

Performance Review Body Monitoring Report

Belgium - 2021

This report is automatically generated from: sesperformance.eu

COPYRIGHT NOTICE AND DISCLAIMER	© European Union, 2025 This report has been prepared for the European Commission by the Performance Review Body 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.
--	---

TABLE OF CONTENTS

1	OVERVIEW	3
1.1	Contextual information	3
1.2	Traffic (En route traffic zone)	3
1.3	Safety (Main ANSP)	4
1.4	Environment (Member State)	4
1.5	Capacity (Member State)	5
1.6	Cost-efficiency (En route/Terminal charging zone(s))	6
2	SAFETY - BELGIUM	6
2.1	PRB monitoring	6
2.2	Effectiveness of Safety Management (EoSM) (KPI#1)	7
2.3	Safety occurrences	7
2.4	Use of automated safety data recording system (ASDRS) (PI#3)	8
3	ENVIRONMENT - BELGIUM	8
3.1	PRB monitoring	8
3.2	En route performance	9
3.3	Terminal performance	10
3.4	Civil-Military dimension	12
4	CAPACITY - BELGIUM	12
4.1	PRB monitoring	12
4.2	En route performance	13
4.3	Terminal performance	14
5	COST-EFFICIENCY - BELGIUM	16
5.1	PRB monitoring	16
5.2	En route charging zone	16
5.3	Terminal charging zone	19

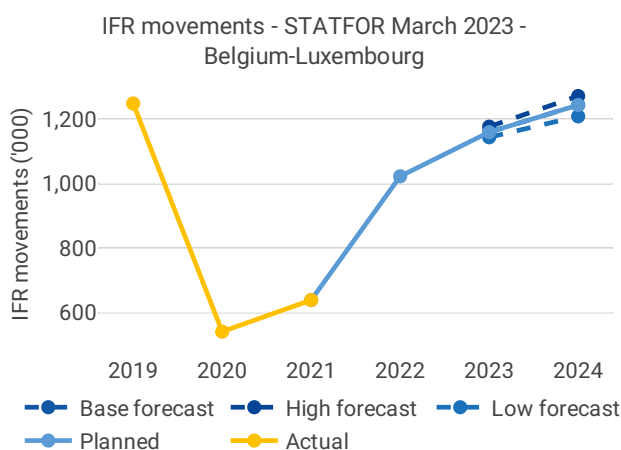
1 OVERVIEW

1.1 Contextual information

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

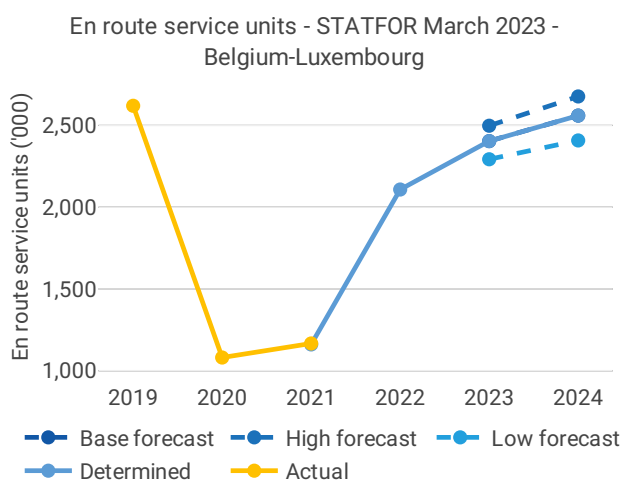
List of ACCs	1	Exchange rate (1 EUR=)		Main ANSP	
Brussels ACC		2017: 1 EUR		• skeyes	
		2021: 1 EUR			
No of airports in the scope of the performance plan:		Share of Union-wide:		Other ANSPs	
• ≥80'K	1	• traffic (TSUs) 2021	1.7%	• MUAC	
• <80'K	0	• en route costs 2021	3.6%	MET Providers	
		Share en route / terminal costs 2021	87% / 13%	–	
		En route charging zone(s)			
		Belgium-Luxembourg			
		Terminal charging zone(s)			
		Belgium			

1.2 Traffic (En route traffic zone)



- The en route charging zone of Belgium-Luxembourg recorded 639K actual IFR movements in 2021, +18% compared to 2020 (541K).

- Actual 2021 IFR movements represent 51% of the actual 2019 level (1,249K).



- The en route charging zone of Belgium-Luxembourg recorded 1,167K actual en route service units in 2021, +8.0% compared to 2020 (1,081K).

- Actual 2021 service units represent 45% of the actual 2019 level (2,620K).

