



PERFORMANCE REPORT 2015 - 2019

CAPACITY

November 2019



making the difference

Contents

Description & Analysis	3
FABEC TRAFFIC DEVELOPMENT (en-route)	4
FABEC TRAFFIC DEVELOPMENT (arrival)	5
KPI #1: En-route ATFM delay per controlled flight (FABEC)	6
KPI #2: Arrival ATFM delay per controlled flight (FABEC)	7
KPI #1: En-route ATFM delay per reason code (FABEC)	8
KPI #1: En-route ATFM delay per controlled flight (ANSP)	9
KPI #1: En-route ATFM delay per controlled flight (ACC)	10
KPI #2: Arrival ATFM delay per reason code (FABEC)	11
KPI #2: Arrival ATFM delay per controlled flight (ANSP)	12
Glossary	13

Description & Analysis

Europe

Traffic in November 2019 decreased by 1.9% compared to November 2018 and was below the low forecast published in October 2019. The decrease reflected a deteriorating economic situation, trade tensions, political unrest along with the aftermath of the recent airline failures, namely Thomas Cook. Additionally, a two-day industrial action at Lufthansa (8-9 November) accelerated the decline in Germany's local traffic which was down 7% (-382 flights/day) in November. Only two states added more than 50 flights per day to the European local traffic growth (Turkey and Poland), owing mainly to their flows to and from: for Turkey (+70): Russian Federation (+25), Middle East (+17), Asia (India, Indonesia, Thailand, Malaysia) (+12), Germany (+11) and France (+10). However, Turkey's internal flow remained weak and saw 60 fewer flights per day; for Poland (+58): Ukraine (+10), Norway (+7), internal flow (+6), Netherlands (+5), UK (+4). The top five external partners in average daily flights on flows in both directions were the United States (865 flights, down 3.6%), the Russian Federation (748 flights, down 3.7%), the United Arab Emirates (352 flights, up 3.1%), Egypt (321 flights, up 12.3%) and Qatar (213 flights, up 4.7%). The airlines which added the most flights to the European network on a daily basis were Ryanair (+81 flights), Wizz Air Hungary (+77 flights), Jet2.com (+29 flights), Pegasus (+23 flights) and LOT (+12 flights).

The average en-route ATFM delay per flight in the NM area in November was 0.32 min/ft, which is above the corresponding monthly guideline value of 0.17 min/ft. The average YTD en-route ATFM delay per flight in 2019 in the NM area is 1.60 min/ft which is three times the corresponding guideline of 0.52 min (Source: NM).

Delays from the passengers' point of view

For November 2019 the Central Office for Delay Analysis (CODA) reported that the average delay per flight on departure was 8.5 minutes per flight - a decrease of 1.8 minutes per flight compared to November 2018.

25 % of the total delay, can be attributable to air traffic control. Airlines caused 56% of the total delay, resulting from such issues as technical problems, staff shortages or turnaround times that are too tightly scheduled. Airports caused 6% of the delays while the rest (IATA Code 85,86,71-79,97-99) of around 13% can be allocated to other reasons (Source: CODA-Digest-11-2019).

FABEC

In the FABEC area, traffic decreased by 3.0% in November 2019 compared to the same month in 2018, leading to a 1.2% traffic increase YTD. With this YTD traffic growth, the number of IFR flights is significantly above the STATFOR baseline scenario published in March 2015. The landings in the FABEC area (only the airports included in the performance plan) dropped down in November (-4.7%). The 2019 YTD arrival traffic evolution is now 0.5% higher than in 2018. All FABEC members saw a rather impressive traffic drop in November. DFS (-7.7%), skyguide (-5.3%), skeyes (-2.6%), DSNA (-2.4%) and LVNL (-1.4%) saw a decrease of their respective landings compared to last year.

The units with the highest ATFM en-route delay in November 2019 are Karlsruhe (69 716 min) and Marseille (26 190 min). In Karlsruhe, delays were due to 'ATC-Capacity' (70%), 'Staffing' (22%), 'Airspace Management' (5%) and 'Weather' (3%); in Marseille, 'Technical' (55%, radio frequency instability), 'Staffing' (37%), 'Weather' (3%), 'ATC-Capacity' (2%), 'Other' (1%) and 'Airspace Management' (1%). Bremen (15 532 min) and Langen (10 194 min) also induced delays in November, but to a lesser extent. In Bremen, delays were mainly due to 'ATC-Capacity' (53%), 'Staffing' (27%) and 'Airspace Management' (20%) and in Langen, mainly to 'Staffing' (70%) and 'ATC-Capacity' (24%).

The en-route ATFM delay per flight all causes reached 0.33 min/ft in November 2019 compared to 0.47 min/ft in 2018 (enhancement by 30%).

The YTD en-route ATFM delay per flight shows a significant improvement compared to last year (1.55 min/ft vs. 2.21 min/ft in 2018). This result is far above the YTD guideline value (0.45 min/ft). The YTD en-route ATFM delay CRSTMP causes reached 1.19 min/ft. This corresponds to a performance enhancement compared to last year (1.45 min/ft); this value is, as well, far above the guideline value estimated at the end of November (0.35 min/ft).

The Arrival ATFM delay per arrival movement all causes was significantly improved in November, from 0.62 min/ft in 2018 to 0.51 min/ft in 2019. The arrival ATFM delay per arrival flight CRSTMP causes slightly decreased in November (from 0.05 min/ft in 2018 to 0.04 min/ft in 2019).

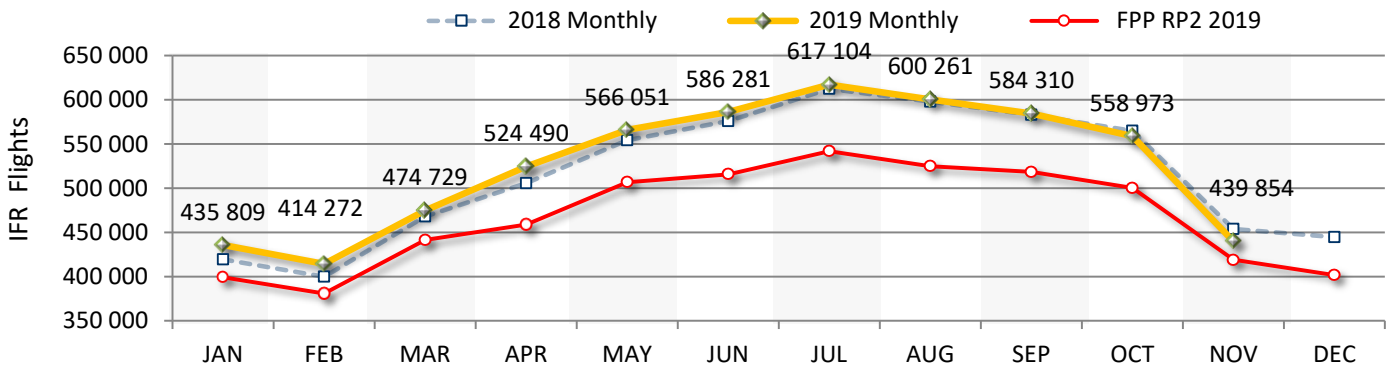
The airports with the highest ATFM delay in November 2019 – more than 10% of the total FABEC arrival delay – were Amsterdam/EHAM (45 521 min) and Frankfurt/EDDF (11 863 min). In Amsterdam, delays were due to 'Weather' (56%) and 'Aerodrome Capacity' (44%); in Frankfurt, 'Weather' (85%) and 'Staffing' (15%). After 11 months in 2019, LVNL, MUAC and skyguide are achieving their respective CRSTMP en-route ATFM delay target per flight whereas skeyes, DFS and DSNA aren't. On the other hand, apart from LVNL, all FABEC members are currently achieving their respective CRSTMP Arrival ATFM delay target per arrival flight.

P.S.: In the context of both the eNM S19 delay re-attribution process and the post-ops performance adjustment, delays figures for all ANSPs are not consolidated yet.

