

# **Performance Review Board**

## **Monitoring Report**

### **Belgium - 2024**



**COPYRIGHT NOTICE  
AND DISCLAIMER**

© European Union, 2025

This document has been prepared for the European Commission by the Performance Review Board of the Single European Sky (PRB).

Reproduction is authorised provided the source is acknowledged. However, neither the European Commission, nor any person acting on its behalf, may be held responsible for the use which may be made of the information contained in this publication, or for any errors which may appear, despite careful preparation and checking.

## Contents

<b>1</b>	<b>OVERVIEW</b>	<b>2</b>
1.1	Contextual information.....	2
1.2	Traffic (En route traffic zone) .....	2
1.3	Safety (Main ANSP) .....	3
1.4	Environment (Member State) .....	4
1.5	Capacity (Member State).....	4
1.6	Cost-efficiency (En route/Terminal charging zone(s)) .....	5
<b>2</b>	<b>SAFETY - BELGIUM</b>	<b>7</b>
2.1	PRB monitoring .....	7
2.2	Effectiveness of Safety Management (EoSM) (KPI#1) .....	7
2.3	Safety occurrences .....	8
2.4	Use of automated safety data recording system (ASDRS) (PI#3) .....	9
<b>3</b>	<b>ENVIRONMENT - BELGIUM</b>	<b>10</b>
3.1	PRB monitoring .....	10
3.2	En route performance .....	10
3.3	Terminal performance .....	11
3.4	Civil-Military dimension .....	14
<b>4</b>	<b>CAPACITY - BELGIUM</b>	<b>16</b>
4.1	PRB monitoring .....	16
4.2	En route performance .....	16
4.3	Terminal performance.....	19
<b>5</b>	<b>COST-EFFICIENCY - BELGIUM</b>	<b>22</b>
5.1	PRB monitoring .....	22
5.2	En route charging zone .....	22
5.3	Terminal charging zone.....	27

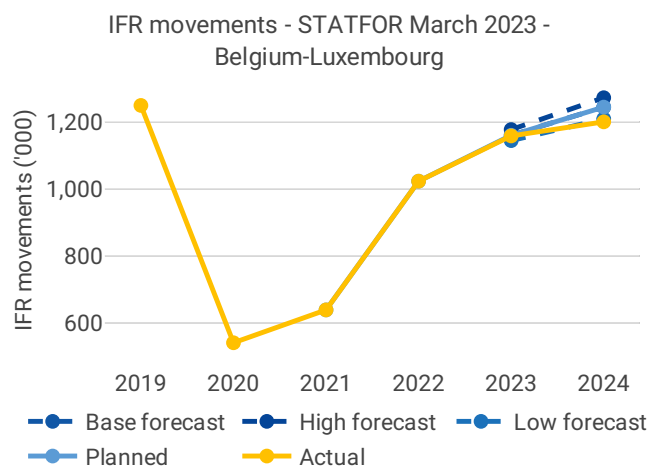
## 1 OVERVIEW

### 1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2024/350 of 13 December 2023

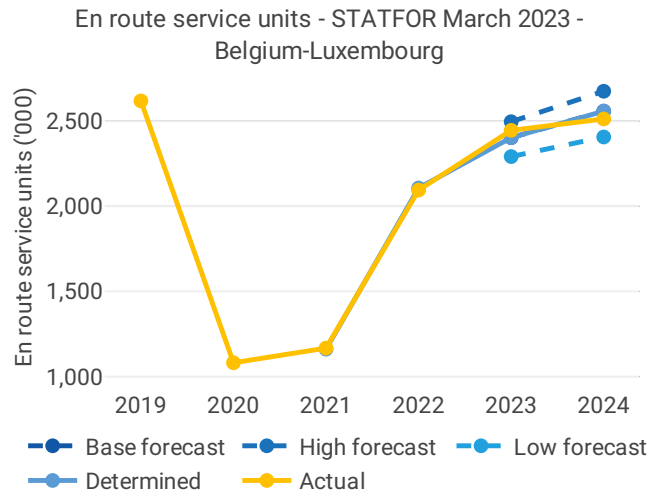
<p><b>List of ACCs</b> 1 Brussels ACC</p> <p><b>No of airports in the scope of the performance plan:</b></p> <ul style="list-style-type: none"> <li>• ≥80'K 1</li> <li>• &lt;80'K 0</li> </ul>	<p><b>Exchange rate (1 EUR=)</b> 2017: 1 EUR 2024: 1 EUR</p> <p><b>Share of Union-wide:</b></p> <ul style="list-style-type: none"> <li>• traffic (TSUs) 2024 1.9%</li> <li>• en route costs 2024 3.6%</li> </ul> <p><b>Share en route / terminal costs 2024</b> 86% / 14%</p> <p><b>En route charging zone(s)</b> Belgium-Luxembourg</p> <p><b>Terminal charging zone(s)</b> Belgium</p>	<p><b>Main ANSP</b></p> <ul style="list-style-type: none"> <li>• skeyes</li> </ul> <p><b>Other ANSPs</b></p> <ul style="list-style-type: none"> <li>• MUAC</li> </ul> <p><b>MET Providers</b> -</p>
--	--	---

### 1.2 Traffic (En route traffic zone)



- Belgium/Luxembourg recorded 1,200K actual IFR movements in 2024, +3.6% compared to 2023 (1,158K).
- Actual 2024 IFR movements were -3.5% below the plan (1,244K).
- Actual 2024 IFR movements represent 96% of the actual 2019 level (1,249K).





- Belgium-Luxembourg recorded 2,514K actual service units in 2024, +2.7% compared to 2023 (2,247K).
- Actual 2024 service units were -1.8% below the plan (2,560).
- Actual 2024 service units represent 96% of the actual 2019 level (2,620K).

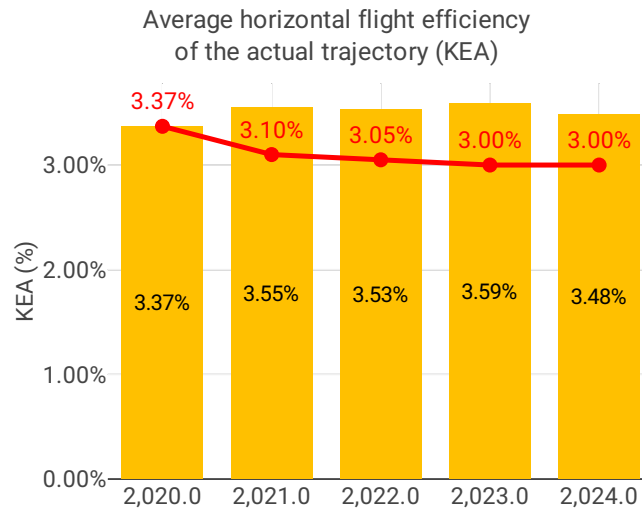
### 1.3 Safety (Main ANSP)



- In 2024, skeyes did not achieve its planned maturity level for Safety Risk Management and Safety Assurance. Consequently, skeyes did not achieve the RP3 target.
- The overall safety performance of skeyes was stable. The rate of separation minima infringements (SMIs) and runway incursion (RIs) were lower than in 2023 and remained below the Union-wide average.
- Belgium should ensure that the ANSP implements, in a timely and cost-efficient manner, the necessary additional measures such as enhanced processes, improved allocation of resources, targeted training, and systematic reviews. Without such actions, the achievement of the RP4 targets could be jeopardised.

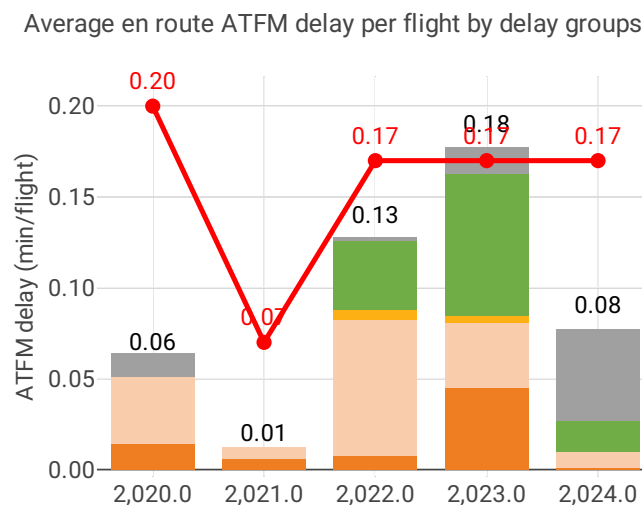


## 1.4 Environment (Member State)



- Belgium achieved a KEA performance of 3.48% compared to its target of 3.00% and did not contribute positively to the Union-wide target.
- The NSA states that given the limited size of the Belgium-Luxembourg airspace, possibilities to improve are limited and this effect is reinforced by the metric excluding an area of 40 nm around the departing/arriving airports.
- KEP improved and SCR improved marginally in comparison with 2023's performance. Despite the KEA target being missed, the improvement in SCR shows that Belgium has improved the environmental efficiency of its airspace when accounting for impacts outside of its control.
- The share of CDO flights increased from 16.20% to 17.69 in 2024.
- Both additional taxi out time and additional time in terminal remained stable in 2024 compared to 2023.

## 1.5 Capacity (Member State)

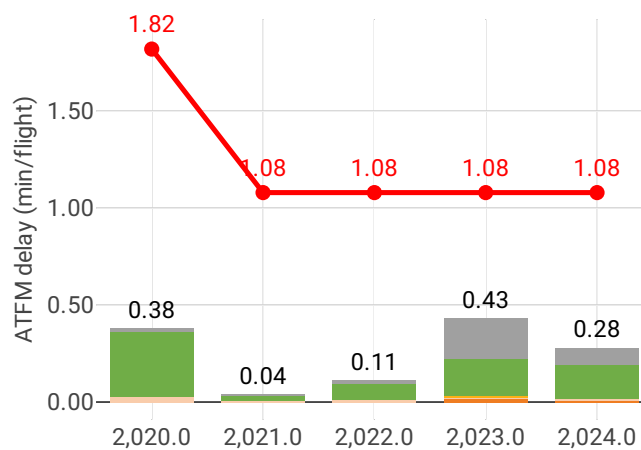


- Belgium registered 0.08 minutes of average en route ATFM delay per flight during 2024, which remained 0.08 after the post-ops adjustment process, thus achieving the local target value of 0.17. Delays in Belgium decreased by 0.01 minutes per flight year-on-year.