1.3 Safety (Main ANSP)

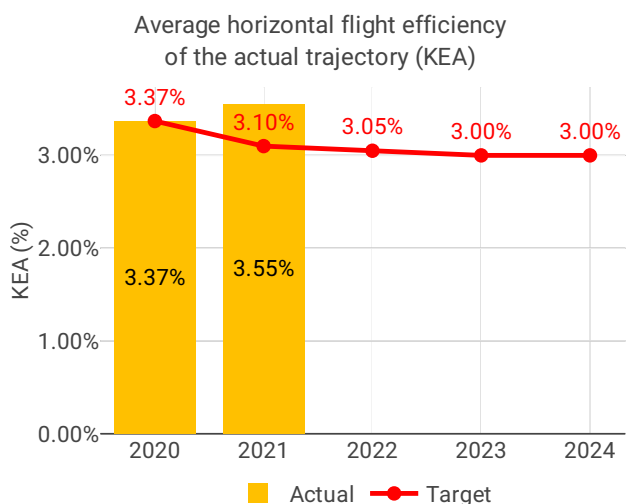


- skeyes did not achieve the targets on three management objectives in 2021, but the Safety Development Plan is established with measures and corrective actions to ensure required RP3 target levels will be met in 2024.

- As a part of the Belgian Plan for Aviation Safety, the NSA permanently monitors the separation minima infringements and runway incursions, conducts associated investigations and implements specific safety recommendations' actions.

- skeyes should improve its safety management by implementing automated safety data recording systems.

1.4 Environment (Member State)



- Belgium achieved a KEA performance of 3.55% compared to its target of 3.10% and did not contribute positively to the Union-wide target. KEA performance deteriorated by 0.18 p.p. in comparison to 2020.

- Traffic levels fluctuated in 2021, with a sharp increase in May/June, which had an impact on KEA performance. However, higher traffic levels were managed with similar KEA performance throughout 2017-2019.

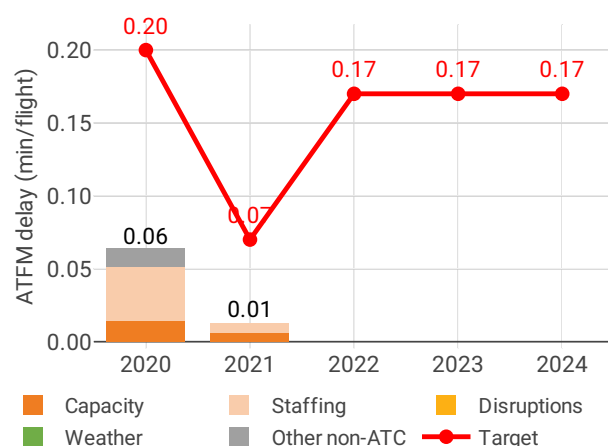
- Both KEP and SCR slightly deteriorated in comparison to 2020.

- The share of flights operating CDO in 2021 remained similar to 2020 levels.

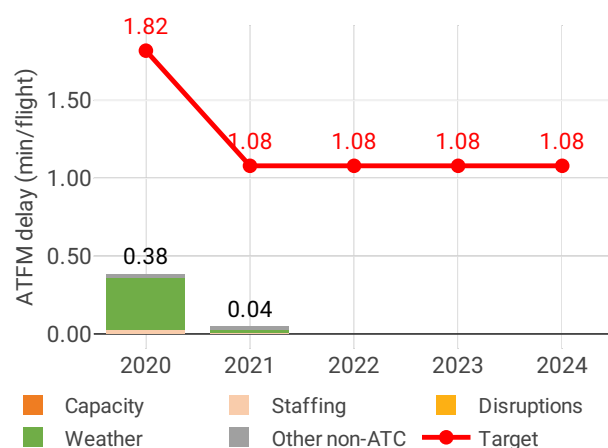
- The additional time airspace users spent in terminal airspace improved by 47% in comparison to 2019. Additional taxi time slightly improved as well.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



Average arrival ATFM delay per flight by delay groups



- Belgium registered 0.01 minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.07.

- Delays should be considered in the context of lower traffic: in Belgium, IFR movements in 2021 were 49% lower than in 2019.

- Traffic is expected to grow with 2019 levels likely being reached in 2023 (in high growth scenario). An increase in the number of ATCOs in OPS is planned during RP3 in Brussels ACC.

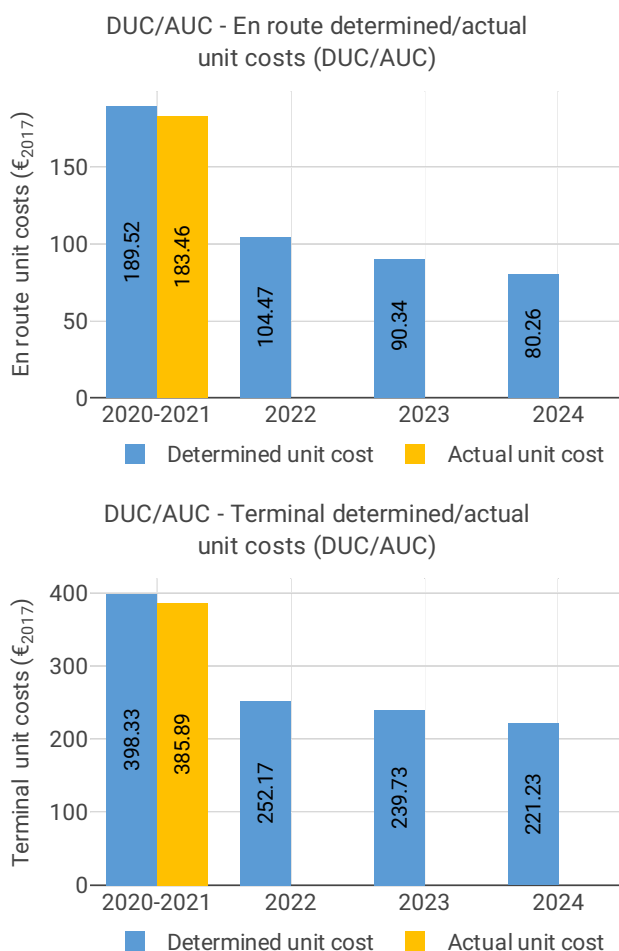
- Delays were highest in August, October and November, mostly driven by ATC Capacity and Staffing issues.

