Network Manager
nominated by
the European Commission

EUROCONTROL

Monthly Network Operations Report

Analysis - September 2015

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NOTICE

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

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

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

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

Last 13 months average daily traffic
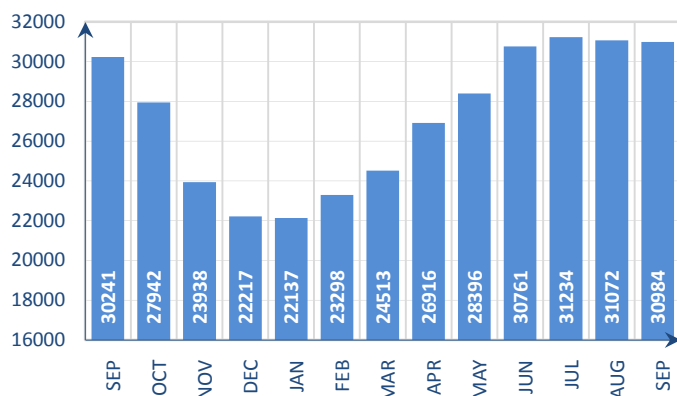
Traffic increased by 2.5% in September 2015 compared to September 2014. This is the highest growth rate since the beginning of the year, but it is artificially inflated (by 1 percentage point) due to the relatively low levels of traffic during September 2014 caused by a lengthy industrial action in France.

Average daily traffic for last 5 Years
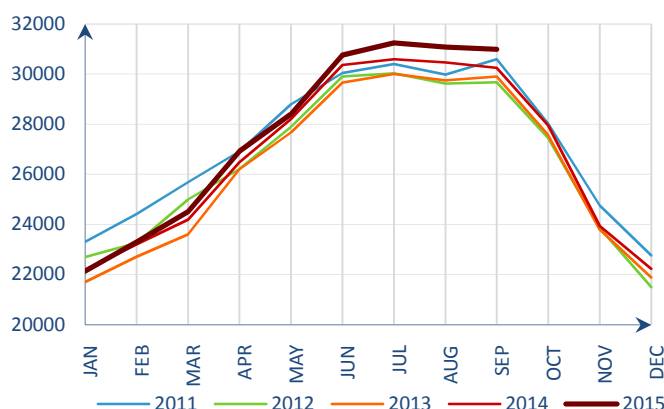
Average daily traffic in September 2015 is the highest for the month of September since traffic records began.

Average daily traffic in September for last 5 Years
Forecast dated 2015-02
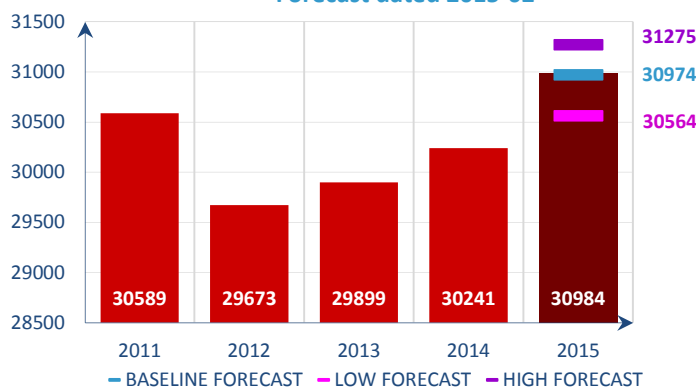
Traffic was in line with the baseline forecast for September 2015.

12 months rolling traffic trend
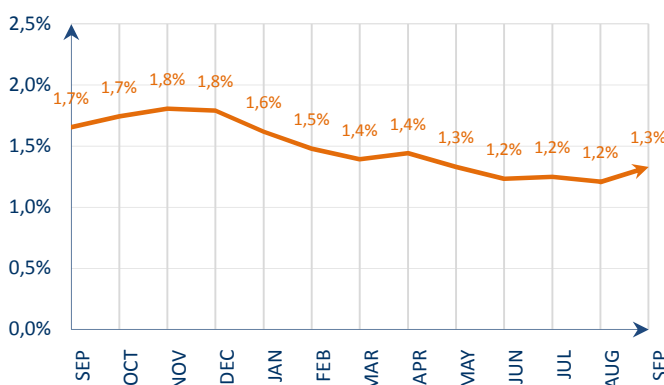
This graph shows the variation in average daily traffic for the last 12-month period relative to previous 12-months. The average daily traffic from October 2014 to September 2015 was 1.3% higher than the average from October 2013 to September 2014.

France was the main contributor to local traffic[1] on the European network in September (+284 flights/day compared to September 2014 – but note the comment above). Excluding France, Turkey remained the main contributor to traffic, adding some 272 daily flights per day (nearly twice August's contribution) thanks to arrival and departure flows but also to renewed growth in domestic flows (+13.4% vs September 2014). UK (+134 flights/day), Spain (+121 flights/day) and Italy (+93 flights/day) were also amongst the top five contributors.
The vast majority of other European States have contributed to the network growth. Norway—hit by the oil crisis—removed most flights (70 daily) from the network in September due to weakness in its arrival/departure traffic.

As was the case in August, the low-cost segment maintained its dominant position with a growth rate of 6% and was followed by the traditional scheduled segment which grew 2.1% in September 2015 (vs. September 2014). Business aviation decreased by 4% (on same month in 2014), while all-cargo remained stable. The charter segment showed a limited decline of 3% in September (vs September 2014). After one year, the regional effects of the Ukraine-crisis are diminishing: more southerly routes for the flows connecting North-West Europe and Middle-East/South-East Asia are now part of the baseline routings.

In North-West Europe, overflight traffic in the Netherlands continues to grow (+6%). This is part of a re-balancing/off-load route strategy aimed at shifting en-route traffic from the Brussels to the Deco sectors in MUAC.
Outside Europe, reduced traffic from/to Russia (-16%) and Tunisia (-42%) has been recorded in September 2015 (compared to September 2014) following the financial crisis in Russia and recent terrorist attacks in Tunisia.
The Europe to Israel flow recorded substantial growth rates in September (~25% on the same month in 2014), reaching traffic volumes comparable to the flows from Europe to Morocco.
 For more information on EUROCONTROL Forecasts, go to http://www.eurocontrol.int/articles/forecasts

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[1] Internal, international departures and arrivals, excluding overflights.

AFR traffic in September 2014 was impacted by industrial action. This explains the relatively large increase in AFR operation traffic and in both Paris airports in September 2015.

With the exception of Frankfurt, all of the top 10 airports had positive traffic growth compared to September 2014. Overall, the largest traffic increases in September 2015 were at Istanbul/Sabiha Gökcen, Tel Aviv/Ben Gurion, Paris/Charles De Gaulle, London/Luton, Athens, Budapest, Paris/Orly and Milano/Linate airports. The largest traffic decreases were at Bergen/Flesland, Oslo/Gardermoen, Stockholm/Arlanda, Warsaw and Milan/Malpensa airports.

Six of the top 10 aircraft operators had more traffic compared to September 2014. Overall, the operators with the highest traffic growth were HOP!, Finnair, American Airlines, Air France, Sun Express, Ukraine International, Wizz Air, Qatar Airways, Pegasus and FlyBe airlines. Monarch, Lot Polish Airlines, Transaero, Jet2, Lufthansa and Air Berlin airlines recorded the highest traffic decrease compared to September 2014.

The traffic variation of AFR and HOP! Flybe (Finland) and Finnair, and Lufthansa and Germanwings is due to the transfer of flights between the aircraft operators. Pegasus recorded an increase in flights compared to September 2014 due to an increase in fleet size.

N°	ADEP	ADEP NAME	201509	%
1	EDDF	FRANKFURT MAIN	704	-0,4%
2	LFPG	PARIS CH DE GAULLE	701	16,3%
3	EHAM	AMSTERDAM/SCHIPHOL	693	2,4%
4	EGLL	LONDON/HEATHROW	677	1,5%
5	LTBA	ISTANBUL-ATATURK	672	7,9%
6	EDDM	MUENCHEN	570	0,5%
7	LEMD	ADOLFO SUAREZ MADRID-BARAJA	538	7,8%
8	LIRF	ROMA/FIUMICINO	498	2,1%
9	LEBL	BARCELONA/EL PRAT	454	0,7%
10	EGKK	LONDON/GATWICK	430	3,6%
11	LSZH	ZURICH	390	-0,3%
12	EKCH	KOBENHAVN/KASTRUP	387	1,3%
13	ENGM	OSLO/GARDERMOEN	377	-2,1%
14	LOWW	WIEN SCHWECHAT	373	0,5%
15	EBBR	BRUSSELS NATIONAL	359	1,1%
16	LTAI	ANTALYA	357	1,4%
17	LFPO	PARIS ORLY	355	9,9%
18	LEPA	PALMA DE MALLORCA	354	1,7%
19	ESSA	STOCKHOLM-ARLANDA	351	-2,0%
20	LTFJ	ISTANBUL/SABIHA GOKCEN	342	23,5%
21	EDDL	DUESSELDORF	329	-0,6%
22	EIDW	DUBLIN	297	9,6%
23	EGCC	MANCHESTER	280	1,1%
24	EDDT	BERLIN-TEGEL	278	1,5%
25	LGAV	ATHINAI/ELEFTHERIOS VENIZELOS	272	10,6%
26	LSGG	GENEVA	259	1,2%
27	EFHK	HELSINKI-VANTAA	256	1,6%
28	LPPT	LISBOA	250	5,5%
29	EGSS	LONDON/STANSTED	249	4,6%
30	LIMC	MILANO MALPENSA	247	-1,2%
31	EDDH	HAMBURG	231	2,7%
32	LFMN	NICE-COTE D'AZUR	223	4,2%
33	EPWA	CHOPINA W WARSZAWIE	214	-1,8%
34	LKPR	PRAHA RUZYNE	204	3,6%
35	EDDK	KOELN-BONN	200	2,0%
36	EDDS	STUTTGART	193	4,3%
37	EGGW	LONDON/LUTON	184	14,3%
38	LIML	MILANO LINATE	182	9,6%
39	LLBG	TEL AVIV/BEN GURION	181	20,7%
40	LEMG	MALAGA/COSTA DEL SOL	178	1,1%
41	EGPH	EDINBURGH	173	3,0%
42	LFLL	LYON SAINT-EXUPERY	162	1,9%
43	EGBB	BIRMINGHAM	154	0,0%
44	LROP	BUCURESTI/HENRI COANDA	144	0,0%
45	LFML	MARSEILLE PROVENCE	143	9,2%
46	LHBP	BUDAPEST LISZT FERENC INT.	143	10,0%
47	LEIB	IBIZA	139	3,7%
48	ENBR	BERGEN/FLESLAND	139	-6,1%
49	LIPZ	VENEZIA TESSERA	138	8,7%
50	LTAC	ANKARA-ESENBOGA	138	0,0%
		TOTALS and % TOTAL TRAFFIC	**15761**	**50,9%**