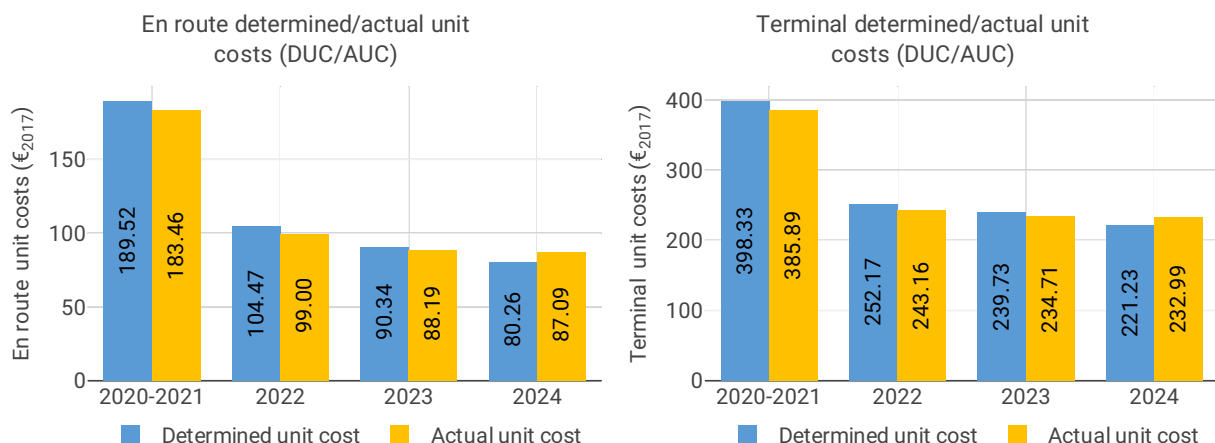
- The majority of delays accumulated in October, mostly due to other, non-ATC delays reasons and adverse weather conditions.
- The share of delayed flights with delays longer than 15 minutes in Belgium decreased by 6 percentage points compared to 2023 and was lower than 2019 values.
- The average number of IFR movements was 9% below 2019 levels in Belgium in 2024.
- The number of ATCOs in OPS is 92, being over the 2024 plan in Brussels by 1 FTE.
- The yearly total of sector opening hours in Brussels ACC was 28,637, showing a 0.4% increase compared to 2023. Sector opening hours are 1.7% below 2019 levels.
- Brussels ACC registered 20.27 IFR movements per one sector opening hour in 2024, being 7.0% below 2019 levels.

Average arrival ATFM delay per flight by delay groups



- character(0

### 1.6 Cost-efficiency (En route/Terminal charging zone(s))



- The en route 2024 actual unit cost of Belgium-Luxembourg was 87.09€<sub>2017</sub>, +8.5% higher than the determined unit cost (80.26€<sub>2017</sub>). The terminal 2024 actual unit cost of Belgium was 232.99€<sub>2017</sub>, +5.3% higher than the determined unit cost (221.23€<sub>2017</sub>).



- The en route 2024 actual service units (2.5M) were -1.8% lower than the determined service units (2.6M).
- The en route 2024 actual total costs were +13M€2017 (+6.6%) higher than determined. The gap was mainly due to the negative exceptional item which was included in the determined costs to achieve the RP3 cost-efficiency targets, but is not included in the actual costs. This was partially offset by lower staff costs than planned (-8.6M€2017, or -8.4%) for skeyes, which the NSA attributed to difficulties in recruitment.
- Skeyes costs of investments were 18M€2017 in 2024 for both en route and terminal charging zones, -9.8% less than determined (20M€2017). According to the NSA, this difference is due to projects delays and a lower fixed asset base.
- The en route actual unit cost incurred by users in 2024 was 97.80€ (-0.7% below the 2024 DUC). The terminal actual unit cost incurred by users was 186.67€ (-31% below the 2024 DUC) for Belgium and 226.12€ (-14% below the 2024 DUC) for Luxembourg. The differences between the AUCU and the DUC for the terminal charging zones of Belgium and Luxembourg are mainly affected by the adjustment of other revenues.



## 2 SAFETY - BELGIUM

### 2.1 PRB monitoring

- In 2024, skeyes did not achieve its planned maturity level for Safety Risk Management and Safety Assurance. Consequently, skeyes did not achieve the RP3 target.
- The overall safety performance of skeyes was stable. The rate of separation minima infringements (SMIs) and runway incursion (RIs) were lower than in 2023 and remained below the Union-wide average.
- Belgium should ensure that the ANSP implements, in a timely and cost-efficient manner, the necessary additional measures such as enhanced processes, improved allocation of resources, targeted training, and systematic reviews. Without such actions, the achievement of the RP4 targets could be jeopardised.

### 2.2 Effectiveness of Safety Management (EoSM) (KPI#1)



#### Focus on EoSM

Three EoSM components of the ANSP meet the RP3 target level. Over 2024, degradation was observed for one question for “Safety Assurance” reducing the maturity of the component from level C to the level B, and consequently not achieving the target for this component. Additionally, the ANSP will need to improve two questions for “Safety Risk Management” to achieve RP3 targets.

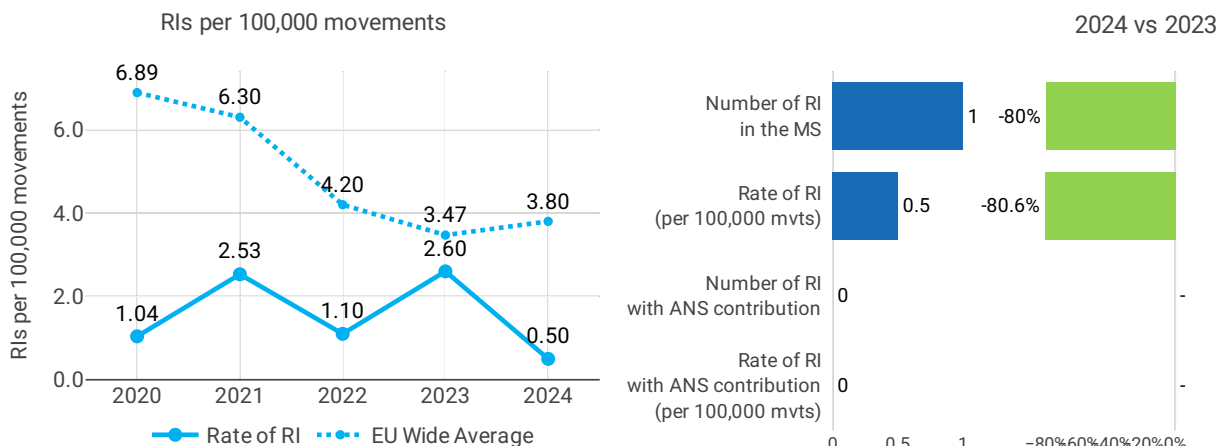
Having achieved the maturity level C for all Management Objectives in 2023, skeyes degraded performance in 2024 for Safety Assurance, being unable to demonstrate the implementation of a compliant internal SMS auditing process. As a result, the NSA downgraded the maturity level of this component to level B. In addition, skeyes did not manage the planned improvement in Safety Risk Management, still needing to improve on 2 of the 3 areas defined in the RP3 EoSM.

The NSA established a training programme for its staff to ensure a consistent and coherent approach to assess safety management. Additionally, the NSA will conduct an audit of skeyes’ SMS to verify the effectiveness of the measures implemented.



## 2.3 Safety occurrences

### 2.3.1 Rate of runway incursions (RIs) (PI#1)

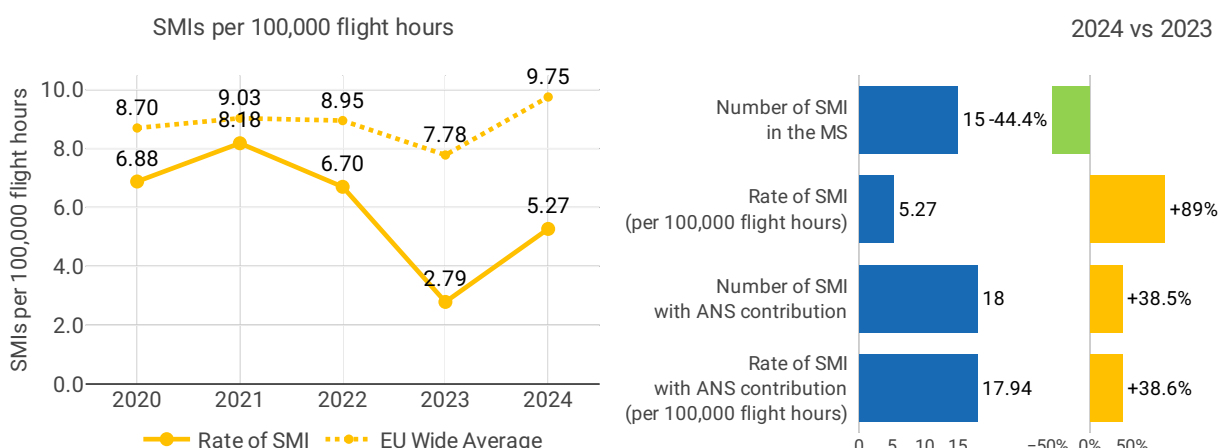


Rate of RIs per 100,000 airport movements - Belgium				
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Brussels	198,617	0	0.00

### Focus on runway incursions

The overall safety performance of the Member State over RP3 was stable, with a single occurrence of runway incursion (RI) in 2024 compared to 5 in 2023. Belgium remained, in respect to RIs, well below the Union-wide average throughout RP3, with few runway incursions.

### 2.3.2 Rate of separation minima infringements (SMIs) (PI#2)



Rate of SMI with ANS contribution per 100,000 flight hours											
#	ANSP	Flight hours					Number of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	skeyes	55,762	134,413	97,089	100,450	100,314	1	5	6	13	18



#	ANSP	Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	skeyes	2	8	8	20	18		+356%	+1%	+142%	-10%

## Focus on separation minima

The overall safety performance of the Member State saw an upward jump in 2024 compared to 2023, but still below the rate seen in early RP3 and with a rate remaining below the Union-wide average. Skeyes has seen an increasing trend in SMIs from 2022 and onwards, but with a rate of SMIs well below the Union-wide average.

### 2.3.3 Quality of occurrences reporting

Belgium adjusted the number of RP3 occurrences in 2024 to cater for an error in the determination of events at the ANSP level for both RIs and SMIs.

