istanbul airports, and at Mikonos, Barcelona, Amsterdam and Paris/Orly airports; Airport ATC capacity issues at Athens and Greek Island airports; En-route ATC staffing delays in Scottish and Brussels ACCs.

05-06 August; En-route ATC capacity delays in Brest, Barcelona, Marseille, Reims, Maastricht, Palma, Athens, Karlsruhe, Reykjavik, Athens and Bordeaux ACCs; Airport capacity issues at both Istanbul airports, Palma, Paris/Orly, London/Gatwick, Amsterdam, Zurich and Skiathos airports; Seasonal weather impacted operations in Vienna, Bratislava, Budapest, Karlsruhe and Zagreb ACCs as well as at Vienna airport; En-route ATC staffing issues in Karlsruhe, Warsaw, Scottish and Langen ACCs; Airport ATC capacity delays at Greek Island airport.

13 August; En-route ATC capacity delays in Brest, Marseille, Barcelona, Maastricht, Athens, Bordeaux and Canarias ACCs; Aerodrome capacity issues at both Istanbul airports, Greek Island, Palma, Figari, Zurich and Paris/Orly airports; En-route ATC staffing issues in Scottish, Karlsruhe and Warsaw ACCs;

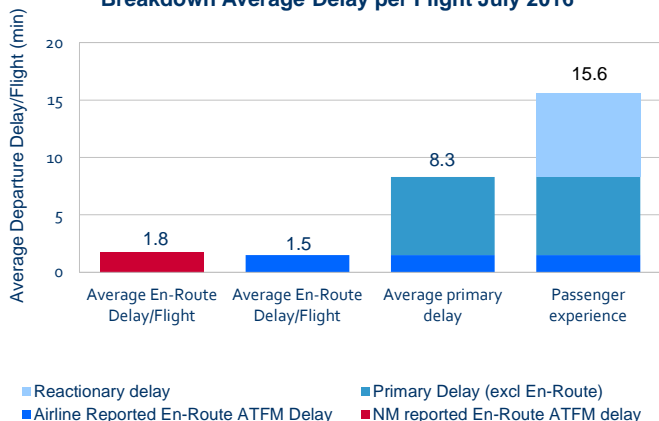
20-21 August; En-route ATC capacity delays in Brest, Marseille, Palma, Barcelona, Maastricht, Athens, Reims, London, Nicosia and Bordeaux ACCs; En-route ATC staffing issues in Karlsruhe, Warsaw and Scottish ACCs; Adverse seasonal weather impacted operations in Maastricht and Marseille ACCs; Airport weather delays at Frankfurt, London/Heathrow, London/Gatwick, Vienna and Zurich airports; Airport ATC capacity delays at Greek Island and Lanzarote airports. En-route ATC staffing issues in Karlsruhe, Warsaw and Scottish ACCs;

27-28 August; En-route ATC capacity in Marseille, Brest, Bordeaux, Barcelona, Palma, Athens, Maastricht, Reims and Nicosia ACCs; En-route ATC staffing issues in Maastricht, Warsaw, Lisbon, Bordeaux, Nicosia and Vienna ACCs; Seasonal weather particularly impacted operations in Maastricht and Karlsruhe ACCs and, to a lesser extent, Paris, Reims, Langen and London ACCs; Aerodrome capacity issues at both Istanbul airports, Greek Island, Palma, Zurich, Amsterdam and Barcelona airports.

6. ALL AIR TRANSPORT DELAYS (SOURCE: CODA)

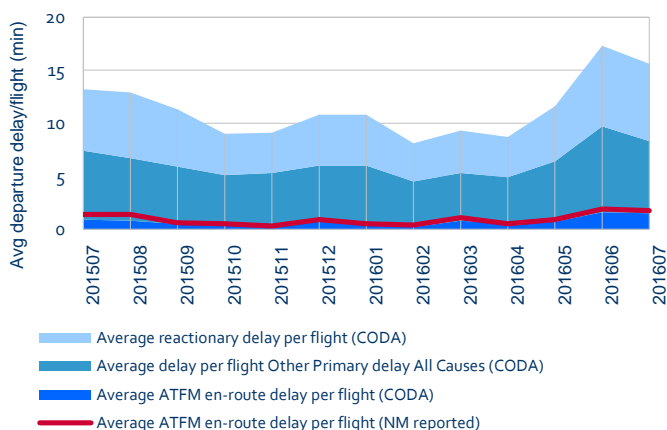
This section presents the all air transport delay situation as seen from the airlines by using the data collected by Central Office for Delay Analysis (CODA) from the airlines. Data coverage is 63% of the commercial flights in the ECAC region for July 2016. ATFM delays reported by airlines may be lower 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 July 2016