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

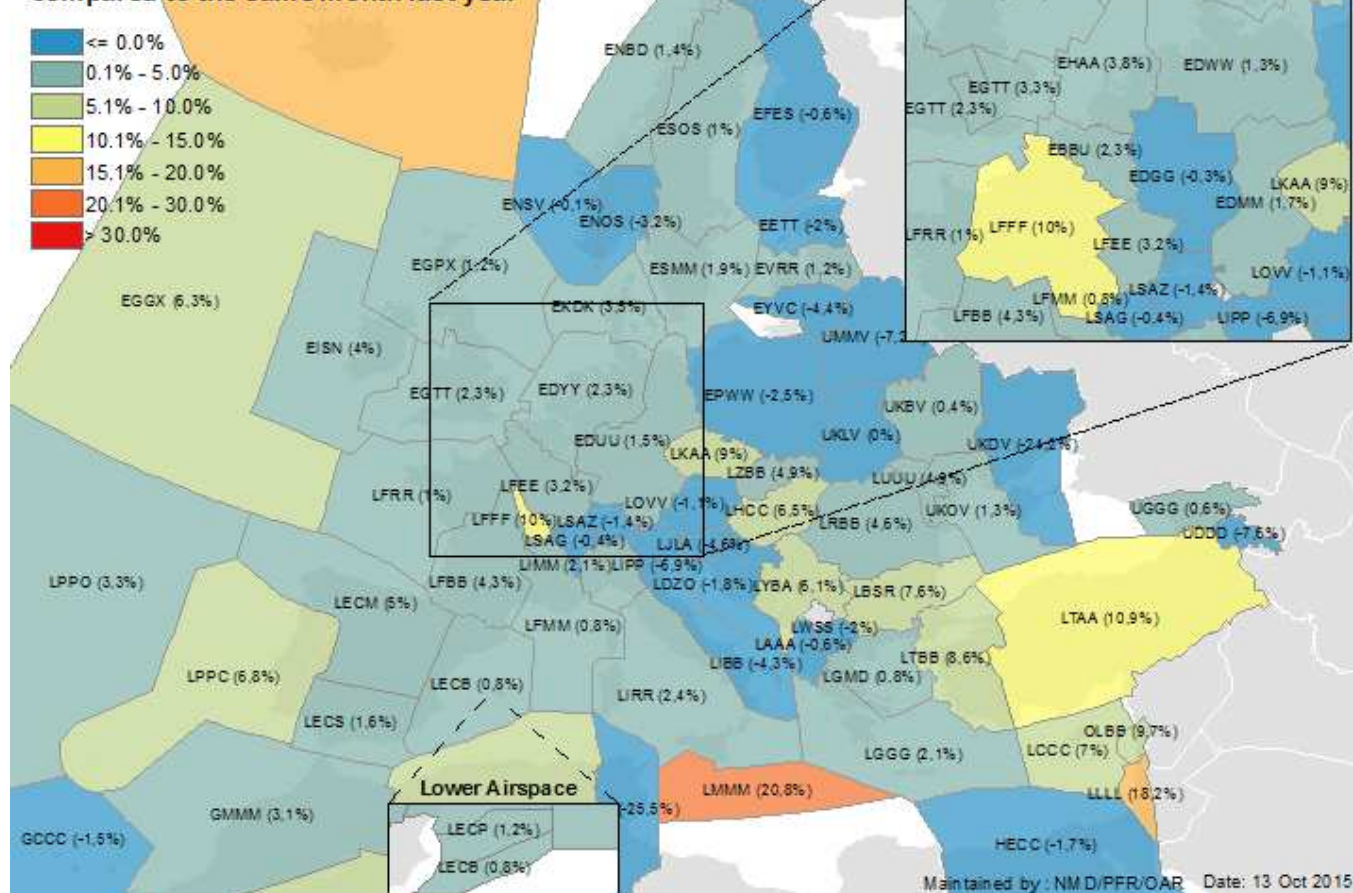| N°	ICAO	AIR OPERATOR	201509	%
1	RYR	RYANAIR	1804	7,4%
2	DLH	DEUTSCHE LUFTHANSA	1459	-6,8%
3	THY	TURKISH AIRLINES	1373	14,7%
4	EZY	EASYJET	1292	5,7%
5	AFR	AIR FRANCE	982	33,7%
6	SAS	SCANDINAVIAN AIRLINES SYSTEM	962	-1,2%
7	BAW	BRITISH AIRWAYS	719	3,7%
8	KLM	KLM ROYAL DUTCH AIRL	653	-0,3%
9	BER	AIR BERLIN, INC.	643	-5,6%
10	AZA	ALITALIA	642	15,0%
11	VLG	VUELING AIRLINES SA	603	13,0%
12	NAX	NORWEGIAN AIR SHUTTLE	548	-1,1%
13	GWI	GERMAN WINGS	519	6,0%
14	PGT	PEGASUS HAVA TASI.	437	17,0%
15	SWR	SWISS INTERNATIONAL	422	1,5%
16	BEE	JERSEY EUROPEAN T/A FLYBE	413	16,2%
17	WIF	WIDEROE	387	-0,2%
18	WZZ	WIZZ AIR	371	21,8%
19	AUA	AUSTRIAN AIRLINES	366	-0,7%
20	FIN	FINNAIR O/Y	337	110,4%
21	TAP	TAP/AIR PORTUGAL	330	-3,5%
22	AEE	AEGEAN AIRLINES	319	11,4%
23	AFL	AEROFLOT-RUSSIAN	257	7,8%
24	HOP	HOP (MERGE OF BZH + RAE + RLA)	248	421,5%
25	AEA	AIR EUROPA	244	10,7%
26	IBE	IBERIA	235	6,5%
27	BEL	BRUSSELS AIRLINES	234	5,6%
28	ANE	AIR NOSTRUM	233	5,0%
29	TOM	THOMSON FLY LTD	230	3,0%
30	EIN	AER LINGUS TEORANTA	221	0,8%
31	RAM	ROYAL AIR MAROC	205	3,6%
32	LOT	LOT-POLISH AIRLINES	194	-11,7%
33	UAE	EMIRATES	180	9,7%
34	EXS	JET2.COM	179	-8,2%
35	TRA	TRANSAVIA.COM	168	-3,7%
36	SXS	SUNEXPRESS AIRLINES	158	23,9%
37	EZS	EASY JET SWITZERLAND	153	3,1%
38	UAL	UNITED AIRLINES INC.	148	0,8%
39	BCS	EUROPEAN AIR TRANSP.	147	9,0%
40	DAL	DELTA AIR LINES INC.	145	2,6%
41	QTR	QATAR AIRWAYS COMP.	145	19,0%
42	NJE	NETJETS	143	-0,8%
43	TVS	TRAVEL SERVIS	142	3,3%
44	BTI	AIR BALTIC CORPORAT.	141	8,1%
45	CFG	CONDOR FLUGDIENST	137	2,1%
46	AUI	UKRAINE INTERNATIONA	134	23,0%
47	TCX	THOMAS COOK AIT LTD	132	4,1%
48	AAL	AMERICAN AIRLINES	132	87,7%
49	MON	MONARCH AIRLINES LTD	131	-21,3%
50	TSO	TRANSAERO AIRLINES	125	-8,3%
		TOTALS and % TOTAL TRAFFIC	**20522**	**66,2%**

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

N°	ICAO	AIR OPERATOR	201509	%
		Unidentified	2405	-13,2%

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

EN-ROUTE TRAFFIC GROWTH

Percentage increase in traffic during September 2015 compared to the same month last year


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

Maintained by : NMD/PFR/OAR   Date: 13 Oct 2015

N°	ASP ID	ASP NAME	201509	%	N°	ASP ID	ASP NAME	201509	%
1	BIRDACC	REYKJAVIK ACC	349	15,2%	39	LFBBALL	BORDEAUX ALL ACC	2791	4,3%
2	DAAAACC	ALGERS ACC	468	6,9%	40	LFEEACC	REIMS U/ACC	2915	3,2%
3	DTTCACC	TUNIS ACC	274	-25,5%	41	LFFFALL	PARIS ALL ACC	3602	10,0%
4	EBBUACC	BRUSSELS CANAC	1808	2,3%	42	LFMMACC	MARSEILLE ACC	3266	0,8%
5	EDGGALL	LANGEN ACC	3799	-0,3%	43	LFRRACC	BREST U/ACC	3012	1,0%
6	EDMMACC	MUNCHEN ACC	3303	1,7%	44	LGGGACC	ATHINAI CONTROL	1818	2,1%
7	EDUUUAC	KARLSRUHE UAC	5414	1,5%	45	LGMDACC	MAKEDONIA CONTROL	1486	0,8%
8	EDWWACC	BREMEN ACC	1947	1,3%	46	LHCCACC	BUDAPEST ACC	2428	6,5%
9	EDYYUAC	MAASTRICHT UAC	5215	2,3%	47	LIBBACC	BRINDISI ACC	853	-4,3%
10	EETTACC	TALLIN ACC	576	-2,0%	48	LIMMACC	MILANO ACC	2543	2,1%
11	EFESACC	TAMPERE ACC	502	-0,6%	49	LIPPACC	PADOVA ACC	2141	-6,9%
12	EGGXOCA	SHANWICK OACC	1337	6,3%	50	LIRRACC	ROMA ACC	2518	2,4%
13	EGPXALL	SCOTTISH ACC	2745	1,2%	51	LJLAACC	LJUBLJANA ACC	933	-4,6%
14	EGTTACC	LONDON ACC	5891	2,3%	52	LKAAACC	PRAGUE ACC	2355	9,0%
15	EGTTTC	LONDON TMA TC	4022	3,3%	53	LLLLACC	TEL AVIV ACC	428	18,2%
16	EHAAACC	AMSTERDAM ACC(245-)	1664	3,8%	54	LMMMACC	MALTA ACC	331	20,8%
17	EIDWACC	DUBLIN ACC	644	6,8%	55	LOVVACC	WIEN ACC	2545	-1,1%
18	EISNACC	SHANNON ACC	1296	4,0%	56	LPPCACC	LISBOA ACC/UAC	1381	6,8%
19	EKDKACC	COPENHAGEN ACC	1641	3,5%	57	LPPOOAC	SANTA MARIA OACC	340	3,3%
20	ENBDACC	BODO ACC	646	1,4%	58	LQSBACC	BOSNIA-HERZEGOVINA	123	0,0%
21	ENOSACC	OSLO ATCC	1040	-3,2%	59	LRBBACC	BUCURESTI ACC	2075	4,6%
22	ENSVACC	STAVANGER ATCC	725	-0,1%	60	LSAGACC	GENEVA ACC	1906	-0,4%
23	EPWWACC	WARSZAWA ACC	2086	-2,5%	61	LSAZACC	ZURICH ACC	2263	-1,4%
24	ESMMACC	MALMO ACC	1586	1,9%	62	LTAAACC	ANKARA ACC	3016	10,9%
25	ESOSACC	STOCKHOLM ACC	1236	1,0%	63	LTBBACC	ISTANBUL ACC	3212	8,6%
26	EVRRACC	RIGA ACC	753	1,2%	64	LUUUACC	CHISINAU ACC	150	4,9%
27	EYVCACC	VILNIUS ACC	654	-4,4%	65	LWSSACC	SKOPJE ACC	577	-2,0%
28	GCCCACC	CANARIAS ACC/FIC	717	-1,5%	66	LYBAACC	BEOGRADE ACC	2121	6,1%
29	GMMMACC	CASABLANCA ACC	998	3,1%	67	LZBBACC	BRATISLAVA ACC	1544	4,9%
30	HECCACC	CAIROACC	706	-1,7%	68	OLBBACC	BEIRUT ACC	170	9,7%
31	LAAAACC	TIRANA ACC	707	-0,6%	69	UDDDACC	YEREVAN ACC	110	-7,6%
32	LBSRACC	SOFIA ACC	2580	7,6%	70	UGGGACC	TBILISI ACC	343	0,6%
33	LCCCACC	NICOSIA ACC	1019	7,0%	71	UKBVACC	KIEV ACC	506	0,4%
34	LDZOACC	ZAGREB ACC	1762	-1,8%	72	UKDVACC	DNIPROPETROVSK ACC	47	-24,2%
35	LECBACC	BARCELONA ACC	2645	0,8%	73	UKLVACC	L'VIV ACC	294	0,0%
36	LECMALL	MADRID ALL ACC	2839	5,0%	74	UKOVACC	ODESSA ACC	320	1,3%
37	LECPACC	PALMA ACC	1087	1,2%	75	UMMVACC	MINSK ACC	739	-7,2%
38	LECSACC	SEVILLA ACC	1001	1,6%	76				

There was significant traffic increase in Malta, Ankara, Istanbul, Paris, Prague, Sofia, Nicosia, Lisbon and Dublin ACCs. The application of temporary measures by NM and BlueMed FAB to alleviate capacity and ATFM delay in Athens ACC shifted some of the traffic to more southerly flows in the region which resulted in a traffic increase for Malta ACC. There was a reduction in traffic in Tunisia, Dnipropetrovsk, Yerevan, Minsk and Padova ACCs (reorganisation of area of responsibility in North Italy last year explains some of the traffic changes in Italian ACCs). Traffic to/from Tunisia remains suppressed following the terrorist attack on 26 June.