### 2.4 Use of automated safety data recording system (ASDRS) (PI#3)

Use of automated safety data recording system - 2024	
For RIs	For SMIs
X	X



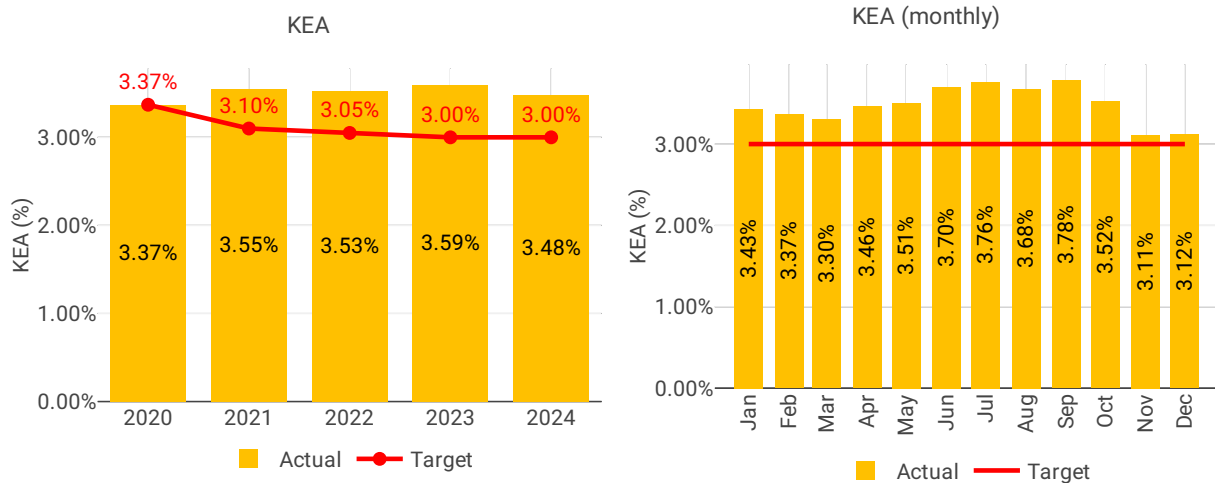
### 3 ENVIRONMENT - BELGIUM

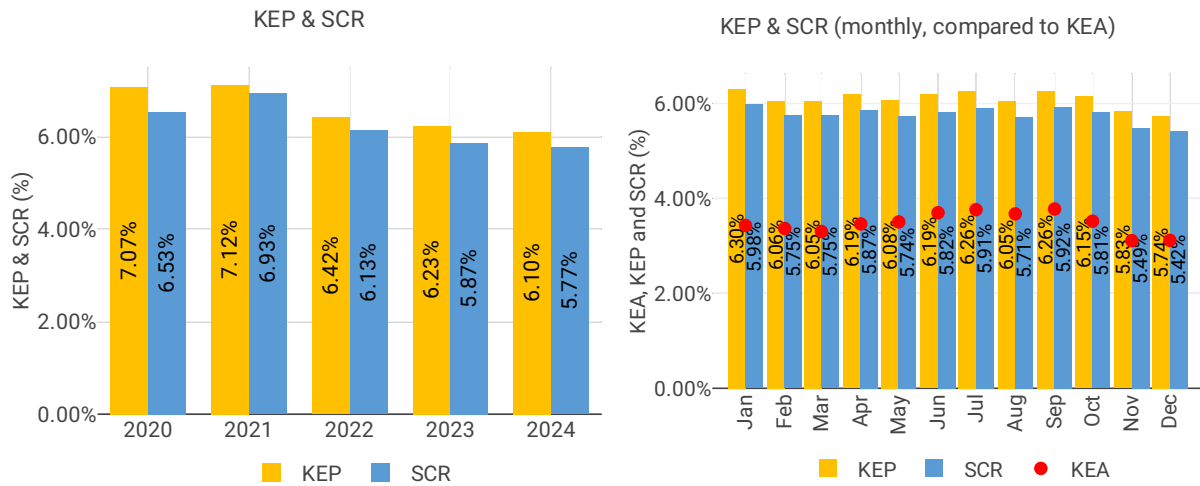
#### 3.1 PRB monitoring

- Belgium achieved a KEA performance of 3.48% compared to its target of 3.00% and did not contribute positively to the Union-wide target.
- The NSA states that given the limited size of the Belgium-Luxembourg airspace, possibilities to improve are limited and this effect is reinforced by the metric excluding an area of 40 nm around the departing/arriving airports.
- KEP improved and SCR improved marginally in comparison with 2023's performance. Despite the KEA target being missed, the improvement in SCR shows that Belgium has improved the environmental efficiency of its airspace when accounting for impacts outside of its control.
- The share of CDO flights increased from 16.20% to 17.69 in 2024.
- Both additional taxi out time and additional time in terminal remained stable in 2024 compared to 2023.

#### 3.2 En route performance

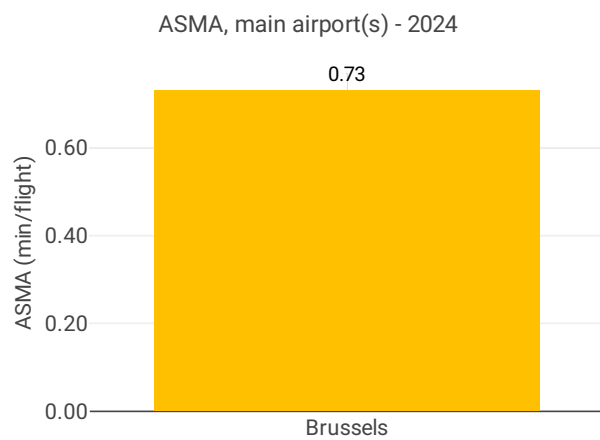
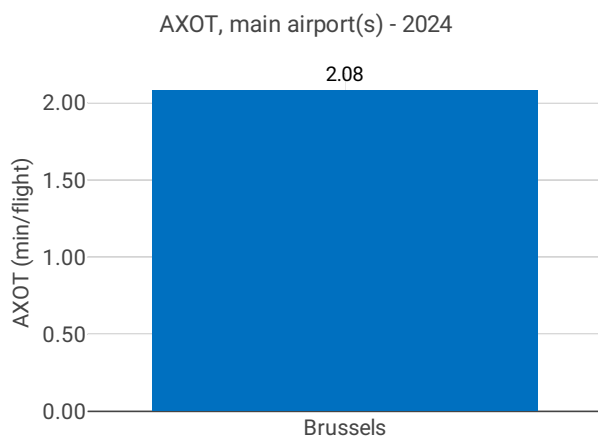
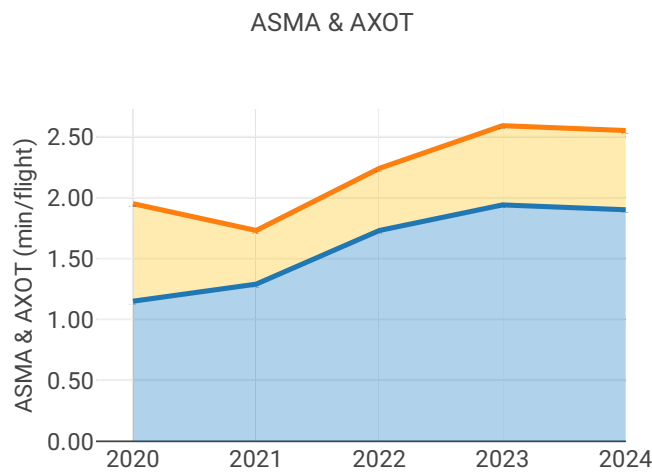
##### 3.2.1 Horizontal flight efficiency of the actual trajectory (KEA) (KPI#1), of the last filed flight plan (KEP) (PI#1) & shortest constrained route (SCR) (PI#2)





### 3.3 Terminal performance

#### 3.3.1 Additional taxi-out time (AXOT) (PI#3) & Arrival Sequencing and Metering Area (ASMA) time (PI#4)



## Focus on ASMA & AXOT

### AXOT

Additional taxi-out times at Brussels (EBBR; 2019: 2.21 min/dep.; 2020: 1.36 min/dep.; 2021: 1.28 min/dep.; 2022: 1.53 min/dep.; 2023: 2.14 min/dep.; 2024: 2.08 min/dep) decreased in 2024 and remained below the SES average in 2024 of 2.91 min/dep.

According to the Belgian monitoring report: *For Belgium, it is noted that some factors included in the Taxi-out time (for example: push-back time) influence this indicator but are beyond control of ANSP.*

*A-CDM is implemented for many years, and continuously being improved. Latest improvements were focused on incorporating de-icing (and hence reducing taxi times). Taxi-out time includes – for example – push-back time. Those (and other) factors – influencing the indicator – are beyond control of ANSP. Improvement of A-CDM is also part of Stargate (EU Green Deal Project for more sustainable aviation). Within this framework, skeyes will provide support to Brussels Airport in developing e-learning modules to create awareness and better understanding of the concept for the airport stakeholders and the fellow airports. The Lighthouse will also enhance reporting and monitoring of KPIs within A-CDM towards more efficient and, thus, more sustainable operations.*

The monitoring report also mentions: *The additional taxi-out time is computed by EUROCONTROL/PRU and can be retrieved on the SES e-dashboard (<https://www.eurocontrol.int/prudata/dashboard>), but the indicator is not available for all airports. However, the methodology defined by PRU is still under discussion because it remains unclear what the time difference from year to year indicates, or the meaningfulness of an airport A versus airport B comparison, in particular when focussing on the ANSP influence on the performance.*

### ASMA

Additional ASMA times at Brussels decreased in 2024 (EBBR; 2019: 1 min/arr.; 2020: 0.89 min/arr.; 2021: 0.47 min/arr.; 2022: 0.57 min/arr.; 2023: 0.75 min/arr.; 2024: 0.73 min/arr.) and remained well below the SES average of 1.28 min/arr.

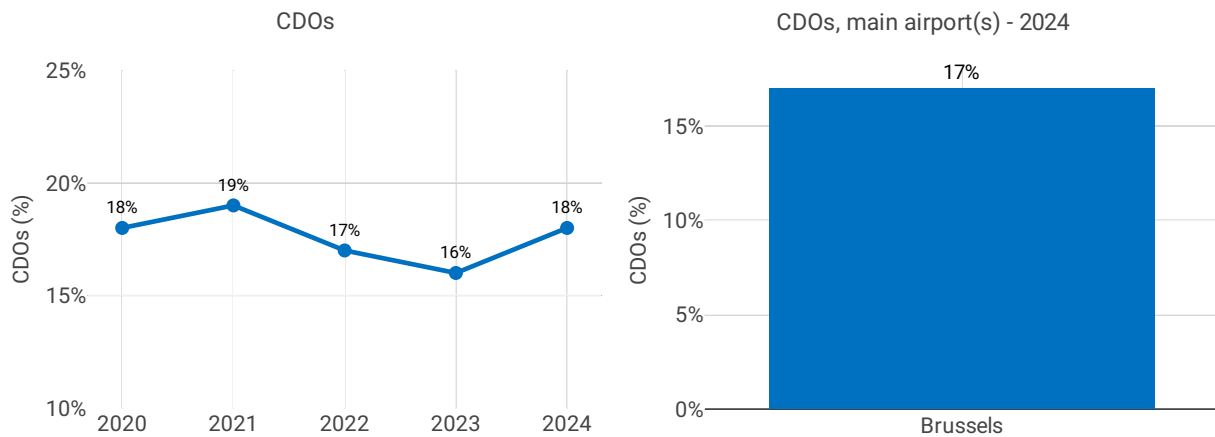
According to the Belgian monitoring report: *For Belgium, ASMA is considered to be intended primarily to capture terminal holdings. Within EBBR, stacking aircraft in holding to absorb delays (similar to EGLL) is seldomly applied. Within a radius of 30 NM around EBBR, radar vectoring is most often applied.*

