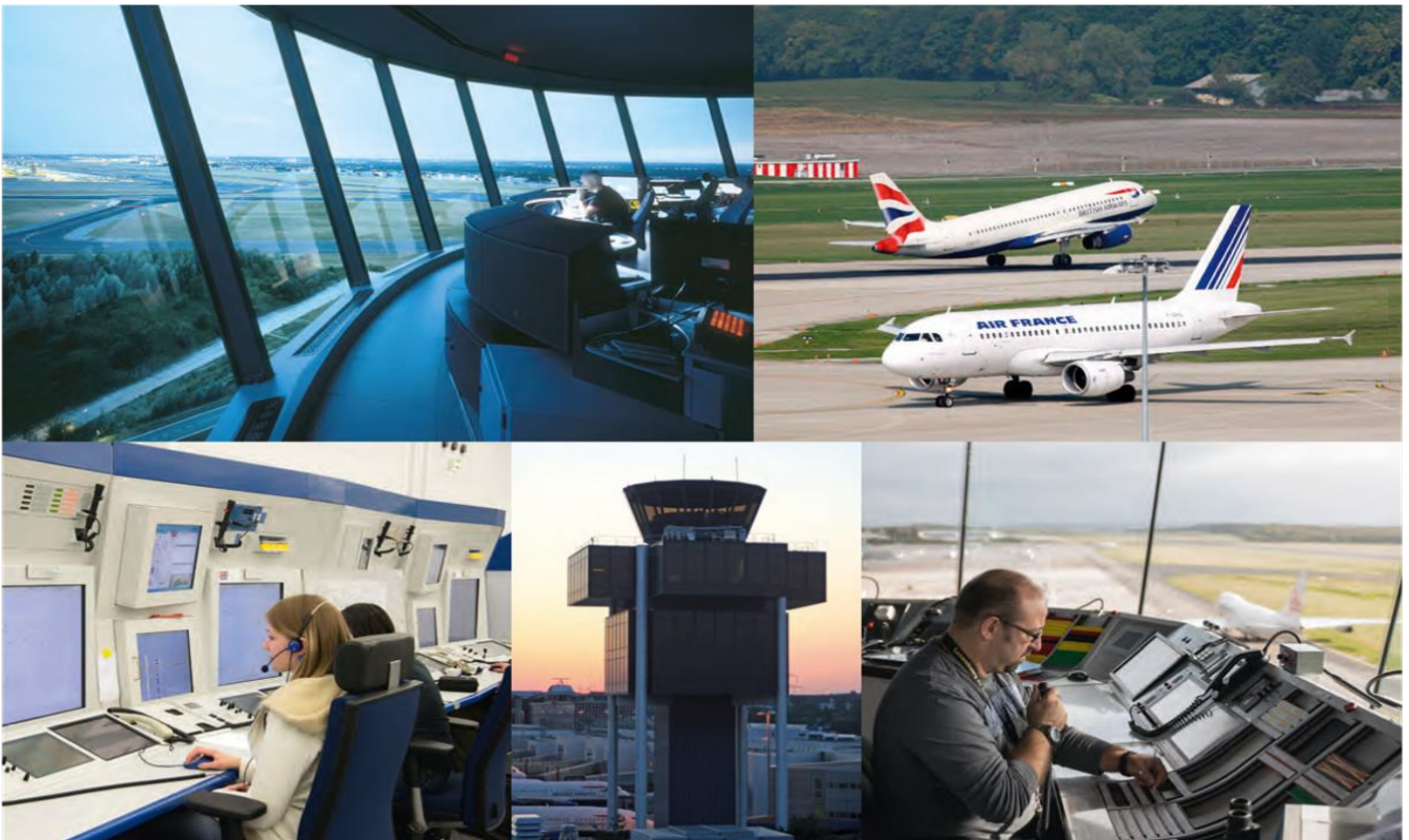




PERFORMANCE REPORT 2015 - 2019

ENVIRONMENT

July 2018



making the difference

Contents

Description & Analysis	3
KPI #1: KEA/HFE at FABEC level (excl. 10 best/worst days)	4
PI #1: HFE based on Actual at FABEC level (incl. all days)	4
PI #2: KEP/HFE based on filed FPL at FABEC level (excl. 10 best/worst days)	5
PI #3: HFE based on filed FPL at FABEC level (incl. all days)	5
PI #4: HFE based on Actual at State level (incl. all days)	6
PI #5: HFE based on filed FPL at State level (incl. all days)	7
<i>PI #6: ASMA</i>	
<i>PI #7: aTXOT</i>	
<i>PI #8: Effectiveness of Booking Procedure for FUA</i>	
<i>PI #9: Effectiveness of SUA usage</i>	
Glossary	8

