



Network Manager
nominated by
the European Commission



Monthly Network Operations Report

Analysis – April 2016

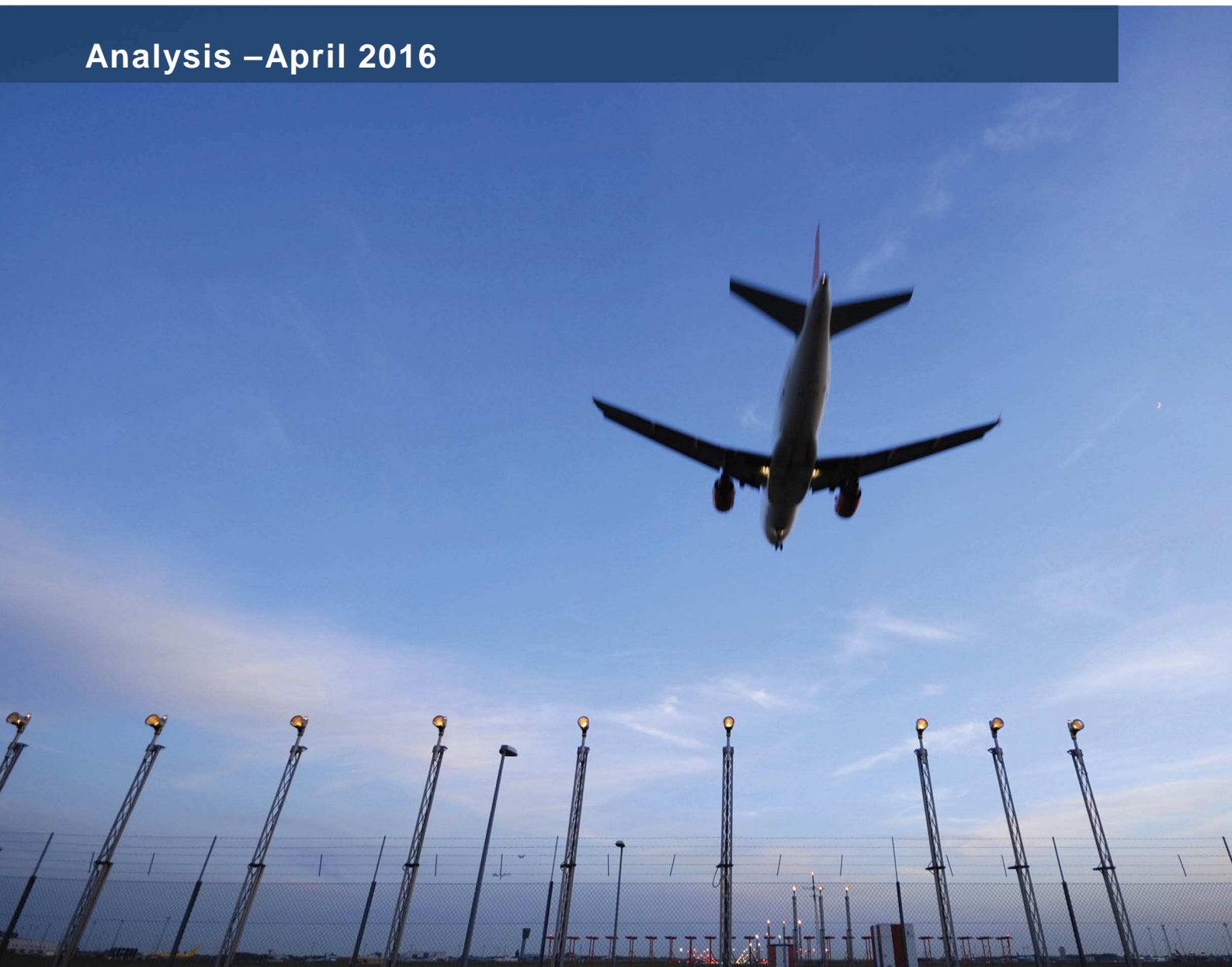


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NOTICE

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.

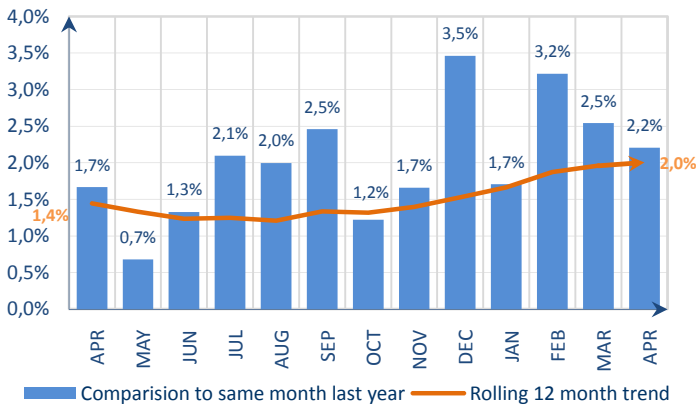
	EN-ROUTE CAPACITY (ATC)		AIRPORT CAPACITY (ATC)
	EN-ROUTE STAFFING (ATC)		AIRPORT STAFFING (ATC)
	EN-ROUTE DISRUPTIONS (ATC)		AIRPORT DISRUPTIONS (ATC)
	EN-ROUTE CAPACITY		AIRPORT CAPACITY
	EN-ROUTE DISRUPTIONS		AIRPORT DISRUPTIONS
	EN-ROUTE EVENTS		AIRPORT EVENTS
	EN-ROUTE WEATHER		AIRPORT WEATHER

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>.

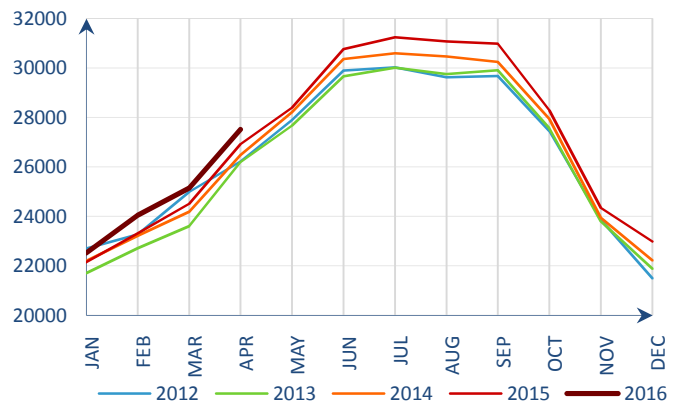
1. TOTAL TRAFFIC

Monthly traffic trend



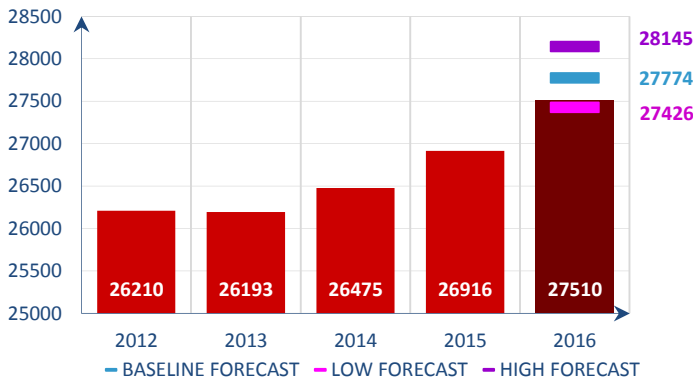
Traffic increased by 2.2 % in April 2016¹.

Average daily traffic for last 5 Years



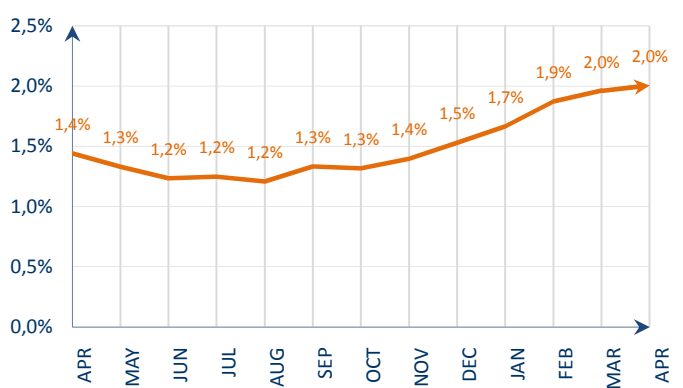
Average daily traffic in April 2016 was the highest April traffic since 2012.

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



The traffic increase of 2.2% for April was just at the low-end of the 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 May 2015 to April 2016 was 2.0% higher than the average from May 2014 to April 2015. This increase is equal to the increase in March 2016 and shows an increasing trend in traffic evolution over the last 12 months.

European average daily flights increased by 2.2% in April 2016¹.

The traffic increase was at the low-end of the forecast published in February 2016 mainly due fewer flights due to industrial action in Greece, Italy, Germany and France but also the closure of Brussels airport until 3 April.

There were on average 167 fewer flights daily in Belgium and a 15% decrease in the state's international arrivals and departures. This was the impact of the terrorist attacks on 22 March along with industrial action in April. Low-cost airlines, easyJet and Vueling shifted all or part of their operations from Brussels to Lille whereas Ryanair shifted part of its schedule from Brussels to Charleroi. The overall decrease of the low-cost segment in Belgium was 4.7% in April.

11 states contributed to the growth of local traffic in Europe with UK as the top contributor with 284 extra flights per day thanks to dynamic traffic on flows from/to the busiest European states. France and Spain came next adding each circa 160 daily flights. Germany added 85 daily flights thanks to a strong internal flow which grew 5.6% on April 2015. Both the Netherlands and Canary Islands contributed to each circa 80 extra daily flights. The remaining states (Ireland, Lisbon FIR, Poland, Romania and Sweden) added together 255 daily flights to the network.

The shift of Easter to March 2016 (compared to April 2015) resulted in total flights being artificially inflated in April 2016. However, the effect was counterbalanced by the significant events during the month that led the low-cost segment to slow down from an increase of 6.8% in March to an increase of 2.2% in April. On the other hand, the traditional scheduled segment may have benefited from the Easter effect as it grew 4% in April. Business aviation and all-cargo increased by 2.7% and 1% respectively. Suffering from the traffic declines from/to Egypt, Tunisia and Russia, the charter segment decreased by 25.3%.

The aircraft operators which added the most flights to the network on a daily basis were Ryanair (+147 flights), easyJet (+78 flights), Turkish Airlines (+67 flights) and Wizz Air (+52 flights). airberlin's reduced summer schedule capacity led to 32 fewer flights daily in April.

The top three extra-European partners in average daily flights on flows in both directions in April were the United States (900 flights, up 2%), the Russian Federation (600 flights, down 17%) and the United Arab Emirates (300 flights, up 10%). Traffic flows between Europe and Egypt and Tunisia did not show signs of recovery and were down 35% and 20% respectively.