*Depending on the traffic demand, shorter or longer trajectories are being flown (-> sequencing). However radar vectoring has the advantage that shortest routes can be issued, hence leading to 'best possible' ASMA values, while of course taking into account applicable restrictions (e.g. noise abatement). Purely for the sake of ASMA, the current working methods (vectoring), probably leave very limited room for improvement. The real challenge is improving predictability in the arrival process (vectoring -> increased use of fixed routings), without deteriorating ASMA.*

The monitoring report also mentions: *The additional time in terminal airspace (ASMA) is computed by EUROCONTROL/PRU and can be retrieved on the SES e-dashboard (<https://www.eurocontrol.int/prudata/dashboard/data/>). However, the methodology defined by PRU is still under discussion. FABEC trials showed that changes of the ambient air temperature alone can significantly influence the measured performance.*



### 3.3.2 Share of arrivals applying continuous descent operations (CDOs) (PI#5)



#### Focus CDOs

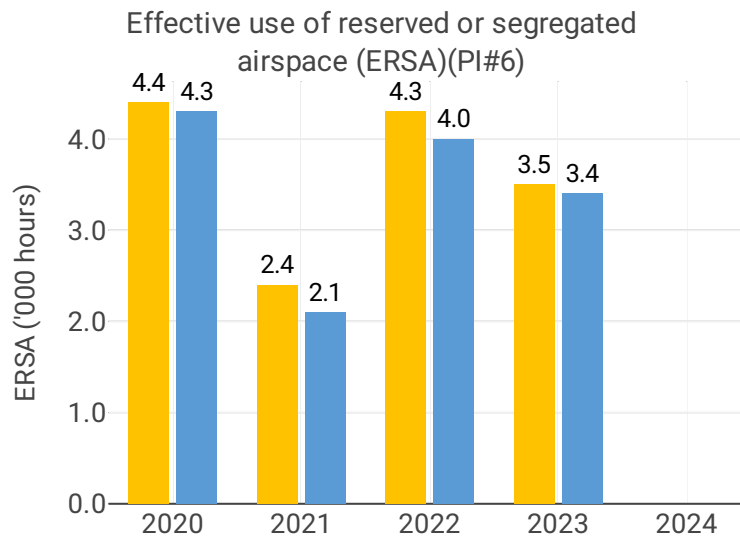
The share of CDO flights for Brussels is 17.5% which is an increase of 1.5 percentage points but still quite low compared to other airports with similar traffic numbers and the overall RP3 value in 2024 (29.3%).

According to the Belgian monitoring report: *skeyes has been running several initiatives/projects to improve the facilitation of CDOs at EBBR. This includes implementation of PBN procedures, promotion of RNP (Required Navigation Performance) procedures (in the framework of Stargate project – see 2.2.2.(d)) and operational demonstration of ISGS (Increased Second Glide Slope) at Brussels airport (in the framework of HERON project, currently in its live trial phase). Additional CDO indicators have been developed and implemented, focusing on level-offs. Those are discussed in CEM meetings and are visible on BATC website. Besides, skeyes maintains a collaboration with main OPS stakeholders at EBBR (ATC/airport/airlines) through CEM (Collaborative Environmental Management) platform to further reduce the environmental impact of airport operations.*

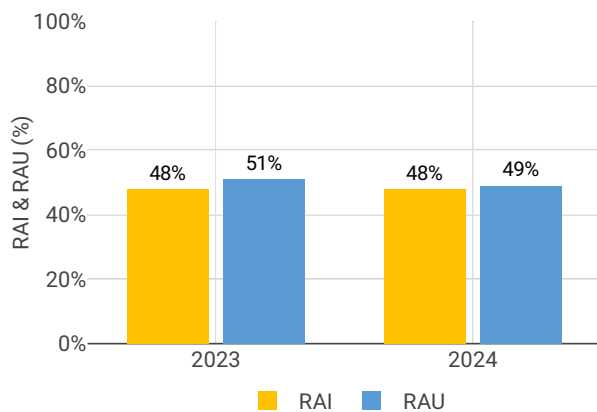
Airport level															
Airport	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels	1.36	1.28	1.53	2.14	2.08	0.89	0.47	0.57	0.75	0.73	18%	20%	17%	16%	17%



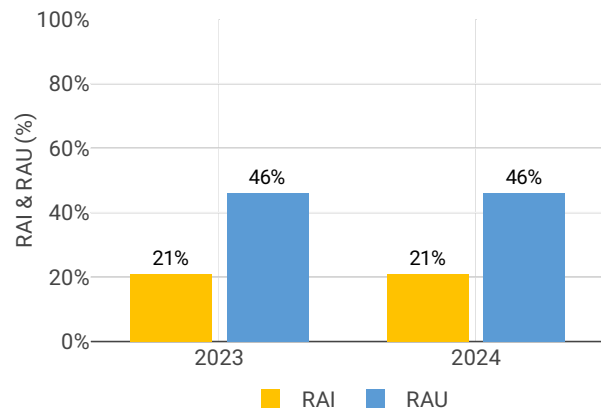
### 3.4 Civil-Military dimension



RAI & RAU via available conditional routes (PIs#7 & 8)



RAI & RAU via available restricted and segregated airspace (PIs#7 & 8)



### Focus on Civil-Military dimension

#### Update on Military dimension of the plan

For obvious flight safety reasons, military activities must be segregated from civil flows which has an impact on both horizontal (HFE) and vertical flight efficiency (VFE). Because ASM manageable areas form an integral part of the nominal system, military airspace reservations shall be considered as part of the performance baseline rather than a key factor degrading environmental KPIs.

As a result of implementation of the FUA concept the impact of military activities using Restricted Airspace -RSA on civil performance is highly minored when associated with an efficient ASM process:

- At strategic level (HLAPB) by designing areas in accordance with A-FUA concept (MVPA/VGA structures), especially for congested airspaces.
- At pre-tactical level (AMC), by managing these areas in a dynamic way, with an associated level 2 CDM process, validated by HLAPB.



- At tactical level (ACC/Regional Military Control Centre) by activating/deactivating areas as close as possible to actual use and allowing crossing or direct routes when possible (in accordance with TRA status), with an associated level 3 CDM process validated by HLAPB.
- At each level, HLAPB, AMC or ACC/Regional Military Control Centre, a key factor of efficiency is a trust-driven civil-military cooperation. As a counterpart, AOs and CFSPs must be reactive and take efficiently into account available or released airspaces. At last, ANSP have also to adapt the route network to create more DCTs within military areas.

Finally, local circumstances (e.g. constrained airspace, proximity of international hubs, etc....) as well as a large number of military missions that differ from one State to another must be taken into account. Therefore, airspace needs (e.g. airspace requirements for the 5th generation fighters) and related ASM procedures of the States differ and standardized objectives cannot be defined.

### **Military - related measures implemented or planned to improve capacity**

FABEC States are working on mid-term improvements regarding implementation of ASM level 1, 2, and 3 procedures. Some local initiatives regarding ASM/ATFCM convergence, like the traffic Light Scheme concept in France are promoted at FABEC level, as well as at ECAC level in the EUROCONTROL OEP framework.

Another major improvement is the interconnection of the existing ASM tools (e.g. LARA, STANLY\_ACOS) at FABEC Level, to enhance regional coordination among FABEC AMCs as well as with the NM.

### **Initiatives implemented or planned to improve PI#6**

Since Jan 23 BEL implemented fully (after trial period) the advanced FUA principles whereby only planned activity is published via AUP on D-1, while extra bookings remain possible up to H-3; this results in a more stable network for the airline users and ANSPs without impacting too much the flexibility of the military. The BB-AUP was introduced in the Belgian Airspace

### **Initiatives implemented or planned to improve PI#7**

n/a

### **Initiatives implemented or planned to improve PI#8**

n/a



## 4 CAPACITY - BELGIUM

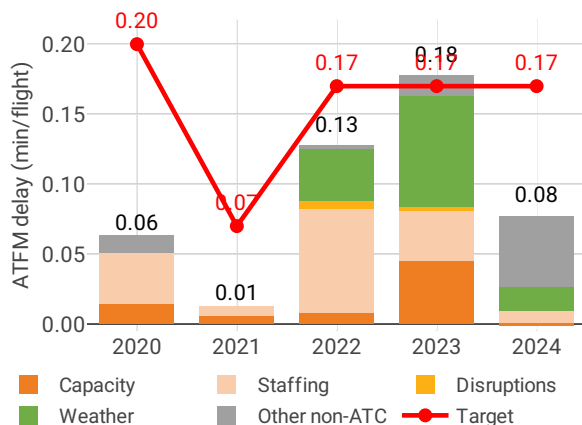
### 4.1 PRB monitoring

- Belgium registered 0.08 minutes of average en route ATFM delay per flight during 2024, which remained 0.08 after the post-ops adjustment process, thus achieving the local target value of 0.17. Delays in Belgium decreased by 0.01 minutes per flight year-on-year.
- The majority of delays accumulated in October, mostly due to other, non-ATC delays reasons and adverse weather conditions.
- The share of delayed flights with delays longer than 15 minutes in Belgium decreased by 6 percentage points compared to 2023 and was lower than 2019 values.
- The average number of IFR movements was 9% below 2019 levels in Belgium in 2024.
- The number of ATCOs in OPS is 92, being over the 2024 plan in Brussels by 1 FTE.
- The yearly total of sector opening hours in Brussels ACC was 28,637, showing a 0.4% increase compared to 2023. Sector opening hours are 1.7% below 2019 levels.
- Brussels ACC registered 20.27 IFR movements per one sector opening hour in 2024, being 7.0% below 2019 levels.