FABEC TRAFFIC DEVELOPMENT (*en-route*)

FABEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
2018 Monthly	419 452	399 761	467 833	505 789	554 363	575 947	612 280	597 957	583 092	564 856	453 639	444 489	5 734 969
2019 Monthly	435 809	414 272	474 729	524 490	566 051	586 281	617 104	600 261	584 310	558 973	439 854		5 802 134
Growth (%)	3.9 %	3.6 %	1.5 %	3.7 %	2.1 %	1.8 %	0.8 %	0.4 %	0.2 %	-1.0 %	-3.0 %		1.2 %
FPP RP2 2019	399 183	380 820	441 248	458 778	506 547	515 400	541 767	524 918	518 262	500 254	419 096	401 552	5 206 274
2019 / RP2 (%) - Monthly	9.2 %	8.8 %	7.6 %	14.3 %	11.7 %	13.8 %	13.9 %	14.4 %	12.7 %	11.7 %	5.0 %		
2019 / RP2 (%) - Cumulated	9.2 %	9.0 %	8.5 %	10.1 %	10.5 %	11.1 %	11.6 %	11.9 %	12.0 %	12.0 %	11.4 %		

2018 Monthly and 2019 Monthly values represent actual movements (*source: PRU*). RP2 2019 represents the traffic forecast (STATFOR low- growth 02/2015) underpinning the FABEC Performance Plan, split into monthly values on the basis of a FABEC consolidated methodology.

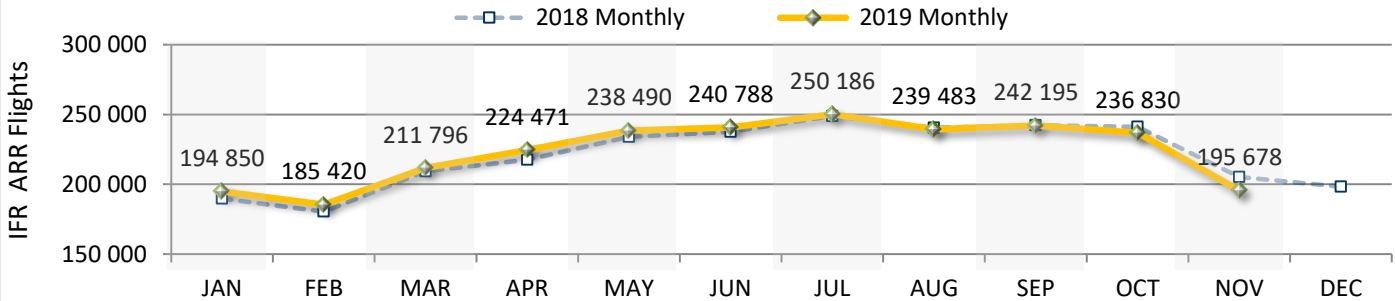


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
skeyes													
2018 Monthly	44 799	42 925	50 291	54 227	58 645	60 296	63 039	61 022	60 111	58 879	48 221	47 119	602 455
2019 Monthly	46 085	42 458	49 539	53 761	57 702	58 513	62 239	59 274	59 410	57 544	46 709		593 234
Growth (%)	2.9 %	-1.1 %	-1.5 %	-0.9 %	-1.6 %	-3.0 %	-1.3 %	-2.9 %	-1.2 %	-2.3 %	-3.1 %		-1.5 %
DFS													
2018 Monthly	212 646	203 601	238 141	252 738	280 725	287 148	300 814	295 118	291 235	289 102	236 401	225 799	2 887 669
2019 Monthly	222 009	211 766	240 686	258 289	282 291	286 199	299 444	292 210	291 681	284 915	225 050		2 894 540
Growth (%)	4.4 %	4.0 %	1.1 %	2.2 %	0.6 %	-0.3 %	-0.5 %	-1.0 %	0.2 %	-1.4 %	-4.8 %		0.2 %
DSNA													
2018 Monthly	213 336	202 724	240 485	267 871	293 860	311 779	337 069	325 019	314 605	296 295	226 565	228 286	3 029 608
2019 Monthly	221 573	209 836	244 322	283 032	302 429	321 951	340 265	329 402	313 806	292 190	221 663		3 080 469
Growth (%)	3.9 %	3.5 %	1.6 %	5.7 %	2.9 %	3.3 %	0.9 %	1.3 %	-0.3 %	-1.4 %	-2.2 %		1.7 %
LVNL													
2018 Monthly	46 296	44 327	50 909	53 087	57 154	56 123	58 261	57 756	56 676	57 414	48 678	47 151	586 681
2019 Monthly	46 111	44 366	50 512	53 470	57 492	55 907	57 593	57 195	56 974	57 181	47 564		584 365
Growth (%)	-0.4 %	0.1 %	-0.8 %	0.7 %	0.6 %	-0.4 %	-1.1 %	-1.0 %	0.5 %	-0.4 %	-2.3 %		-0.4 %
MUAC													
2018 Monthly	135 713	126 950	147 139	154 380	168 707	168 910	176 472	173 216	168 749	168 395	142 381	141 678	1 731 012
2019 Monthly	138 773	129 324	147 712	154 875	164 086	166 793	176 133	173 200	168 761	166 082	137 728		1 723 467
Growth (%)	2.3 %	1.9 %	0.4 %	0.3 %	-2.7 %	-1.3 %	-0.2 %	0.0 %	0.0 %	-1.4 %	-3.3 %		-0.4 %
skyguide													
2018 Monthly	86 394	82 941	97 689	107 085	117 936	124 702	131 917	128 638	125 622	119 747	90 115	91 030	1 212 786
2019 Monthly	89 334	86 268	99 645	110 651	120 991	127 214	133 394	127 821	124 023	115 533	86 141		1 221 015
Growth (%)	3.4 %	4.0 %	2.0 %	3.3 %	2.6 %	2.0 %	1.1 %	-0.6 %	-1.3 %	-3.5 %	-4.4 %		0.7 %

FABEC TRAFFIC DEVELOPMENT (arrival)

FABEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
2018 Monthly	189 660	180 419	209 287	217 664	233 911	237 622	248 909	240 578	242 314	241 201	205 323	198 327	2 446 888
2019 Monthly	194 850	185 420	211 796	224 471	238 490	240 788	250 186	239 483	242 195	236 830	195 678		2 460 187
Growth (%)	2.7 %	2.8 %	1.2 %	3.1 %	2.0 %	1.3 %	0.5 %	-0.5 %	0.0 %	-1.8 %	-4.7 %		0.5 %

2018 Monthly and 2019 Monthly values represent actual arrivals (source: PRU).



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
ANA LUX													
2018 Monthly	2 788	2 607	3 008	3 249	3 389	3 414	3 313	3 129	3 352	3 366	3 024	2 830	34 639
2019 Monthly	2 728	2 640	3 007	3 285	3 451	3 420	3 410	3 160	3 445	3 466	3 150		35 162
Growth (%)	-2.2 %	1.3 %	0.0 %	1.1 %	1.8 %	0.2 %	2.9 %	1.0 %	2.8 %	3.0 %	4.2 %		1.5 %

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
skeyes													
2018 Monthly	9 676	9 263	10 646	11 094	11 701	11 711	12 477	12 046	11 860	11 367	10 594	9 826	122 435
2019 Monthly	9 804	8 825	10 293	11 083	11 763	11 678	12 607	12 086	12 016	11 632	10 315		122 102
Growth (%)	1.3 %	-4.7 %	-3.3 %	-0.1 %	0.5 %	-0.3 %	1.0 %	0.3 %	1.3 %	2.3 %	-2.6 %		-0.3 %

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
DFS													
2018 Monthly	73 971	72 422	83 650	86 752	94 000	94 769	98 092	97 183	98 506	100 871	86 195	79 756	986 411
2019 Monthly	78 274	75 894	85 673	88 848	96 254	95 027	98 049	95 422	98 321	97 898	79 529		989 189
Growth (%)	5.8 %	4.8 %	2.4 %	2.4 %	2.4 %	0.3 %	0.0 %	-1.8 %	-0.2 %	-2.9 %	-7.7 %		0.3 %

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
DSNA													
2018 Monthly	66 247	61 688	72 535	76 311	82 339	85 816	91 320	84 966	86 309	82 645	68 991	68 659	859 167
2019 Monthly	66 766	63 317	73 401	81 023	84 477	88 656	92 799	86 055	86 206	81 851	67 332		871 883
Growth (%)	0.8 %	2.6 %	1.2 %	6.2 %	2.6 %	3.3 %	1.6 %	1.3 %	-0.1 %	-1.0 %	-2.4 %		1.5 %