Description & Analysis

ENV KPI #1: KEA at FABEC level (excl. 10 best/worst days)

Confirming the trend observed for the last 4 months, the inefficiency of flown trajectories on the horizontal plain is increasing with a value of 3.25%, stopping positive trend observed until March. The indicator is at 0.20pp above the yearly target (3.05%), and the trend is not downwards, taking into account the increase of traffic by 2.40% in FABEC in July 2018 compared to July 2017. The difference between KEA and KEP is 2.77pp, small increased value (+0.02pp) compared to previous month. Very severe delays were experienced in July (doubled compared to 2017), for which the three main reasons were capacity and weather, and staffing to a lesser extent. In case of important ATFM delays, the interdependency between delays and HFE become more and more obvious.

ENV PI#1: HFE based on Actual at FABEC level (including all days)

On a monthly basis, HFE (KEA including all days) has reached 3.42%, which is a quite comparable with the previous month (3.52%) and which confirms reversal of the trend observed up until March 2018. Compared to July 2017 (3.36%), it represents an increase of the inefficiency values by 0.06pp.

ENV PI#2: HFE based on Filed FPL at FABEC level (excl. 10 best/worst days)

After a period of stabilization, reaching its lowest level (5.94%) in March, the indicator keeps showing a reversal of the trend, and goes over the bar of 6% for the second consecutive month. The value is now clearly above the value of July 2017 (6.02% vs 5.98%).

In an international context where traffic is still growing (+3.7% for Europe), FABEC delays in July 2018 are much higher than delays in July 2017 (all cause en-route delays reached 4.45 min per flight this month vs 2.57 min in July 2017). In such conditions, Aircraft Operators filed longer routes. Delays were the main reasons for longer routes, due to capacity, weather, and staffing. Moreover, NM measures linked to the 4ACC initiative forced some flows to use longer routes.

Reminder 1: In the 2018 context with almost harmonized unit rates in FABEC, meaning that the shortest route is the cheapest route most of the time, KEP should globally improve, but it is not the case, because of interdependency with ATFM.

Reminder 2: The 2018 context should also favor KEP because en-route traffic (steady traffic = +2.6%) is growing more than evolving traffic (+1.7%) for July over FABEC area. Here again, interdependencies are affecting KEP.

ENV PI#3: HFE based on Filed FPL at FABEC level (including all days)

Compared to same value of 2017, the figure is showing a deterioration for July (6.05% vs 5.88% monthly, and 6.08% vs 5.97% for YTD). The results cannot be considered as bad results (especially YTD) taking into account that delays in July 2018 are doubled compared to delays of the same month of 2017 (+1.88' per flight for all causes, but +1.62' per flight for CRSTMP).

ENV PI#4: HFE based on Actual at State level (including all days)