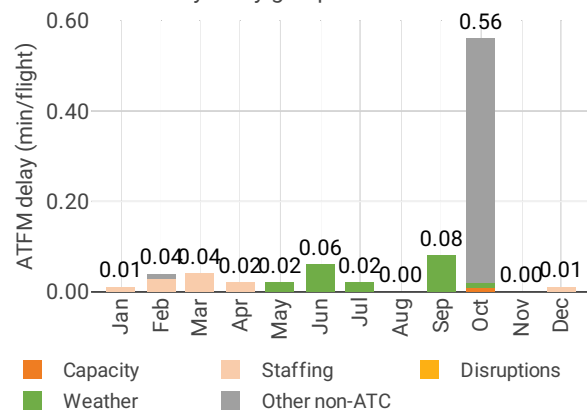
### 4.2 En route performance

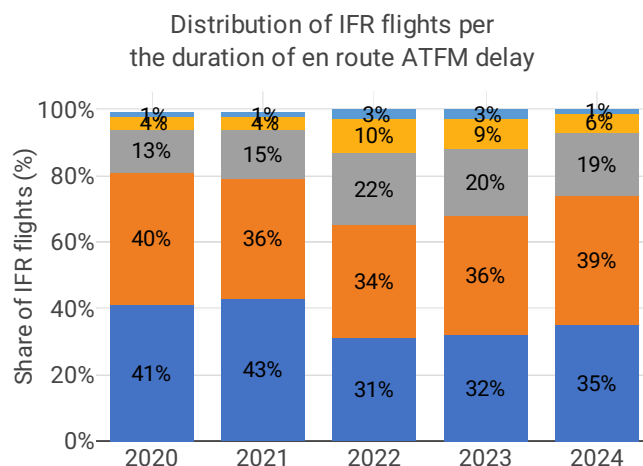
#### 4.2.1 En route ATFM delay (KPI#1)

Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay by delay groups - 2024





## Focus on en route ATFM delay

### Summary of capacity performance

Belgium & Luxembourg did not achieve the required en route capacity performance for 2024. There were 1 244k flights handled in the airspace of Belgium & Luxembourg (both Brussels ACC and the Brussels sectors in MUAC) with 238k minutes of en route ATFM delay. In 2023 there were 1 174k flights with 206k minutes of en route ATFM delay.

### NSA's assessment of capacity performance

En route capacity target was not achieved.

### Monitoring process for capacity performance

For skeyes, capacity monitoring is executed via the process as described in the manual of the NSA. Relevant data are collected from skeyes, FABEC and other entities (Eurocontrol dashboard). If delays occur, a justification can be requested from skeyes, with potential corrective action request afterwards.

MUAC reports its en-route capacity performance to the states through the MUAC Finance and Performance committee. The performance data is also monitored on a monthly basis through the FAO/PMG (FABEC ANSP Office / Performance Management Group) capacity report. This report is based on MUAC data and available PRU data, which is consolidated and analysed and the results compared to the reference and indicative values. Even though the FABEC states now have national performance plans, the monitoring for en-route capacity performance is carried out under the auspices of the FABEC Financial and Performance Committee (FPC), counterpart of the European Commission at the States side, consulting and reporting to FABEC Council as appropriate.

On a monthly basis and through the FAO/PMG /FABEC ANSP OFFICE/ Performance Management Group) the ANSPs collectively submit a report to the FPC, based on PRU available data, consolidated and analysed, on their joint progress in achieving the FABEC target set and reference or indicative values and on the results and analysis of the en- route capacity achievement.

In case the target set and/or the annual/reference values are threatened not to be met, FAO/PMG is asked to propose to FPC possible corrective measures which the ANSPs determine fit to react to the weaker performance at FAB, national and/or ACC level, in order to remedy the situation.



The FPC analyses the reports, assesses the actions considered by the ANSPs together with the necessity of appropriate measures to be taken by the States or the NSAs and makes an advice to the proposals, made by the FAO/PMG, to the FABEC Council for such appropriate measures, after consultation with the FAO/PMG. The potential corrective measures take into account the seriousness of the risk of not meeting the targets set and/or the annual/reference values.

This monitoring process is described in the FABEC FPC States Performance Process description, which is regularly updated.

### Capacity planning

A weekly Rolling NOP, published every Friday has been introduced through which NM coordinates with all partners to ensure capacity is available at ACCs and in the airspace they manage, and on the ground at airports, to meet the expected traffic demand from the airlines on each day of the next six weeks enabling to coordinate all operational stakeholders throughout the pandemic to ensure that network actors can plan their recovery effectively based on predicted traffic levels.

### Application of Corrective Measures for Capacity (if applicable)

No corrective measures listed.

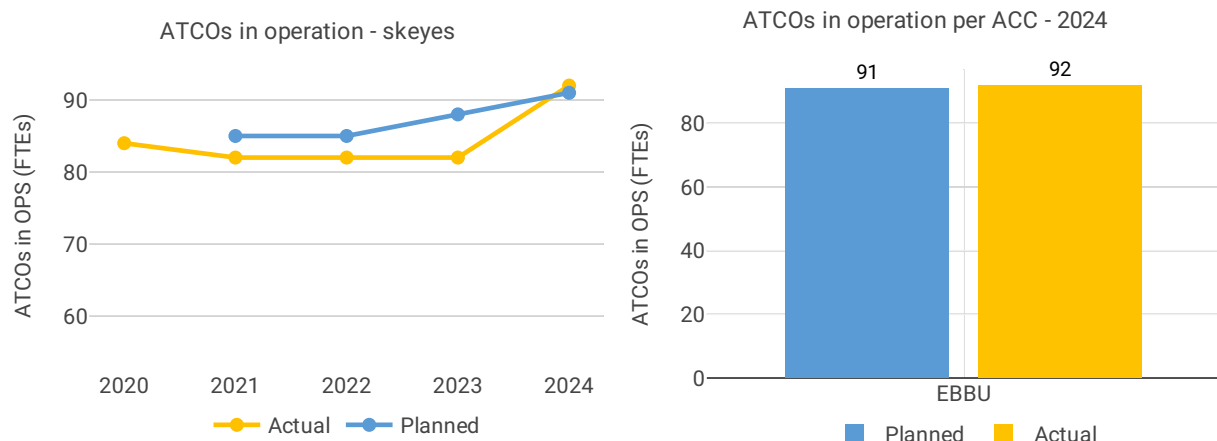
### En route Capacity Incentive Scheme

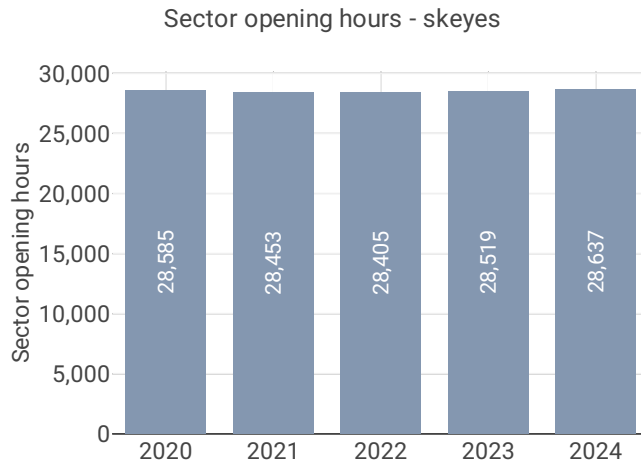
**Skeyes:** The incentive scheme is based only on delays attributed to C,R,S,T,M & P delay codes. The skeyes target was set at 0.1 minutes per flight and the actual performance is reported as 0.06 minutes per flight (CRSTMP only). This results in a reported bonus of €389 711.

**MUAC:** The incentive scheme is based only on delays attributed to C,R,S,T,M & P delay codes. The MUAC target was set at 0.086 minutes per flight and the actual performance is reported as 0.11 minutes per flight (CRSTMP only). This falls within the deadband resulting in neither bonus nor malus.

In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No incentive scheme was applicable for Belgium in 2023 since the performance plan was only adopted in the same year.

#### 4.2.2 Other indicators





### Focus on ATCOs in operations

Brussels ACC: 2023 has been corrected from 82 FTE ATCO to 87.

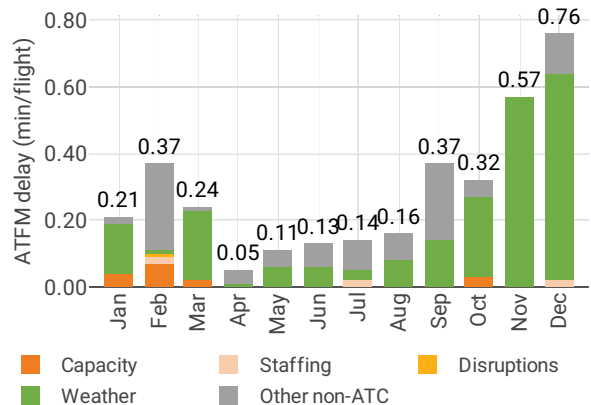
### 4.3 Terminal performance

#### 4.3.1 Arrival ATFM delay (KPI#2)

Average arrival ATFM delay per flight by delay groups



Monthly distribution of arrival ATFM delay by delay groups - 2024



### Focus on arrival ATFM delay

Belgium identifies only Brussels airport as subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of pre-departure delays can be performed. The data quality of the pre-departure delay reporting, which did not allow the calculation of the ATC pre-departure delay in 2020 and 2021, improved allowing the calculation of this indicator in 2022-2024. Traffic levels in 2024 were still 15% lower than in 2019 at Brussels airport, but 3% higher than in 2023.

Average arrival ATFM delay in 2024 was 0.28 min/arr, compared to 0.43 min/arr in 2023. The national target was met. ATFM slot adherence is very stable and above 95% (2023: 95.6%; 2024: 95.5%).

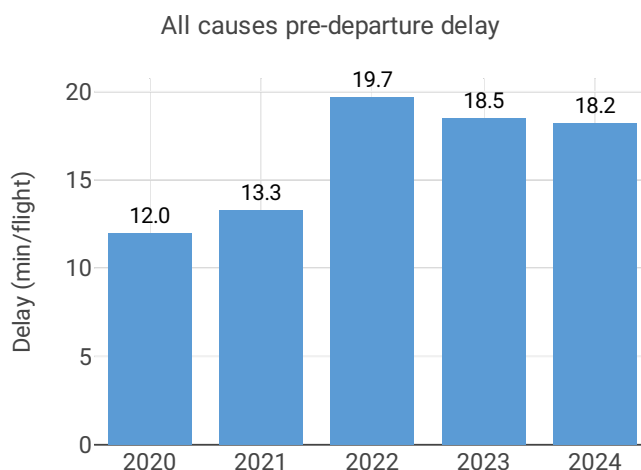
ATFM arrival delays at Brussels decreased in 2024 (EBBR; 2019: 0.90 min/arr; 2020: 0.38 min/arr; 2021: 0.04 min/arr; 2022: 0.11 min/arr; 2023: 0.43 min/arr; 2024: 0.28 min/arr).



Most of these delays were attributed to Weather (64%) followed by Aerodrome Capacity (27%).

The incentive scheme uses modulated pivot values limited CRSTMP delay causes. This pivot value for CRSTMP is 0.12 min/arr in 2024. Following the attribution of the regulation reason, the actual CRSTMP value for 2024 is 0.025 min/arr. According to the Belgian monitoring report, this performance corresponds to the maximum bonus (0.125%), computed by the NSA as EUR53665.09.

#### 4.3.2 Other terminal performance indicators (PI#1-3)



Airport level										
	Avg arrival ATFM delay (KPI#2)					Slot adherence (PI#1)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels	0.38	0.04	0.11	0.43	0.28	97.4%	96.6%	95.5%	95.6%	95.5%

	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels	0.35	0.45	0.57	0.64	0.66	13.9	15.3	20.6	19.3	19.1

### Focus on performance indicators at airport level

#### ATFM slot adherence

Brussels ATFM slot compliance in 2024 was 95.5%. With regard to the 4.5% of flights that did not adhere, 3.2% were early and 1.3% were late.