- The share of delayed flights with delays longer than 15 minutes in Belgium increased by 1.73 p.p. compared to 2020 and was lower than 2019 values.

- The yearly total of sector opening hours in Brussels ACC was 28,453, showing a 1.0% decrease compared to 2020. Sector opening hours are 2.3% below 2019 levels.

- Brussels ACC registered 12.26 IFR movements per one sector opening hour in 2021, being 43.8% below 2019 levels.

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



- The en route 2020/2021 actual unit cost of Belgium-Luxembourg was 183.46 €2017, -3.0% lower than the determined unit cost (189.52 €2017).

- The terminal actual unit cost of Belgium was 385.89 €2017, -3.1% lower than the determined unit cost (398.33 €2017).

- The en route 2021 actual service units (1,167K) were in line with the determined service units (1,161K).

- The en route 2021 actual total costs were -12 M€2017 (-5.5%) lower than determined, mainly due to lower other operating costs (-8.1 M€2017, or -15%) and lower staff costs (-3.1 M€2017, or -2.1%). The NSA did not provide explanations for the variations of costs.

- Skeyes spent 13.0 M€2017 in 2021 related to costs of investments, -3.0% less than determined (13.4 M€2017), due to both lower depreciation and cost of capital stemming from a lower net book value. The NSA explained that there have been changes in the planned schedule of some investments.

- The en route actual unit cost incurred by users of Belgium-Luxembourg in 2020/2021 was 195.76€,

while the terminal actual unit cost incurred by users was 324.46€ for Belgium and 303.05€ for Luxembourg.

2 SAFETY - BELGIUM

2.1 PRB monitoring

- skeyes did not achieve the targets on three management objectives in 2021, but the Safety Development Plan is established with measures and corrective actions to ensure required RP3 target levels will be met in 2024.

- As a part of the Belgian Plan for Aviation Safety, the NSA permanently monitors the separation minima infringements and runway incursions, conducts associated investigations and implements specific safety recommendations' actions.

- skeyes should improve its safety management by implementing automated safety data recording systems.

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



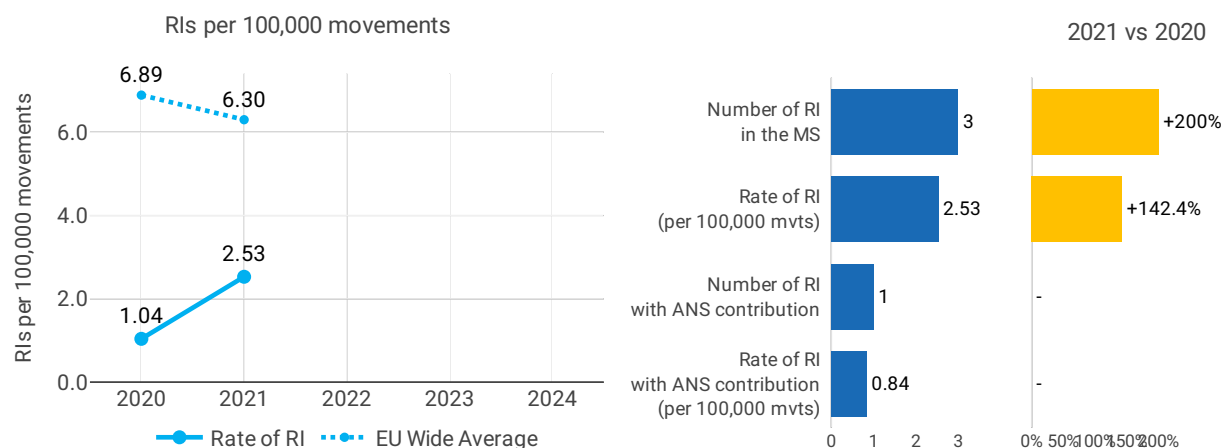
Focus on EoSM

Improvements in maturity levels have been observed with respect to 2020. Two out of five EoSM components of the ANSP meet the 2024 target level, namely “Safety Assurance” and “Safety Promotion”. The other three components are below 2024 target levels and are expected to improve in the next years of RP3.