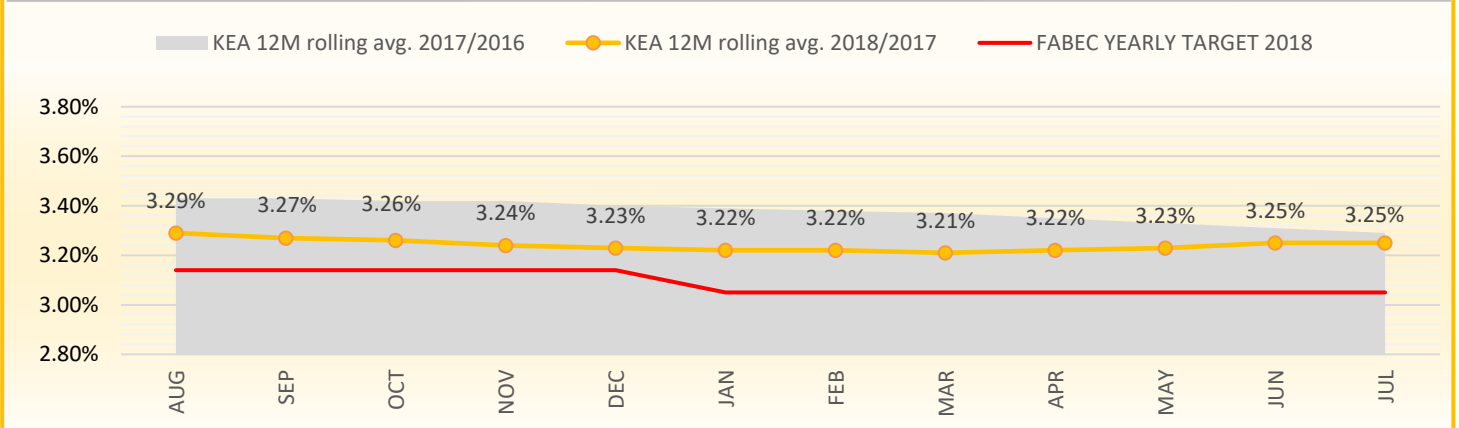
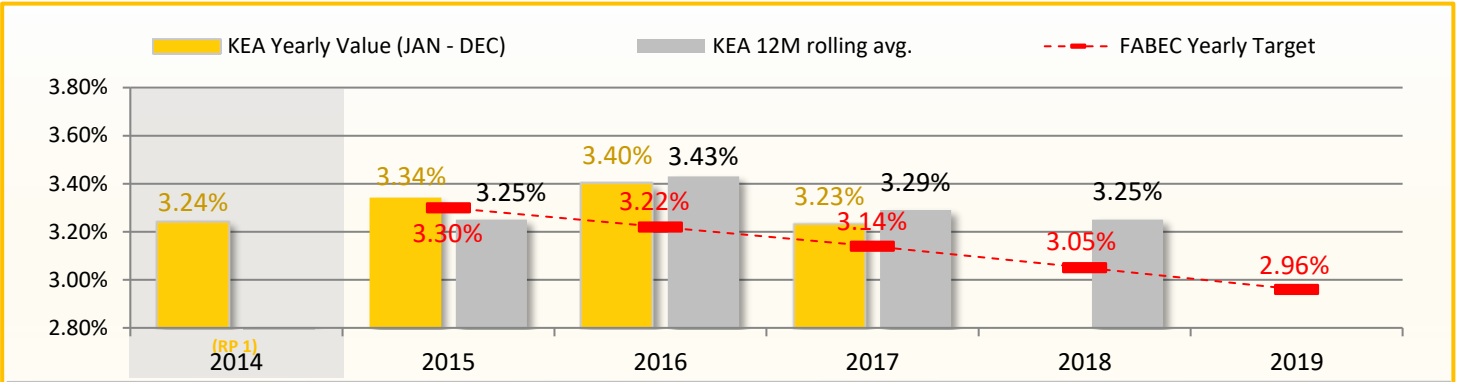
At national level, the figures of YTD for all states show a small increase of the inefficiency compared to the same month of 2017 (except for The Netherlands with a small improvement). On a monthly basis, the inefficiency value is increasing for all states, except for The Netherlands (-0.09pp), and Germany (-0.07pp) with the following results: Belgium (+0.21pp), Switzerland (+0.12pp), and France (+0.14pp). The increase of the KEA value at FABEC level seems equally shared amongst all states.

As a reminder, do not forget that PI#4 is impacted by HFE based on Filed FPL at State level (PI#5).