The Belgian monitoring report highlights that national level and main national individual airports involved are above the 80% threshold of compliance.

#### ATC pre-departure delay

ATC pre-departure delay at Brussels slightly increased in 2024 (EBBR: 2022: 0.57 min/dep; 2023: 0.63 min/dep; 2024: 0.65 min/dep but it is still below the pre-pandemic value (0.78 min/dep).

The Belgian monitoring report mentions that the pre-departure delays in 2024 were stable compared to previous years.



### **All causes pre-departure delay**

The total (all causes) delay in the actual off block time at Brussels slightly decreased in 2024 (EBBR: 2020: 13.88 min/dep.; 2021: 15.29 min/dep.; 2022: 20.59 min/dep.; 2023: 19.3 min/dep.; 2024: 19.07 min/dep) and sits slightly above the SES average of 18.77 min/dep.

According to the Belgian monitoring report: *Skeyes focusses its effort on the reduction of ATFM delays which are directly under the control of ANSP. All cause departure delay is very generic and ATFM delay is only a small contributor. Departure delay can be generated by ATFM en-route delay (not only local airport, but the complete Network) but also reactionary and turnaround delay, technical issues with the aircraft, airport operations, problems with passengers and or luggage, etc. In other words, it is not always possible to address a specific reason as this delay is quite generic.*



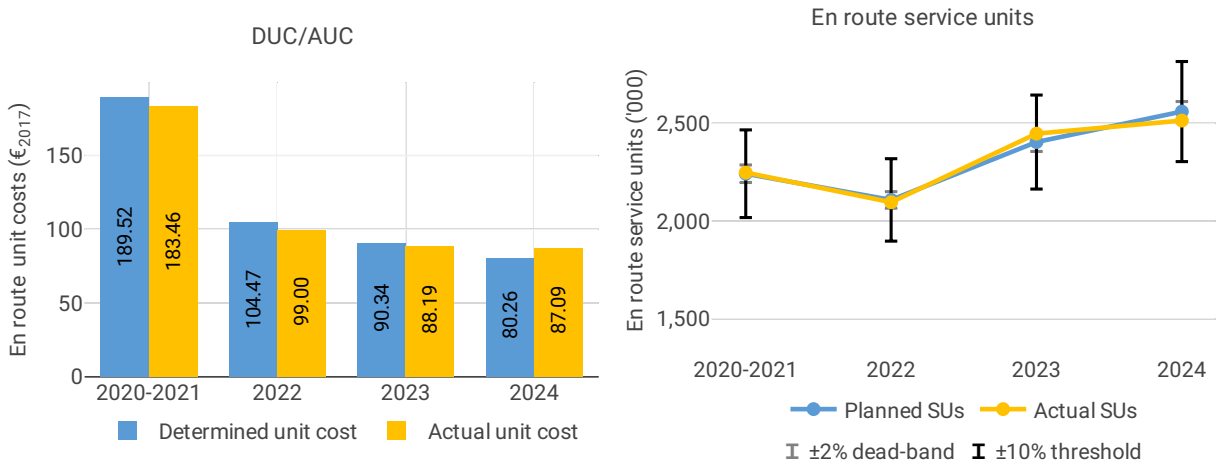
## 5 COST-EFFICIENCY - BELGIUM

### 5.1 PRB monitoring

- The en route 2024 actual unit cost of Belgium-Luxembourg was 87.09€2017, +8.5% higher than the determined unit cost (80.26€2017). The terminal 2024 actual unit cost of Belgium was 232.99€2017, +5.3% higher than the determined unit cost (221.23€2017).
- The en route 2024 actual service units (2.5M) were -1.8% lower than the determined service units (2.6M).
- The en route 2024 actual total costs were +13M€2017 (+6.6%) higher than determined. The gap was mainly due to the negative exceptional item which was included in the determined costs to achieve the RP3 cost-efficiency targets, but is not included in the actual costs. This was partially offset by lower staff costs than planned (-8.6M€2017, or -8.4%) for skeyes, which the NSA attributed to difficulties in recruitment.
- Skeyes costs of investments were 18M€2017 in 2024 for both en route and terminal charging zones, -9.8% less than determined (20M€2017). According to the NSA, this difference is due to projects delays and a lower fixed asset base.
- The en route actual unit cost incurred by users in 2024 was 97.80€ (-0.7% below the 2024 DUC). The terminal actual unit cost incurred by users was 186.67€ (-31% below the 2024 DUC) for Belgium and 226.12€ (-14% below the 2024 DUC) for Luxembourg. The differences between the AUCU and the DUC for the terminal charging zones of Belgium and Luxembourg are mainly affected by the adjustment of other revenues.

### 5.2 En route charging zone

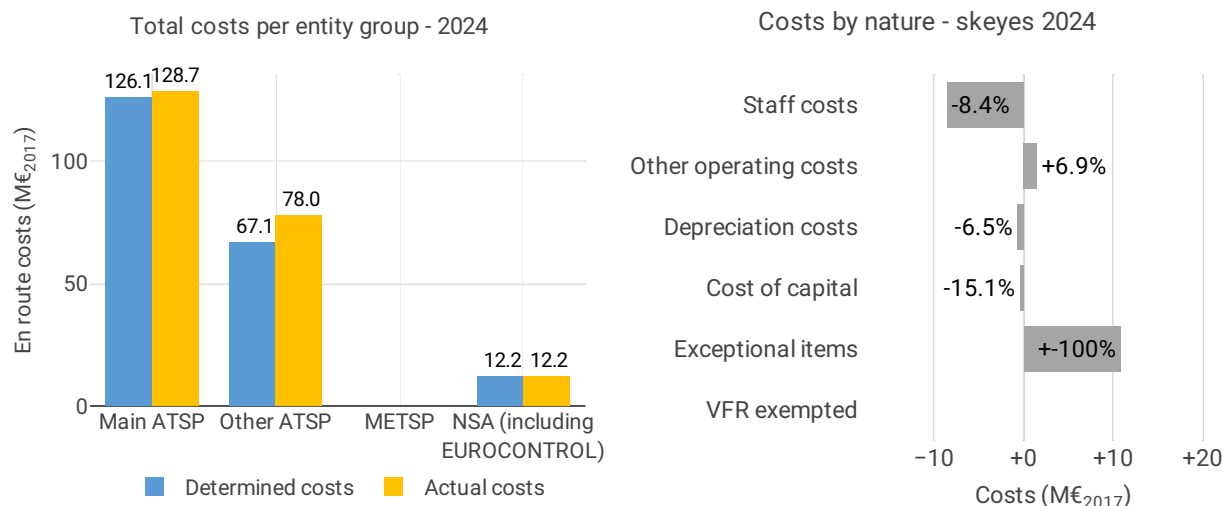
#### 5.2.1 Unit cost (KPI#1)



Actual and determined data				
Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	432	240	255	269
Determined costs	442	250	262	252
Difference costs	-10	-10	-7	17



Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	7.8%	4.7%	2.1%
Determined inflation index	NA	115.6	123.9	126.5
Actual inflation rate	NA	10.3%	2.3%	4.3%
Actual inflation index	NA	118.3	121	126.2
Difference inflation index (p.p.)	NA	+2.7	-2.8	-0.3



## Focus on unit cost

### AUC vs. DUC

In 2024, the en route AUC was +8.5% (or +6.84 €2017) higher than the planned DUC. This results from the combination of significantly higher than planned en route costs in real terms (+6.6%, or +13.5 M€2017) and lower than planned TSUs (-1.8%).

### En route service units

The difference between actual and planned TSUs (-1.8%) falls inside the ±2% dead-band. Hence, the loss of en route revenues is borne by the ANSPs (see items 10 to 14).

### En route costs by entity

Actual real en route costs are +6.6% (+13.5 M€2017) higher than planned. This is the result of higher costs for the other ANSP (ANA and MUAC, +16.3%, or +11.0 M€2017) and the main ANSP, skeyes (+2.0%, or +2.5 M€2017) and lower costs for the NSA/EUROCONTROL (-0.3%, or -0.04 M€2017).

### En route costs for the main ANSP at charging zone level

Higher than planned en route costs in real terms for skeyes in 2024 (+2.0%, or +2.6 M€2017) result from:

- Significantly lower staff costs (-8.4%), mainly due to “lower number of FTE, which is a direct result of ongoing recruitment challenges in an increasingly tight labour market”,
- Significantly higher other operating costs (+6.9%), primarily due to greater use of external staff to maintain operations and a provision for major building maintenance following the decision to renovate rather than rebuild.

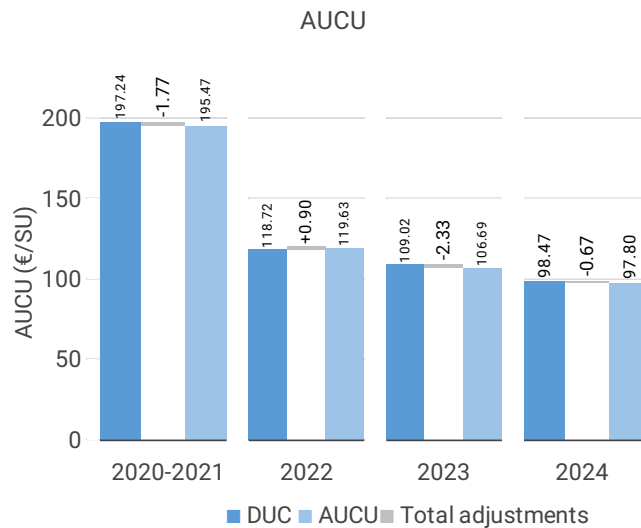


- Significantly lower depreciation (-6.5%), mainly due to delays in commissioning radio sites and IT-related projects, including the VCS Main System and the SAT for WAN, caused by supplier issues and difficulties obtaining permits,
- Significantly lower cost of capital (-15.1%), “mainly due to a lower fixed asset base”,
- Exceptional costs which reflect a reporting of negative amount (-13.7 M€ in nominal terms) in 2024 determined costs for skeyes to correct for the difference between planned and actual costs in 2021-22 resulting from resubmission of the RP3 PP. The same treatment is applied to other ANSPs (-11.6 M€ for MUAC and -0.4 M€ for ANA).