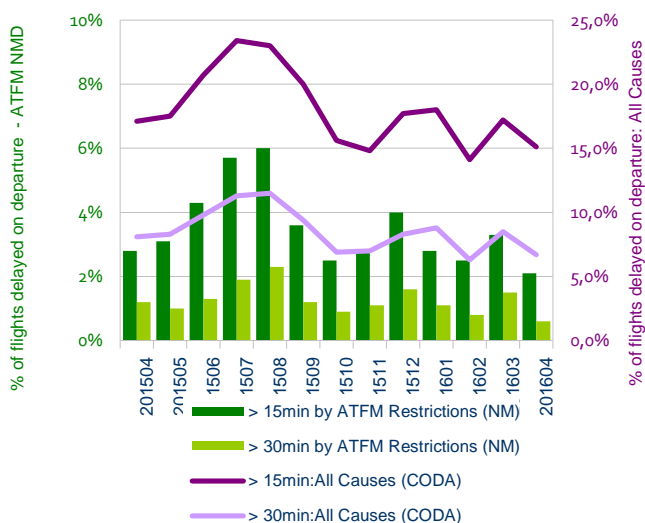
Based on airline data, the average departure delay per flight from "All Causes" was 15.6 minutes per flight, this was an increase of 19% in comparison to 13.1 minutes per flight in the same month of 2015. Within all air transport delays, en-route ATFM delays were 1.5 minutes/flight in July 2016. Primary delays counted for 53% (or 8.3 min/ft), with reactionary delays representing a smaller remaining share of 47% at (7.3 min/ft).

Average departure delay per flight 2015/2016



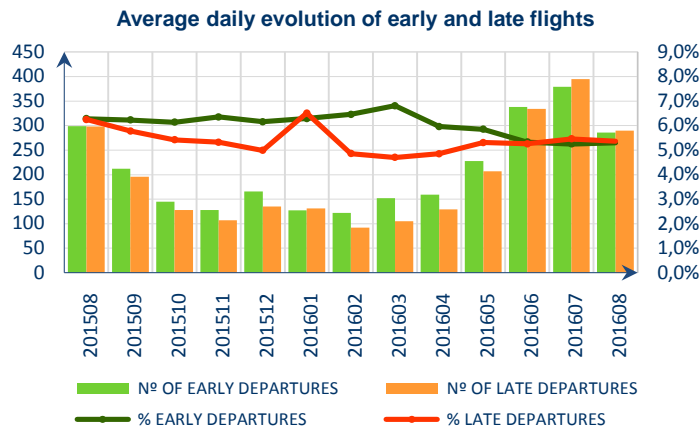
Further analysis of airline data from 'All-Causes' shows that the average en-route ATFM delay was 1.5 minutes per flight. This was below the NM reported average en-route ATFM delay of 1.8 minutes per flight.

Percentage of Delayed Flights: ATFM & All Causes



The percentage of flights delayed from 'all-causes' exceeding 15 minutes increased by 5 percentage points to 28.4% and those exceeding 30 minutes increased by 3.3 points to 14.6% of flights when compared to the same month last year.