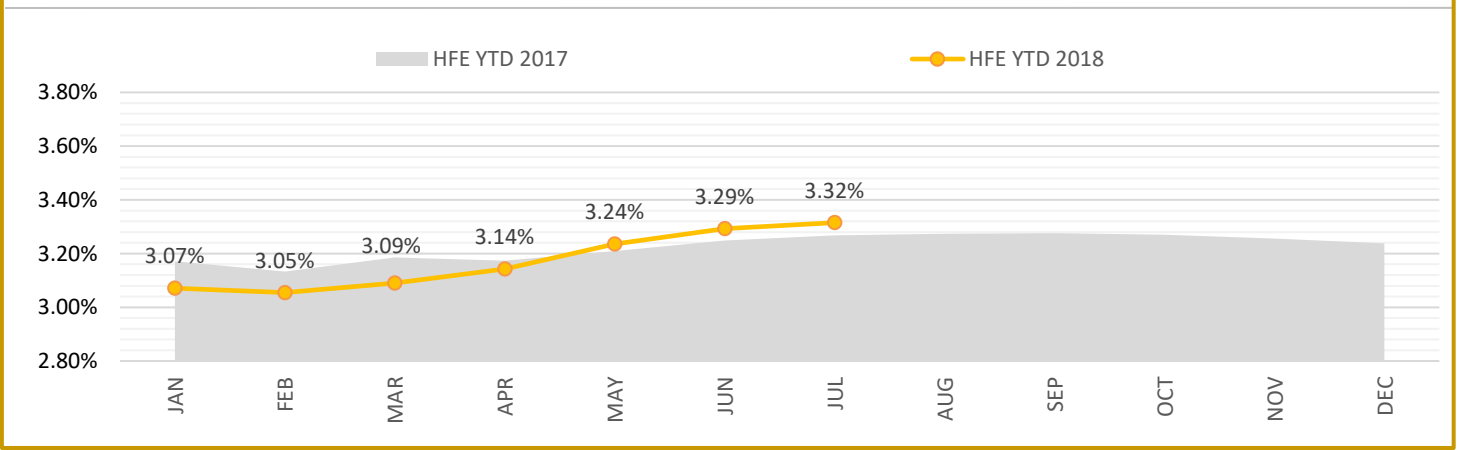
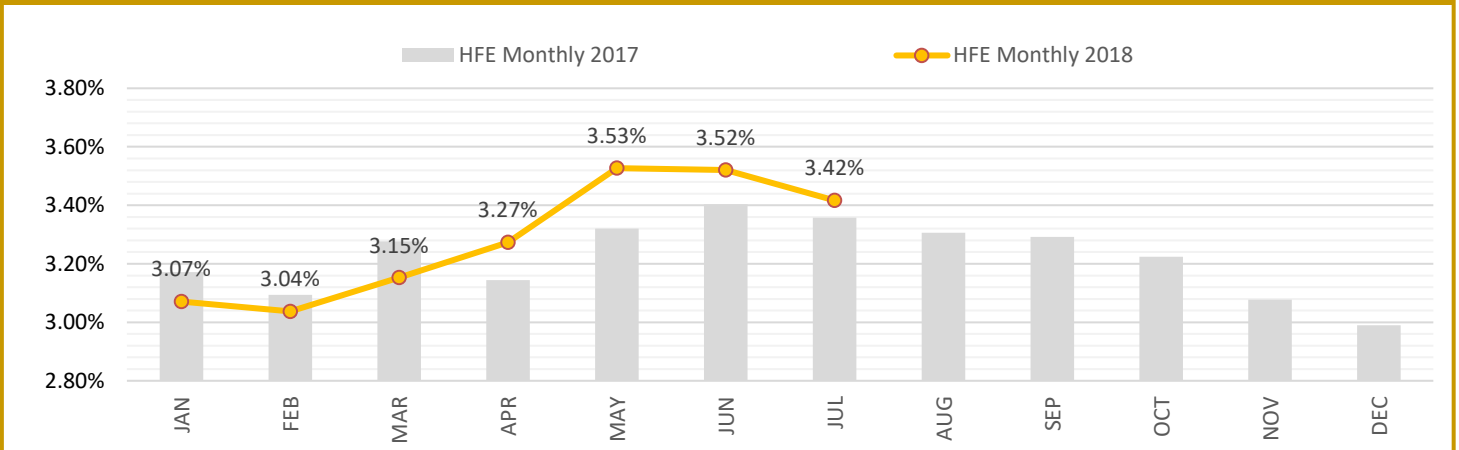
ENV PI#5: HFE based on Filed FPL at State level (including all days)

At national level, the figures of YTD for all states are globally similar to the figures of the same month of 2017. On a monthly basis, the inefficiency is increasing for all states except for The Netherlands with the following results: Belgium (+0.36pp), The Netherlands (+0.00pp), Switzerland (+0.20pp), France (+0.17pp) and Germany (+0.16pp). In addition to the delays, these figures are showing an impact of the 4ACC initiative for Belgium, Germany and France.