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
LVNL													
2018 Monthly	18 970	17 932	20 586	21 404	22 907	22 339	23 347	23 315	22 640	23 022	19 660	19 505	236 122
2019 Monthly	18 998	18 021	20 363	21 455	22 973	22 330	22 933	23 046	22 639	22 777	19 390		234 925
Growth (%)	0.1 %	0.5 %	-1.1 %	0.2 %	0.3 %	0.0 %	-1.8 %	-1.2 %	0.0 %	-1.1 %	-1.4 %		-0.5 %

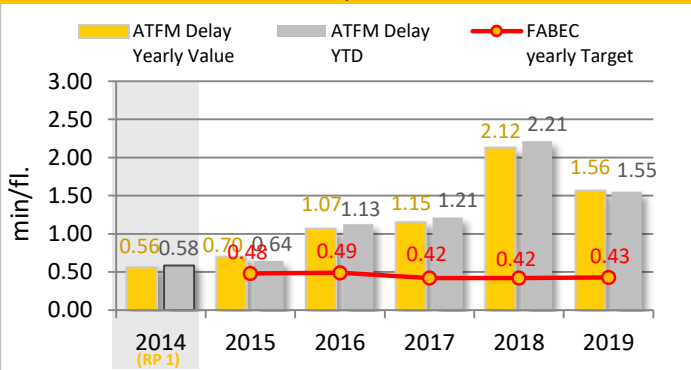
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
skyguide													
2018 Monthly	18 008	16 507	18 862	18 854	19 575	19 573	20 360	19 939	19 647	19 930	16 859	17 751	208 114
2019 Monthly	18 280	16 723	19 059	18 777	19 572	19 677	20 388	19 714	19 568	19 206	15 962		206 926
Growth (%)	1.5 %	1.3 %	1.0 %	-0.4 %	0.0 %	0.5 %	0.1 %	-1.1 %	-0.4 %	-3.6 %	-5.3 %		-0.6 %

KPI #1: En-route ATFM delay per controlled flight (FABEC)

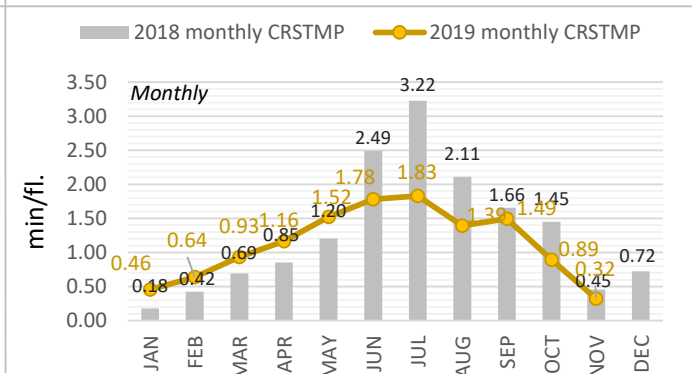
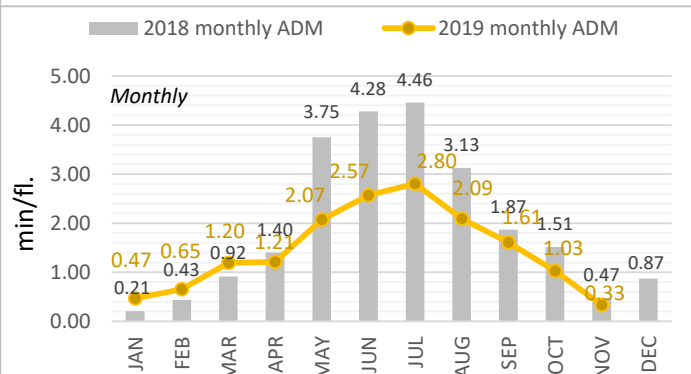
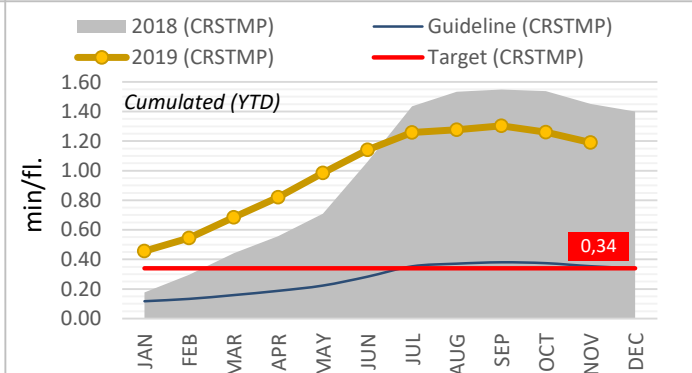
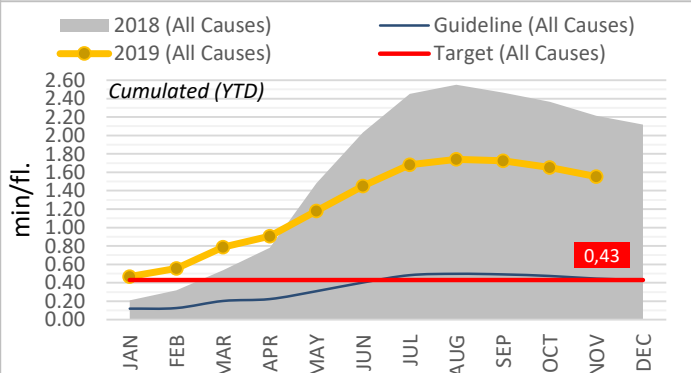
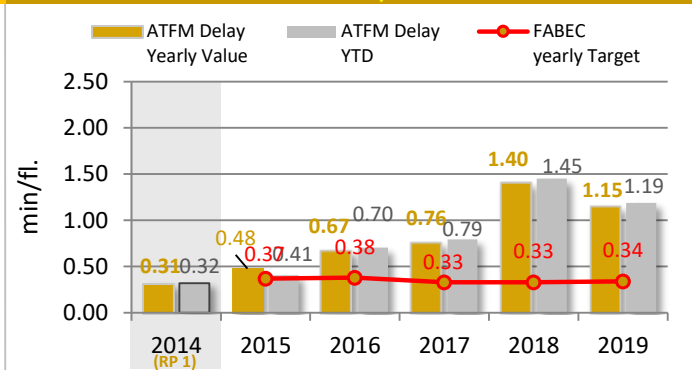
	YTD 2019	YTD 2018	YTD 2019	YTD 2018
En-route Delay All causes	1.55	2.21	1.19	1.45
FABEC Target (yearly value)	0.43		0.34	
Guideline	0.45		0.35	
Minute ('000) ALL causes	9 004	12 702	6 900	8 329
Diff. 2019 - 2018	- 29.1 %		- 17 %	
Traffic ('000)	5 802	5 735		
Diff. 2019 - 2018	+ 1.2 %			
<i>Potential savings (*) due to underbid the delay Target</i>				
<i>(all Causes) in Mio EURO (YTD)</i> ▶ 0.0				

* Cost of ATFM-delay per min = 87 €

All Delay Causes



CRSTMP Delay Causes

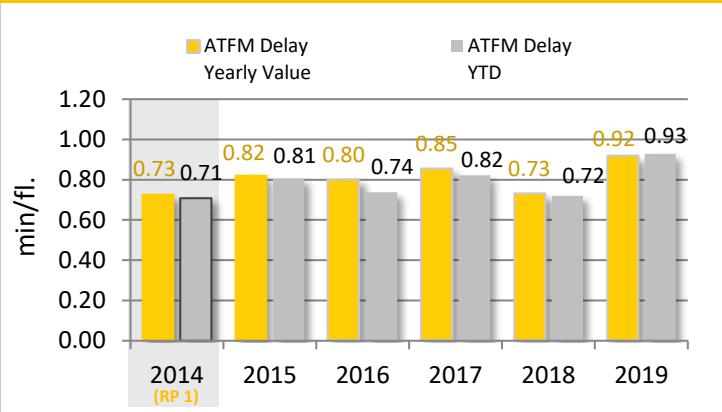


The guideline for the en-route ATFM delay per movement is a basic cumulative extrapolation of the previous three years monthly allocation and is designed to give an impression, how the YTD figures should be, in order to reach the yearly 2019 published targets (**0.43 min per flight for all delay causes** and **0.34 min per flight for the delay causes CRSTMP**).

