



PERFORMANCE REPORT 2015 - 2019

# ENVIRONMENT

May 2018



making the difference

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## Description & Analysis

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

Confirming the trend observed for the last 2 months, the inefficiency of flown trajectories on the horizontal plan is increasing with a value of 3.23%, stopping positive trend observed until March. The indicator is at 0.18pp above the yearly target (3.05%), and the trend is not downwards, taking into account the small increase of traffic by 1.00% in FABEC in May 2018 compared to May 2017. Difference between KEA and KEP is 2.74pp, same value to previous month. Severe delays experienced in May, whatever the reasons but mainly due to industrial actions, are the main explanations of the May performance figures, showing how important are the interdependencies between capacities, weather, and HFE.

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

On a monthly basis, HFE (KEA including all days) has reached 3.53%, which is a significant degradation compared to the previous month (3.27%) and which confirms reversal of the trend observed up until March 2018. Compared to May 2017 (3.32%), it represents an increase of the inefficiency values by 0.21pp.

### 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 is also showing a reversal of the trend, but remains below the bar of 6.00%. The improvement compared to April 2017 is clear anyway (5.97% vs 6.01%), considering that all cause delays in May 2018 are much higher than delays in May 2017 (en-route delays reached 3.75 min this month vs 0.98 min in May 2017). In an international context where traffic is still growing (+2.9% for Europe) very important delays due to industrial actions were observed this month compared to the same month in 2017, encouraging Aircraft Operators to file longer routes, also affected by strong delays due to reasons such as Capacity, Staffing, or Weather. Regarding delays due to weather, they were the most important delays for almost all FABEC ANSPs.

As a reminder, implementation in March 30<sup>th</sup> of S-WAFLE project in Bordeaux, offering more airspace for military training and then resulting in average to a route extension by 1NM for Bordeaux traffic, contributed to the deterioration of the indicator. 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 is also favored compared to May 2017 because en-route traffic (steady traffic = +1.0%) is growing more than evolving traffic (-1.0%) over FABEC area.

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

Compared to same value in 2017, the figure is showing an deterioration for May (6.21% vs 5.96% monthly, and 6.05% vs 5.99% for YTD), but cannot be considered as a bad result (especially YTD) taking into account that delays in May 2018 are much higher than delays of the same month of 2017 (+2.77' per flight for all causes, but +0.62' per flight for CRSTMP).