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 April 2016 were at London/Luton, Birmingham, Istanbul/Sabiha Gökçen, Manchester and Gran Canaria. The largest traffic decreases were at Brussels and Antalya airports. The aftermath of the terrorist attack in March at Brussels airport accounts for the traffic decrease.

Seven of the top ten aircraft operators had more traffic compared to April 2015. The operators with the highest traffic growth were Olympic, Volotea, Qatar, LOT/Polish airlines, Ukraine International and Wizz Air. Germanwings, Aegean and Brussels Airlines recorded the highest traffic decrease. The reduction of operations at Brussels airport accounts for the flights decrease of Brussels Airlines.

Ryanair's increase is partially due to an increase in fleet size which is due to continue throughout 2016, although it slowed down from a growth rate of circa 20% during winter to 8% with the introduction of the summer schedule. The continuing transfer of flights between Lufthansa, Germanwings and Eurowings accounts for the variation among the German carriers. The traffic variation of Flybe (Finland) and Finnair, Norwegian Air Shuttle and Norwegian Air International, is due to the transfer of flights between the aircraft operators. Pegasus recorded an increase in flights due to an increase in fleet size. The traffic variation of Olympic and Aegean is due to Aegean flights operated with Olympic callsign.

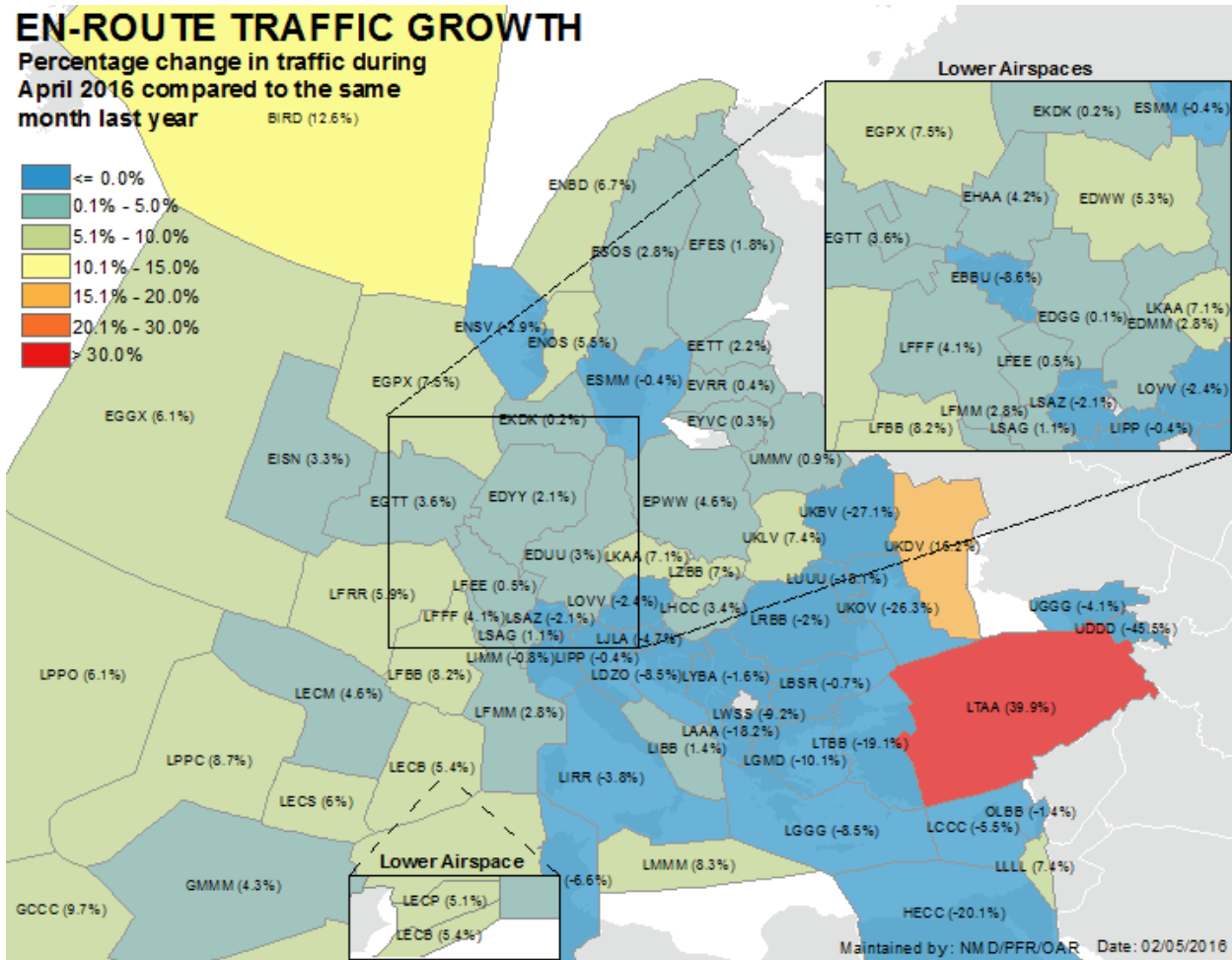
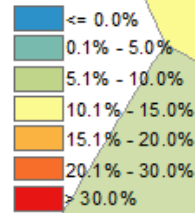
N°	ADEP	ADEP NAME	201604	%	N°	ICAO	AIR OPERATOR	201604	%
1	EHAM	AMSTERDAM/SCHIPHOL	681	6,3%	1	RYR	RYANAIR	1905	8,3%
2	LFPG	PARIS CD DE GAULLE	668	3,7%	2	DLH	DEUTSCHE LUFTHANSA	1380	-2,8%
3	EGLL	LONDON/HEATHROW	661	-0,6%	3	EZY	EASYJET	1284	6,4%
4	EDDF	FRANKFURT MAIN	650	-2,1%	4	THY	TURKISH AIRLINES	1273	5,6%
5	LTBA	ISTANBUL-ATATURK	632	1,3%	5	AFR	AIR FRANCE	904	-0,5%
6	EDMM	MUENCHEN	537	2,7%	6	SAS	SCANDINAVIAN AIRLINES SYSTEM	898	2,1%
7	LEMD	ADOLFO SUAREZ MADRID-BARAJA	515	0,7%	7	BAW	BRITISH AIRWAYS	705	1,8%
8	LEBL	BARCELONA/EL PRAT	443	6,6%	8	KLM	KLM ROYAL DUTCH AIRL	642	0,7%
9	LIRF	ROMA/FIUMICINO	431	-5,6%	9	AZA	ALITALIA	538	-4,5%
10	EGKK	LONDON/GATWICK	375	3,1%	10	VLG	VUELING AIRLINES SA	525	8,2%
11	EKCH	KOBENHAVN/KASTRUP	370	2,9%	11	BER	AIR BERLIN, INC.	506	-6,0%
12	LSZH	ZURICH	351	1,0%	12	BEE	JERSEY EUROPEAN T/A FLYBE	419	13,1%
13	ENGM	OSLO/GARDERMØEN	350	2,1%	13	SWR	SWISS INTERNATIONAL	412	0,1%
14	LFPO	PARIS ORLY	343	6,4%	14	PGT	PEGASUS HAVA TASI	407	10,0%
15	LOWW	WIEN SCHWECHAT	338	-1,6%	15	NAX	NORWEGIAN AIR SHUTTLE	389	-22,8%
16	ESSA	STOCKHOLM-ARLANDA	336	3,3%	16	WZZ	WIZZ AIR	376	16,1%
17	LTFJ	ISTANBUL/SABIHA GOKCEN	311	13,1%	17	WIF	WIDERØE	356	1,8%
18	EIDW	DUBLIN	292	9,8%	18	AUA	AUSTRIAN AIRLINES	348	3,7%
19	EDDL	DUESSELDORF	290	2,3%	19	GWJ	GERMAN WINGS	338	-28,4%
20	EDDT	BERLIN-TEGEL	260	2,2%	20	FIN	FINNAIR O/Y	310	11,1%
21	LSGG	GENEVA	250	0,1%	21	TAP	TAP AIR PORTUGAL	300	-2,6%
22	EGCC	MANCHESTER	249	12,2%	22	AFL	AEROFLOT-RUSSIAN	248	1,0%
23	LPPT	LISBOA	245	6,0%	23	HOP	HOP (MERGE OF BZH + RAE + RLA)	246	4,6%
24	EGSS	LONDON/STANSTED	241	2,2%	24	IBE	IBERIA	239	6,8%
25	LEPA	PALMA DE MALLORCA	237	2,3%	25	LOT	LOT-POLISH AIRLINES	232	25,4%
26	LGAV	ATHINA/ELF THERIOS VENIZELOS	236	0,5%	26	AEA	AIR EUROPA	230	5,8%
27	EFHK	HELSINKI-VANTAA	235	1,2%	27	ANE	AIR NOSTRUM	222	-2,9%
28	LIMC	MILANO MALPENSA	224	0,2%	28	EIN	AER LINGUS TEORANTA	198	-1,1%
29	EDDH	HAMBURG	213	0,2%	29	RAM	ROYAL AIR MAROC	197	5,8%
30	EPWA	CHOPINA W WARSZAWIE	204	8,5%	30	UAE	EMIRATES	195	15,4%
31	EBBR	BRUSSELS NATIONAL	198	-40,1%	31	BEL	BRUSSELS AIRLINES	192	-12,3%
32	LFMN	NICE-COTE D'AZUR	189	3,5%	32	AEE	AEGEAN AIRLINES	186	-27,7%
33	EDDK	KOELN-BONN	181	8,6%	33	QTR	QATAR AIRWAYS COMP.	172	27,1%
34	EGGW	LONDON/LUTON	177	16,5%	34	IBK	NORWEGIAN AIR INTERNATIONAL	147	
35	LEMG	MALAGA/COSTA DEL SOL	174	8,0%	35	EWG	EUROWINGS AG	147	0,0%
36	LKPR	PRAHA RUZYNE	173	4,8%	36	TRA	TRANSVIA.COM	146	15,1%
37	EGPH	EDINBURGH	168	5,6%	37	EZS	EASY JET SWITZERLAND	145	-2,3%
38	EDDS	STUTTGART	167	2,3%	38	BCS	EUROPEAN AIR TRANSP.	144	1,9%
39	LLBG	TEL AVIV/BEN GURION	162	6,6%	39	UAL	UNITED AIRLINES INC.	128	-1,4%
40	LFLY	LYON SAINT-EXUPERY	159	2,3%	40	AUI	UKRAINE INTERNATIONAL	122	17,8%
41	LIML	MILANO LINATE	157	-3,6%	41	DAL	DELTA AIR LINES INC.	121	1,1%
42	GCLP	GRAN CANARIA	153	12,1%	42	BTI	AIR BALTIC CORPORAT.	120	2,9%
43	LTAI	ANTALYA	144	-24,6%	43	OAL	OLYMPIC	112	127,6%
44	LROP	BUCURESTI/HENRI COANDA	144	9,5%	44	SHT	BAW SHUTTLE	112	0,4%
45	EGBB	BIRMINGHAM	143	14,8%	45	NJE	NETJETS	108	0,5%
46	LTAC	ANKARA-ESENBOGA	136	4,2%	46	LOG	LOGANAIR	108	15,5%
47	LFML	MARSEILLE PROVENCE	135	2,1%	47	TOM	THOMSON FLY LTD	107	1,0%
48	LHBP	BUDAPEST LISZT FERENC INT.	134	6,2%	48	SXS	SUNEXPRESS AIRLINES	103	-8,8%
49	LFBO	TOULOUSE BLAGNAC	131	5,5%	49	VOE	VOLOTEA	103	44,3%
50	EDDB	SCHOENEFELD-BERLIN	130	0,0%	50	ROT	TAROM	102	8,0%
TOTALS and % TOTAL TRAFFIC								18847	68,4%
Top 50 Air Operators with average daily traffic and percentage compared to same period of previous year									
N°	ICAO	AIR OPERATOR	201604	%					
		Unidentified	2096	-4,9%					