2. ATFM DELAY AND ATTRIBUTIONS

Average daily ATFM delays


Average daily ATFM delays
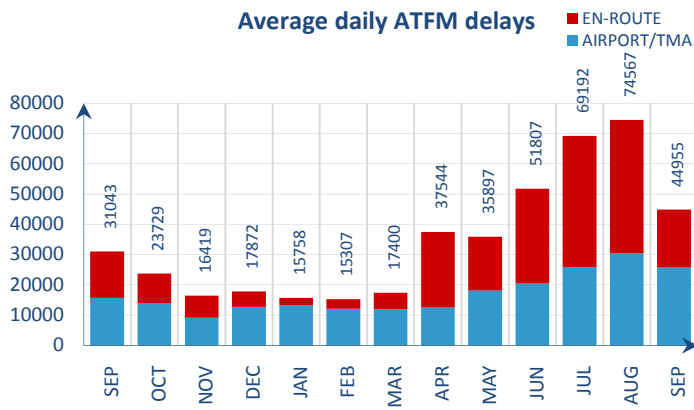
Total ATFM delays increased by 44.8 % in September 2015 compared to September 2014. There was a large decrease in ATFM delays compared to August 2015, particularly en-route.
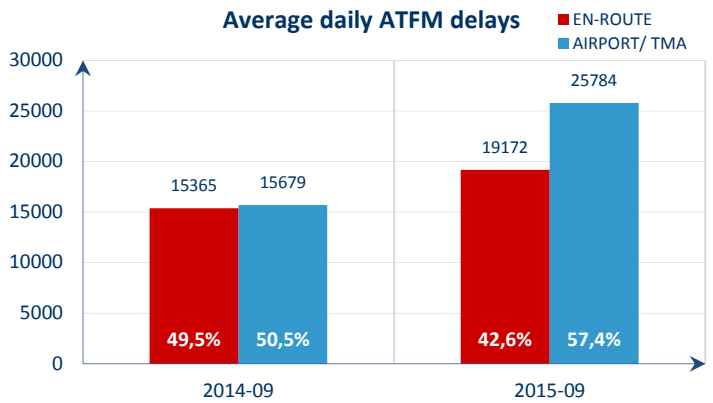
En-route ATFM delays increased by 24.8% and airport ATFM delays increased by 64.4% compared to September 2014.

Monthly ATFM delays trend

Comparison to same month last year — Rolling 12 month trend
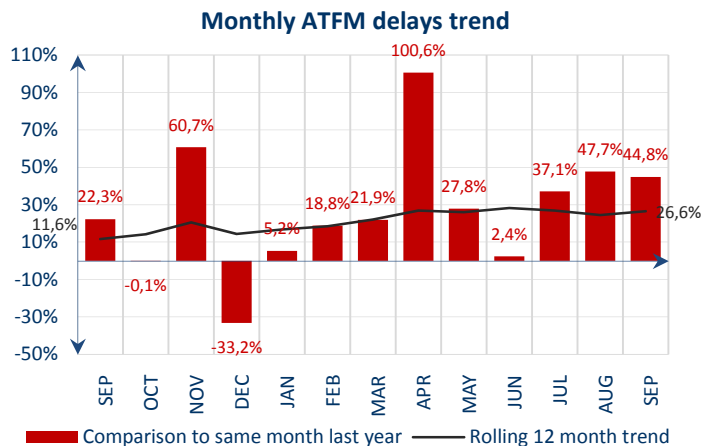
The rolling 12-month trend shows that ATFM delay was 26.6% higher during the period October 2014 - September 2015 compared to October 2013 - September 2014. A similar trend can be observed since the beginning of the year.

Proportion of ATFM delays in September 2015
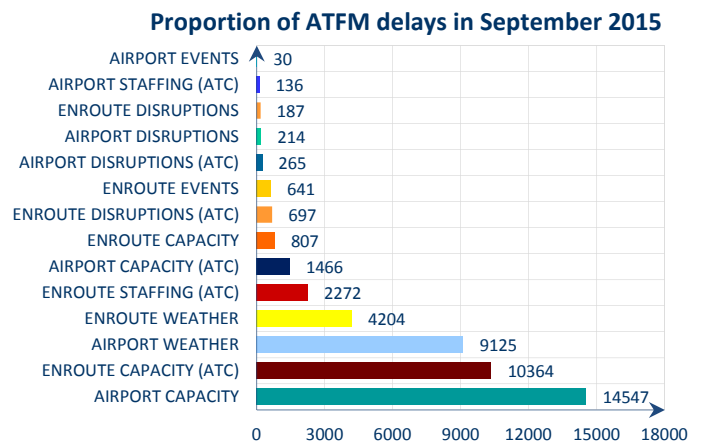
Airport capacity (32.4%), en-route ATC capacity (23.1%) and airport weather (20.3%) were the main causes of ATFM delays in September 2015.

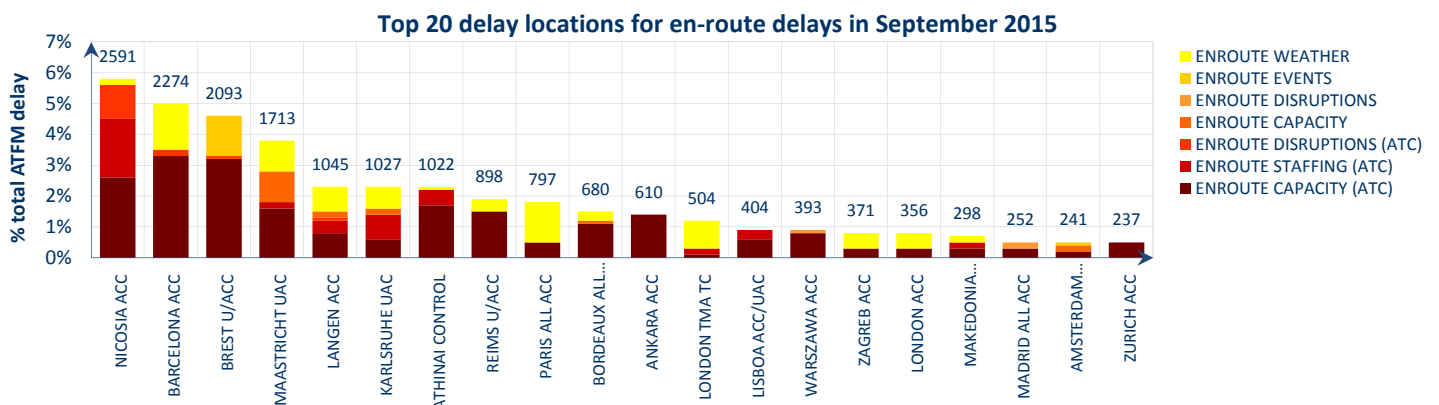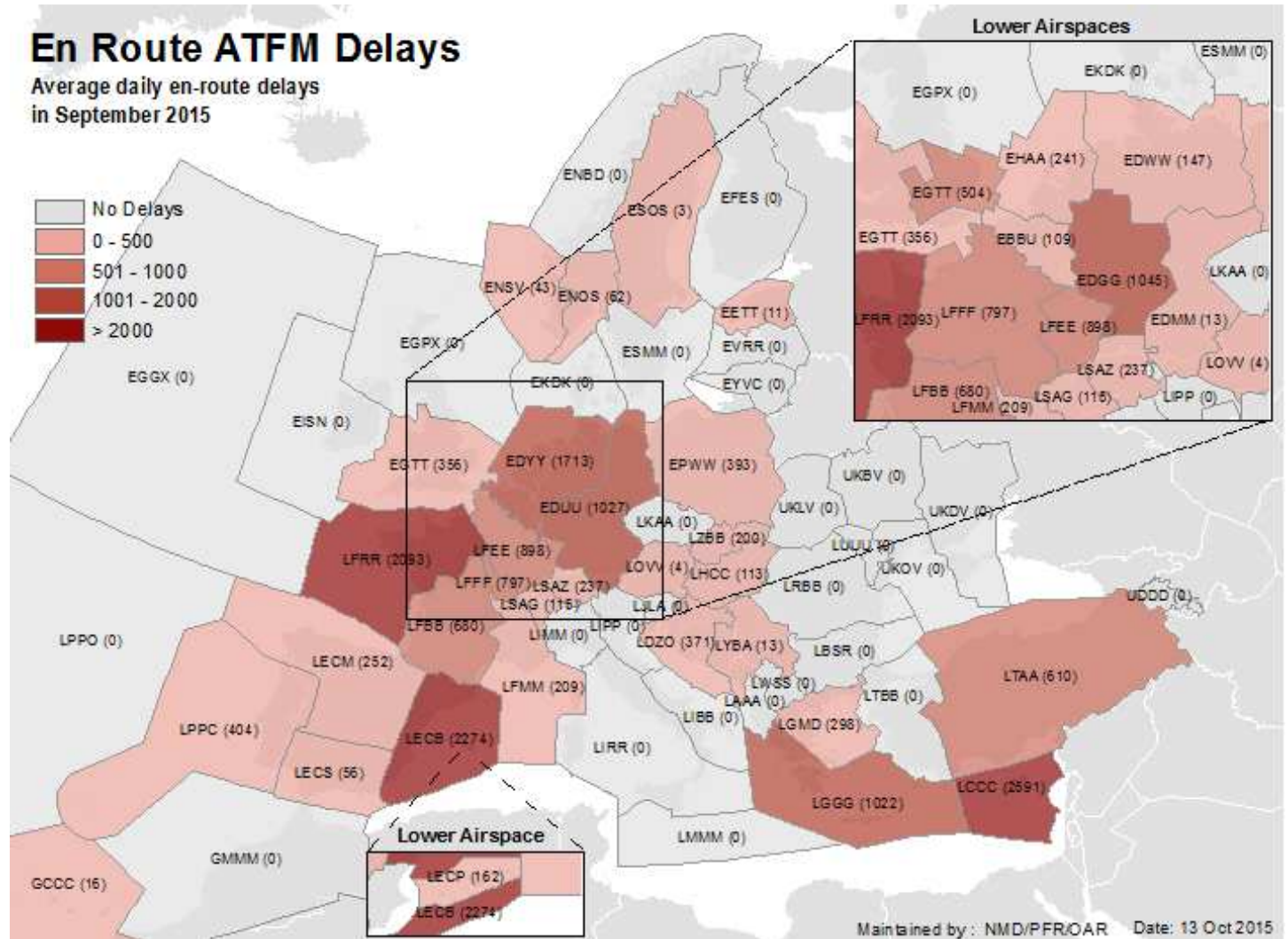### Top 20 delay reference locations in September 2015
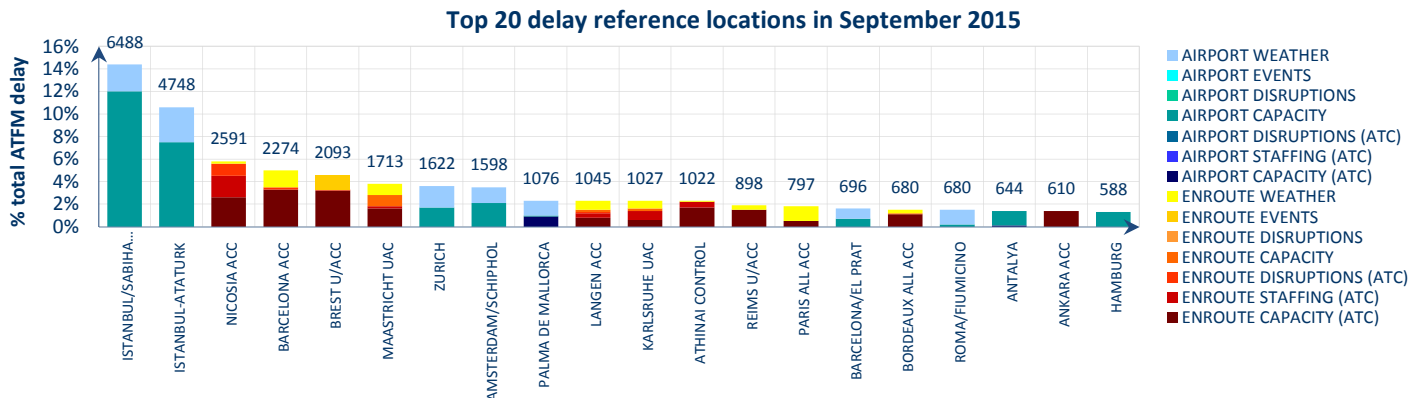
These are the top 20 delay generating locations for the reporting month with respect to total ATFM delays. Figures are the average daily delays in minutes for the individual locations.