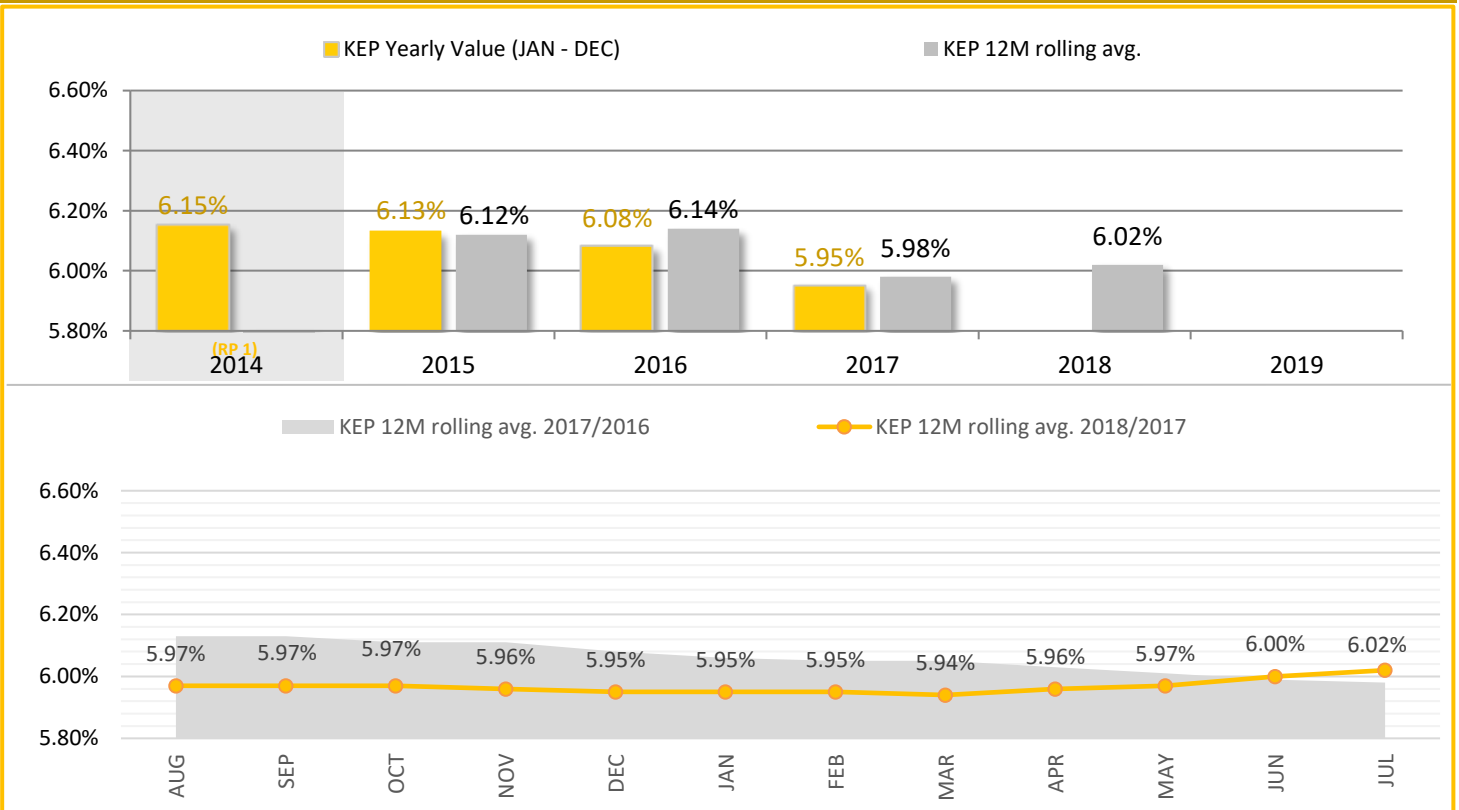
KPI #1: KEA/HFE at FABEC level (excl. 10 best/worst days)



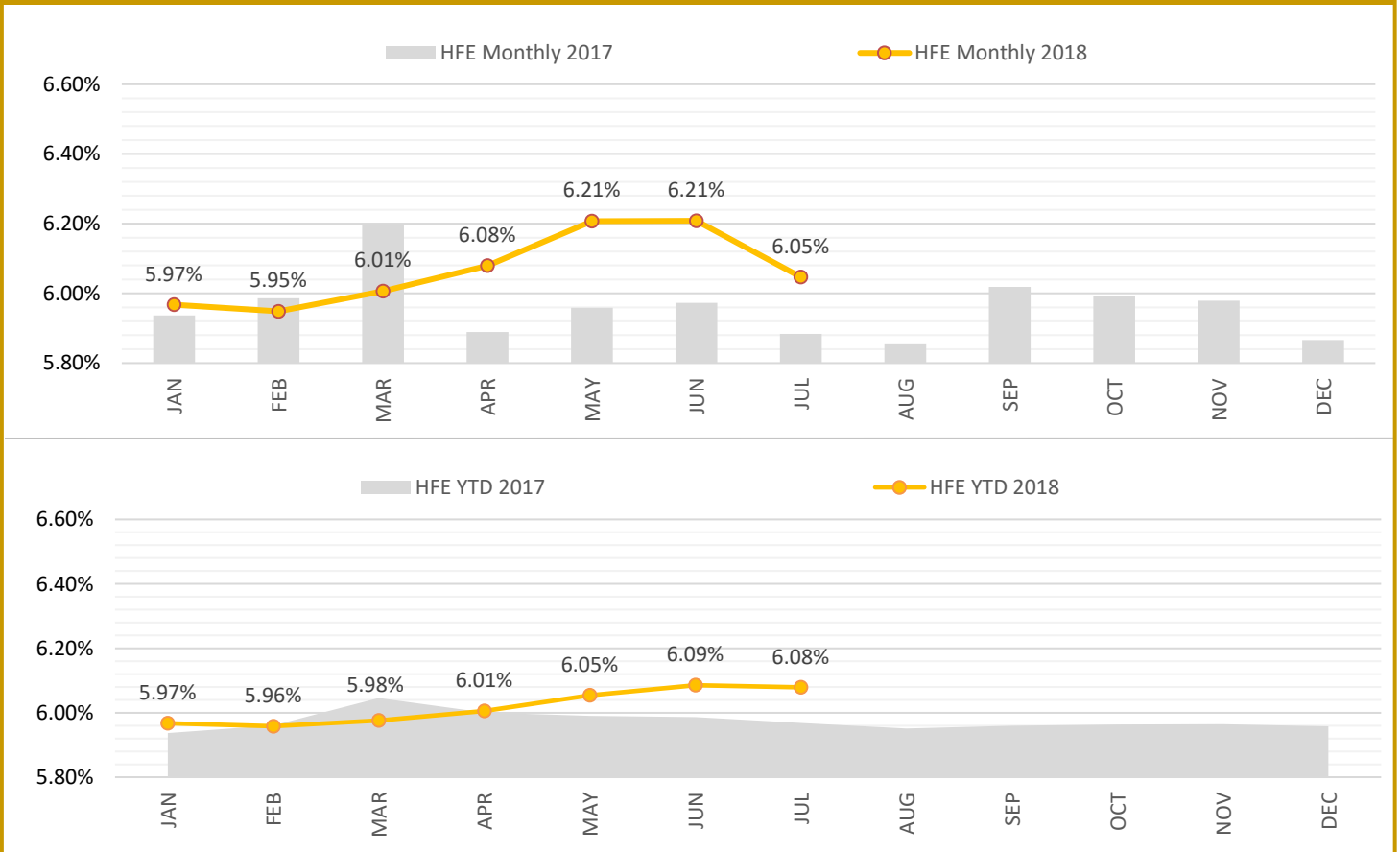
PI #1: HFE based on Actual at FABEC level (incl. all days)