7. ATFM SLOT ADHERENCE

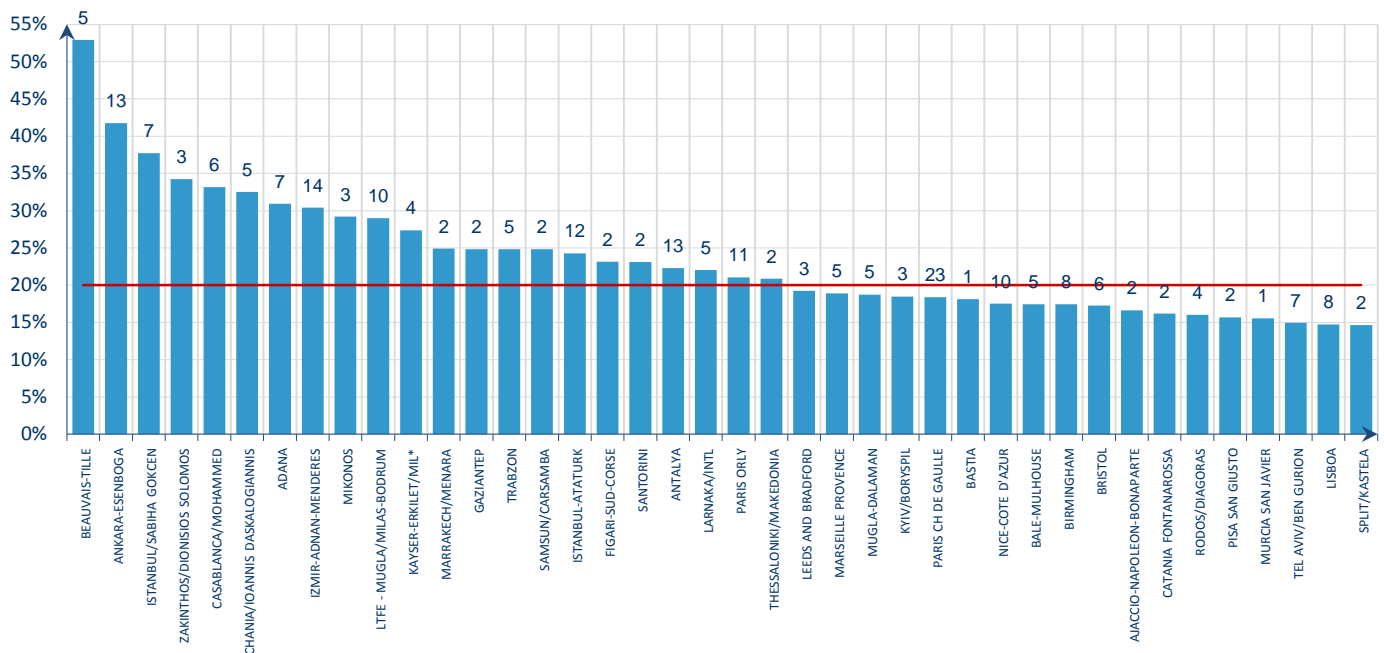


The percentage of early departures for August 2016 is 5.3% of regulated flights, which is a decrease of 1% compared to August 2015.

The percentage of late departures for August 2016 is 5.4% of regulated flights, which is a decrease of 0.9% compared to August 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.

Proportion of regulated flights outside the Slot Tolerance Window in August 2016



8. SIGNIFICANT EVENTS AND ISSUES

PLANNED EVENTS

ACC

Major airspace or ATM system improvement projects.

None of the ACCs carried out major projects, concerning either ATM system changes/upgrades or airspace reorganisations, during this reporting period.

AIRPORTS

Local Plans in August

A number of airports undertook infrastructure and technical system improvement works during August. These improvements had at most a minor impact on local airport operations unless otherwise stated:

Completed:

- A-CDM implementation at Paris/Orly airport on 18 July.
- Advanced ATC Tower implementation at Alicante airport on 23 August.
- Runway maintenance at Lisbon, Riga, Stockholm and Warsaw/Chopin (822 minutes of airport ATFM delay) airports.
- Taxiways improvements at Oslo/Gardermoen airport.
- ILS maintenance at Lisbon airport.

Ongoing

- Runway maintenance at Brussels (2,980 minutes of airport ATFM delay), Cologne, Gran Canaria (3,993 minutes of airport ATFM delay), Istanbul/Sabiha Gökçen, Kishinev, Krakow, Oslo/Gardemoen, Paris/Charles de Gaulle (1,341 minutes of airport ATFM delay), Paris/Orly (18,800 minutes of airport ATFM delay), Tallinn and Thessaloniki airports;
- Taxiway(s) and/or apron(s) improvements at Frankfurt/Main, Copenhagen, Gran Canaria, Hamburg, Helsinki, Lanzarote, London/Heathrow, Riga, Stuttgart, Tallinn, Tenerife/Sur, Toulouse and Venice airports;
- ILS maintenance at Bologna, Budapest, Dusseldorf, Gran Canaria, Oslo/Gardermoen and Paris/Charles de Gaulle airports;
- Terminal building(s) improvements/works at Belgrade, Bergen, Budapest, Frankfurt/Main, Ljubljana, and Oslo/Gardermoen airports;
- PRIDEP trial at Zurich airport generated 3,100 minutes of airport ATFM delay.