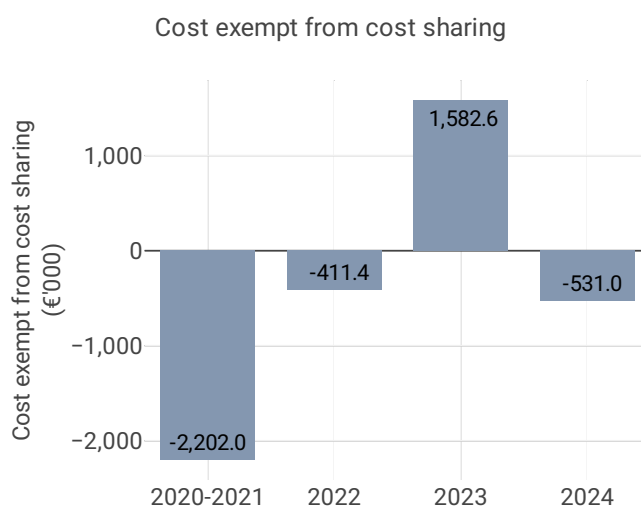
### RP3 summary

When considering the whole of RP3 (2020-2024) for Belgium-Luxembourg en route charging zone, actual TSUs are -0.1% lower than planned, while actual costs in real terms are -1.2% lower than the determined costs (some -13.1 M€2017). As a result, the weighted average actual unit cost over RP3 (113.34 €2017) is -1.1% lower than planned in the PP (114.64 €2017).

#### 5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)



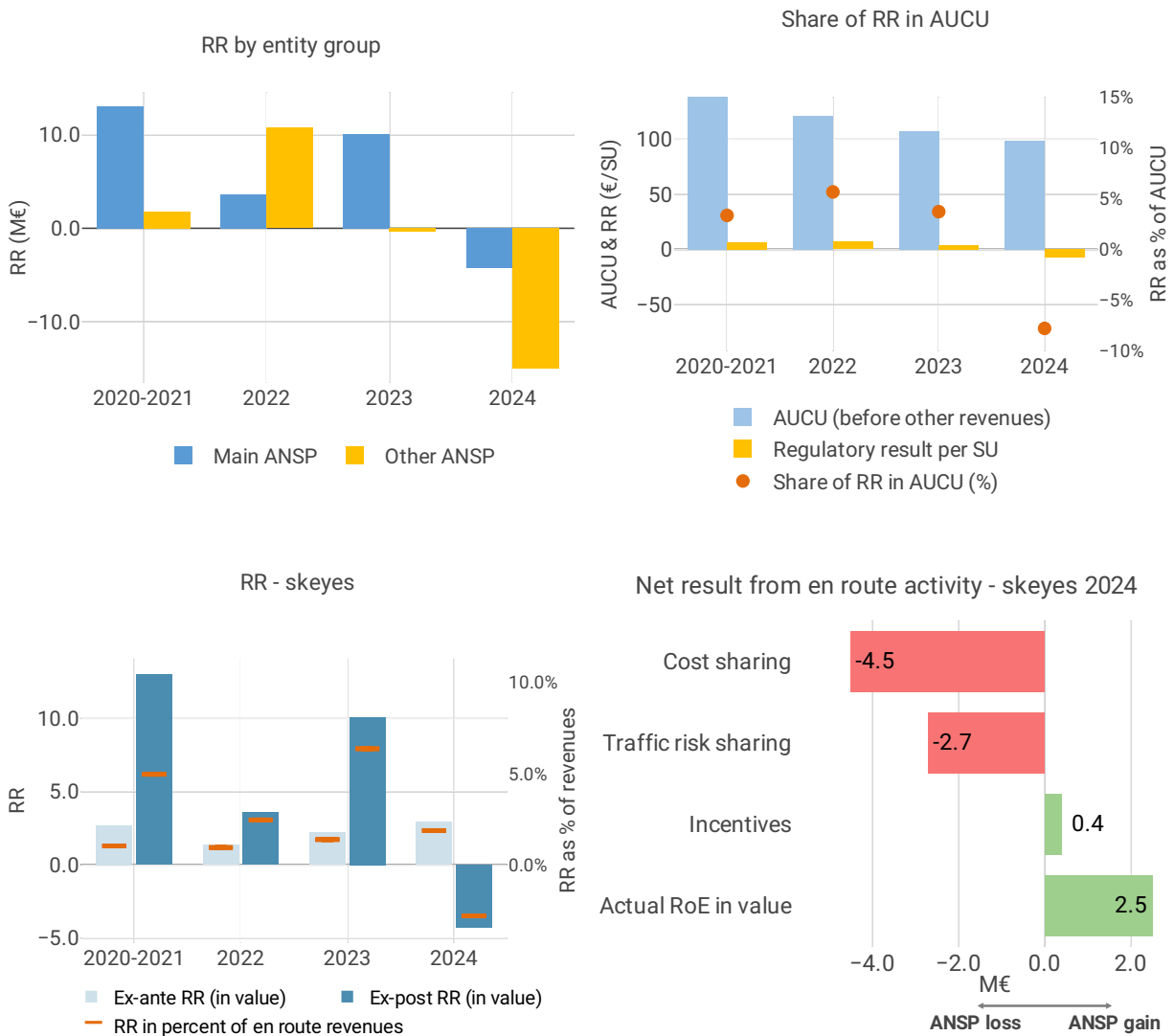
AUCU components (€/SU) – 2024	
<b>Components of the AUCU in 2024</b>	<b>€/SU</b>
<b>DUC</b>	<b>98.47</b>
Inflation adjustment	-0.18
Cost exempt from cost-sharing	-0.21
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	0.15
Financial incentives	0.16
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-0.58
Application of lower unit rate	0.00
Total adjustments	-0.67
<b>AUCU</b>	<b>97.80</b>
<b>AUCU vs. DUC</b>	<b>-0.7%</b>



Cost exempt from cost sharing – 2024		
<b>Cost exempt from cost sharing by item - 2024</b>	<b>€'000</b>	<b>€/SU</b>
New and existing investments	-1,294.4	-0.51
Competent authorities and qualified entities costs	16.0	0.01
Eurocontrol costs	-57.8	-0.02
Pension costs	805.2	0.32
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
<b>Total cost exempt from cost risk sharing</b>	<b>-531.0</b>	<b>-0.21</b>



5.2.3 Regulatory result (RR)



**Focus on regulatory result**

**skeyes net gain/loss on activity in the Belgium-Luxembourg en route charging zone in the year 2024**

skeyes reported a net loss of -6.8 M€, as a combination of a loss of -4.5 M€ arising from the cost sharing mechanism, with a loss of -2.7 M€ arising from the traffic risk sharing mechanism and a gain of +0.4 M€ relating to financial incentives.

**skeyes overall regulatory result (RR) for the en route activity**

Ex-post, the overall RR taking into account the net loss from the en route activity mentioned above (-6.8 M€) and the actual RoE (+2.5 M€) amounts to -4.3 M€ (-2.8% of the en route revenues). The resulting ex-post rate of return on equity is negative (-6.5%).

**RP3 summary**

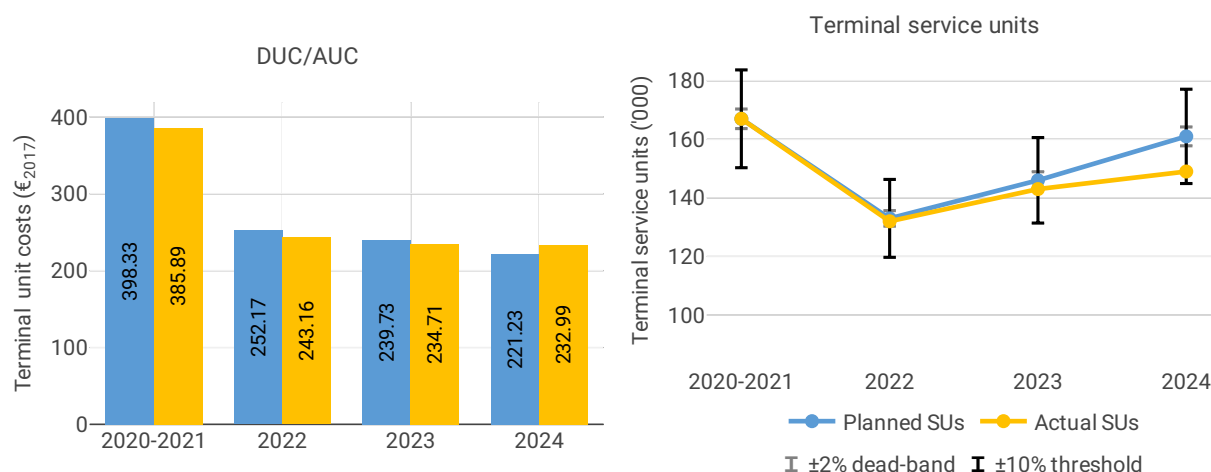
When considering the whole of RP3 (2020-2024), skeyes generated a cumulative gain in respect of cost sharing of +14.0 M€, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated a loss of -0.1 M€. Adding the gain of +0.4 M€ to



be retained by the ATSP in respect of financial incentives and the actual RoE (+8.1 M€ over RP3) leads to an overall regulatory result of +22.4 M€, which corresponds to an average ex-post rate of return on equity of 8.1% (compared to 3.0% initially planned in the PP).

## 5.3 Terminal charging zone

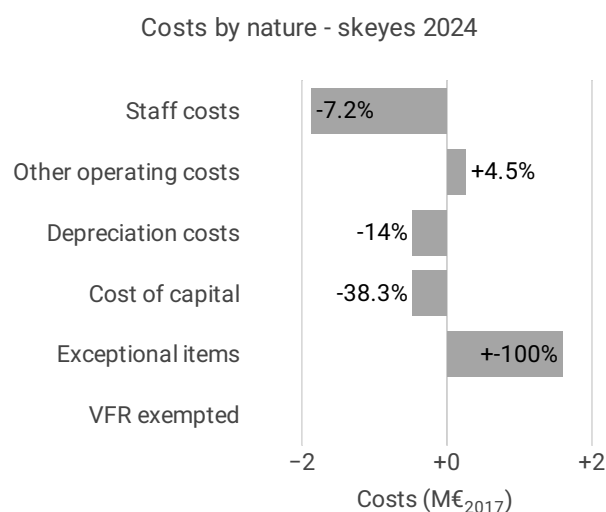
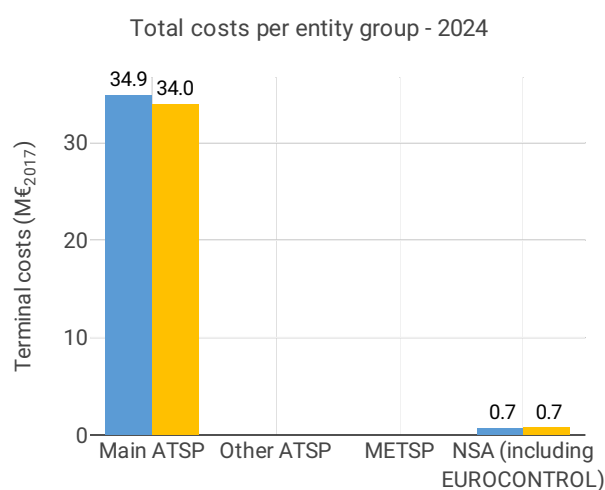
### 5.3.1 Unit cost (KPI#1)



### Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	67	37	40	43
Determined costs	70	38	42	44
Difference costs	-2	-1	-3	-1

Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	7.8%	4.7%	2.1%
Determined inflation index	NA	115.6	123.9	126.5
Actual inflation rate	NA	10.3%	2.3%	4.3%
Actual inflation index	NA	118.3	121	126.2
Difference inflation index (p.p.)	NA	+2.7	-2.8	-0.3



## Focus on unit cost

### AUC vs. DUC

In 2024, the terminal AUC was +5.3% (or +11.76 M€2017) higher than the planned DUC. This results from the combination of significantly lower than planned TNSUs (-7.6%) and lower than planned terminal costs in real terms (-2.7%, or -0.9 M€2017).