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

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 April 2016 compared to the same month last year

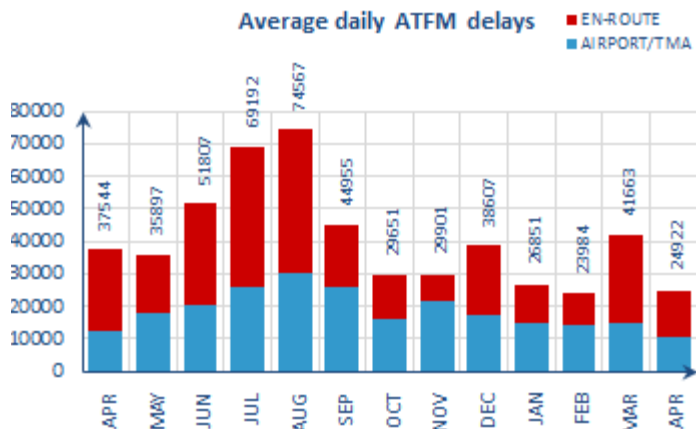


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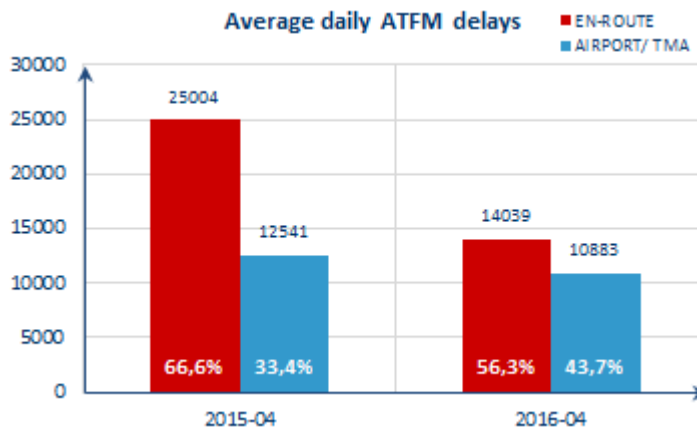
Nº	ASP ID	ASP NAME	201604	%	Nº	ASP ID	ASP NAME	201604	%
1	BIRDACC	REYKJAVIK ACC	305	12,6%	39	LFBBALL	BORDEAUX ALL ACC	2510	8,2%
2	DAAAACC	ALGERS ACC	464	7,4%	40	LFEAC	REIMS U/ACC	2605	0,5%
3	DTTACC	TUNIS ACC	268	-6,3%	41	LFLLACC	PARIS ALL ACC	3298	4,1%
4	EBBUACC	BRUSSELS CANAC	1489	-8,7%	42	LFMMACC	MARSEILLE ACC	2787	2,8%
5	EDGGALL	LANGEN ACC_FIR	3406	0,1%	43	LFMMAPP	MARSEILLE TMA	850	3,2%
6	EDMMACC	MUNCHEN ACC	2982	2,8%	44	LFRRACC	BREST U/ACC	2691	5,9%
7	EDUUUAC	KARLSRUHE UAC	4847	3,0%	45	LGSGACC	ATHINAI CONTROL	1093	-8,4%
8	EDWWACC	BREMEN ACC	1824	5,3%	46	LGMACC	MAKEDONIA CONTROL	802	-10,1%
9	EDYYUAC	MAASTRICHT UAC	4832	2,1%	47	LHCCACC	BUDAPEST ACC	1825	3,4%
10	EETTACC	TALLIN ACC	521	2,2%	48	LIBBACC	BRINDISI ACC	644	1,4%
11	EFESACC	TAMPERE ACC	457	1,8%	49	LIMMACC	MILANO ACC	2165	-0,8%
12	EGGXOCA	SHANWICK OACC	1253	6,1%	50	LIPPACC	PADOVA ACC	1733	-0,4%
13	EGPXALL	SCOTTISH ACC	2555	7,5%	51	LIRRACC	ROMA ACC	2073	-3,8%
14	EGTTACC	LONDON ACC	5293	3,6%	52	LJLAACC	LJUBLJANA ACC	635	-4,7%
15	EGTTTC	LONDON TMA TC	3738	3,6%	53	LKAAACC	PRAGUE ACC	2008	7,1%
16	EHAACC	AMSTERDAM ACC(245-)	1585	4,2%	54	LLLLACC	TEL AVIV ACC	390	7,4%
17	EIDWACC	DUBLIN ACC	634	10,7%	55	LMMMACC	MALTA ACC	316	8,6%
18	EISNACC	SHANNON ACC	1186	3,3%	56	LOVVACC	WIEN ACC	1947	-2,4%
19	EKDKACC	COPENHAGEN ACC	1503	0,2%	57	LPPCACC	LISBOA ACC/UAC	1447	8,7%
20	ENBDACC	BODO ACC	610	6,8%	58	LPPOACC	SANTA MARIA OACC	365	6,1%
21	ENOSACC	OSLO ATCC	1005	5,5%	59	LQSBACC	BOSNIA-HERZEGOVINA	89	2,3%
22	ENSVACC	STAVANGER ATCC	647	-2,9%	60	LRBBACC	BUCURESTI ACC	1558	-2,0%
23	EPWWACC	WARSAWA ACC	1856	4,6%	61	LZBBACC	GENEVA ACC	1711	1,1%
24	ESMMACC	MALMO ACC	1427	-0,4%	62	LSAZACC	ZURICH ACC	1957	-2,2%
25	ESOSACC	STOCKHOLM ACC	1139	2,8%	63	LTAACC	ANKARA ACC	3339	39,9%
26	EVRACC	RIGA ACC	666	0,5%	64	LTBBACC	ISTANBUL ACC	2024	-19,0%
27	EYVCACC	VILNIUS ACC	599	0,3%	65	LUUUACC	CHISINAU ACC	86	-18,1%
28	GCCCACC	CANARIAS ACC/FIC	841	9,7%	66	LWSSACC	SKOPIE ACC	266	-9,2%
29	GMMMACC	CASABLANCA ACC	1043	4,3%	67	LYBAACC	BEOGRADE ACC	1395	-1,6%
30	HECCACC	CAIRO ACC	588	-20,0%	68	LZBBACC	BRATISLAVA ACC	1182	7,0%
31	LAAAACC	TIRANA ACC	419	-18,2%	69	OLBBACC	BEIRUT ACC	138	-1,4%
32	LBSRACC	SOFIA ACC	1824	-0,7%	70	UDDACC	YEREVAN ACC	56	-44,6%
33	LCCCACC	NICOSIA ACC	841	-5,4%	71	UGGGACC	TBILISI ACC	304	-3,5%
34	LDZOACC	ZAGREB ACC	1147	-8,5%	72	UKBVACC	KIEV ACC	282	-27,1%
35	LECBACC	BARCELONA ACC	2176	5,4%	73	UKDVACC	DNIPROPETROVSK ACC	43	16,2%
36	LECMALL	MADRID ALL ACC	2829	4,6%	74	UKLVACC	L'VIV ACC	232	7,4%
37	LECPACC	PALMA ACC	639	5,1%	75	UKOVACC	ODESSA ACC	160	-26,3%
38	LECSACC	SEVILLA ACC	1011	6,0%	76	UMMVACC	MINSK ACC	656	1,1%

Traffic increased in Ankara, Reykjavik, Dublin, Canarias and Lisboa ACCs. Airspace realignment in Ankara and Istanbul ACCs accounts for the variation. Increased usage of the Oceanic ATS routes by traffic avoiding French ACCs during the French ATC industrial action and increased traffic between UK and Spain accounts for the variation in Dublin, Shanwick, Santa Maria, Sevilla, Lisbon, Malta and Canarias ACCs. Increased usage of more southerly routes for traffic routing to/from Turkey accounts for the increase in Malta ACC. The traffic decrease in Brussels ACC was due to the reduction of operations at Brussels airport.

2. ATFM DELAY AND ATTRIBUTIONS

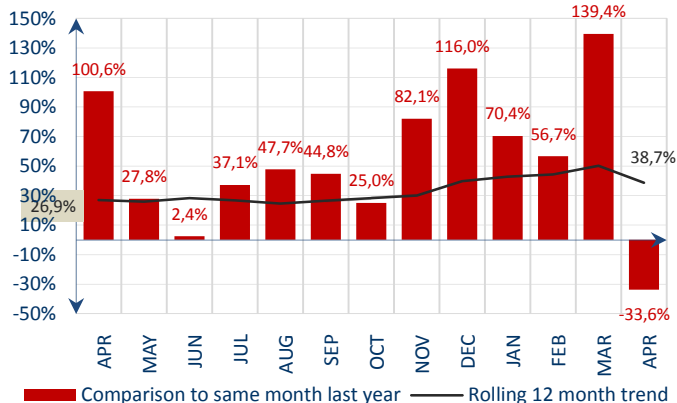


Total ATFM delays decreased by 33.6% in April 2016¹.



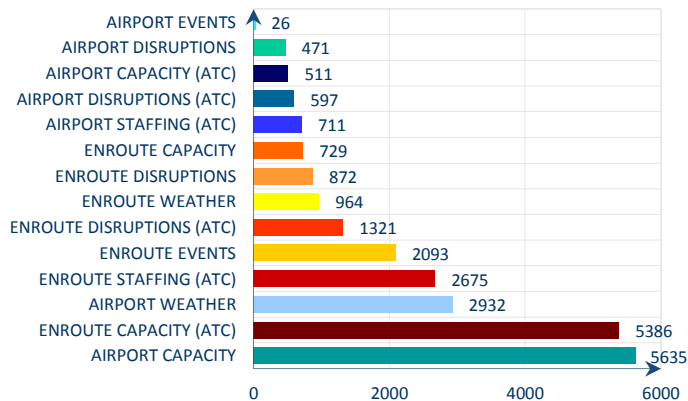
En-route ATFM delays decreased by 43.9% and airport ATFM delays decreased by 13.2%. Note that April 2015 was strongly impacted by a French ATC industrial action.