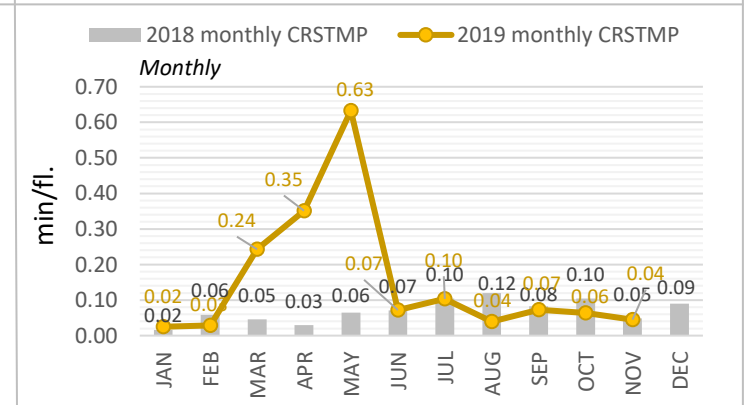
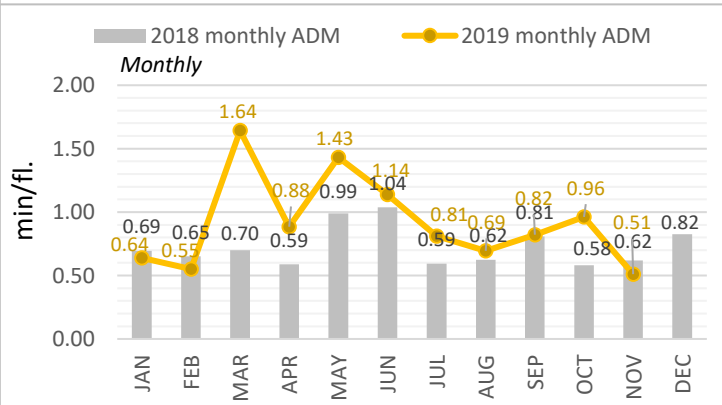
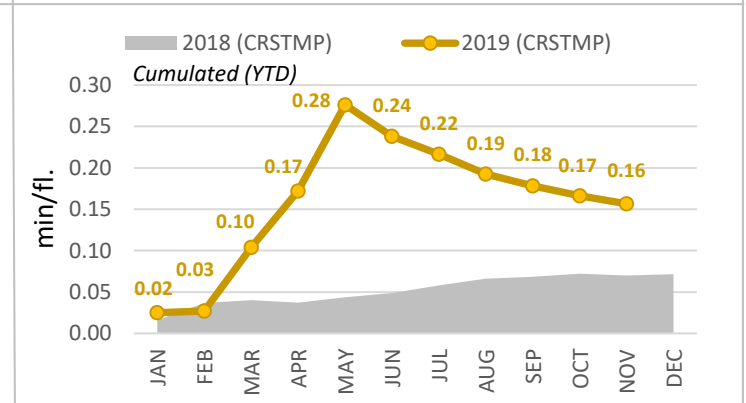
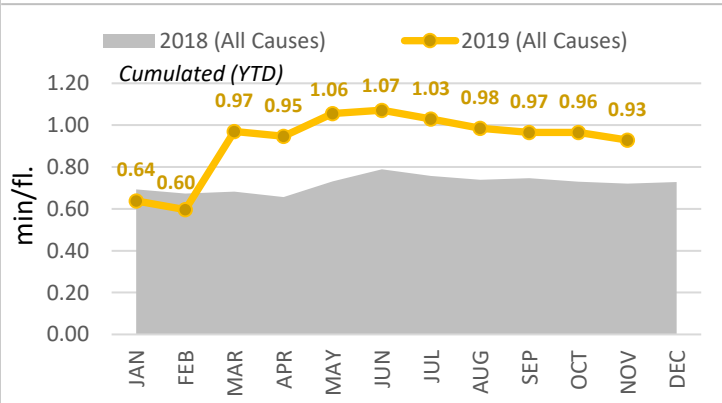
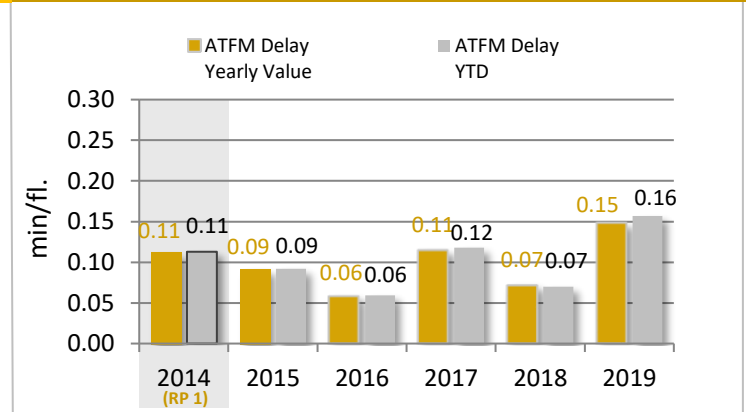
KPI #2: Arrival ATFM delay per controlled flight (FABEC)

	YTD 2019	YTD 2018		YTD 2019	YTD 2018
Arrival Delay All causes	0.93	0.72	Arrival Delay CRSTMP causes	0.16	0.07
<i>Diff. 2019 - 2018</i>	+ 29 %		<i>Diff. 2019 - 2018</i>	+ 124 %	
Minute ('000) ALL causes	2285	1 762	Minute ('000) CRSTMP causes	386	172
<i>Diff. 2019 - 2018</i>	+ 30 %		<i>Diff. 2019 - 2018</i>	+ 125 %	
Traffic ('000)	2 460	2 447			
<i>Diff. 2019 - 2018</i>	+ 0.5 %				