- There were high delays due to airport capacity at both Istanbul airports and Zurich, Amsterdam/Schiphol and Barcelona airports. Hamburg airport had delays due to single runway operations (WIP). Antalya had some airport capacity delays due to runway maintenance during weekends.
- En-route ATC capacity/staffing delays were recorded at Barcelona, Brest, Athens, Nicosia, Reims, Maastricht, Langen, Bordeaux, Ankara, Paris and Karlsruhe ACCs.
- Thunderstorms and/or turbulence affected Barcelona, Maastricht, Karlsruhe, Paris and Reims ACCs. Thunderstorms, heavy rain and/or low visibility affected both Istanbul airports, Palma de Mallorca, Zurich and Rome/Fiumicino airports.
- Topsky ATM system upgrade in Nicosia ACC, software upgrade in Brest ACC.
- Industrial action in Spain on the 26 September generated en-route ATFM delay in Barcelona ACC (3,311 min of delays).
- Restart of training for software update in Brest ACC generated ATFM delays in September (17,259 min of delays).
- En-route ATC capacity delays in Ankara ACC due to ATFM measures applied on point ODERO.

3. EN-ROUTE ATFM DELAYS

EN-ROUTE ATFM DELAY PER LOCATION

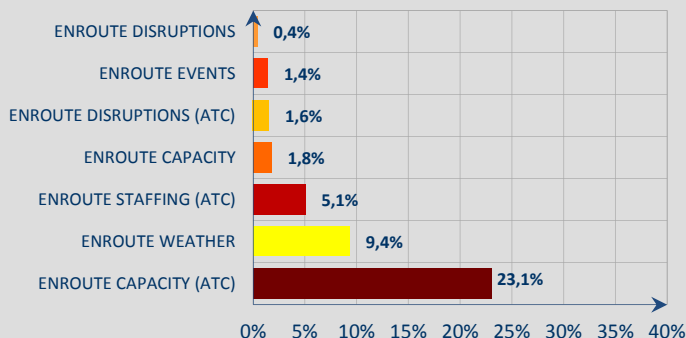Top 20 delay locations for en-route delays in September 2015

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

The top 20 en-route delay locations generated 39.5% of the monthly total (network) ATFM delay.
The top 5 en-route delay locations generated 21.5% of the monthly total (network) ATFM delay.

EN-ROUTE ATFM DELAY PER DELAY GROUP

Reasons for en-route delays in September 2015

ENROUTE DISRUPTIONS	0,4%
ENROUTE EVENTS	1,4%
ENROUTE DISRUPTIONS (ATC)	1,6%
ENROUTE CAPACITY	1,8%
ENROUTE STAFFING (ATC)	5,1%
ENROUTE WEATHER	9,4%
ENROUTE CAPACITY (ATC)	23,1%

En-route delays accounted for 42.6% of all ATFM delays. Most of this delay was caused by en-route ATC capacity, en-route weather and en-route ATC staffing as explained in detail below. The other causes were:

- *En-route capacity*: Military activity in Maastricht, Amsterdam, Langen and Karlsruhe ACCs.
- *En-route ATC disruptions*: TOPSKY ATM system upgrade in Nicosia on 29 September, industrial action in Barcelona and Seville ACCs on 26 September, Radar problems in Langen ACC on 29/30 September, radio/frequency problems in Brest ACC on 01, 09 and 24 September.
- *En-route Events*: Software update in Brest ACC, parajumping between 8 and 11 September generated ATFM delays in Amsterdam.

## Top 10 delay locations for En-route Capacity (ATC) in September 2015
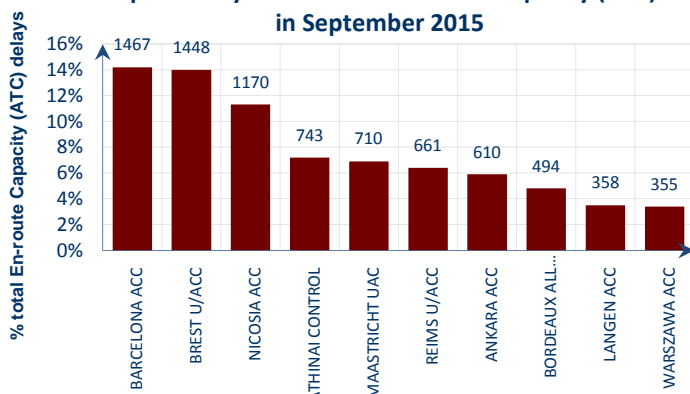
En-route ATC capacity delays decreased in Barcelona, Brest, Nicosia, Athens, Reims, Ankara and Bordeaux ACCs compared to August 2015. Maastricht, Langen and Warsaw ACCs entered the top 10. Ankara ACC continued to generate ATFM delay due to the application of ATFM measures on point ODERO.
The top three ACCs for en-route ATC capacity accounted for 21.3% of the total en-route ATFM delay in September.

## Top 10 delay locations for En-route Staffing (ATC) in September 2015
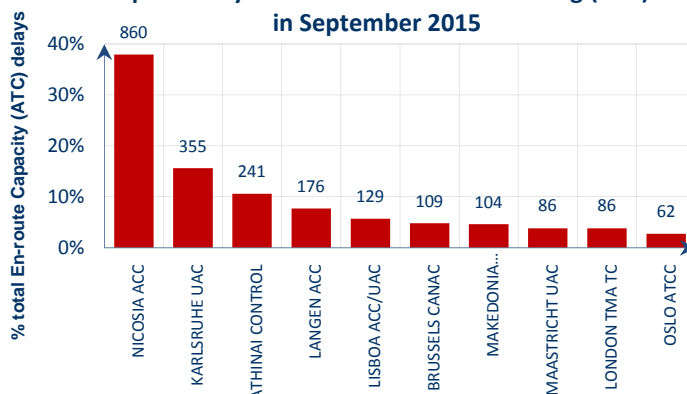
En-route ATC staffing delays decreased in Athens, London and Makedonia ACCs. Delays in Karlsruhe, Langen and Lisbon ACCs increased compared to August 2015. Nicosia, Brussels, Maastricht and Oslo ACCs entered the top 10. The top three ACCs for ATC staffing accounted for 7.6% of en-route ATFM delay in September.

Top 5 delay locations for En-route Weather in September 2015
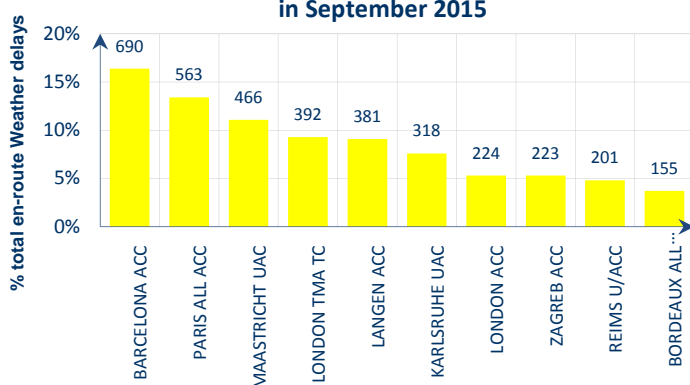
Thunderstorms and/or turbulence impacted operations at several ACCs.