Monthly ATFM delays trend



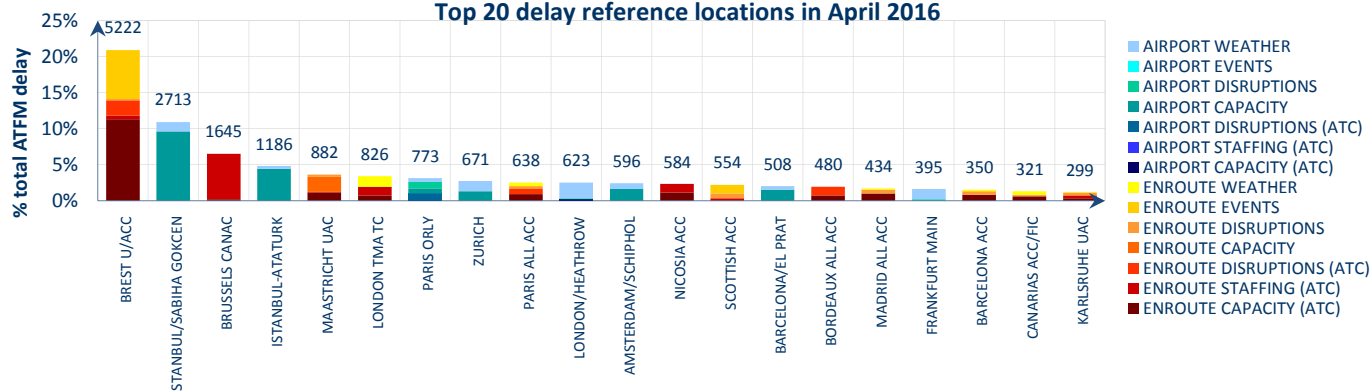
Although there was a decrease of 33.6%, the rolling 12-month trend shows that ATFM delay was 38.7% higher during the period May 2015 – April 2016 compared to May 2014 – April 2015.

Proportion of ATFM delays in April 2016



Airport capacity (22.6%), en-route ATC capacity (21.6%) and airport weather (11.8%) were the main causes of ATFM delays in April 2016.

Top 20 delay reference locations in April 2016

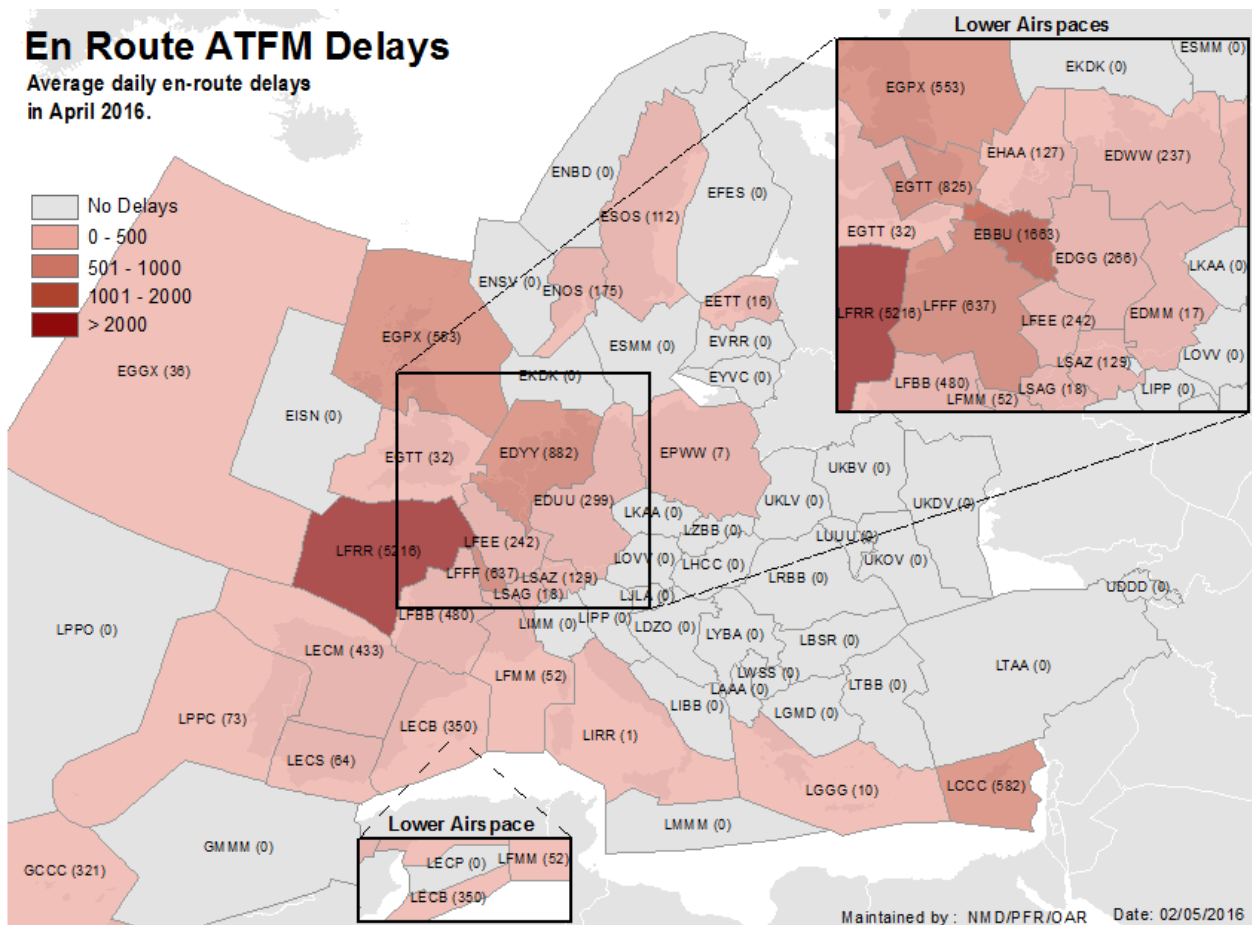


These are the top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

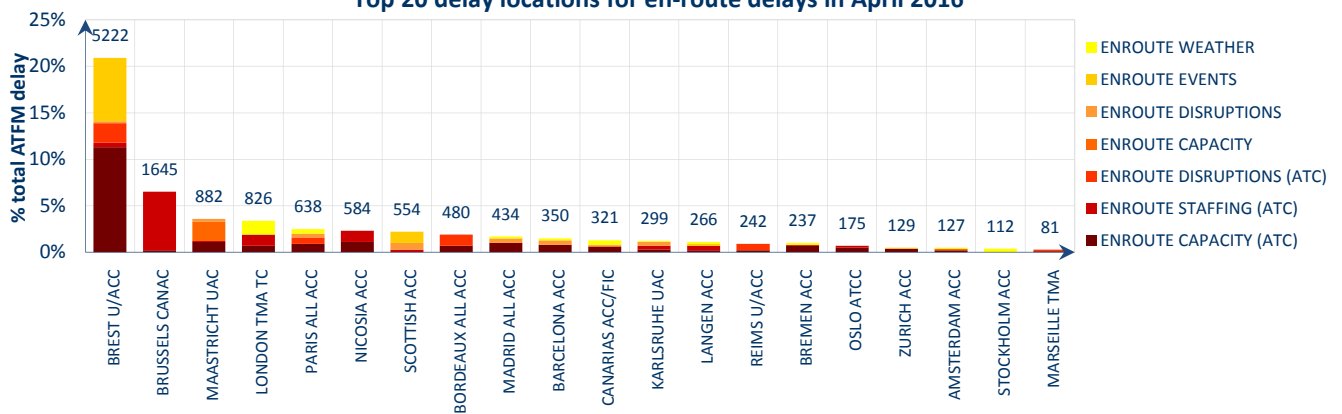
- French industrial action on 27-28-29 April resulted in delays for Brest, Paris and Bordeaux ACCs.
- ERATO ATM system implementation generated ATFM delays in Brest ACC ;
- Seasonal weather (fog, strong winds, thunderstorms) impacted operations particularly at London/Heathrow, Istanbul/Sabiha Gökçen, Frankfurt Main, Zurich and Amsterdam/Schiphol airports;
- Aerodrome capacity issues generated delays at Istanbul/Sabiha Gökçen and Istanbul/Ataturk airports, and to a lesser extent Amsterdam/Schiphol, Zurich and Barcelona airports;
- En-route ATC capacity delays in Brest, Maastricht, Nicosia, Madrid and Paris ACCs;
- Maastricht ACC was impacted by military exercise FRISIAN FLAG and therefore generated en-route disruption delays.
- Introduction of new en-route procedures in the Scottish ACC generated delays.
- Brussels and to a lesser extent Nicosia and London TMA ACCs recorded delays due to several ATC staffing issues during the month.

3. EN-ROUTE ATFM DELAYS

EN-ROUTE ATFM DELAY PER LOCATION



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



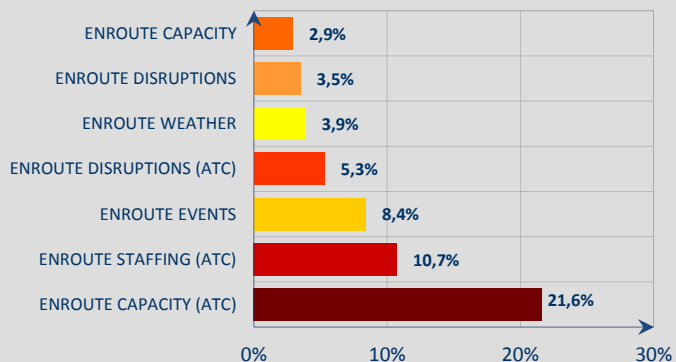
These are the top 20 en-route ATFM delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

The top 20 en-route ATFM delay locations generated **54%** of the monthly total (network) ATFM delay. The top 5 en-route ATFM delay locations generated **37%** of the monthly total (network) ATFM delay.

Brest ACC generated **21%** of the monthly total (network) ATFM delay in April 2016.