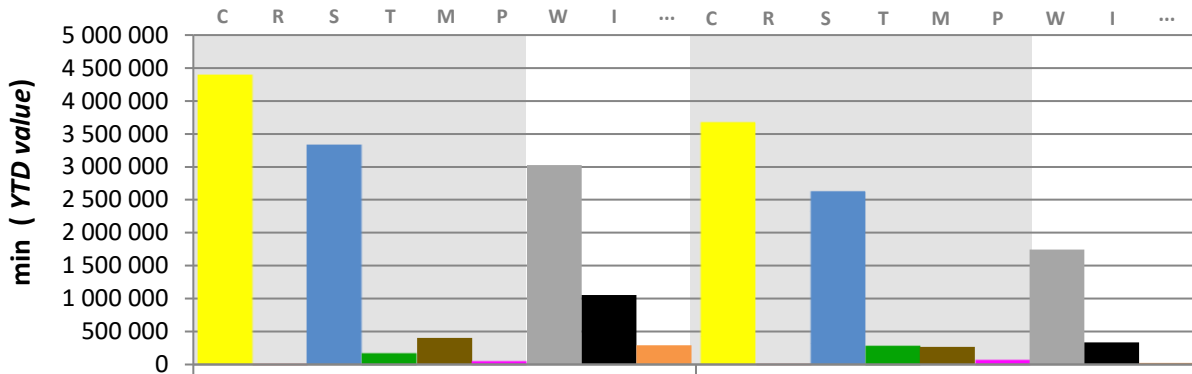
All Delay Causes



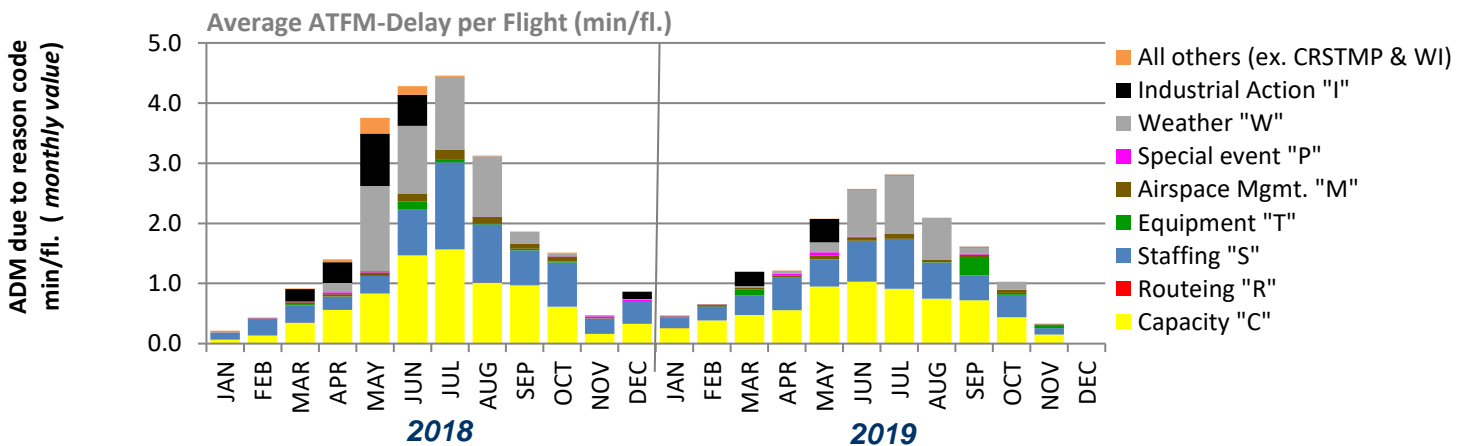
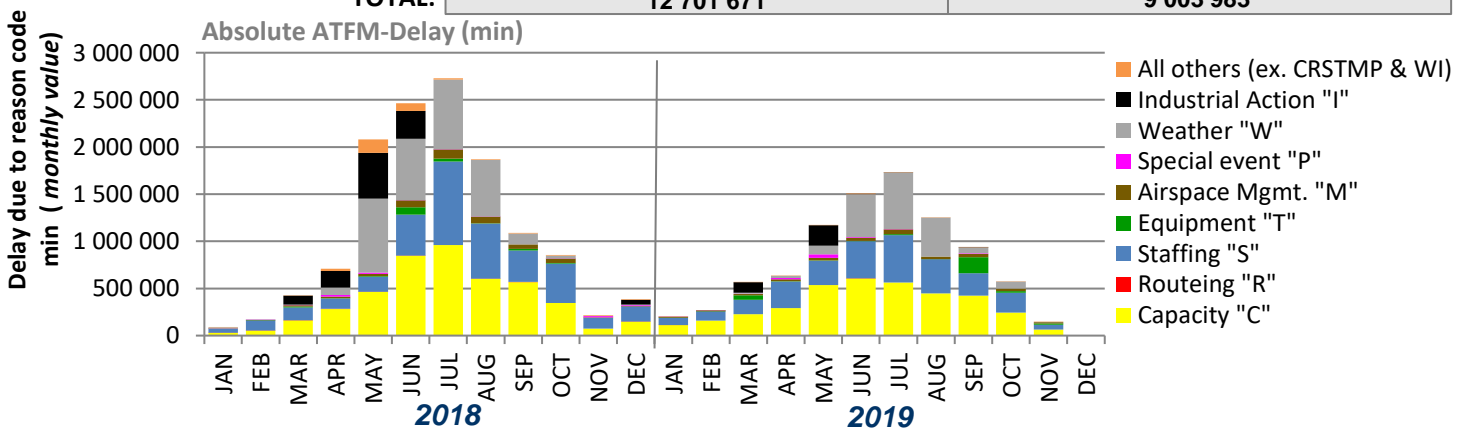
CRSTMP Delay Causes



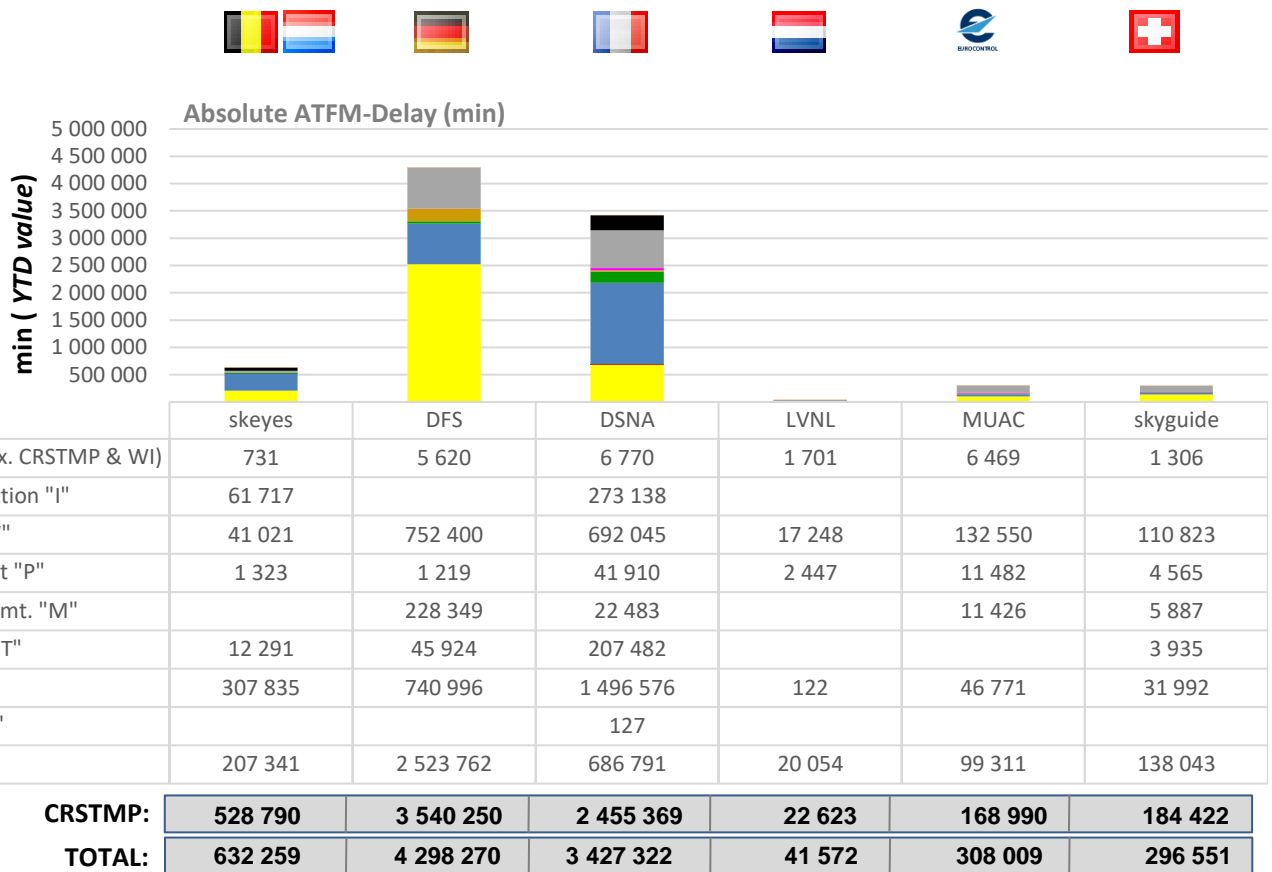
KPI #1: En-route ATFM delay per reason code (FABEC)