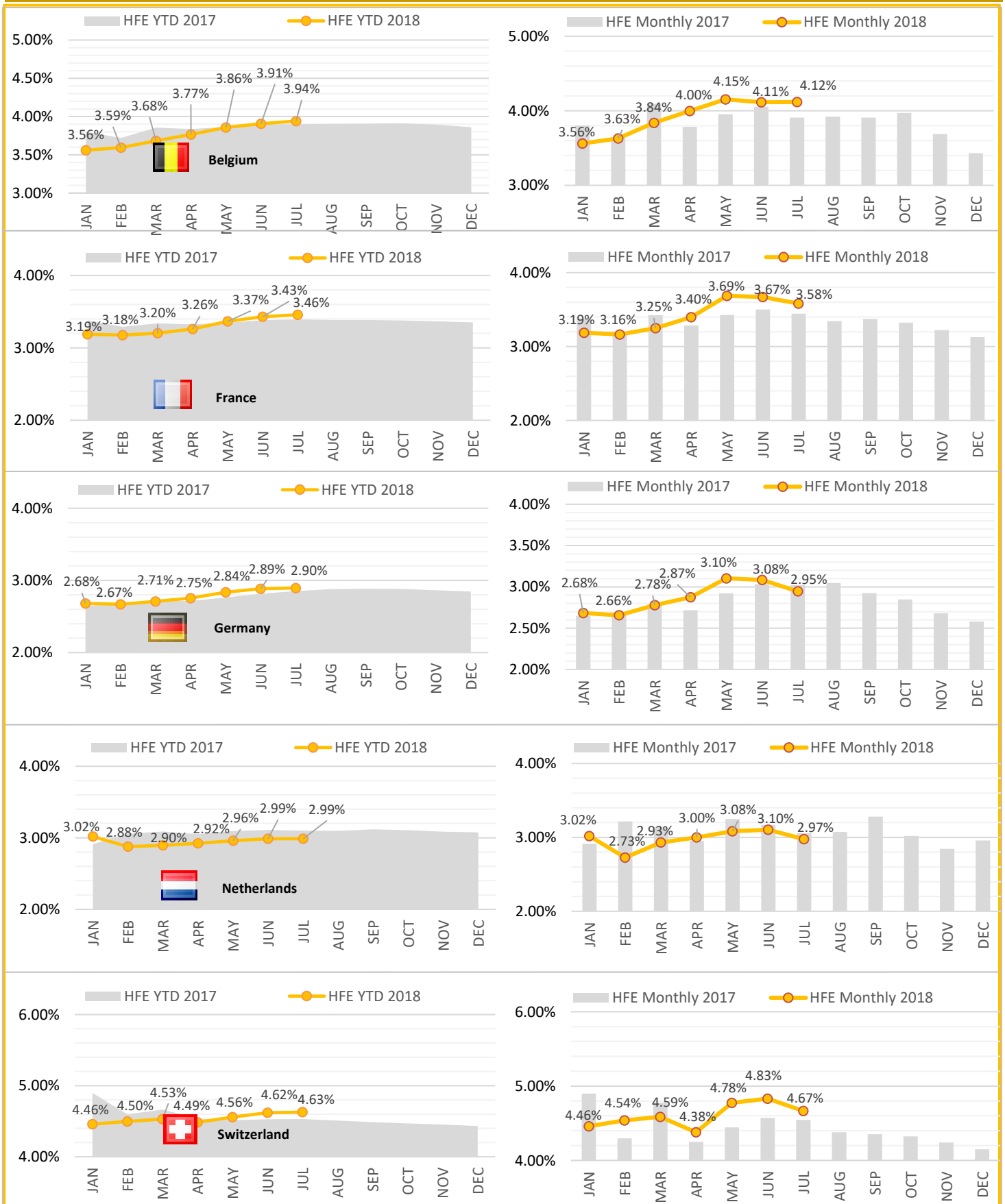
PI #2: KEP/HFE based on filed FPL at FABEC level (excl. 10 best/worst days)