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

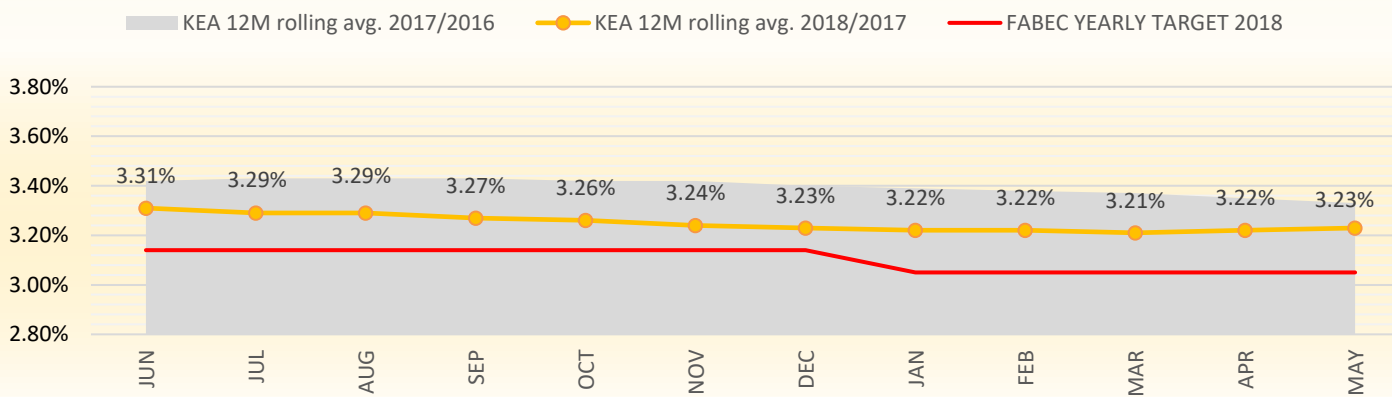
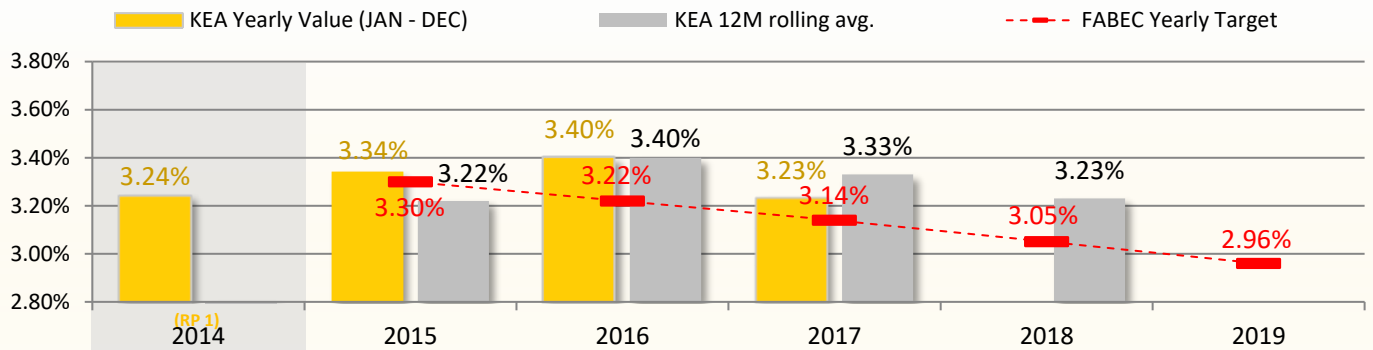
At national level, figures of YTD for all states are similar to figures of the same month of 2017 (with a small improvement for The Netherlands), but on a monthly basis, the inefficiency value is increasing for all states, except for The Netherlands, with the following results: Belgium (+0.20pp), Switzerland (+0.38pp), France (+0.26pp) and Germany (+0.18pp). 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).

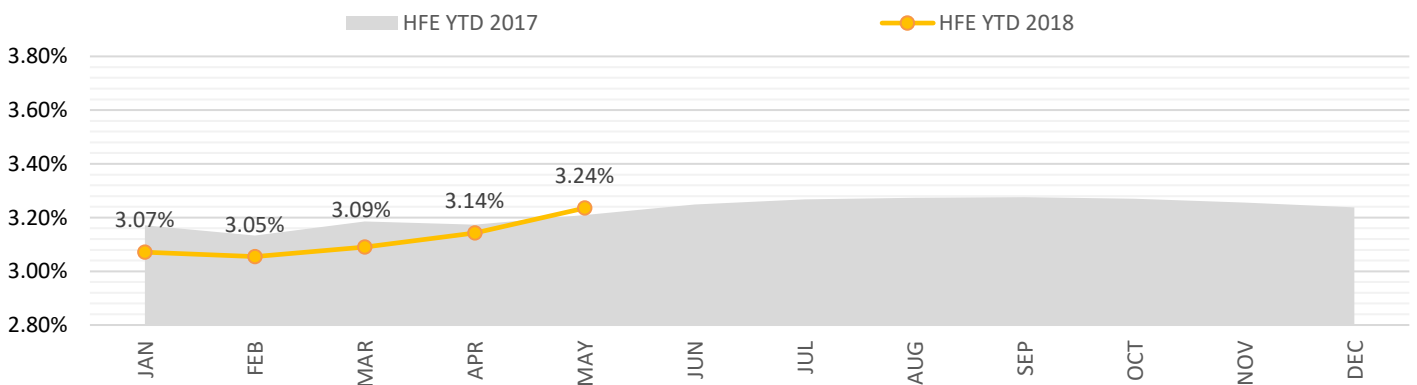
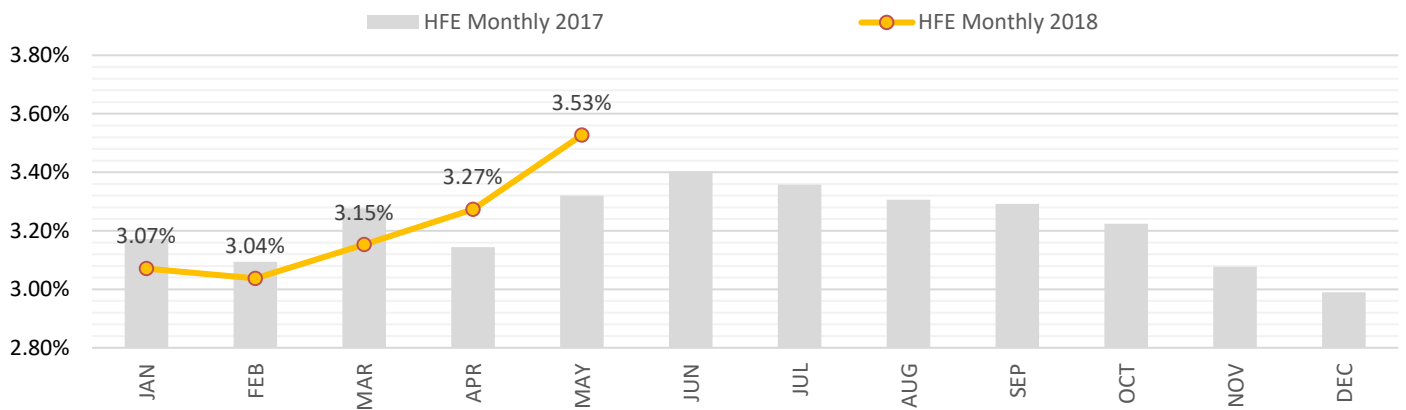
### ENV PI#5: HFE based on Filed FPL at State level (including all days)