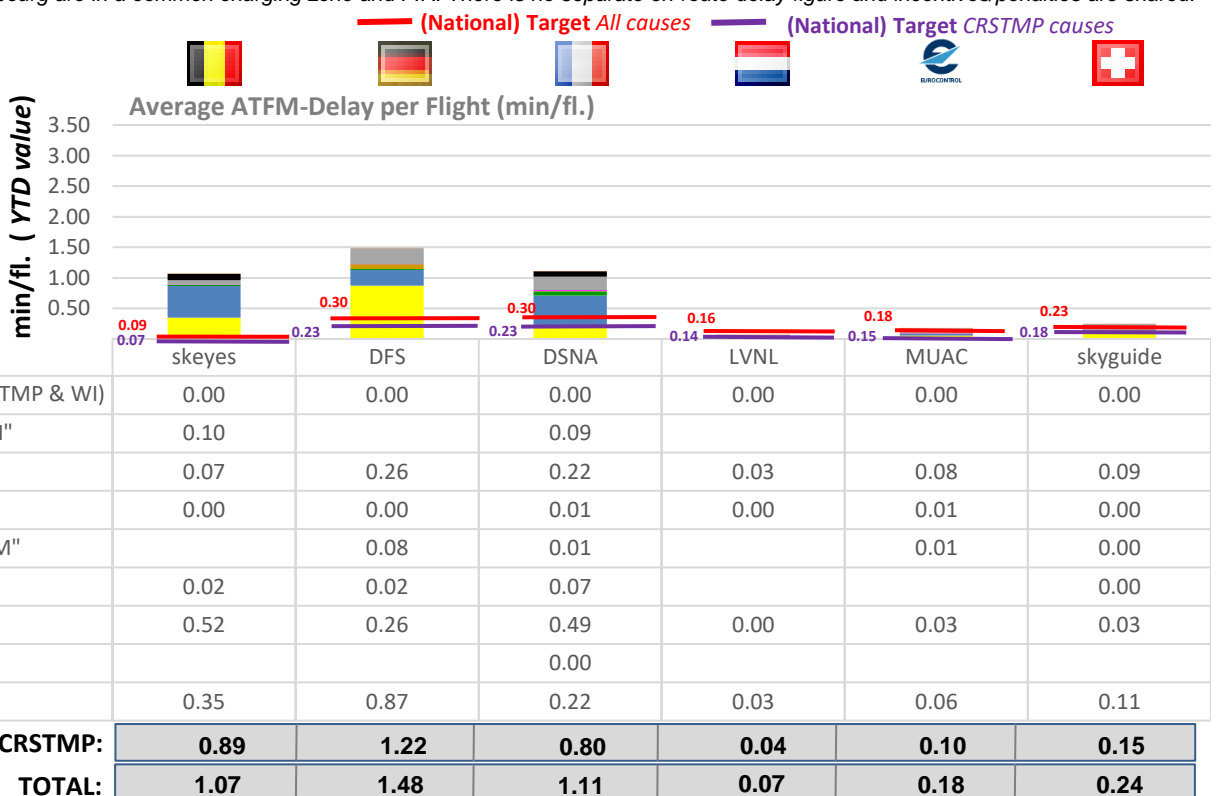
Delay due to reason code:	2018	2019
Capacity "C"	4 387 596	3 675 302
Routeing "R"	5 283	127
Staffing "S"	3 322 022	2 624 292
Equipment "T"	164 180	269 632
Airspace Mgmt. "M"	401 492	268 145
Special event "P"	48 077	62 946
Weather "W"	3 026 538	1 746 087
Industrial Action "I"	1 056 407	334 855
All others (ex. CRSTMP & WI)	290 076	22 597
CRSTMP:	8 328 650	6 900 444
TOTAL:	12 701 671	9 003 983



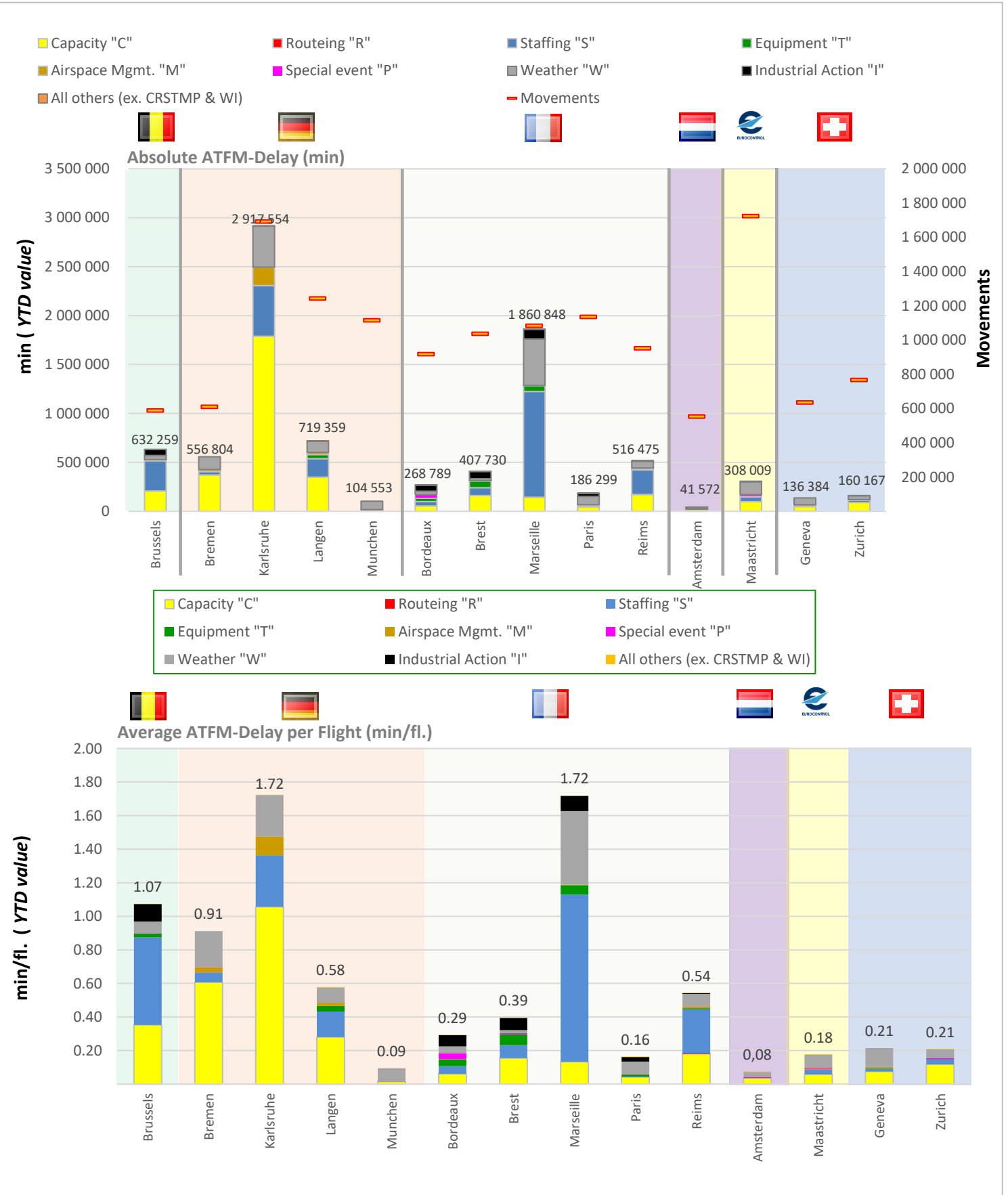
KPI #1: En-route ATFM delay per controlled flight (ANSP)