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3 Safety occurrences

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



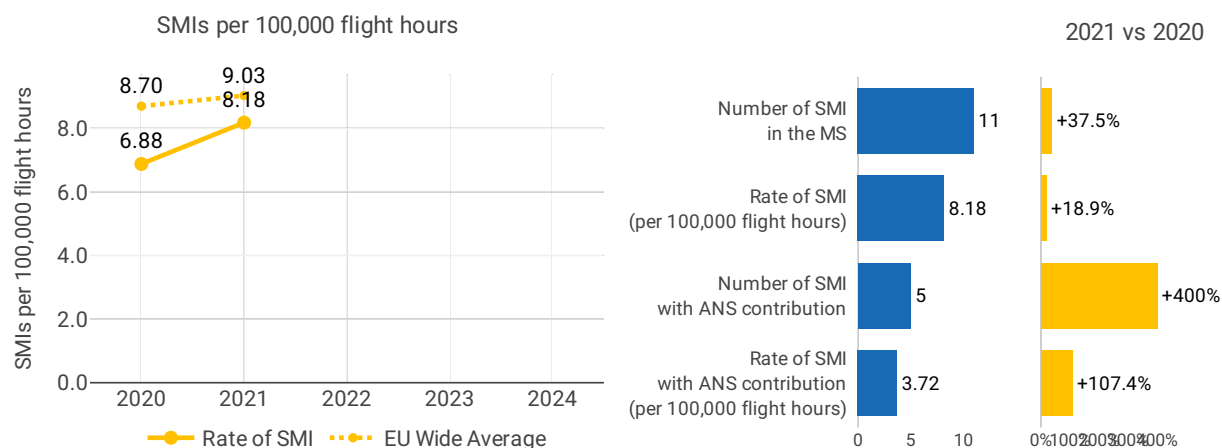
Rate of RIs per 100,000 airport movements - Belgium

#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Brussels	118,735	1	2.53

Focus on runway incursions

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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	NA	NA	NA	1	5	NA	NA	NA

#	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	1.8	8.2	NA	NA	NA	NA	+356%	NA	NA	NA

Focus on separation minima

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3.3 Quality of occurrences reporting

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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

2021	
For RIs	For SMIs
X	X

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

3 ENVIRONMENT - BELGIUM

3.1 PRB monitoring

- Belgium achieved a KEA performance of 3.55% compared to its target of 3.10% and did not contribute positively to the Union-wide target. KEA performance deteriorated by 0.18 p.p. in comparison to 2020.

- Traffic levels fluctuated in 2021, with a sharp increase in May/June, which had an impact on KEA performance. However, higher traffic levels were managed with similar KEA performance throughout 2017-2019.
- Both KEP and SCR slightly deteriorated in comparison to 2020.
- The share of flights operating CDO in 2021 remained similar to 2020 levels.
- The additional time airspace users spent in terminal airspace improved by 47% in comparison to 2019. Additional taxi time slightly improved as well.