At national level, figures of YTD for all states are similar to figures of the same month of 2017. On a monthly basis, inefficiency is increasing for all states with the following results: Belgium (+0.30pp), The Netherlands (+0.01pp), Switzerland (+0.17pp), France (+0.35pp) and Germany (+0.14pp).

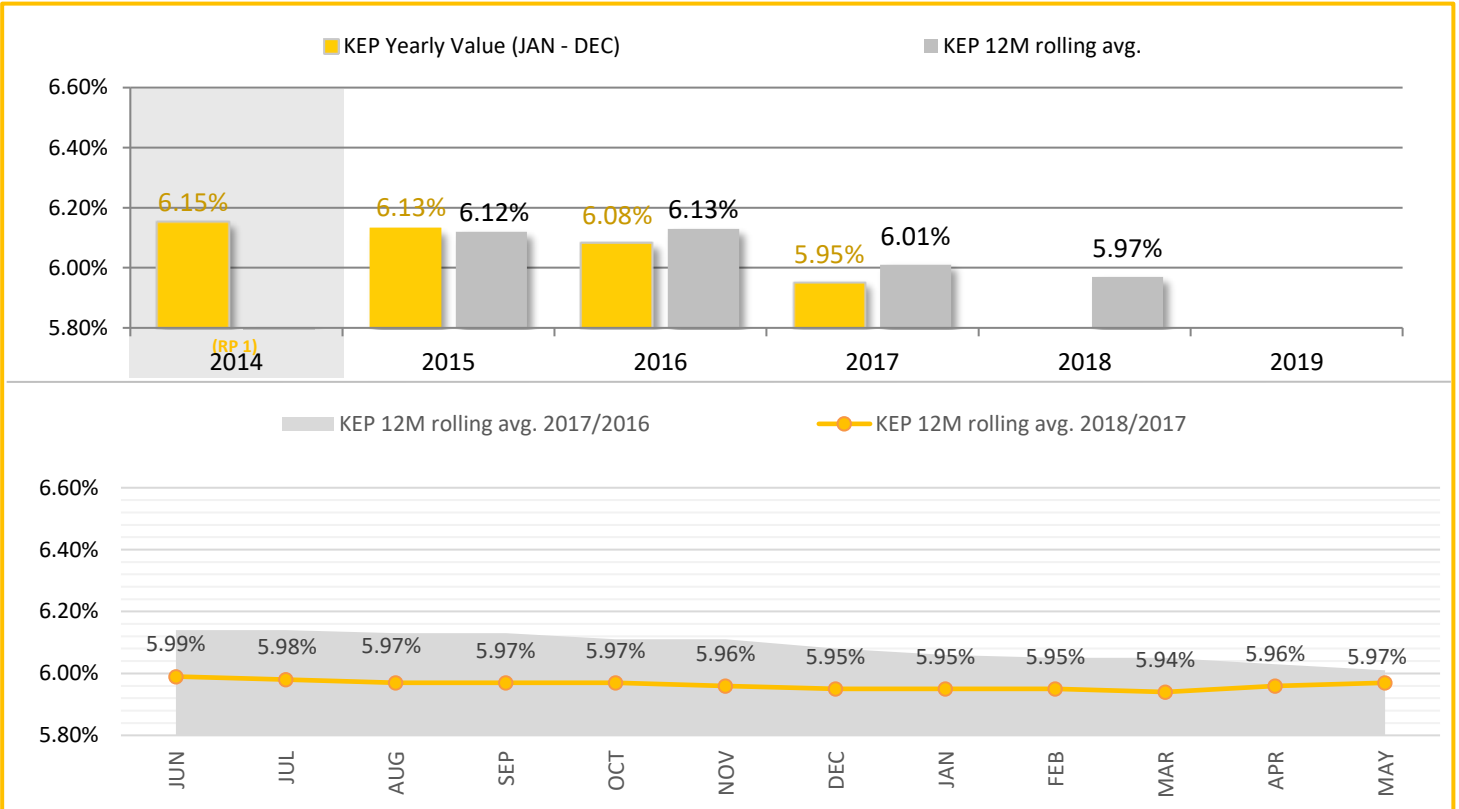
## KPI #1: KEA/HFE at FABEC level (excl. 10 best/worst days)



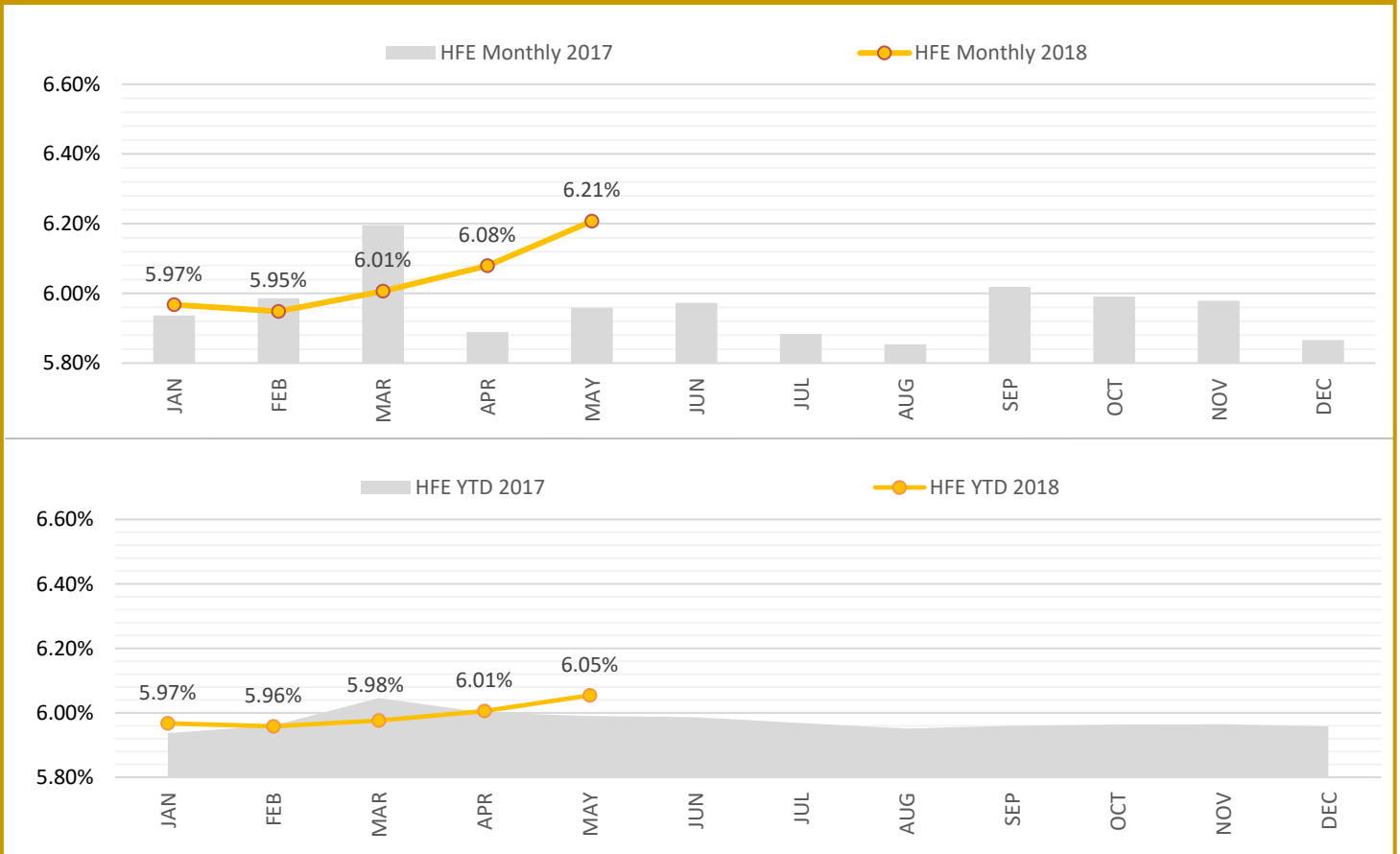
## PI #1: HFE based on Actual at FABEC level (incl. all days)