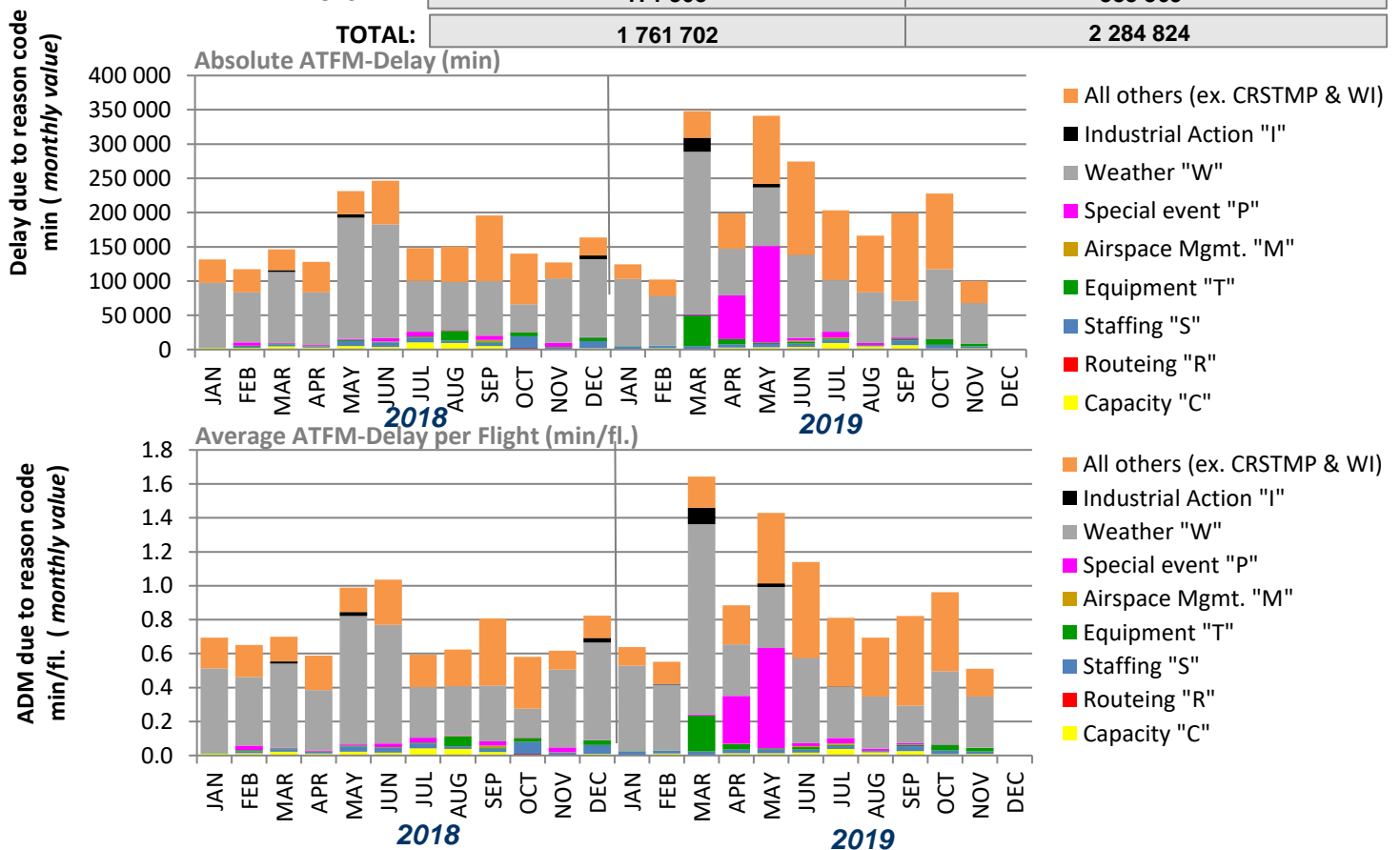
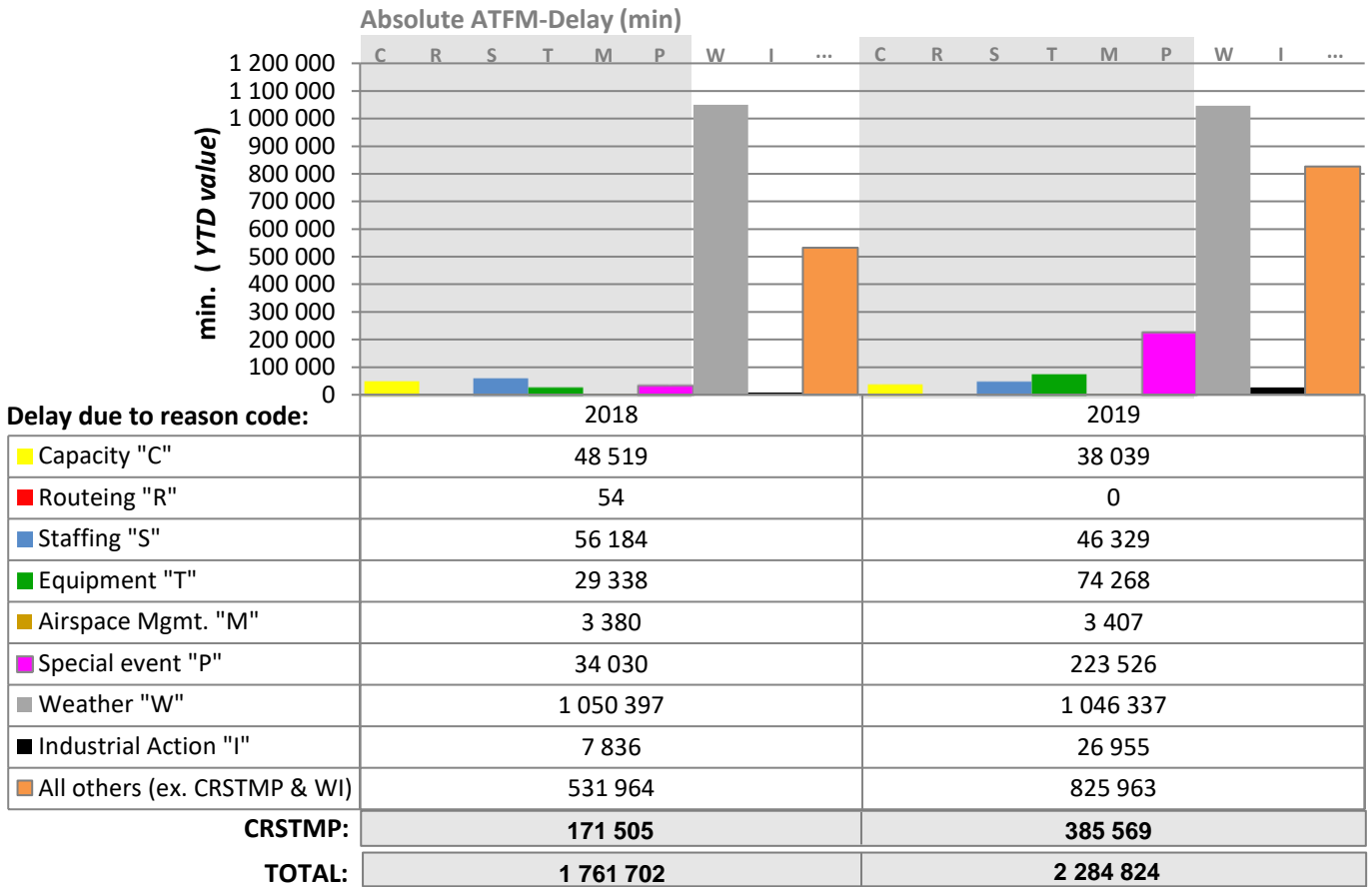
*Belgium and Luxembourg are in a common charging zone and FIR. There is no separate en-route delay figure and incentives/penalties are shared.