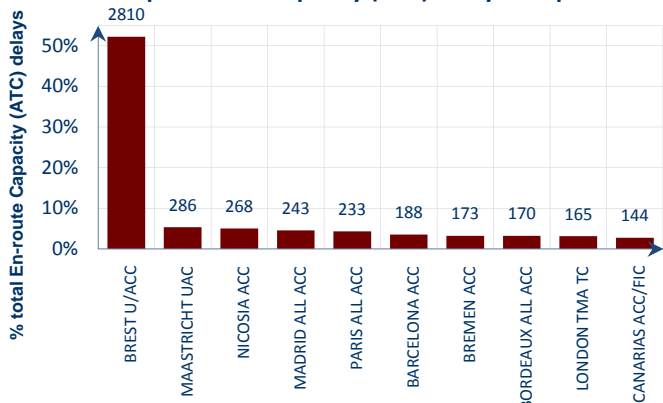
EN-ROUTE ATFM DELAY PER DELAY GROUP

Reasons for en-route delays in April 2016



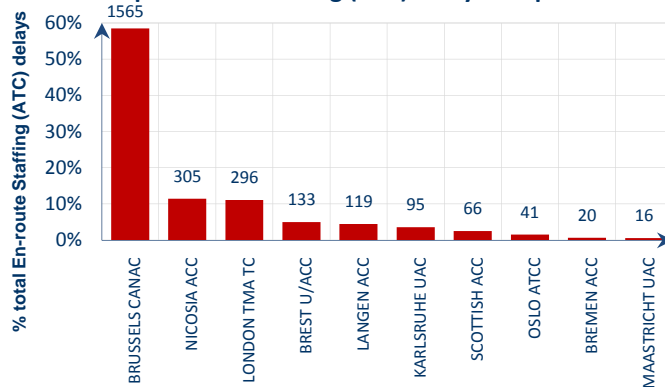
En-route ATFM delays accounted for 56.3% of all ATFM delays. Most of this delay was caused by en-route ATC capacity, en-route ATC staffing and en-route events as explained in detail below. The other causes were: *En-route ATC disruptions*; Bordeaux ACC (frequency problems) and French ACCs (industrial action); *En-route weather*; Stockholm, Langen, Bremen, London TMA, Madrid, Barcelona and Canarias ACCs were affected by strong winds or thunderstorm activity; *En-route disruptions*; Barcelona, Madrid, Maastricht and Karlsruhe ACCs all generated delays due to the application of ATFM protective measures during the French ATC industrial action; delay was recorded during the implementation new en-route procedures in Scottish ACC.

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



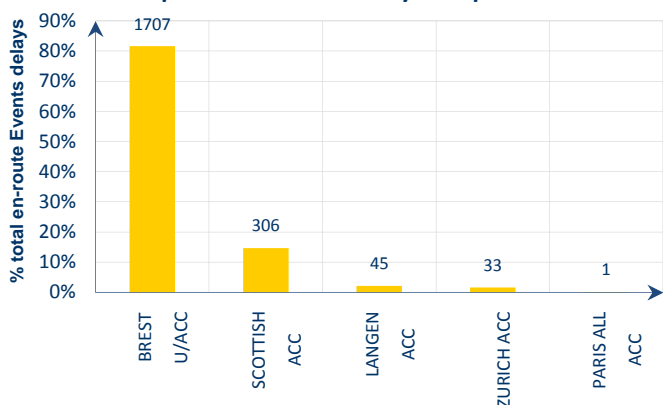
Capacity shortage generated ATFM delays in Brest ACC.

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



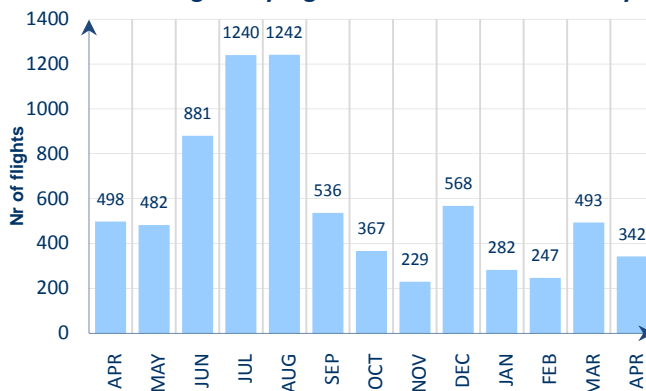
ATFM delays due to staff shortage in Brussels CANAC, Nicosia and London TMA ACCs.

Top en-route Event delays in April 2016



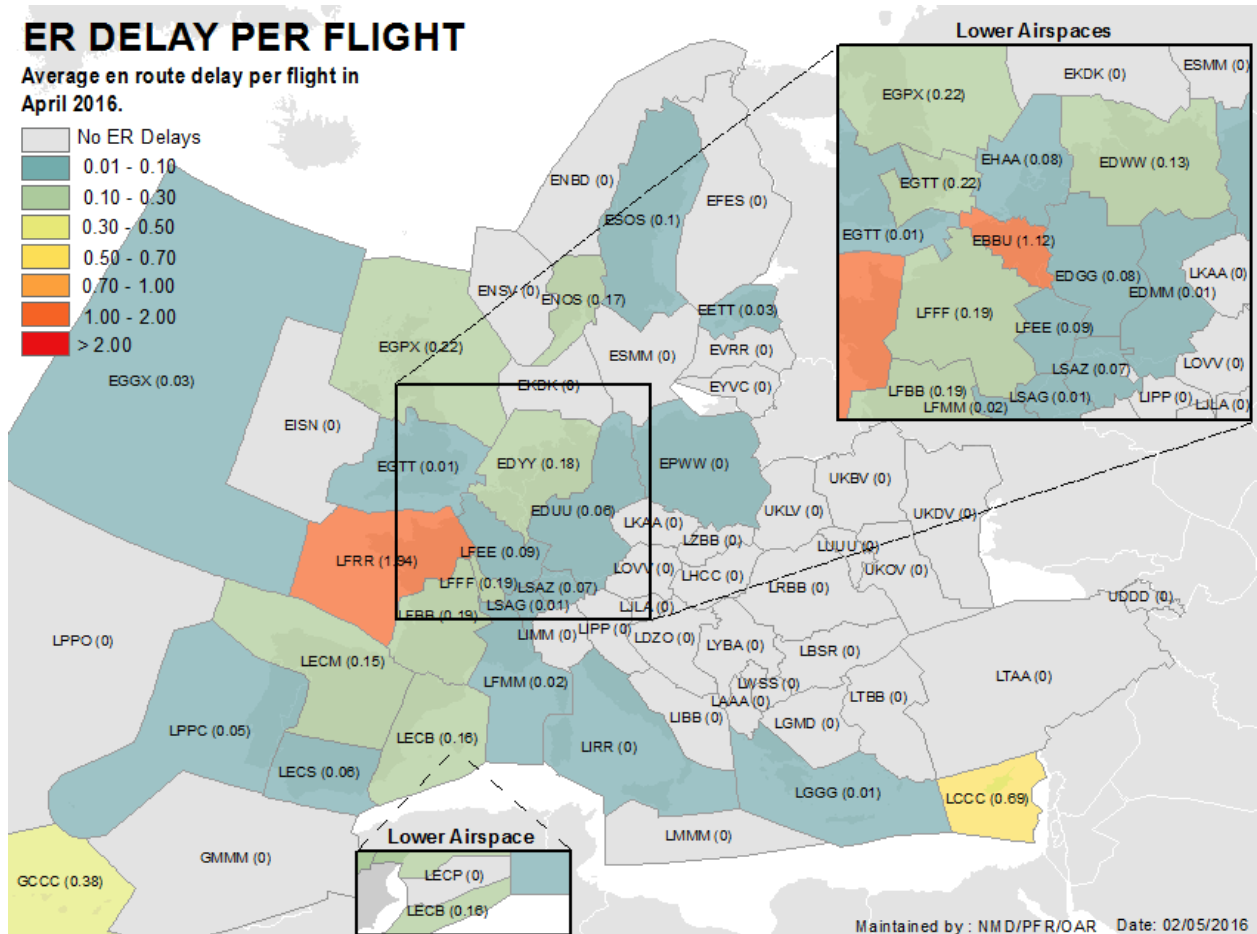
Brest ACC generated significant en-route ATFM delays throughout the month due to the ERATO ATM system implementation. Scottish ACC implemented new en-route procedures which generated delays.

Average daily flights >= 15 min en-route delay

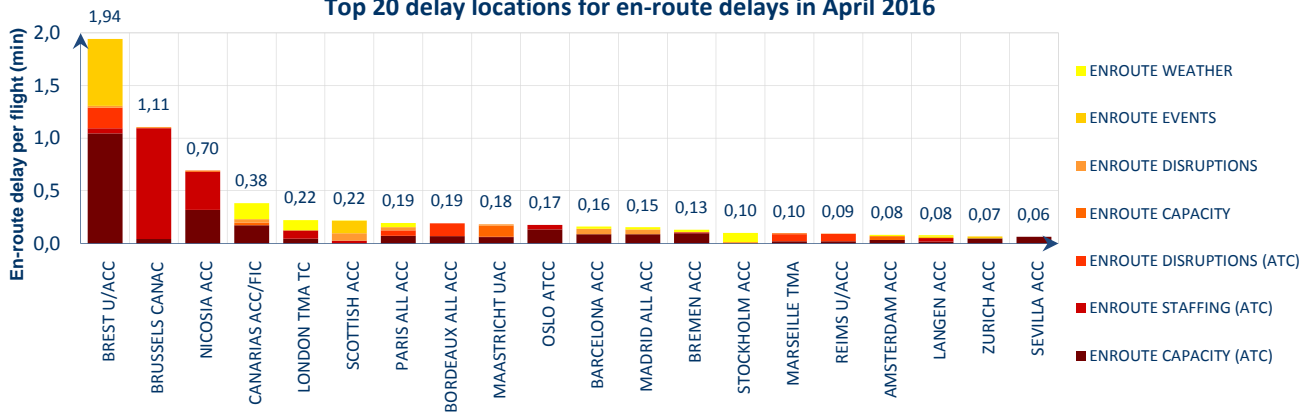


An average of 342 flights/day received an en-route ATFM delay of at least 15 minutes in April 2016. The corresponding figure for March 2015 was 498 flights/day.

EN-ROUTE ATFM DELAY PER FLIGHT



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



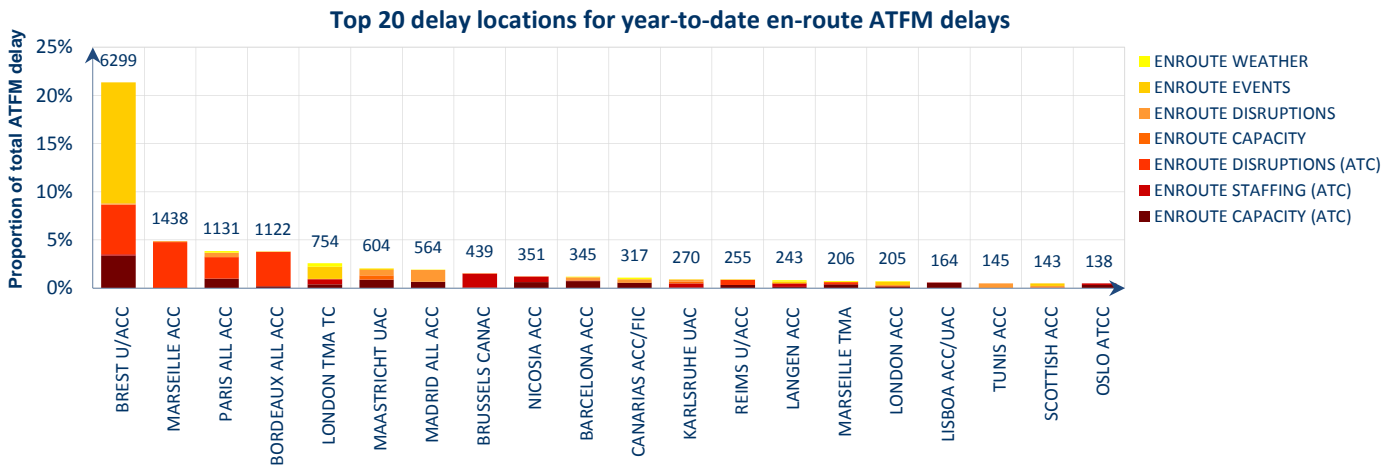
These are the top 20 average en-route ATFM delay per flight generating locations for the reporting month. Figures are the average en-route ATFM delay per flight in minutes for the individual locations.