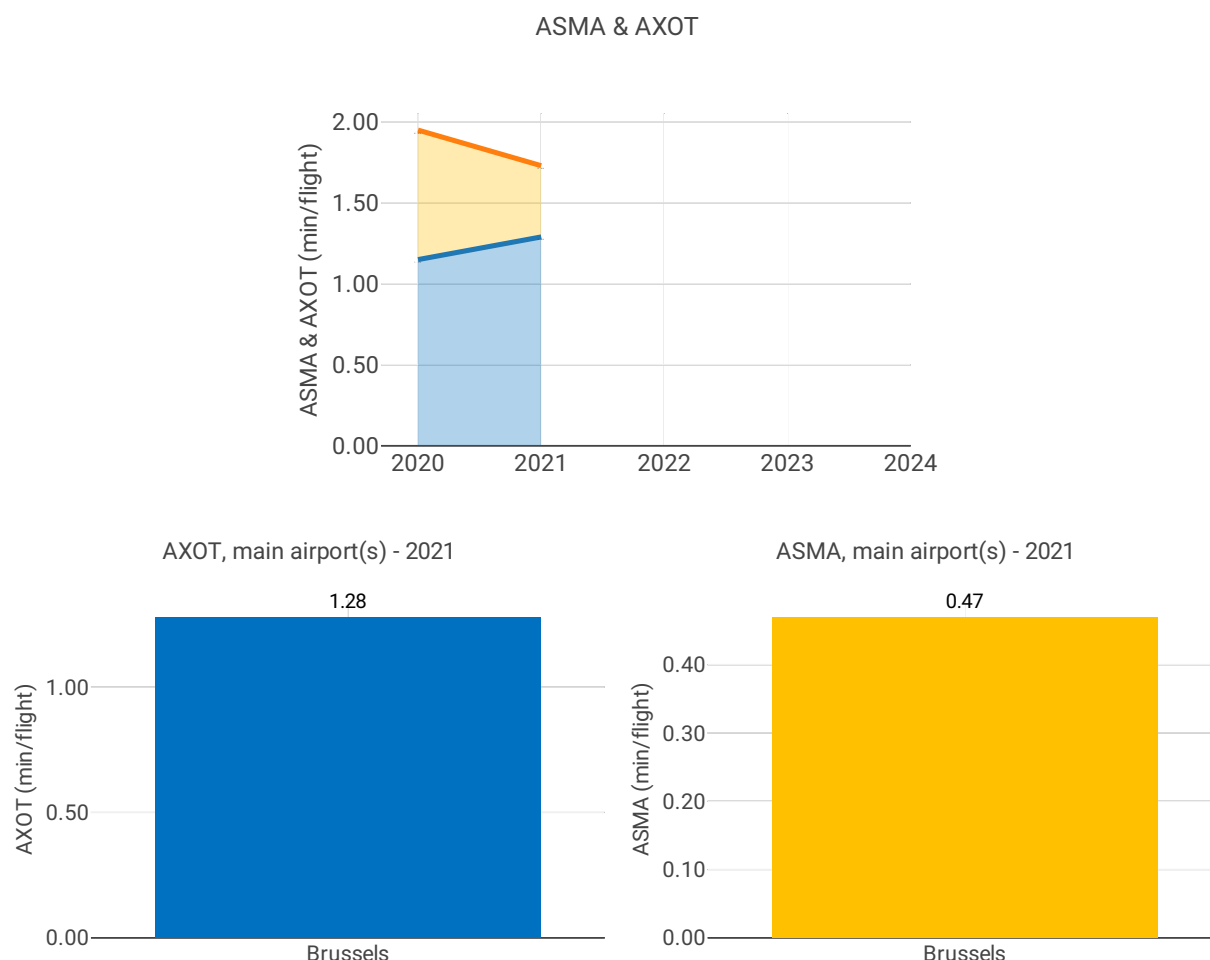
3.2 En route performance

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 decreased once more even if just slightly in 2021 (EBBR; 2019: 2.21 min/dep.; 2020: 1.36 min/dep.; 2021: 1.28 min/dep). The reduction is in fact only due to the improvement in the first trimester compared to the first trimester of 2020. For the rest of the year the additional taxi-out times averaged 1.25 min/dep, almost 30 seconds more than in 2020, but still a minute lower than in 2019.

According to FABEC 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 focused on incorporating de-icing (and hence reducing taxi times).*

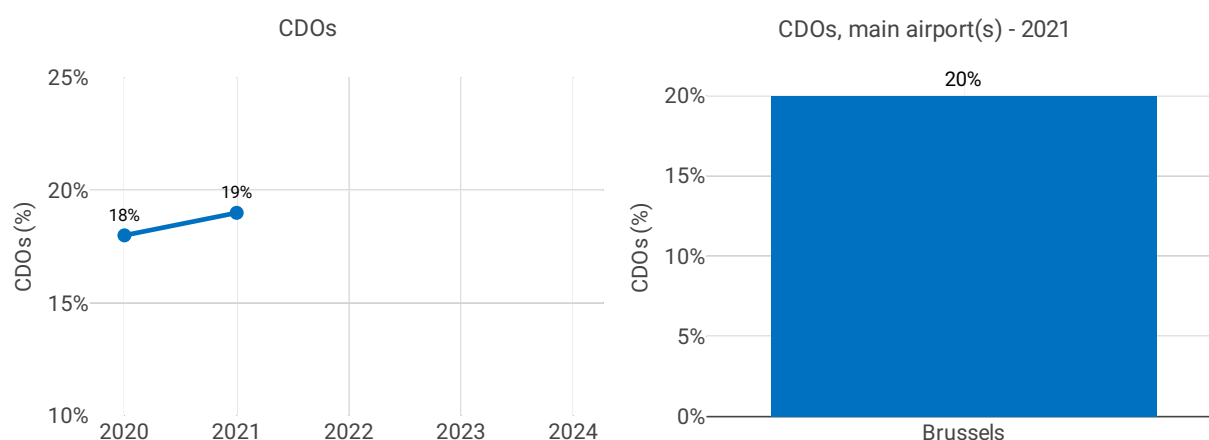
ASMA

Additional ASMA times at Brussels significantly decreased again in 2021 (EBBR; 2019: 1 min/arr.; 2020: 0.89 min/arr.); 2021: 0.47 min/arr. Like with the additional taxi-out times, the annual reduction is in fact only due to the improvement in the first trimester compared to the first trimester of 2020. For the rest of the year the additional ASMA times averaged 0.71 min/arr., 0.21 min/dep. but still half of the additional ASMA times in 2019.

According to FABEC 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 seldom 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).