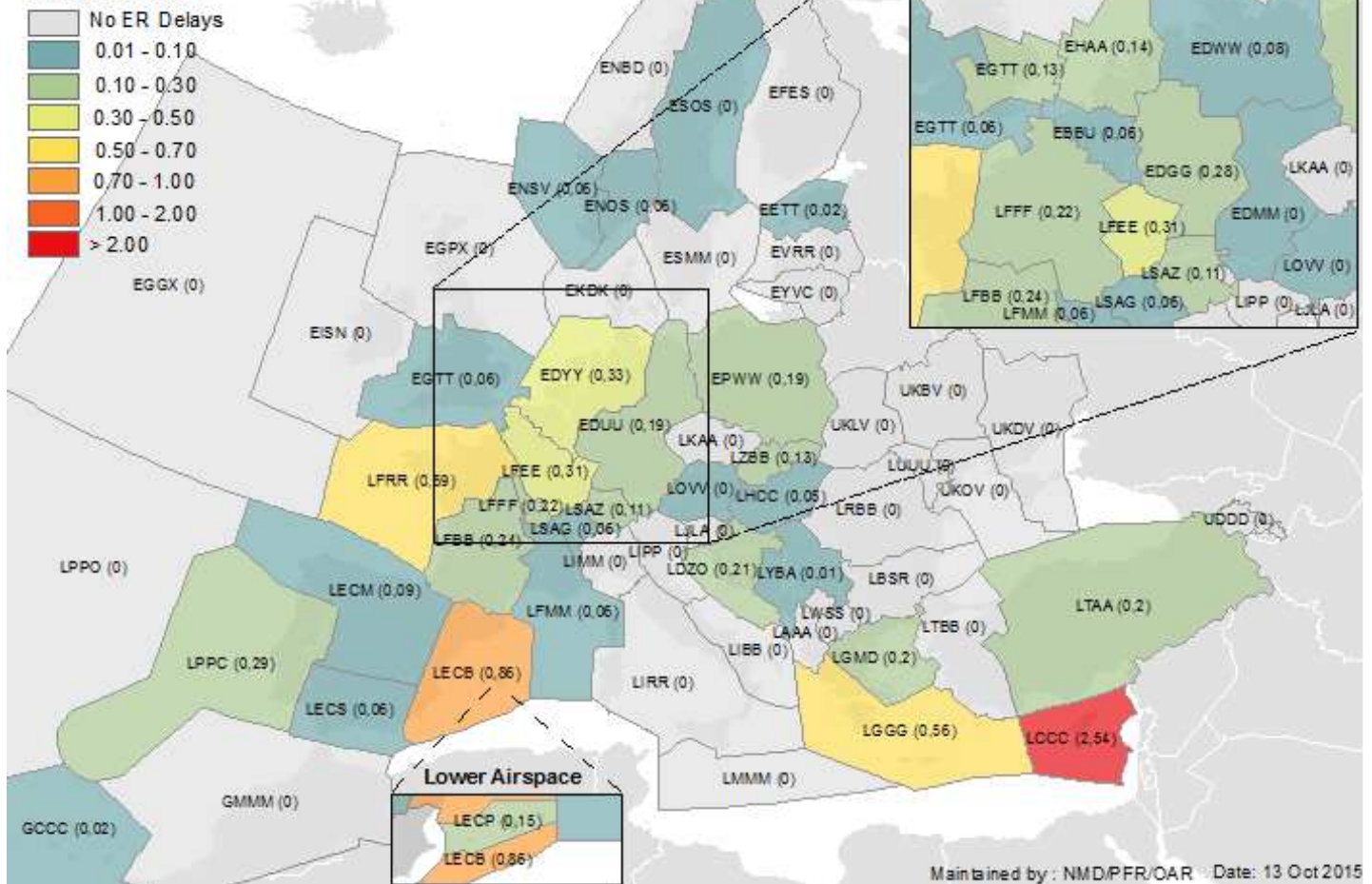## Average daily flights >= 15 min en-route delay
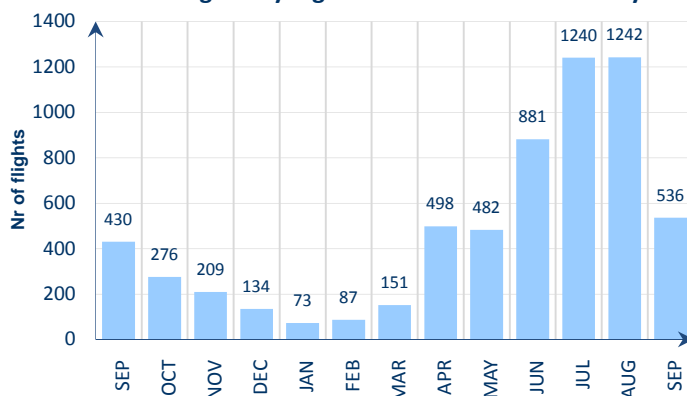
An average of 536 flts/day received an en-route delay of at least 15 min in September 2015, which is half the August 2015 level. The corresponding figure for September 2014 was 430.
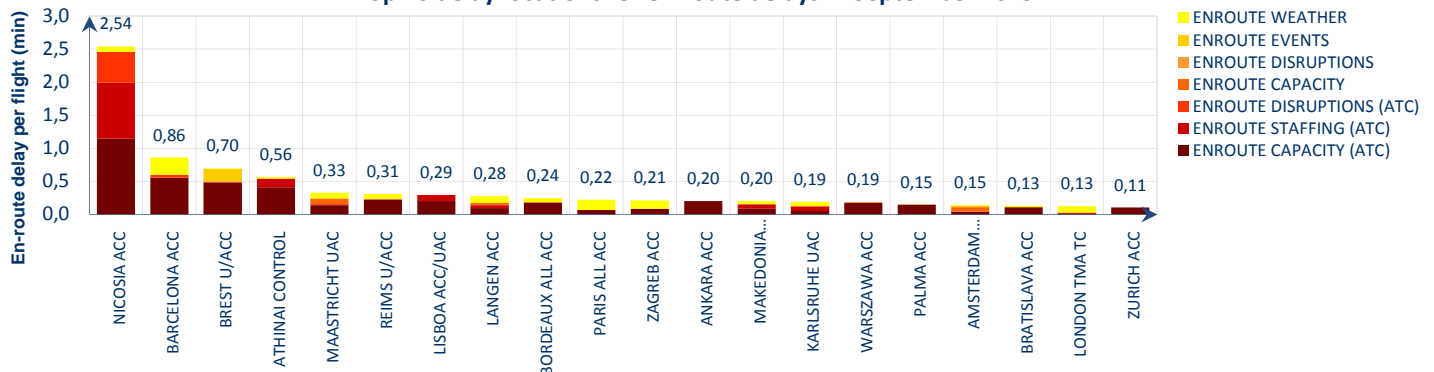
EN-ROUTE ATFM DELAY PER FLIGHT

ER DELAY PER FLIGHT

Average en route delay per flight in September 2015

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

Lower Airspaces

EKDK (0)   ESMM (0)
EGPX (0)
EHAA (0,14)   EDWW (0,08)
EGTT (0,13)
EGTT (0,06)   EBBU (0,06)
EDGG (0,28)   LKAA (0)
LFFF (0,22)   LFEE (0,31)   EDMM (0)
LSAZ (0,11)   LOVV (0)
LFBB (0,24)   LSAG (0,06)   LIPP (0)   LJLA (0)
LFMM (0,06)

ENBD (0)   EFES (0)
ESOS (0)
ENSV (0,06)   EETT (0,02)
ENOS (0,06)
EGPX (0)   ESMM (0)   EVRR (0)
EYVC (0)
EGGX (0)   EKDK (0)
EISN (0)
EGTT (0,06)   EDYY (0,33)   EPWW (0,19)   UKBV (0)
EDUU (0,19)   LKAA (0)   UKLV (0)   UKDV (0)
LZBB (0,13)   LUUU (0)
LFRR (0,59)   LFEE (0,31)   LOVV (0)   LHCC (0,05)   UKOV (0)
LFFF (0,22)   LSAZ (0,11)   LRBB (0)
LFBB (0,24)   LSAG (0,06)   LJLA (0)   UDDD (0)
LPPO (0)   LIMM (0)   LIPP (0)   LDZO (0,21)   LYBA (0,01)   LBSR (0)
LECM (0,09)   LFMM (0,06)   LWSS (0)   LTAA (0,2)
LAAA (0)   LTBB (0)
LPPC (0,29)   LIBB (0)   LGMD (0,2)
LECB (0,86)   LIRR (0)
LECS (0,06)   LGGG (0,56)   LCCC (2,54)
GMMM (0)   LMMM (0)
GCCC (0,02)

Lower Airspace
LECP (0,15)
LECB (0,86)

Maintained by : NMD/PFR/OAR   Date: 13 Oct 2015

Top 20 delay locations for en-route delays in September 2015

En-route delay per flight (min)

2,54   0,86   0,70   0,56   0,33   0,31   0,29   0,28   0,24   0,22   0,21   0,20   0,20   0,19   0,19   0,15   0,15   0,13   0,13   0,11

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

Locations: NICOSIA ACC, BARCELONA ACC, BREST U/ACC, ATHINAI CONTROL, MAASTRICHT UAC, REIMS U/ACC, LISBOA ACC/UAC, LANGEN ACC, BORDEAUX ALL ACC, PARIS ALL ACC, ZAGREB ACC, ANKARA ACC, MAKEDONIA..., KARLSRUHE UAC, WARSZAWA ACC, PALMA ACC, AMSTERDAM..., BRATISLAVA ACC, LONDON TMA TC, ZURICH ACC
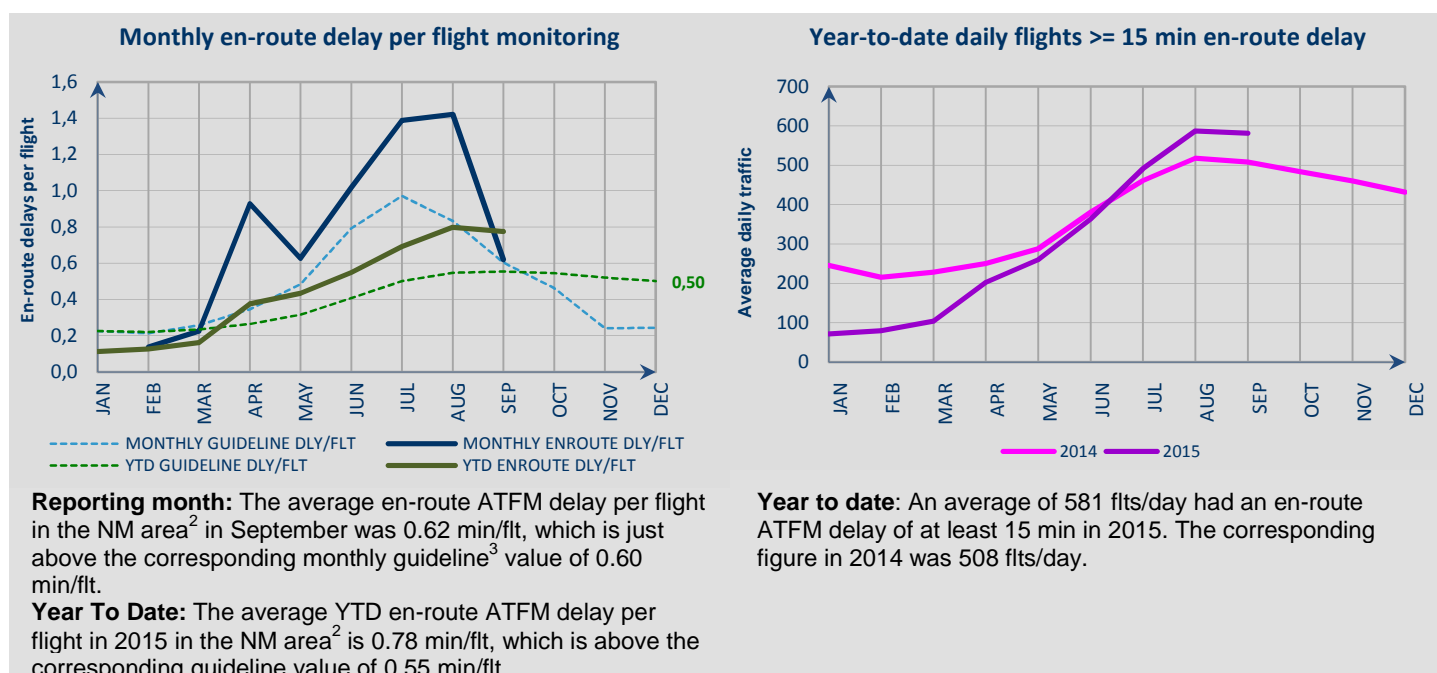
These are the top 20 average en-route ATFM delay per flight generating locations for the reporting month.
Figures are the average en-route ATFM delay per flight in minutes for the individual locations.