Brest ACC average en-route ATFM delay/flight decreased from 4.19 min/ft in March 2016 to 1.94 min/ft in April 2016.

Nicosia ACC average en-route ATFM delay/flight increased from 0.38 min/ft in March 2016 to 0.70 min/ft in April 2016.

Brussels ACC average en-route ATFM delay/flight increased from 0.10 min/ft in March 2016 to 1.11 min/ft in April 2016.

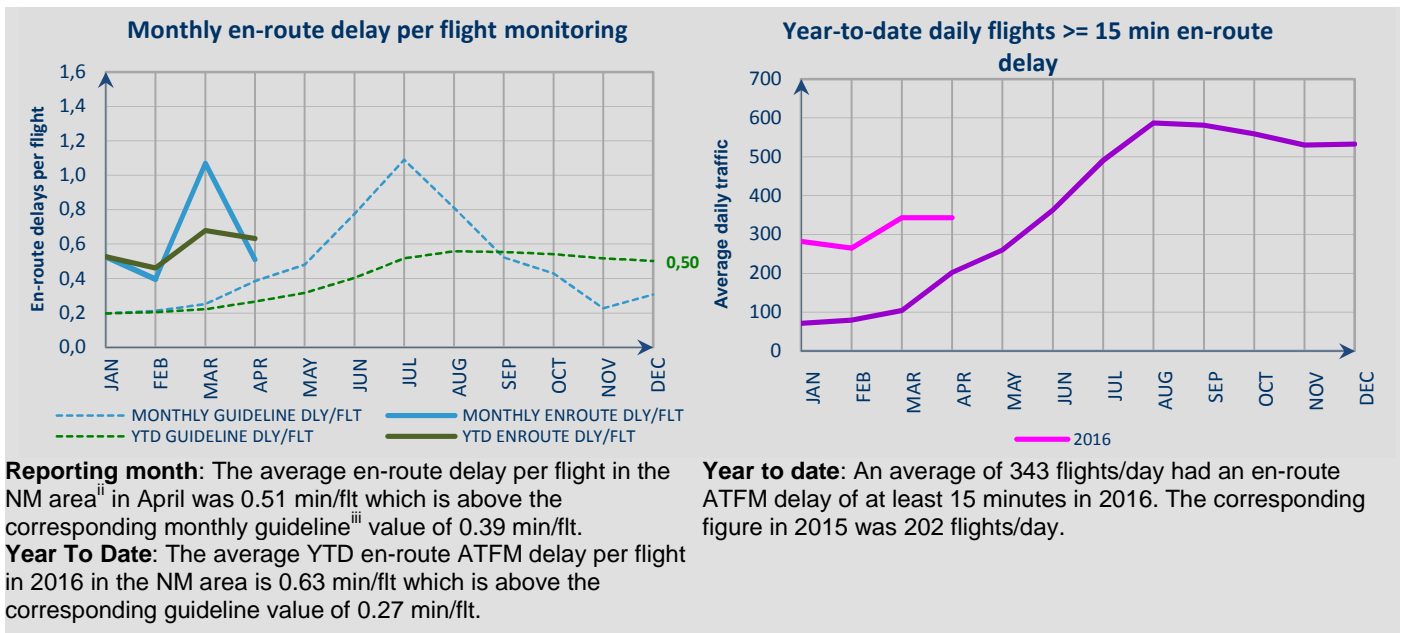
EN-ROUTE ATFM DELAY YEAR-TO-DATE



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.

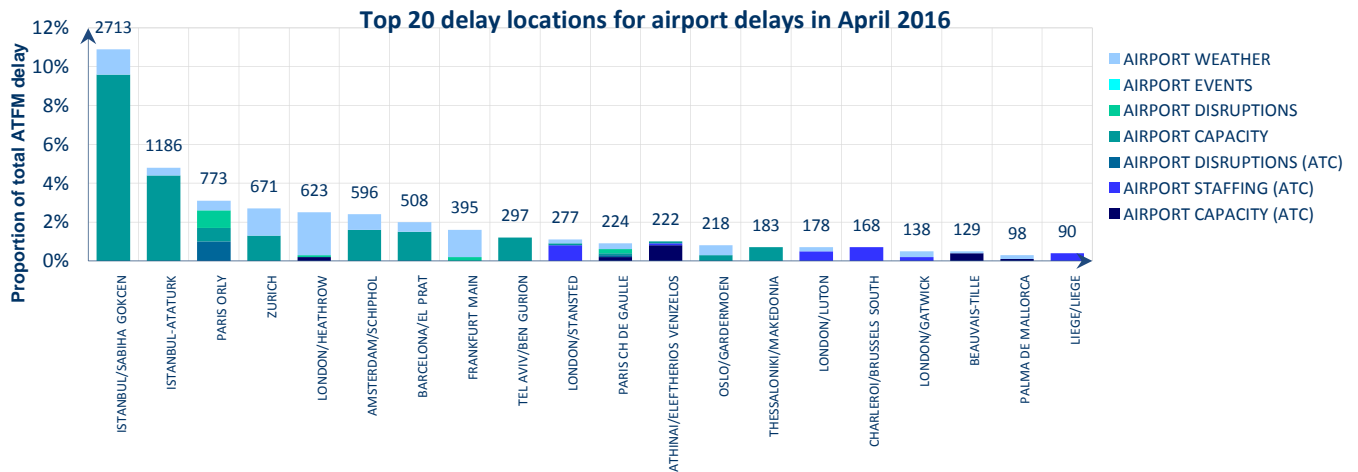
The top 20 en-route delay locations generated **51.3%** of the total ATFM (network) delay.

The top 5 en-route delay locations generated **36.5%** of the total ATFM (network) delay.



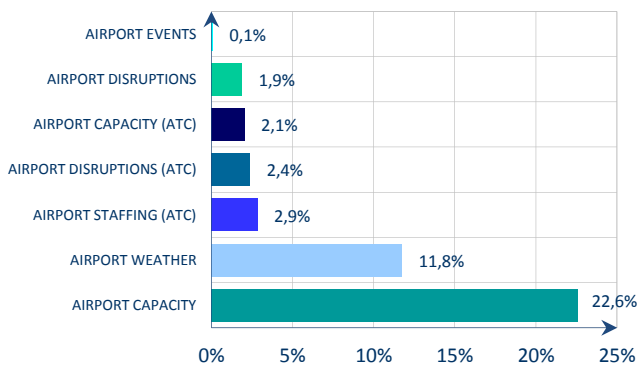
4. AIRPORT/TMA ATFM DELAYS

AIRPORT/TMA ATFM DELAY PER LOCATION



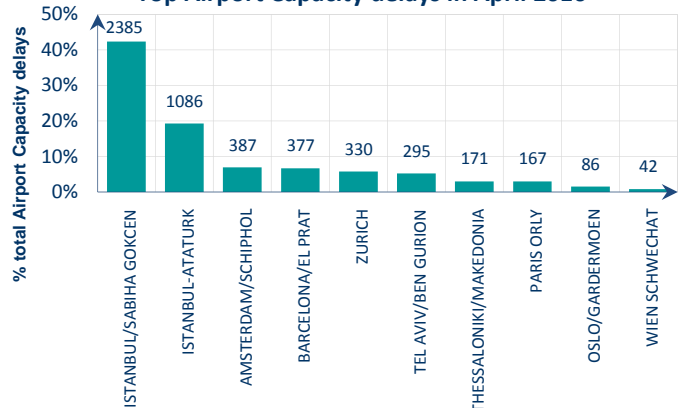
AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

Reasons for airport delays in April 2016



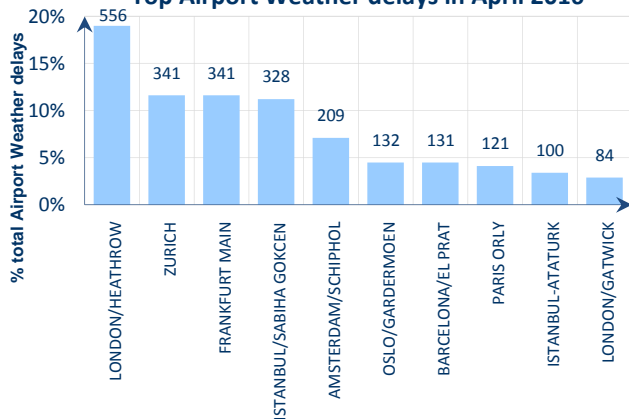
Airports accounted for 43.7% of all ATFM delays in April 2016, mainly due to capacity and airport weather.

Top Airport Capacity delays in April 2016



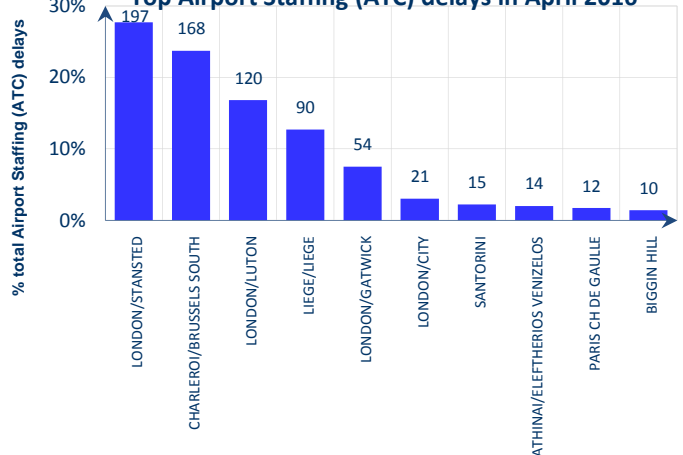
Airport capacity delays at Istanbul/Sabiha Gökçen, Istanbul/Ataturk and, to a lesser extent, Amsterdam/Schiphol, Barcelona and Zurich airports.

Top Airport Weather delays in April 2016



Seasonal weather (fog, strong winds, thunderstorms) particularly impacted operations at London/Heathrow, Zurich, Frankfurt, Istanbul/Sabiha Gökçen and Amsterdam/Schiphol airports.