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



Focus CDOs

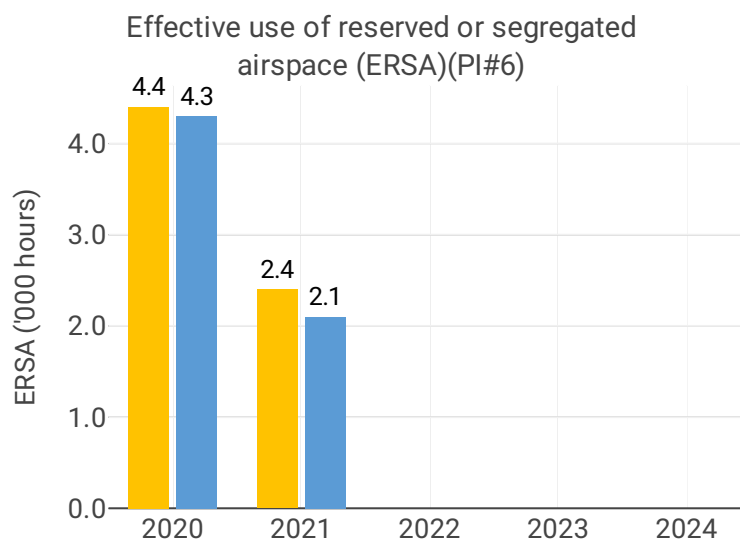
The share of CDO flights for Brussels is 19.6% which is an increase of 1.1 percentage points but still quite low compared to other airports with similar traffic numbers and the overall RP3 value (30.5%).

According to the FABEC monitoring report: *For Belgium, the following (non-exhaustive) list of initiatives applies:*

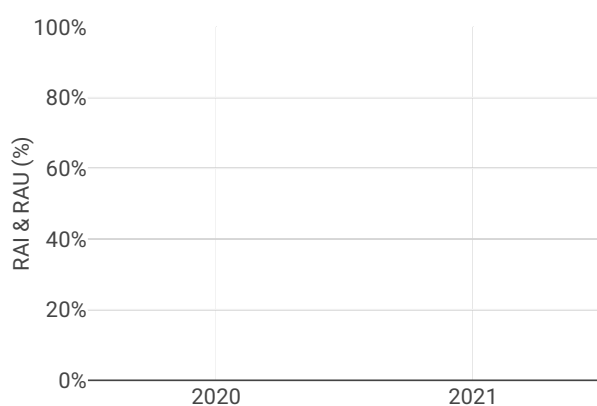
- CEM EBBR -> collaboration between operational stakeholders. Various initiatives are on-going to improve predictability in the arrival process, which facilitates airspace users in optimizing their descent. Example: Trials regarding 'Increased Use RNP Approaches' are planned for 2022. As these procedures aim to improve predictability throughout the arrival process, those allow aircraft operators to better optimize their descent.
- The Environmental Action Plan that has been developed by skeyes, where improving (vertical) flight efficiency is one of the key pillars
- A PBN Transition Plan improved and optimised PBN routes. This ameliorated predictability and consequently improved CDO performance.

Airport Name	Airport level														
	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	NA	NA	NA	0.89	0.47	NA	NA	NA	18%	20%	NA	NA	NA

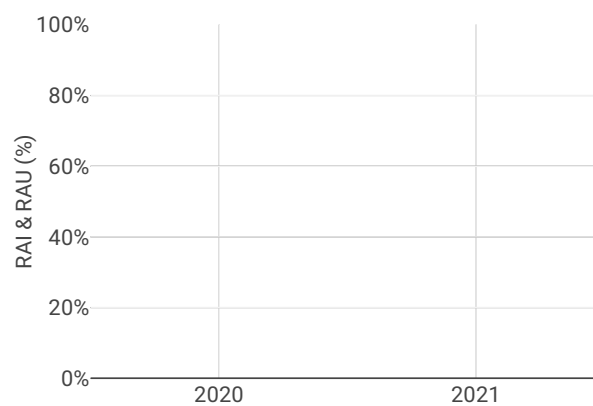
3.4 Civil-Military dimension



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

Military - related measures implemented or planned to improve capacity

Initiatives implemented or planned to improve PI#6

Initiatives implemented or planned to improve PI#7

Initiatives implemented or planned to improve PI#8

4 CAPACITY - BELGIUM

4.1 PRB monitoring

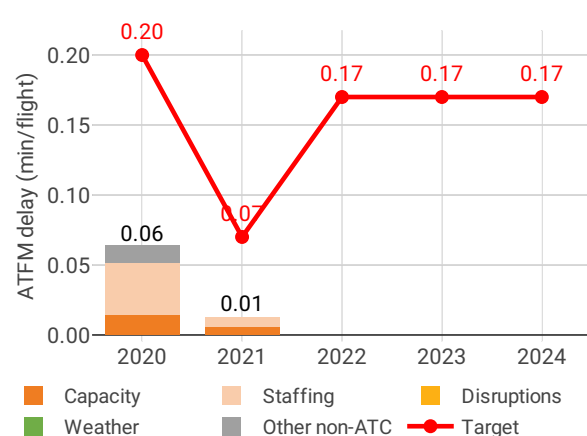
- Belgium registered 0.01 minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.07.
- Delays should be considered in the context of lower traffic: in Belgium, IFR movements in 2021 were 49% lower than in 2019.
- Traffic is expected to grow with 2019 levels likely being reached in 2023 (in high growth scenario). An increase in the number of ATCOs in OPS is planned during RP3 in Brussels ACC.