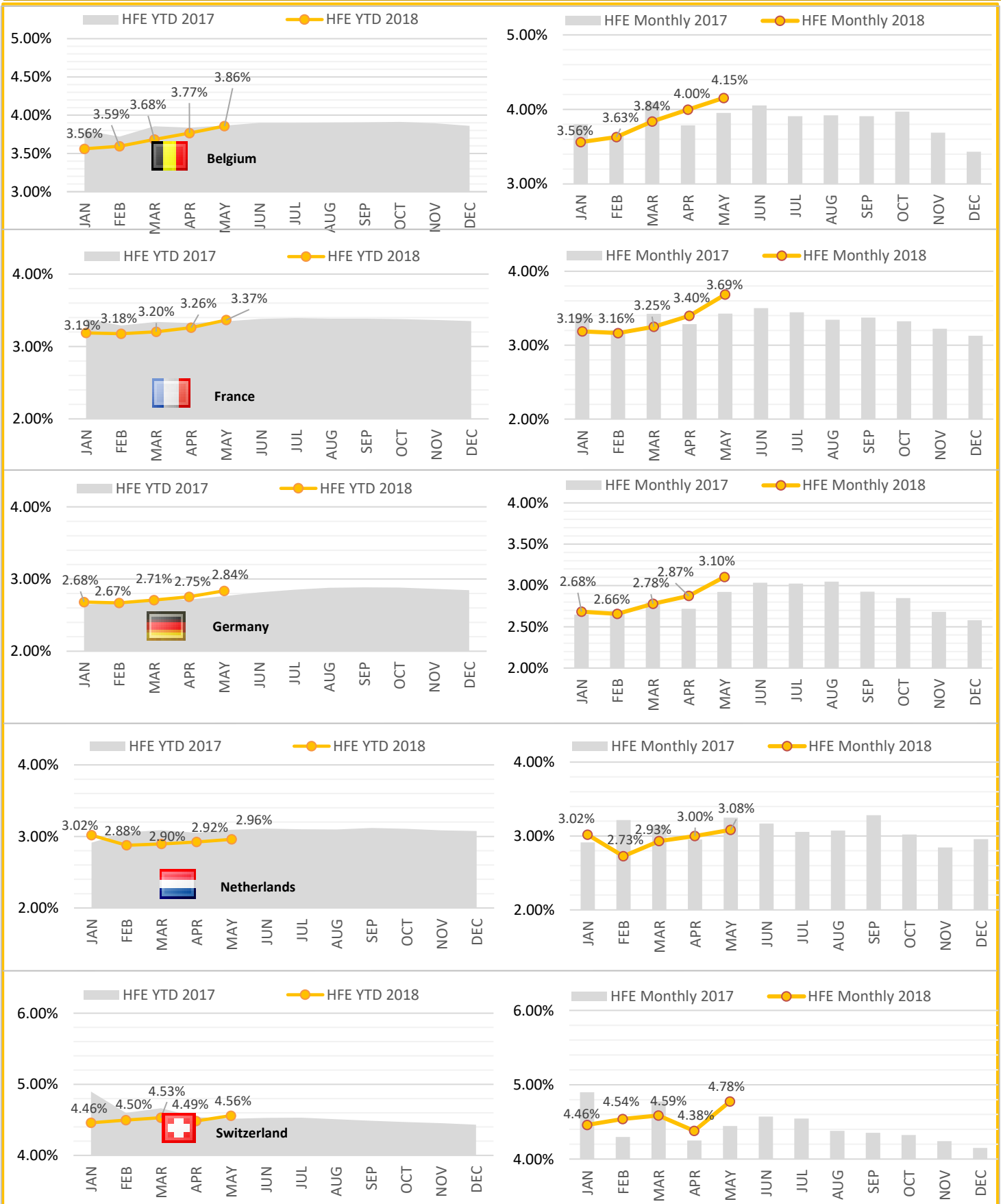
## PI #2: KEP/HFE based on filed FPL at FABEC level (excl. 10 best/worst days)