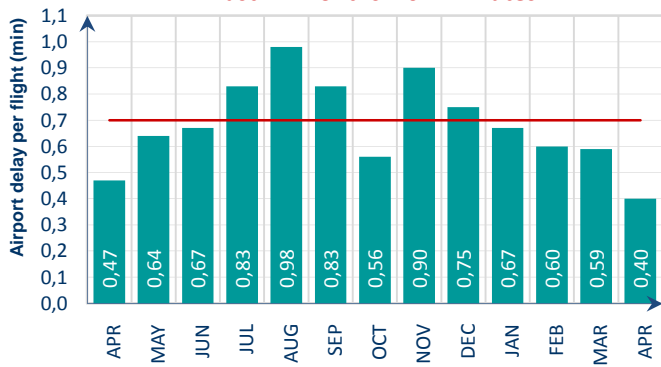
Top Airport Staffing (ATC) delays in April 2016



Staff issues in London TMA led to London/Stansted and London/Luton recording ATFM delays. Staffing issues generated delays at Charleroi/Brussels South airport.

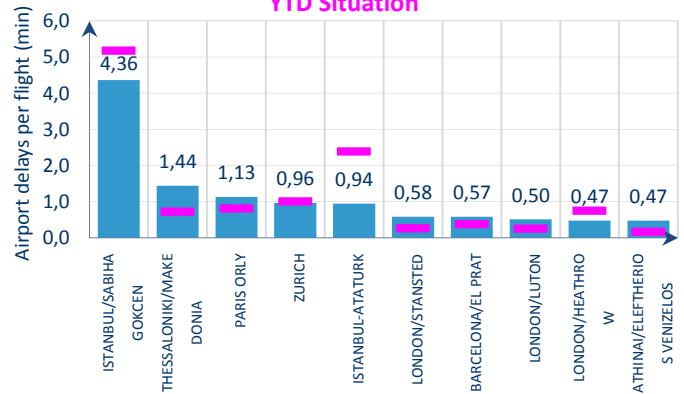
AIRPORT/TMA ATFM DELAY PER FLIGHT

Monthly average Airport delay (min) per flight
Last 12 months = 0.7 minutes



Average airport/TMA delay per flight decreased from 0.47 min/flt in April 2015 to 0.40 min/flt in April 2016.

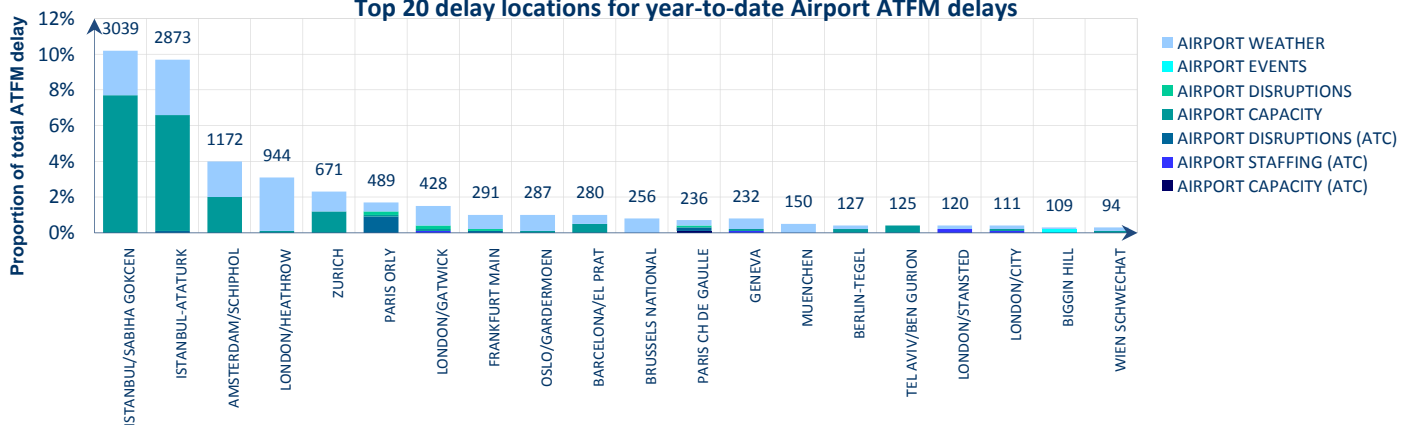
Top 10 Airport delay per flight in April 2016
YTD Situation



Istanbul/Sabiha Gökçen had the highest delay per flight in April, mainly due to airport capacity and seasonal weather. Istanbul/Ataturk airport generated an average delay per flight well below its year to date average. Thessaloniki/Makedonia generated delays due to work in progress in the manoeuvring area.

AIRPORT/TMA ATFM DELAY YEAR-TO-DATE

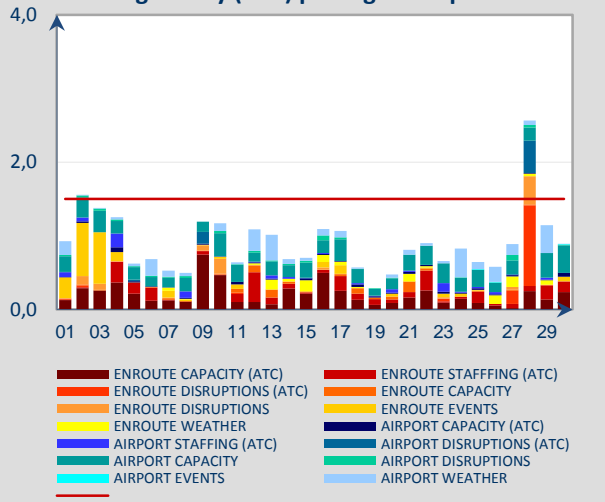
Top 20 delay locations for year-to-date Airport ATFM delays



The top 20 Airport/TMA delay locations have generated 40.5% of the total ATFM (network) delay in 2016. The top 5 Airport/TMA delay locations have generated 29.3% of the total ATFM (network) delay in 2016.

5. DAILY EVOLUTION

Average delay (min) per flight in April 2016



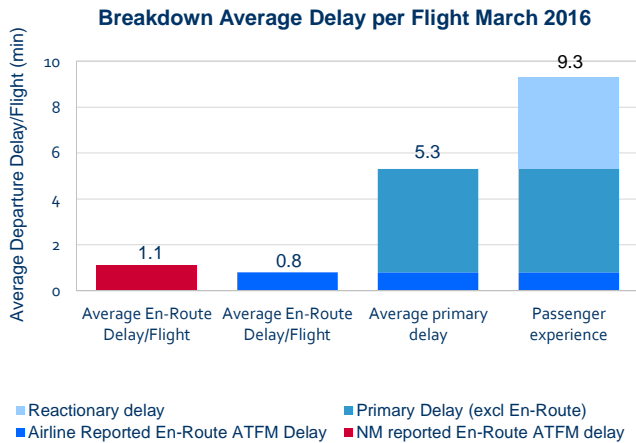
Two days in April 2016 had an average delay/flt above 1.5 min/flt mainly due to en-route ATC disruptions (30%) and en-route events (20%). The remaining reasons are covered below;

02 April; Brest ACC ERATO ATM system implementation disrupted the South/West axis traffic and generated most of the delays; En-route ATC capacity in Madrid and Paris ACCs; Aerodrome capacity issues at Istanbul/Ataturk and Istanbul/Sabiha Gökçen airports.

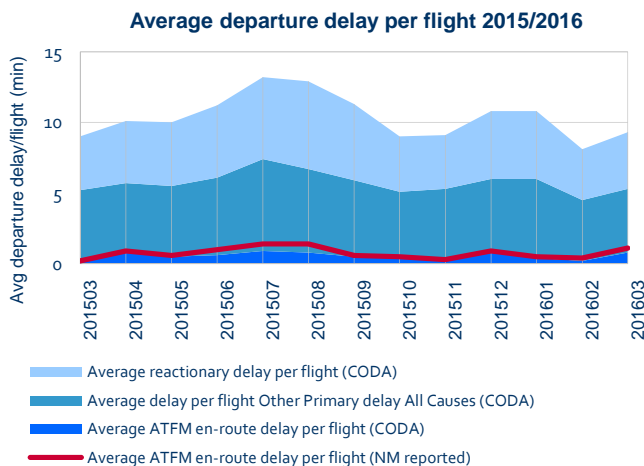
28 April; En-route ATC disruption delays at Brest, Reims, Marseille, Paris and Bordeaux ACCs due to the French ATC industrial action, with additional delays in Maastricht, Madrid, Barcelona and Karlsruhe ACCs. Bale-Mulhouse, Marseille and Paris/Orly airports were the most impacted by the French ATC industrial action and generated delays; airport capacity delays at Istanbul/Ataturk and Istanbul/Sabiha Gökçen airports; Strong winds at Zurich airport and thunderstorms at Amsterdam airport.

6. ALL AIR TRANSPORT DELAYS (SOURCE: CODA)

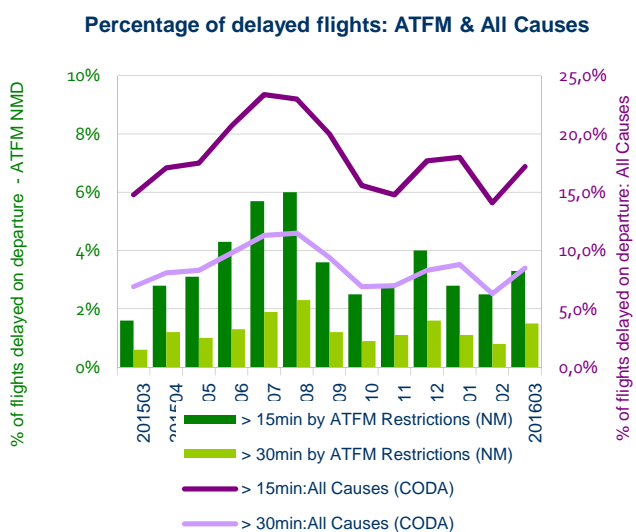
This section presents the all air transport delay situation as seen from the airlines by using the data collected by Central Office for Delay Analysis (CODA) from the airlines. Data coverage is 67% of the commercial flights in the ECAC region for March 2016. ATFM delays reported by airlines may be lower 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.



Based on airline data, the average departure delay per flight from “All Causes” was 9.3 minutes per flight, this was an increase of 7% in comparison to 8.7 minutes per flight in the same month of 2015. Within all air transport delays, en-route ATFM delays were 0.8 minutes/flight in March 2016. Primary delays counted for 57% (or 5.3 min/ft), with reactionary delays representing a smaller remaining share of 43% at (4.0 min/ft).