- Delays were highest in August, October and November, mostly driven by ATC Capacity and Staffing issues.
- The share of delayed flights with delays longer than 15 minutes in Belgium increased by 1.73 p.p. compared to 2020 and was lower than 2019 values.
- The yearly total of sector opening hours in Brussels ACC was 28,453, showing a 1.0% decrease compared to 2020. Sector opening hours are 2.3% below 2019 levels.
- Brussels ACC registered 12.26 IFR movements per one sector opening hour in 2021, being 43.8% below 2019 levels.

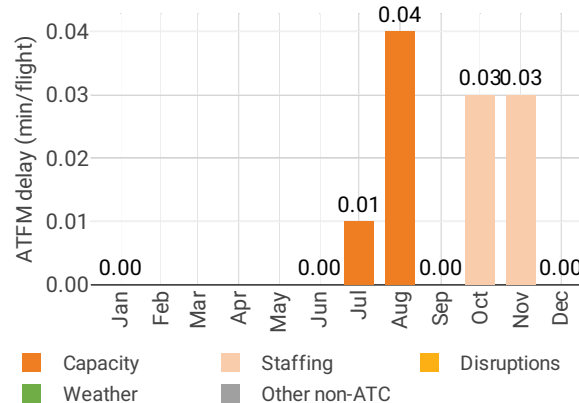
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

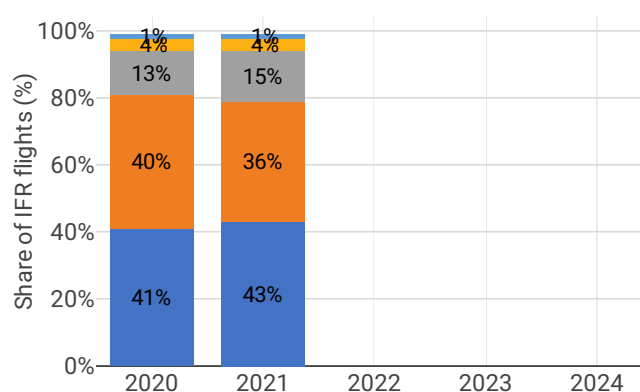
Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay by delay groups - 2021



Distribution of IFR flights per the duration of en route ATFM delay



Focus on en route ATFM delay

Summary of capacity performance

2021 en route capacity performance are monitored at FABEC level. Therefore, no inputs are available for the individual States.