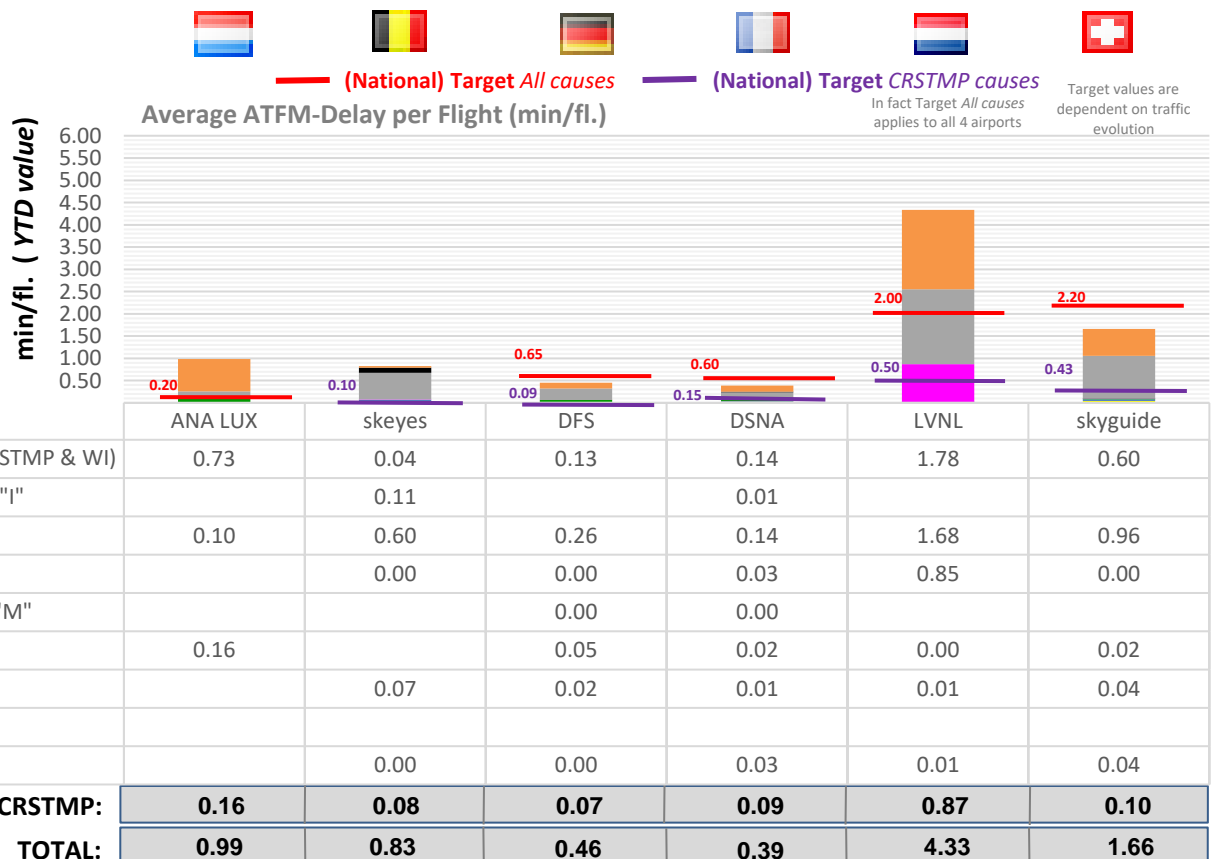
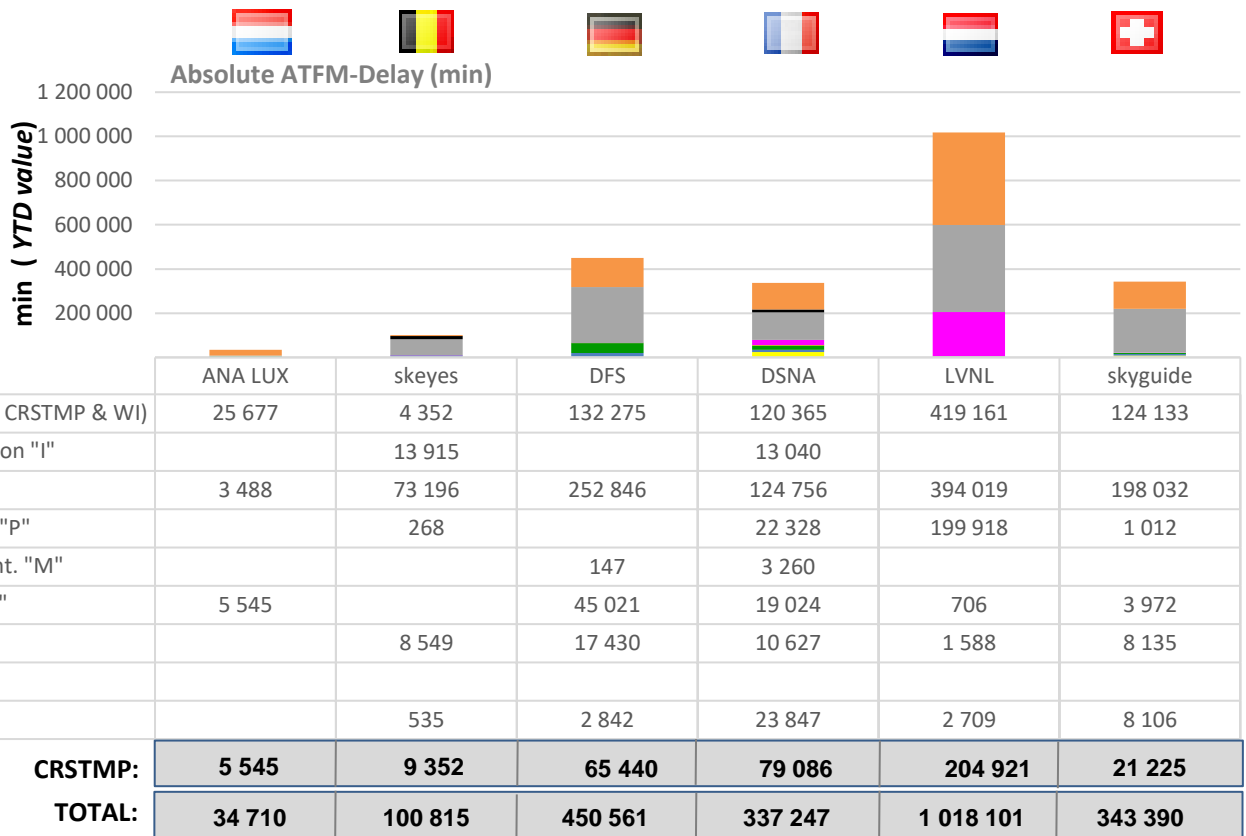
KPI #1: En-route ATFM delay per controlled flight (ACC)



KPI #2: Arrival ATFM delay per reason code (FABEC)



KPI #2: Arrival ATFM delay per controlled flight (ANSP)



Glossary

KPI #1:

KPI #1 is set by IR (EU) 390/2013 and is expressed in minutes per flight. For this indicator, the EU-wide target set for each year of RP2 is 0.50 min/fl.

The targets set at FABEC level are as follows for the indicator 'En-route ATFM delay (all regulation causes) per controlled flight' for **2015: 0,48 min/fl., 2016: 0.42 min/fl., 2017: 0.42 min/fl., 2018: 0.42 min/fl., 2019: 0.43 min/fl.**

The targets set at FABEC level are as follows for the indicator 'En-route ATFM delay (CRSTMP regulation causes) per controlled flight' for **2015: 0.37 min/fl., 2016: 0.33 min/fl., 2017: 0.33 min/fl., 2018: 0.33 min/fl., 2019: 0.34 min/fl.**

KPI #2:

KPI #2 is set by IR (EU) 390/2013 and is expressed in minutes per flight. For this indicator, no targets have been defined at EU and FABEC level for RP2. The targets have been set at local level.

Cause	CODE	Guidelines for Application
ATC Capacity	C	En Route: Demand exceeds or complexity reduces declared or expected ATC capacity Airport: Demand exceeds declared or expected ATC capacity.
ATC Industrial Action	I	Reduction in any capacity due to industrial action by ATC staff
ATC Routeings	R	Network solutions / scenarios used to balance demand and capacity
ATC Staffing	S	Unplanned staff shortage reducing expected capacity.
ATC Equipment	T	Reduction of expected or declared capacity due to the non-availability or degradation of equipment used to provide an ATC service.
Accident / Incident	A	Reduction of expected ATC capacity due to an aircraft accident / incident.
Aerodrome Capacity	G	Reduction in declared or expected capacity due to the degradation or non-availability of infrastructure at an airport. e.g. Work in Progress, shortage of aircraft stands etc. Or when demand exceeds expected aerodrome capacity.
Equipment NON ATC- to be Aerodrome Services	E	Reduced capacity due to the degradation or non-availability of support equipment at an airport e.g. Fire Service, De-icing / snow removal equipment or other ground handling equipment.
Industrial Action NON ATC	N	A reduction in expected / planned capacity due to industrial action by non ATC personnel.
Airspace Management	M	Reduction in declared or expected capacity following changes in airspace / route availability due to small scale military activity.
Special Event	P	Reduction in planned, declared or expected capacity or when demand exceeds the above capacities as a result of a major sporting, governmental or social event. It may also be used for ATM system upgrades and transitions. Large multinational military exercises may also use this reason. This category should only be used with prior approval during the planning process.
Weather	W	Reduction in expected capacity due to any weather phenomena. This includes where weather impacts airport infrastructure capacity, but where aerodrome services are operating as planned / expected.
Environmental Issues	V	Reduction in any capacity or when demand exceeds any capacity due to agreed local noise, runway usage or similar procedures. This category should only be used with prior agreement in the planning process.
Other	O	This should only be used in exceptional circumstances when no other category is sufficient. An explanatory ANM remark MUST be given to allow post ops analysis.

CRSTMP:

ATC Capacity (**C**), ATC Routeings (**R**), ATC Staffing (**S**), ATC Equipment (**T**), Airspace Management (**M**), Special Event (**P**); a set of regulation codes which are defined in the Common Charging Scheme Regulation (IR 391/2013) and subject to financial incentive.

Note: Arrival figures (traffic and delay) do only include EBBR and EBLG for Belgium and only EHAM for the Netherlands.

TABLE OF ABBREVIATIONS

ADM - Average en-route ATFM Delay per Movement

ANSP - Air Navigation Service Provider

ATFM - Air Traffic Flow Management

ANM - Aeronautical Notification Message

FABEC - Functional Airspace Block Europe Central

ATM - Air Traffic Management

PRU - Performance Review Unit

YTD - Year to Date value

FPP - FABEC Performance Plan

CODA - Central Office for Delay Analysis

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Notice

The FABEC PMG has made every effort to ensure that the information and analysis contained in this document are as accurate and complete as possible.

Only information from quoted sources has been used and information relating to named parties has been checked with the parties concerned.

Despite these precautions, should you find any errors or inconsistencies we would be grateful if you could please bring them to the FABEC PMGs attention.