### Terminal service units

The difference between actual and planned TNSUs (-7.6%) falls outside the  $\pm 2\%$  dead-band, but does not exceed the  $\pm 10\%$  threshold foreseen in the traffic risk sharing mechanism. The resulting loss of terminal revenues is therefore shared between the ANSP and the airspace users (see the main ANSP loss in Box 11).

### Terminal costs by entity

Actual real terminal costs are -2.7% (-0.9 M€2017) lower than planned. This is the result of lower costs for the main ANSP, skeyes (-2.7%, or -1.0 M€2017) and higher costs for the NSA (+1.5%, or +0.01 M€2017).

### Terminal costs for the main ANSP at charging zone level

Lower than planned terminal costs in real terms for skeyes in 2024 (-2.7%, or -1.0 M€2017) result from:

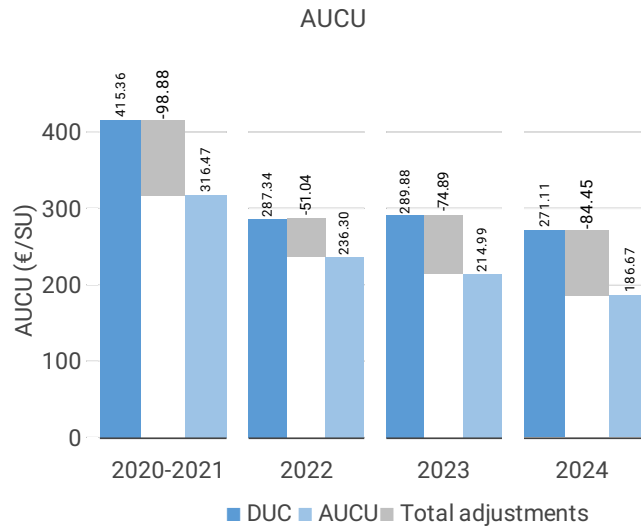
- Significantly lower staff costs (-7.2%), mainly due to “*lower number of FTE, which is a direct result of ongoing recruitment challenges in an increasingly tight labour market*”,
- Higher other operating costs (+4.5%), mainly driven by a provision for major building maintenance following the decision to renovate an existing facility instead of rebuilding it,
- Significantly lower depreciation (-14.0%), mainly due to delays in commissioning radio sites and IT-related projects, including the VCS Main System and the SAT for WAN, caused by supplier issues and difficulties obtaining permits,
- Significantly lower cost of capital (-38.3%), “*mainly due to a lower fixed asset base*”,
- Exceptional costs which reflect a reporting of negative amount (-2.0 M€ in nominal terms) in 2024 determined costs for skeyes to correct for the difference between planned and actual costs in 2021-22 resulting from resubmission of the RP3 PP.

### RP3 summary

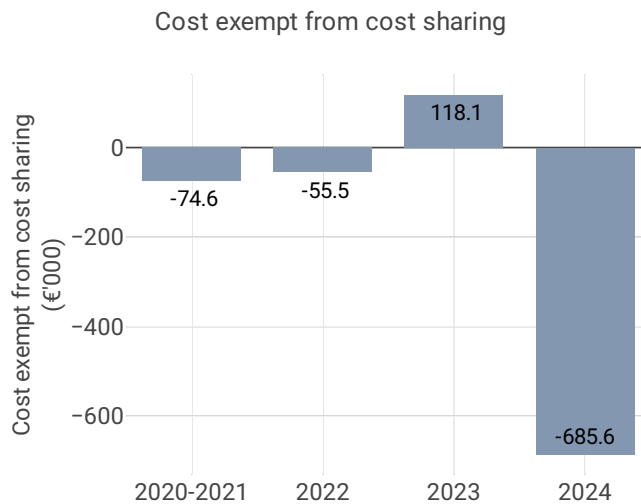
When considering the whole of RP3 (2020-2024) for Belgium terminal charging zone, actual TNSUs are -2.9% lower than planned, while actual costs in real terms are -3.8% lower than the determined costs (some -6.4 M€2017). As a result, the weighted average actual unit cost over RP3 (278.83 M€2017) is -0.9% lower than planned in the PP (281.22 M€2017).



5.3.2 Actual unit cost incurred by the users (AUCU) (PI#1)

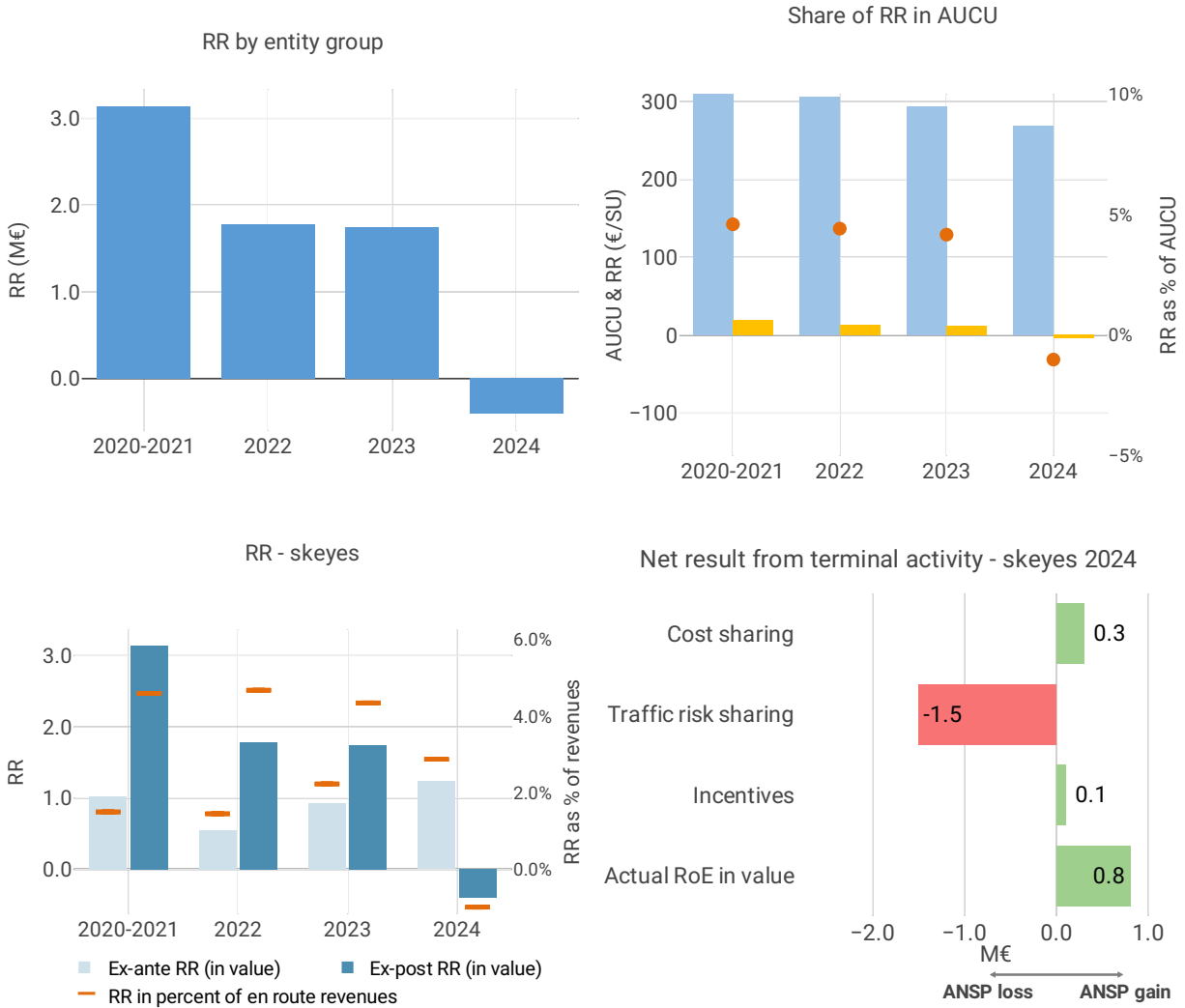


AUCU components (€/SU) - 2024	
<b>Components of the AUCU in 2024</b>	<b>€/SU</b>
<b>DUC</b>	<b>271.11</b>
Inflation adjustment	-0.53
Cost exempt from cost-sharing	-4.61
Traffic risk sharing adjustment	10.60
Traffic adj. (costs not TRS)	1.65
Financial incentives	0.36
Modulation of charges	-9.84
Cross-financing	0.00
Other revenues	-82.08
Application of lower unit rate	0.00
Total adjustments	-84.45
<b>AUCU</b>	<b>186.67</b>
<b>AUCU vs. DUC</b>	<b>-31.1%</b>



Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	€'000	€/SU
New and existing investments	-696.3	-4.68
Competent authorities and qualified entities costs	10.7	0.07
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
<b>Total cost exempt from cost risk sharing</b>	<b>-685.7</b>	<b>-4.61</b>

5.3.3 Regulatory result (RR)



**Focus on regulatory result**

**skeyes net gain/loss on activity in the Belgium terminal charging zone in the year 2024**

skeyes reported a net loss of -1.2 M€, as a combination of a gain of +0.3 M€ arising from the cost sharing mechanism, with a loss of -1.5 M€ arising from the traffic risk sharing mechanism and a gain of +0.1 M€ relating to financial incentives.



**skeyes overall regulatory result (RR) for the Belgium terminal charging zone activity**

Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-1.2 M€) and the actual RoE (+0.8 M€) amounts to -0.4 M€ (-1.0% of the terminal revenues). The resulting ex-post rate of return on equity is negative (-2.0%).

**RP3 summary**

When considering the whole of RP3 (2020-2024), skeyes generated a cumulative gain in respect of cost sharing of +6.5 M€, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated a loss of -3.0 M€. Adding the gain of +0.1 M€ to be retained by the ATSP in respect of financial incentives and the actual RoE (+2.8 M€ over RP3) leads to an overall regulatory result of +6.3 M€, which corresponds to an average ex-post rate of return on equity of 6.5% (compared to 3.0% initially planned in the PP).