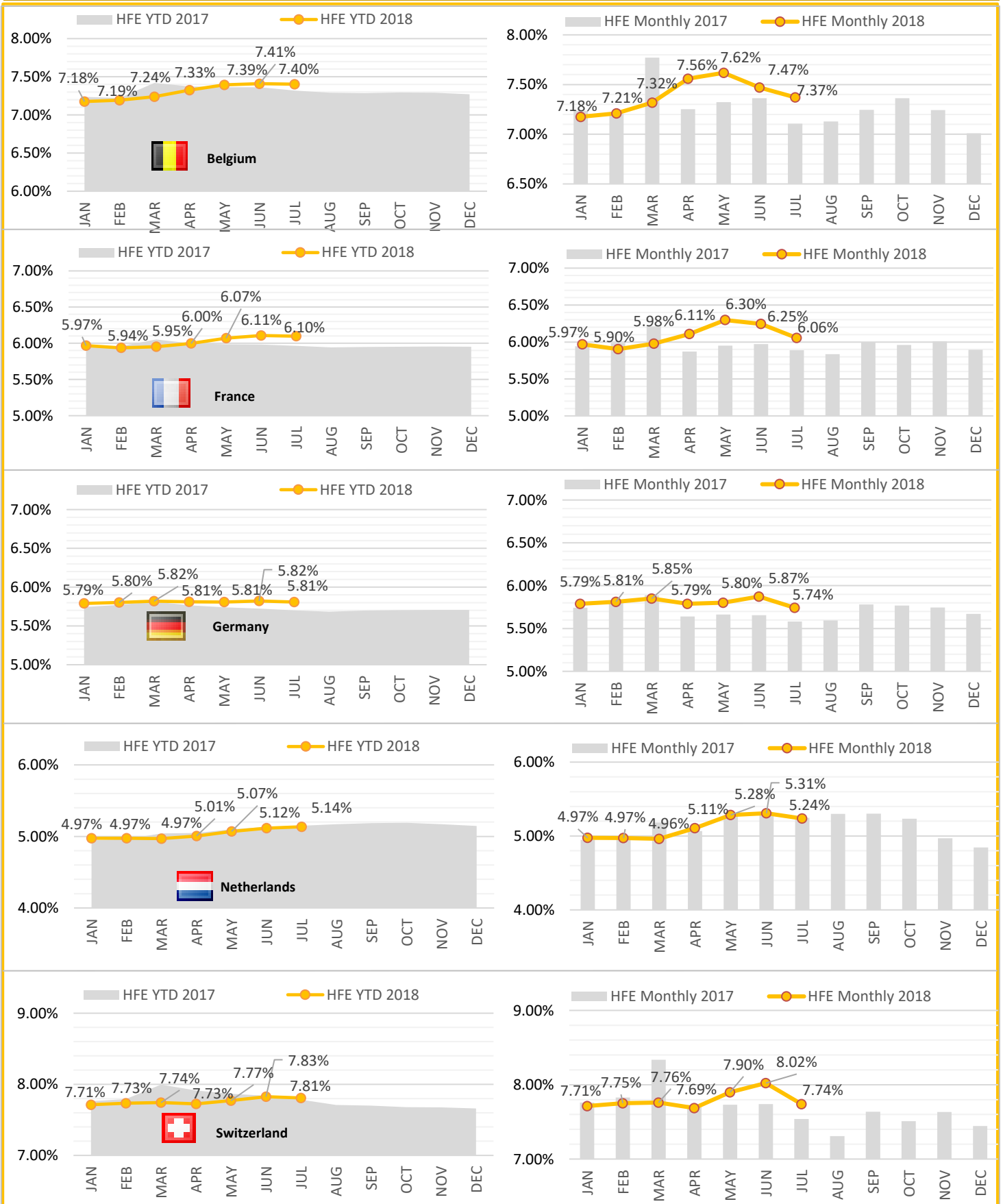
PI #3: HFE based on filed FPL at FABEC level (incl. all days)