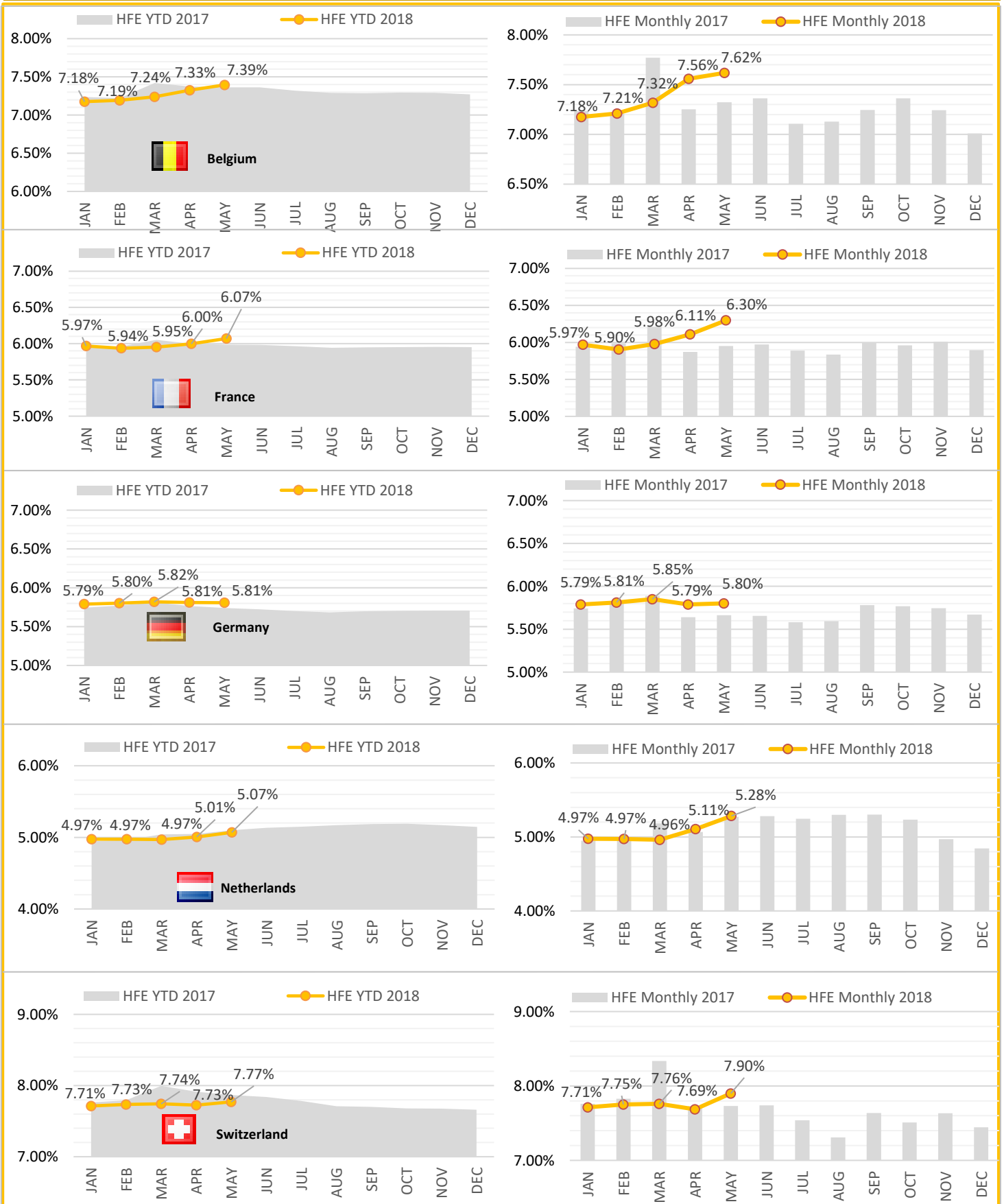
## PI #3: HFE based on filed FPL at FABEC level (incl. all days)