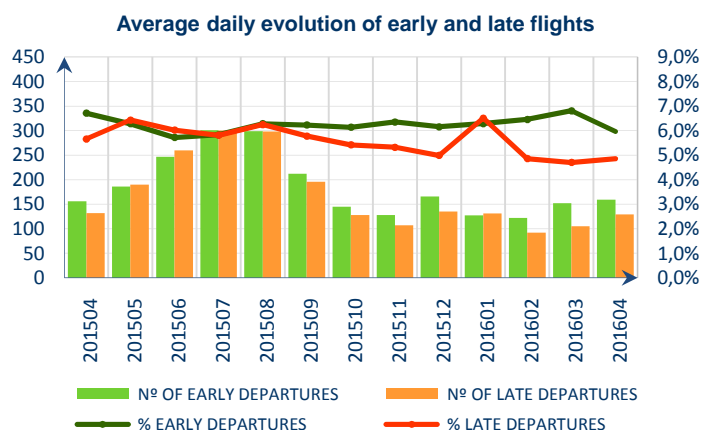


Further analysis of airline data from ‘All-Causes’ shows that the average en-route ATFM delay was 0.8 minutes per flight. This was below the NM reported average en-route ATFM delay of 1.1 minutes per flight.



The percentage of flights delayed from ‘All-Causes’ increased (those exceeding 15 minutes) by 2.4 percentage points to 17.2% and those (exceeding 30 minutes) increasing by 1.6 points to 8.5% of flights in March 2016.

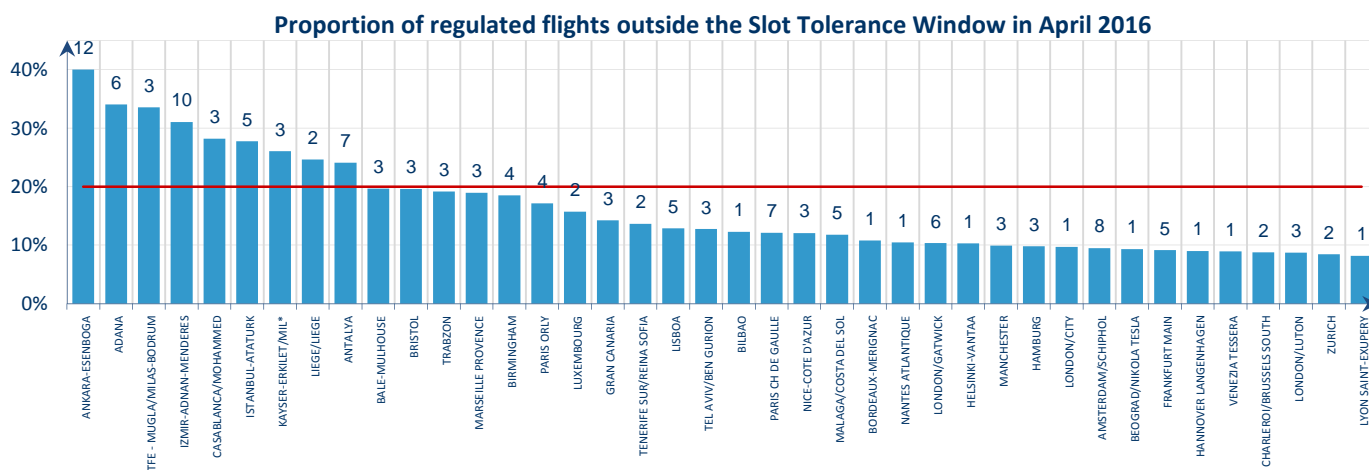
7. ATFM SLOT ADHERENCE



The percentage of early departures for April 2016 is 6.0% of regulated flights, which is a decrease of 0.8% compared to April 2015.

The percentage of late departures for April 2016 is 4.9% of regulated flights, which is a decrease of 0.8% compared to April 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.

Five ACCs carried out projects, planned for this reporting period, involving ATM system changes/upgrades or airspace reorganisations. All projects had been categorised as special, planned events with potential impact on the network performance

Brest ACC

Stepped implementation of ERATO system extended throughout the entire month of April generating 49,522 minutes of ATFM delay. This represented 31.7% of total delay (156,491 minutes) for Brest ACC for April. A 20% sector capacity reduction had been originally planned, with normal sector configuration (19).

ERATO implementation also affected Paris ACC, which generated an additional 2,926 minutes of delay making it 15.3% of total Paris ACC delay (19,102 min) in April.

Total delay (Brest and Paris ACC) caused by ERATO implementation amounted to 52,448 minutes.

Brest and Paris ACC (EEE) generated 7.1% of total en-route ATFM delay in April.

Langen ACC

The implementation of PSS on sector group EBG07 was preceded by two operational weekends in April (15-19 and 29-30). Delay generated during the operational weekends amounted to 298 minutes, which represented 3.73% of total delay generated by

Langen ACC during April. A 20% sector capacity reduction had been originally planned with maximum configuration of 2 sectors plus feeder EDDK.

L'viv ACC

The implementation of a new ATM system progressed through the transition phase during April 2016, without generating ATFM delay, despite a capacity reduction of 10%.

Warsaw ACC

The implementation of new sectorisation with vertical split started on 01 April and progressed throughout the entire month. The project generated no delay. Capacity reductions had been planned between 5 – 10% with maximum sector configuration between 8-10 sectors depending on the time of the day.

Zurich ACC

The implementation of Step 4 of CH Stripless took place between 05 and 25 April. The project implementation generated no ATFM delay. Capacity reductions had been planned between 10 – 15% with maximum sector configuration of 4 within CTA and 5 within UTA.

Military activity

Military Exercise FRISIAN FLAG at Maastricht ACC between 11 and 22 April generated 15,316 minutes of ATFM delay.

AIRPORTS

Local Plans in April

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

Completed:

- **Runway maintenance** at Amsterdam and Tallinn airports;
- **Terminal building(s) improvements/works** at Munich airport;
- **Transition to stripless operation** at Palma de Mallorca airport tower.

Ongoing

- **Runway maintenance** at Amsterdam, Gran Canaria, Istanbul Sabiha Gökçen, Luxembourg, Nurnberg and Vienna airports;
- **Taxiway(s) and/or apron(s) improvements** Bologna, Dublin, Gran Canaria, Hamburg, Helsinki, Malta Luqa, Nurnberg, Oslo Gardermoen (2,586 minutes of ATFM delay), Palma de Mallorca, Paris Orly (11,763 minutes of ATFM delay), Prague, Riga, Stuttgart, Thessaloniki (5,481 minutes of ATFM delay) and Venice airports;
- **ILS maintenance** at Bologna and London Heathrow airports;
- **Terminal building(s) improvements/works** at Frankfurt Main, Hamburg, Ljubljana, and Oslo Gardermoen airports.
- **PRIDEP trial** at Zurich airport generated 1,990 minutes of ATFM delay.

DISRUPTIONS

Disruption

- Due to ATC staff shortage total of 13,571 minutes of ATFM delay were generated on 12 and 13 April. In the afternoon on the 12 April zero-rate regulations were requested at short notice Brussels TMA and Charleroi TMA. Between the zero-rate periods and from 1830 the TMAs operated with significantly reduced rates. Most impacted TMAs were Brussels TMA (9,031 minutes of ATFM delay) and Charleroi TMA (2,084 minutes of ATFM delay).
- Due to ATC Staffing issues Liege airport generated 2,786 minutes of ATFM delay between 14 and 30 April and Charleroi/Brussels South generated 4,987 minutes of ATFM delay between 15 and 25 April;
- Due to TMA staffing issues London Stansted generated 5,896 minutes of ATFM delay, London Luton generated 2,686 minutes of ATFM delay. London Gatwick generated 1,607 minutes during several days in April.

Industrial Action

- French ATC industrial action between 27 and 29 April generated 12,927 minutes of airport ATFM delay and 37,244 minutes of en-route delay. Most affected airport was Paris Orly (7,767 minutes of ATFM delay); Most affected ACCs were Brest (15,633 min) and Bordeaux (7,890 min). The action resulted in 350 flight cancellations.
- Industrial non ATC action took place in Germany on 27 April and resulted in approximately 1,300 flights not operating at several German airports. The action generated 2,080 minutes of ATFM delay at Cologne airport.
- ATC Industrial action took place in Italy on the 09 April with 3,577 minutes of airport ATFM delay.

Other

- New en-route procedures implemented in Prestwick ACC generated 9,190min of en-route ATFM delay

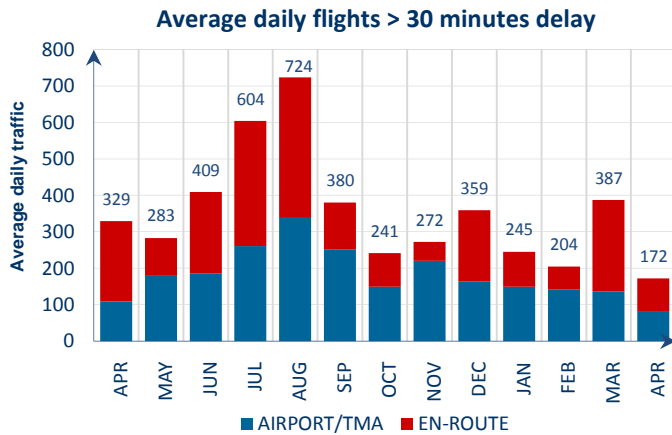
- During the deployment of RECAT EU at Paris Charles de Gaulle protection was requested during its peak periods which resulted in 1,708 min of ATFM delay between 1 and 3 April;

9. NM ADDED VALUE

FLIGHTS WITH DELAY > 30'

The number of flights that had more than 30 minutes of ATFM delay decreased by 47.7% from 329 flts/day in April 2016 to 172 flts/day in April 2016.

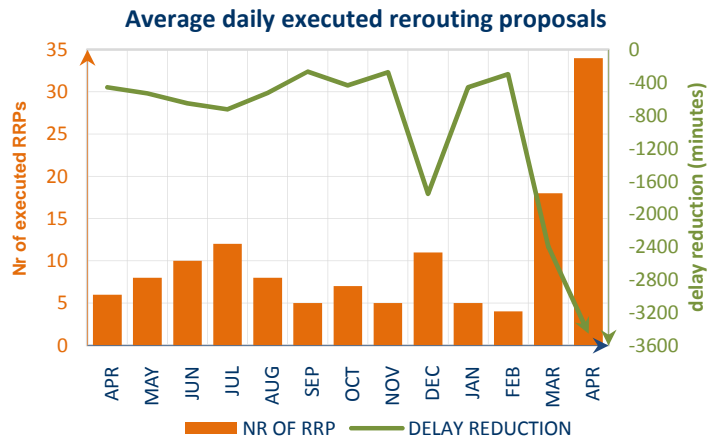
52.3% of flights with more than 30 minutes of ATFM delay in April 2016 were en-route and 47.7% were airport.



RRP DIRECT DELAY SAVINGS

On average 53 RRP were offered in April 2016 of which 34 RRP were executed, saving 3,456 minutes of daily delay.

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



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

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

ii See Notice on page 1 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).