PI #4: HFE based on Actual at State level (incl. all days)



PI #5: HFE based on filed FPL at State level (incl. all days)

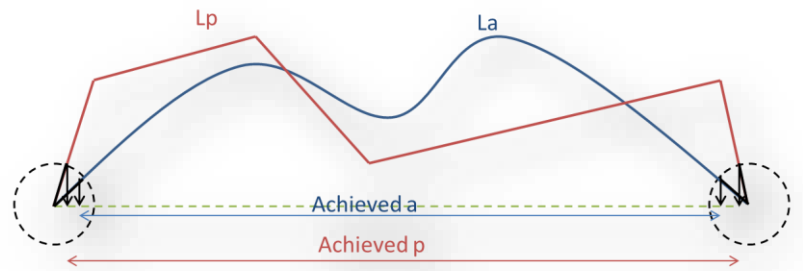


Glossary

KEP / KEA definition

KEP compares the length of the en route section of the last filed flight plan L_p with the corresponding Achieved p of the great circle distance.

KEA compares the length of the en route section of the actual trajectory L_a with the corresponding Achieved a of the great circle distance.



$$KEA = (L_a - \text{Achieved } a) / \text{Achieved } a$$

$$KEP = (L_p - \text{Achieved } p) / \text{Achieved } p$$

KEP is the reference for SES-wide improvement with a global target set by the European Commission. KEA is the reference for FAB improvements with individual targets set by the European Commission.

Achieved distance calculation

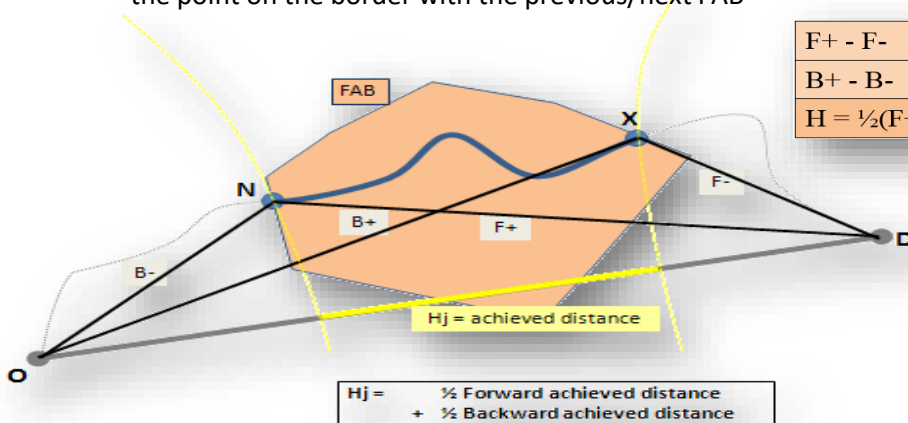
4 reference points are identified for KEP/KEA calculation :

The **O**rigin and **D**estination points are the targets of the trajectory and the reference points for the Great Circle:

- the airports inside the SES area
- when the airports are outside the SES area, they are the trajectory point at the SES border

The **eN**try and **eX**it points are the first and last points of the part of the trajectory considered within a FAB:

- the point on the 40NM circle around departure or arrival airport
- the point on the border with the previous/next FAB



F+ - F-	Forward achieved distance
B+ - B-	Backward achieved distance
$H = \frac{1}{2}(F+ - F-) + \frac{1}{2}(B+ - B-)$	Achieved distance

$$H_j = \frac{1}{2} \text{ Forward achieved distance} + \frac{1}{2} \text{ Backward achieved distance}$$

TABLE OF ABBREVIATIONS

ADEP - Airport of Departure

ANSP - Air Navigation Service Provider

ATFM - Air Traffic Flow Management

FABEC - Functional Airspace Block Europe Central

TMA - Terminal Manoeuvring Area, delimited by a 40 NM circle around the origin and destination airport.

ADES - Airport of Destination

PRU - Performance Review Unit

YTD - Year to Date value

FPP - FABEC Performance Plan

FABEC Performance Report Environment:

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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.