## 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)

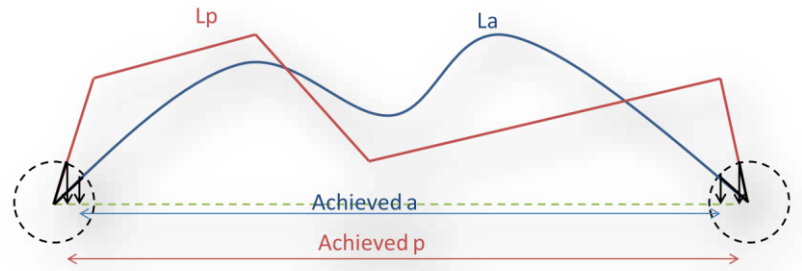


## Glossary

### 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

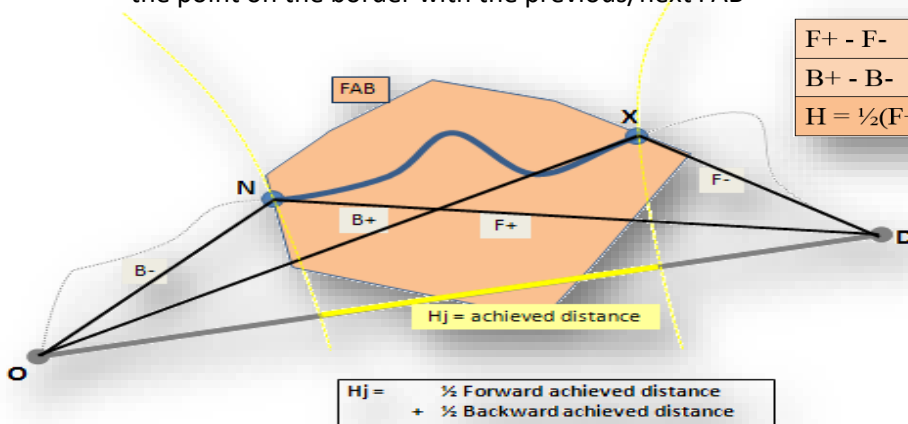
4 reference points are identified for KEP/KEA calculation :

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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[www.FABEC.eu](http://www.FABEC.eu)

### 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.