Nicosia ACC average en-route ATFM delay per flight decreased from 2.63 min/flt in August 2015 to 2.54 min/flt in September 2015, Barcelona ACC average en-route ATFM delay per flight decreased from 1.26 min/flt in August 2015 to 0.86 min/flt in September 2015.

EN-ROUTE ATFM DELAY YEAR-TO-DATE

Top 20 delay locations for year-to-date en-route ATFM delays
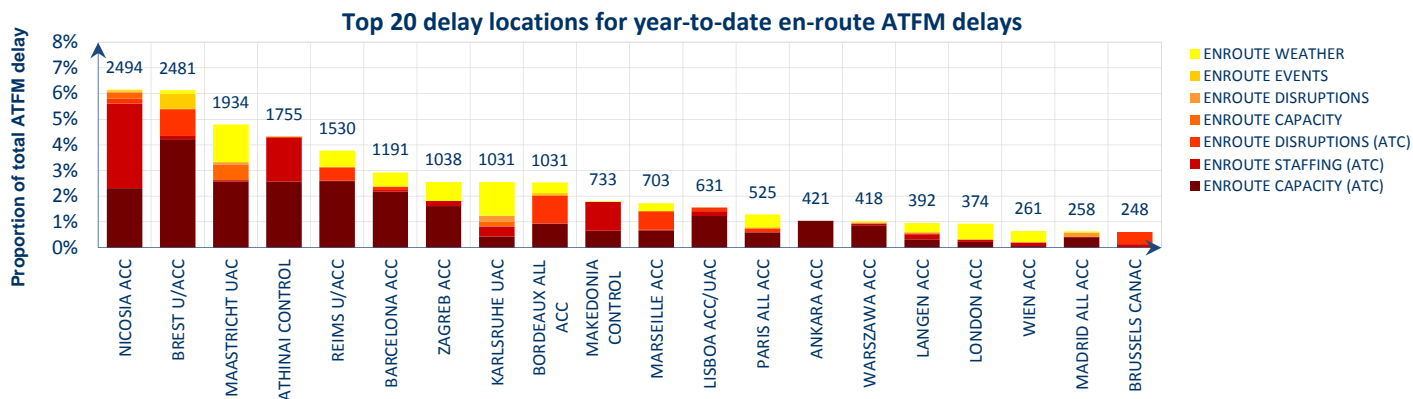
These are the top 20 en-route delay locations for 2015 with respect to the total ATFM delay. Figures are the average daily en-route delay in minutes for the individual locations. The top 20 en-route delay locations generated 48% of the total ATFM (network) delay. The top 5 en-route delay locations generated 25.2% of the total ATFM (network) delay.

Monthly en-route delay per flight monitoring

Year-to-date daily flights >= 15 min en-route delay

Reporting month: The average en-route ATFM delay per flight in the NM area[2] in September was 0.62 min/flt, which is just above the corresponding monthly guideline[3] value of 0.60 min/flt.

Year To Date: The average YTD en-route ATFM delay per flight in 2015 in the NM area[2] is 0.78 min/flt, which is above the corresponding guideline value of 0.55 min/flt.

Year to date: An average of 581 flts/day had an en-route ATFM delay of at least 15 min in 2015. The corresponding figure in 2014 was 508 flts/day.

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[2] See NOTICE on page 1 for more information on NM Area.

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

4. AIRPORT/TMA ATFM DELAYS

AIRPORT/TMA ATFM DELAY PER LOCATION

Top 20 delay locations for airport delays in September 2015
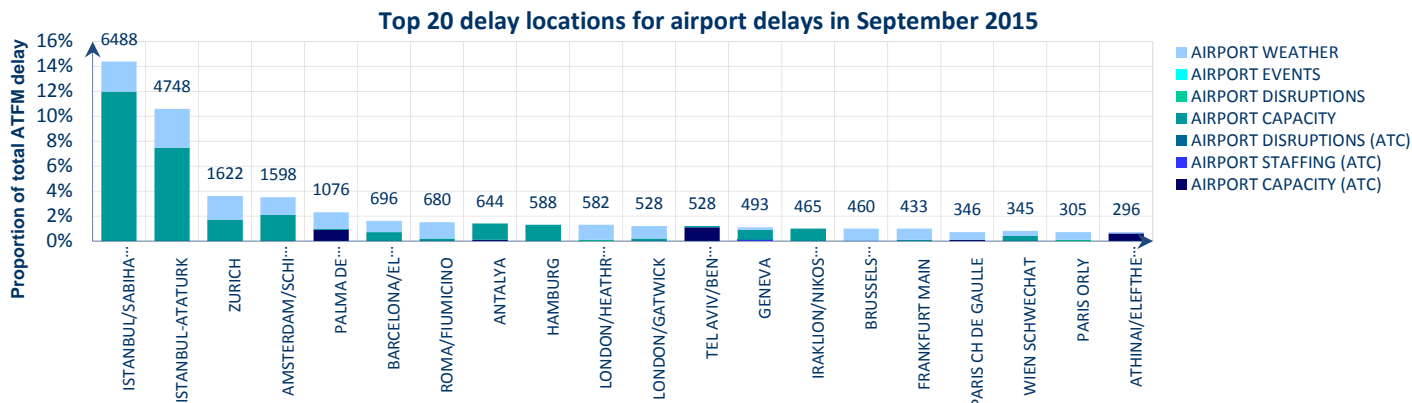
The top 20 Airport/TMA delay locations generated 50.9% of the monthly total ATFM (network) delay.
The top 5 Airport/TMA delay locations generated 34.4% of the monthly total ATFM (network) delay.

AIRPORT/TMA ATFM DELAY PER DELAY GROUPS

### Reasons for airport delays in September 2015

AIRPORT EVENTS	0,1%
AIRPORT STAFFING (ATC)	0,3%
AIRPORT DISRUPTIONS	0,5%
AIRPORT DISRUPTIONS (ATC)	0,6%
AIRPORT CAPACITY (ATC)	3,3%
AIRPORT WEATHER	20,3%
AIRPORT CAPACITY	32,4%
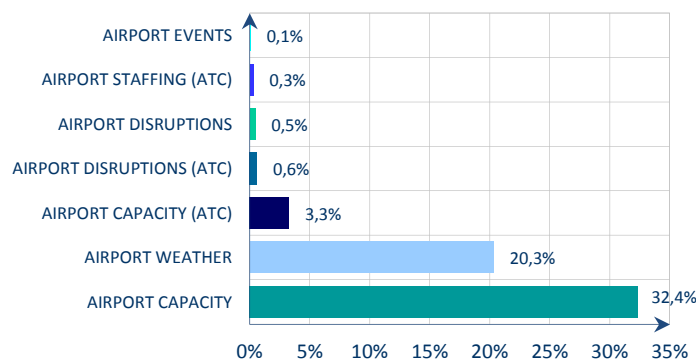
Airports accounted for 57.4% of all ATFM delays in September 2015, mainly due to airport capacity with additional delay being generated by airport weather.

Top 10 delay locations for Airport Capacity in September 2015
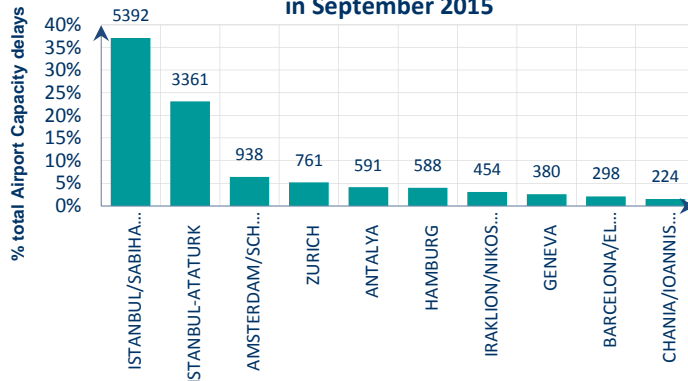
Istanbul/Sabiha Gökcen and Istanbul/Ataturk airports continued to generate airport capacity delays. Amsterdam recorded delays due to single runway ops caused by wind direction.

Top 10 delay locations for Airport Weather in September 2015
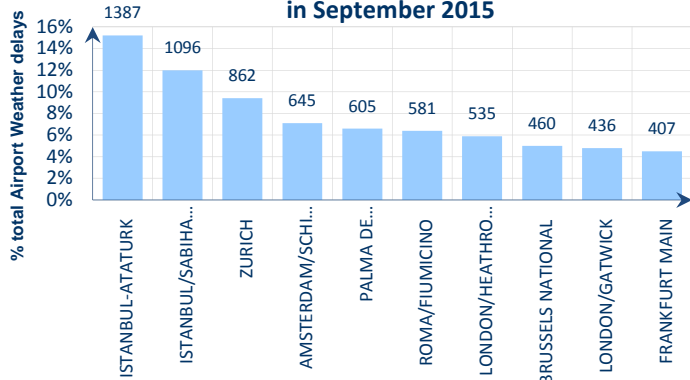
Thunderstorms, wind and low visibility impacted operations at both Istanbul airports, Zurich, Amsterdam and Palma de Mallorca. Furthermore, the unavailability of the optimum runway due to wind direction generated delays at Zurich and Brussels/National airports.

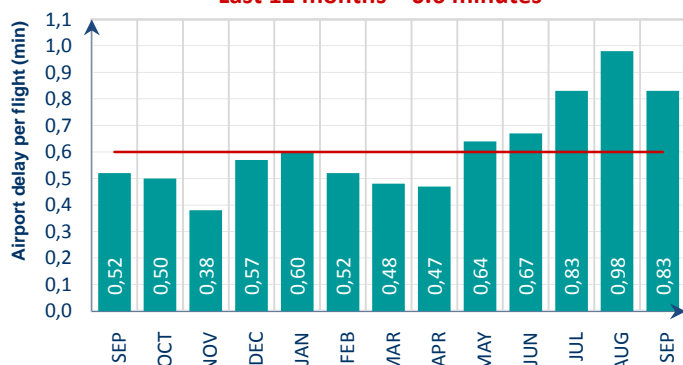### Top 10 delay locations for Airport Capacity (ATC) in September 2015
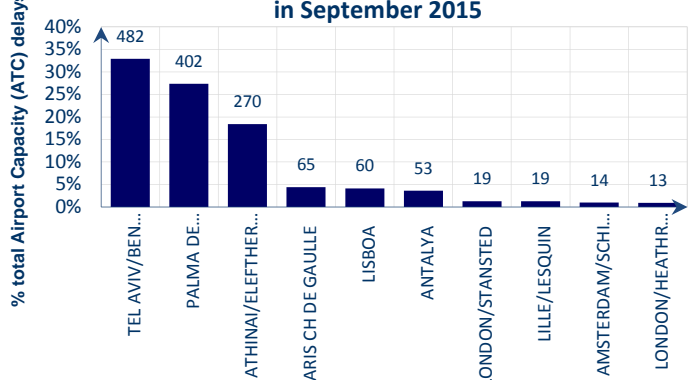
Increased demand for Tel Aviv/Ben Gurion airport contributed to an increase in airport ATC capacity delays. Athens airport generated delay due to the application of ATFM measures on departing aircraft.
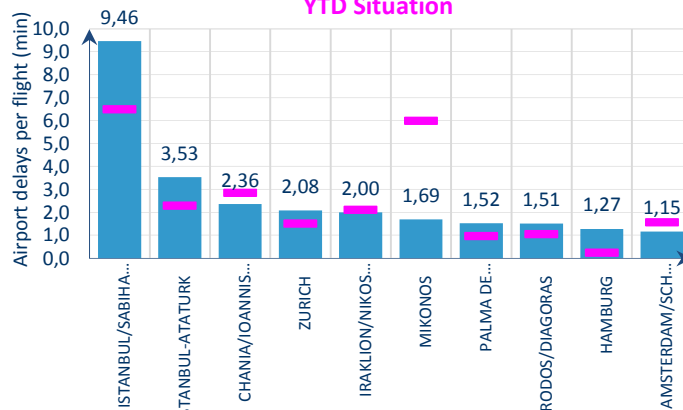
AIRPORT/TMA ATFM DELAY PER FLIGHT