DISRUPTIONS

Disruption

- Fire in Marseille airport vicinity on 10 and 11 August generated 3,762 minutes of ATFM delay;
- ATC equipment issue at Oslo/Gardermoen airport on 18 August generated 1,248 minutes of ATFM delay;
- Technical issues in Vienna COM Centre on 28 August resulted in the prolonged disruption of flight data messaging and the application of ATFM measures at Vienna airport (2,523 mins) and Ljubljana ACC (966 mins). Initial indications are that 30 flights did not operate due to the disruption;
- Terminal evacuation at Frankfurt airport on 31 August generated 2,796 minutes of ATFM delay and over 100 flights were reported cancelled^{vi}.

Other

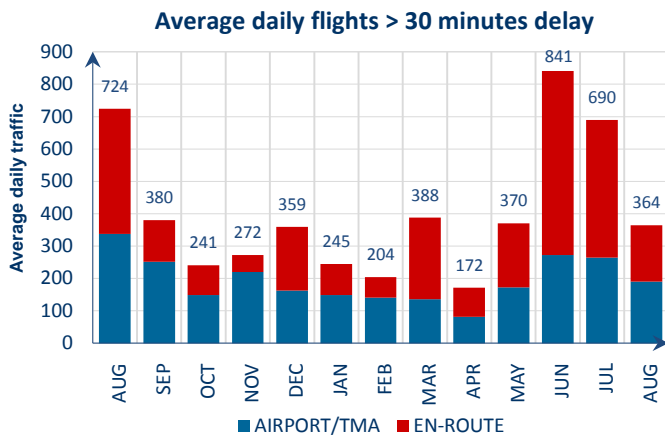
- ATC equipment issue in Warsaw ACC on 25 August generated 1,301 minutes of ATFM delay;

9. NM ADDED VALUE

FLIGHTS WITH DELAY > 30'

The number of flights that had more than 30 minutes of ATFM delay decreased by 49.7% from 724 flts/day in August 2015 to 364 flts/day in August 2016.

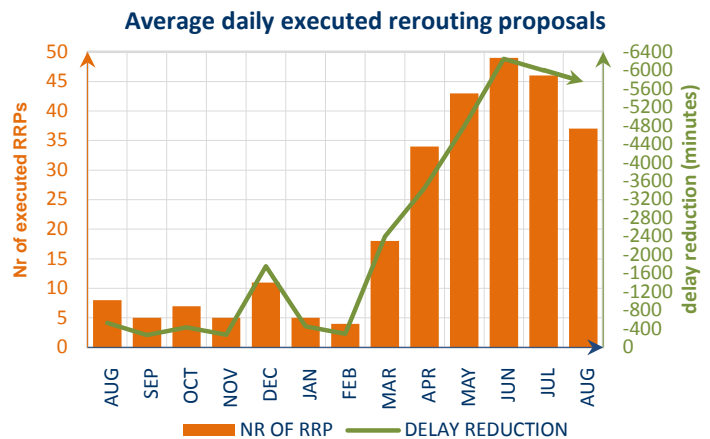
47.8% of flights with more than 30 minutes of ATFM delay in August 2016 were en-route and 52.2% were airport.



RRP DIRECT DELAY SAVINGS

A daily average of 59 RRP were offered in August 2016 of which 37 RRP were executed, saving 5,751 minutes of daily delay.

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



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i See Notice on page 1 for more information on traffic and delay comparison.

ii Internals, international departures and arrivals, excluding interflights

iii iTEC (interoperability Through European Collaboration) provides advanced flight data processing and Controller Working Position under SWIM (System Wide Information Management) which will improve information flow in control centres and airports.

iv See Notice on page 1 for more information on NM Area

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

vi <http://www.reuters.com/article/us-germany-security-airport-idUSKCN1160WL>