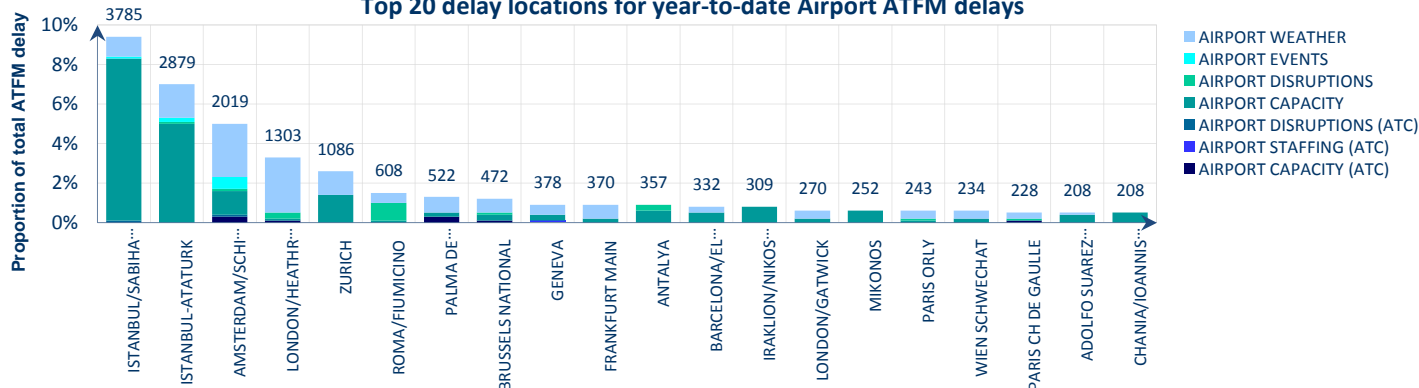**Monthly average Airport delay (min) per flight**
Last 12 months = 0.6 minutes

Average airport/TMA delay per flight increased from 0.52 min/flt in September 2014 to 0.83 min/flt in September 2015.

Top 10 Airport delay per flight in September 2015
YTD Situation

Both Istanbul airports, Zurich and summer destinations such as Chania, Mikonos and Iraklion registered a high delay per flight.

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 39.5% of the total ATFM (network) delay in 2015.
The top 5 Airport/TMA delay locations have generated 27.3% of the total ATFM (network) delay in 2015.

5. DAILY EVOLUTION

Average delay (min) per flight in September 2015
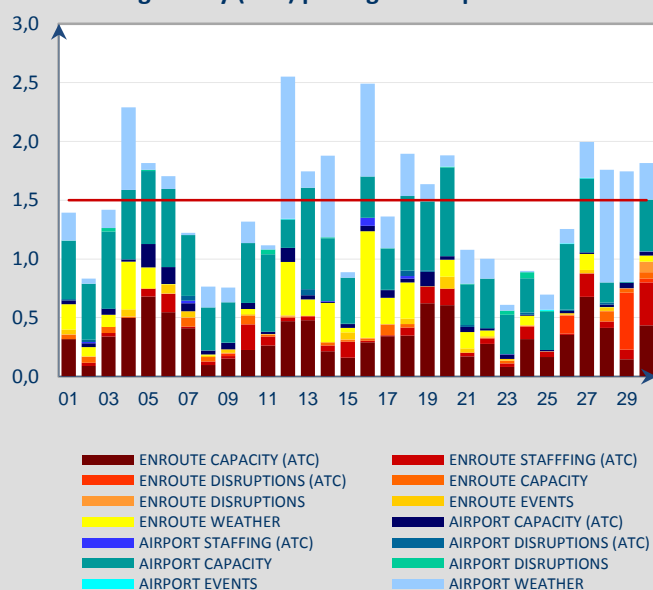
14 days in September 2015 had an average delay/flt above 1.5 min/flt, with the worst days at weekends.

4/5/6 Sept: Airport capacity delays at Istanbul/Sabiha Gökcen, Istanbul/Ataturk, Antalya and Hamburg airports; en-route ATC capacity delays in Barcelona, Brest, Athens and Maastricht ACCs; Thunderstorms in Palma de Mallorca and Barcelona airports, strong wind at Amsterdam airport and thunderstorms in Barcelona and Zagreb ACCs; airport ATC capacity at Palma de Mallorca airport.

12/13/14 Sept: Thunderstorms at Istanbul/Sabiha Gökcen, Istanbul/Ataturk, London/Heathrow and Rome/Fiumicino airports as well as in Paris, Bordeaux and Karlsruhe ACCs; airport capacity at Istanbul/Sabiha Gökcen, Istanbul/Ataturk, Antalya and Geneva airports; en-route ATC capacity in Barcelona, Athens, Brest, Nicosia and Maastricht ACCs.

16 /18/19/20 Sept: Airport capacity delays at Istanbul/Sabiha Gökcen, Istanbul/Ataturk, Amsterdam and Zurich airports; en-route ATC capacity in Brest, Maastricht, Barcelona, Nicosia, Reims, Athens and Warsaw ACCs; seasonal weather (fog, wind, CB, rain and low visibility) affected London/Gatwick, London/Heathrow, Frankfurt and Brussels airports, thunderstorms and/or turbulence in London, Paris, Maastricht, Reims and Langen ACCs; en-route ATC staffing delays in Karlsruhe and Nicosia ACCs; software upgrade ERATO in Brest ACC generated en-route events delays.

27/28/29/30 Sept: Seasonal weather affected Istanbul/Sabiha Gökcen, Istanbul/Ataturk, Zurich, Brussels, Amsterdam and Barcelona/Al Prat airports; en-route ATC capacity delays in Brest, Nicosia, Reims, Barcelona, Bordeaux and Athens ACCs; airport capacity delays at Istanbul/Sabiha Gökcen, Istanbul/Ataturk, and Amsterdam airports; TOPSKY ATM system upgrade generated en-route ATC disruptions delays in Nicosia ACC. Military exercise generated delays in Maastricht ACC.

# 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 65% of the commercial flights in the ECAC region for August 2015. 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 August 2015
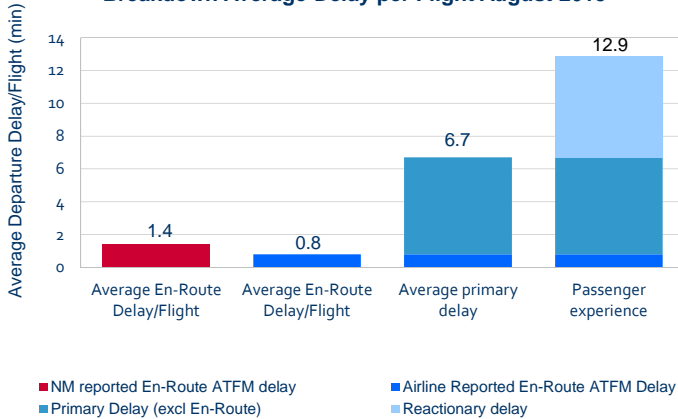
Based on airline data, the average departure delay per flight from "All Causes" was 12.9 minutes per flight, this was an increase of 6% in comparison to 12.2 minutes per flight in the same month of 2014 and a continuation in the trend of higher delays for 2015. Within all air transport delays, en-route ATFM delays were 0.8 minutes/flight in August 2015. Primary delays counted for 52% (or 6.7 min/flt) of which 0.8 min/flight was attributed to en-route ATFM delays, with reactionary delays representing a smaller remaining share of 48% (at 6.2 min/flt).

Average departure delay per flight 2014/2015
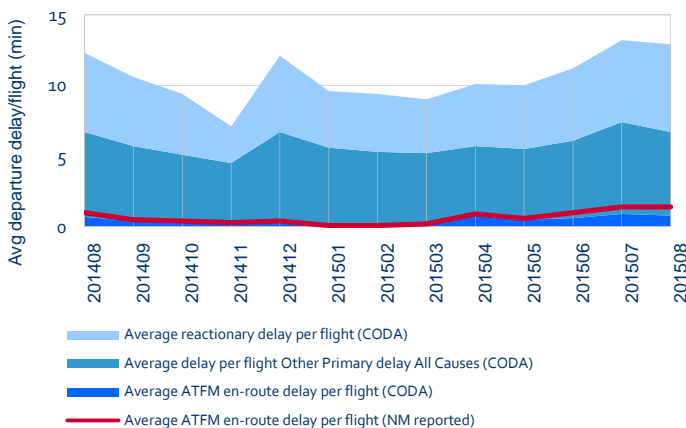
Further analysis of airline data shows that the average en-route ATFM delay was 0.8 minutes per flight.
This was below as the NM reported average en-route ATFM delay of 1.4 minutes per flight.

**Percentage of delayed flights: ATFM & All Causes**
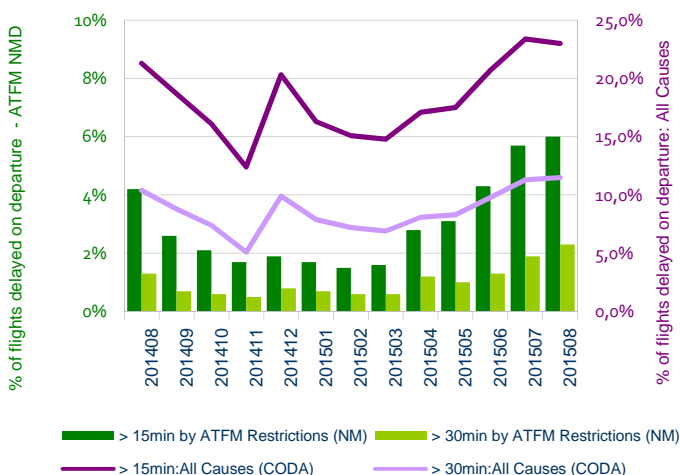
The percentage of flights subject to long ATFM restrictions (those exceeding 15 & 30 minutes) increased by 1.8 percentage points with flights with restrictions exceeding 15 minutes at 6.0%.

The percentage of flights delayed from all-causes also increased (those exceeding 15 minutes) increased by 1.7 percentage points to 23.0% and those (exceeding 30 minutes) increased to 11.5% from 10.4% in August 2014.

7. ATFM SLOT ADHERENCE

**Average daily evolution of early and late flights**
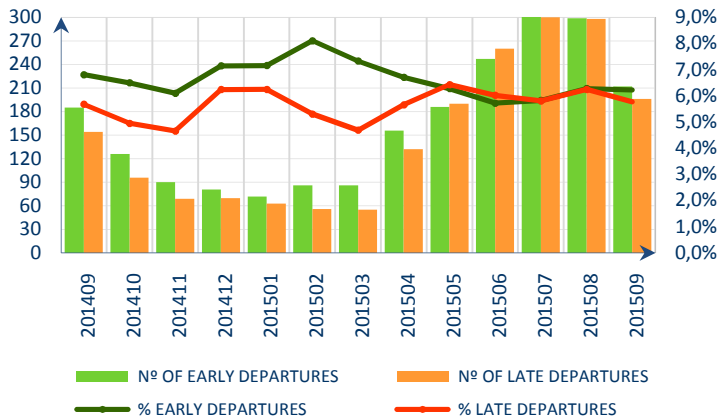
The percentage of early departures stayed at the same level and the percentage of late departures decreased slightly compared to August 2015.

The percentage of early departures for September 2015 is 6.2% of regulated flights, which is 0.6% below September 2014.

The percentage of late departures for September 2015 is 5.8% of regulated flights, which was 0.1% above September 2014.

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

Proportion of regulated flights outside the Slot Tolerance Window in September 2015
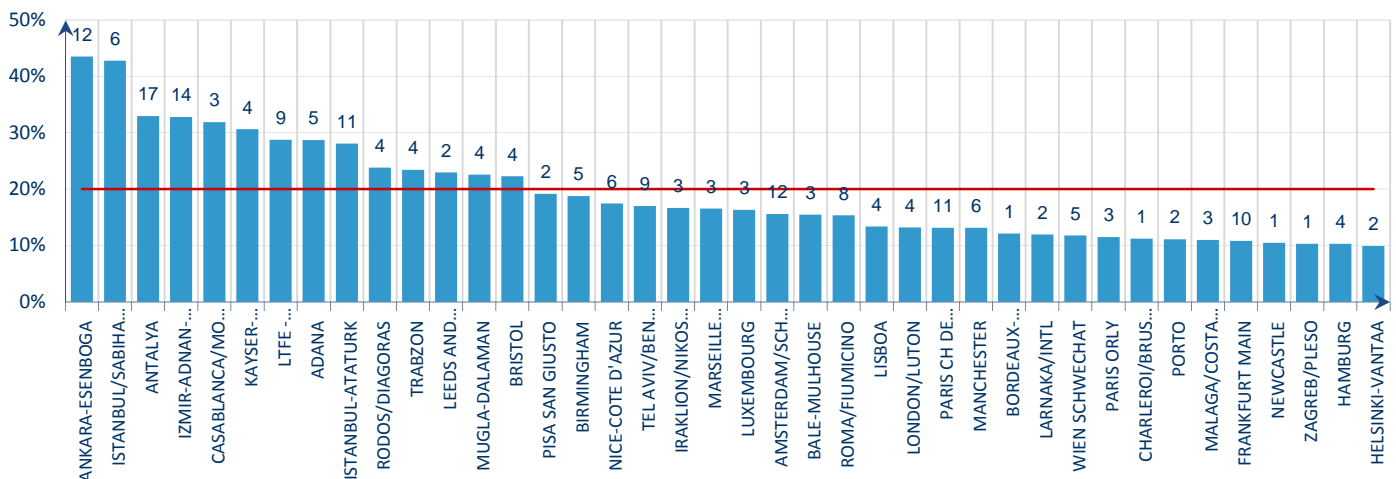
8. SIGNIFICANT EVENTS AND ISSUES

PLANNED EVENTS

ACCs

Seven ACCs and one TMA/APP carried out projects involving ATM system changes/upgrades or airspace modernisations. All projects, except L'viv, progressed through the training phase, and all had been categorised as special, planned events with potential impact on the network performance.

L'viv ACC
The implementation of a new ATM system progressed through the transition phase during September, not generating ATFM delay, despite a capacity reduction of 10%.

Bordeaux ACC
The fourth phase of training for the implementation of ERATO Electronic Environment was carried out from 07 September, not generating ATFM delay. The reduction of sector capacities had not been foreseen, but maximum configuration was reduced by 2 sectors.

Brest ACC
Another phase of training for the implementation of ERATO Electronic Environment was carried out throughout the entire month of September generating 17,259 min of ATFM delay, which presented 27.5% of total delay (62,782 min) generated by this ACC for the month.
The reduction of sector capacities had not been foreseen; however maximum configuration was reduced by 2-3 sectors (down to 15-16 sectors).

Langen ACC
The training for a new P2 ATM system progressed through September generating no ATFM delay. The reduction of sector capacities, and maximum configurations had not been planned.

London TC
Training for the first phase (1A) of the LAMP Programme was carried out, not generating ATFM delay. The reduction of sector capacities, and maximum configurations had not been planned.

Geneva ACC
Training for the implementation of step 4 of the Stripless CH system started on 28 September with no ATFM delay. The reduction of sector capacities, and maximum configurations had not been planned.

Zurich ACC
Training for the implementation of step 4 of the Stripless CH system progressed throughout entire month of September, not generating ATFM delay. The reduction of sector capacities, and maximum configurations had not been planned.

Vienna TMA/APP
The training for the implementation of NG AATMS "Topsky" was carried out during September not generating ATFM delay. Maximum configuration had been set at 4 sectors without reducing arrival capacity.

Airports
Special Events
- EXPO Milano started on 1 May with extra traffic expected for the surrounding airports;
- Barcelona Air Show on 19 and 20 September and Malta International Air Show on 24 and 25 September.

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

Completed:
- A-CDM implementation at Praha airport on 2 September;
- Runway maintenance at Brussels, Hamburg (17,646 min of ATFM delays), Istanbul/Sabiha Gökcen, Lisbon, Oslo/Gardermoen and Toulouse airports;
- Taxiway(s) and/or apron(s) improvements at Stuttgart airport;
- Terminal building(s) improvements/works at Budapest/Ferihegy airport.

On-going:
- Runway maintenance at Amsterdam/Schiphol, Tel Aviv/Ben Gurion (10,062 min of ATFM delays), Berlin/Schonefeld, Koln/Bonn and Rome/Fiumicino airports;
- ILS maintenance at Bologna, Rome/Fiumicino and Tenerife Norte airports;
- Taxiway(s) and/or apron(s) improvements at Bari/Palese, Bologna, Dublin, Frankfurt/Main, Katowice/Pyrzowice, Krakow/Balice, Tenerife/North and Venice airports;
- Terminal building(s) improvements/works at Bergen/Flesland, Hamburg, Katowice/Pyrzowice, Krakow/Balice, Malaga, Munich, Nuremberg, Oslo/Gardermoen and Zurich airports.

DISRUPTIONS
Technical
- ILS failure at Nice airport on 13 September generated 1,523 min of ATFM delays;
- Unplanned maintenance of ILS at Paris/Le Bourget caused 2,759 min of ATFM delays during several days in September;
- Radar maintenance at Pisa airport caused 1,852 min of ATFM delays during several days in September.
- Radar problem in Langen ACC on 29/30 September (total ATFM delay: 1,535 min),
- TOPSKY ATM system upgrade in Nicosia ACC on 29 September (total ATFM delay: 14,268 min).

Industrial action
- Non-ATC industrial action, farmers blocked access to Paris/Orly airport (total ATFM delay: 662 min),
- Lufthansa cockpit staff industrial action on 8 September, approximately 80 flights cancelled for the day.
- Industrial action in Spain on 26 September, no major Network impact Seville ACC recorded 875 min of ATFM delays, Barcelona ACC 3,311 min of ATFM delays and Palma de Mallorca airport 279 min of ATFM delays.

Other
- Runway maintenance at Antalya airport caused 17,739 min of ATFM delays in September;
- Emergency landing at London/Heathrow on 11 September caused 1,024 min of ATFM delays;
- A prolonged period of rainfall resulted in damage to the surface of the runway at Rhodos airport causing 3,042 min of ATFM delays;
- Ongoing PRIDEP trial at Zurich airport (total ATFM delays: 6,092 min).
- Madrid ACC was regulated due to French military exercise (total AFTM delay: 2,695 min).
- The European parachute championship took place from 8 to 11 September; Amsterdam ACC recorded 1,309 min of delay.

9. NM ADDED VALUE

FLIGHTS WITH DELAY > 30'

The number of flights that had more than 30 minutes of ATFM delay increased by 71.9% from 221 flts/day in September 2014 to 380 flts/day in September 2015. Fewer en-route flights were delayed (>30 min) compared to August 2015.
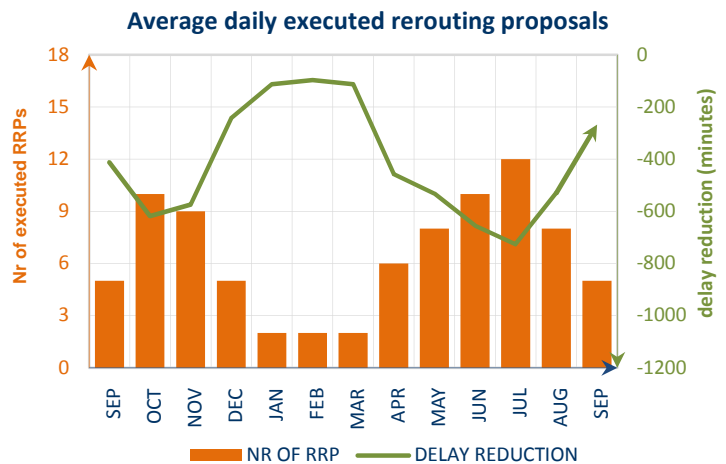
33.7% of flights with more than 30 minutes of ATFM delay in September 2015 were en-route and 66.3% were airport.

Average daily flights > 30 minutes delay
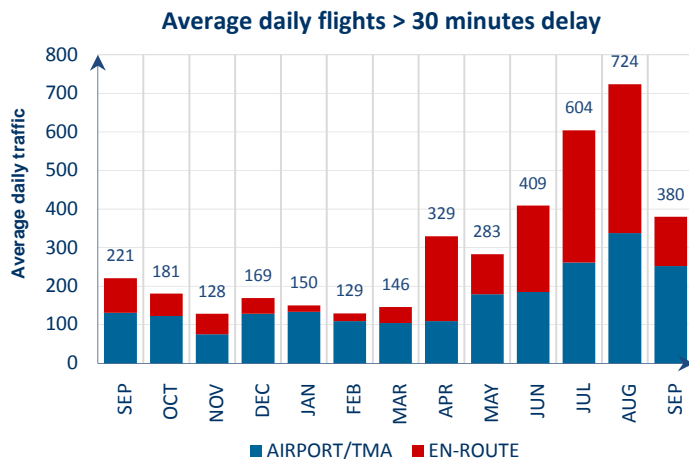
RRP DIRECT DELAY SAVINGS

In September 2015, on average 10 RRPs were offered of which 5 RRPs were executed, saving 267 min of daily delay.

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

Average daily executed rerouting proposals