NSA's assessment of capacity performance

N/A

Monitoring process for capacity performance

N/A

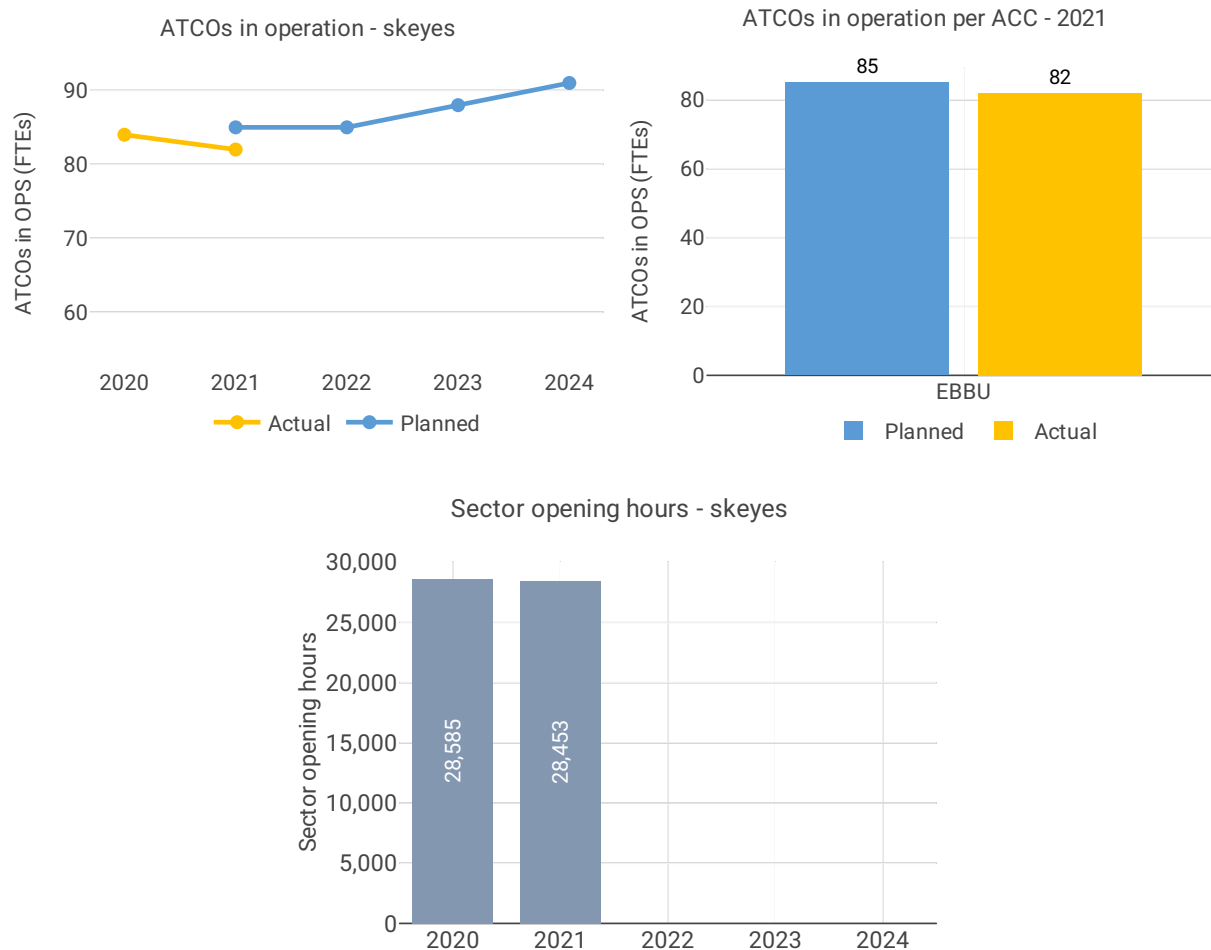
Capacity planning

N/A

Application of Corrective Measures for Capacity (if applicable)

N/A

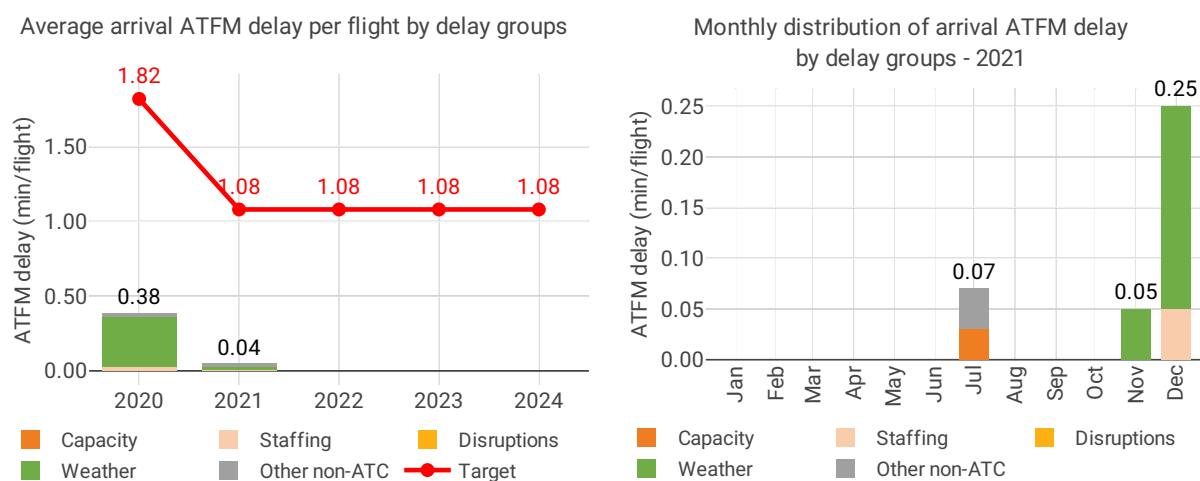
4.2.2 Other indicators



Focus on ATCOs in operations

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)



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. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause. Traffic levels in 2021 were still 50% less than in 2019 at Brussels airport. However, regardless of a 25% traffic increase with respect to 2020.

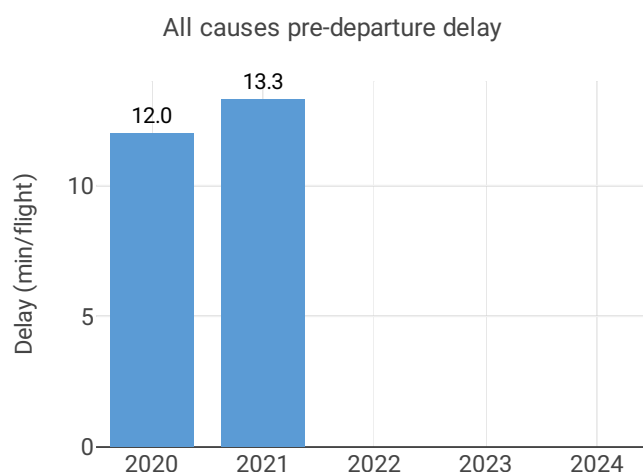
Average arrival ATFM delays in 2021 was 0.04 min/arr, compared to 0.38 min/arr in 2020. ATFM slot adherence has slightly deteriorated (2021: 96.6%; 2020: 97.4%).

ATFM arrival delays at Brussels have almost disappeared in 2021 (EBBR; 2019: 0.90 min/arr; 2020: 0.38 min/arr; 2021: 0.04 min/arr). Delays were only registered in July, November and December. Most of these delays were attributed to weather (67%) followed by ATC staffing (14%) and special events (10%).

The provisional national target on arrival ATFM delay in 2021 was met.

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 bonus will be awarded to keyes for 2021 achievement.

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



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

Airport name	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Brussels	0.35	0.45	NA	NA	NA	13.9	15.3	NA	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

With the drastic drop in traffic, regulated departures from Brussels virtually disappeared until July 2021. Brussels ATFM slot compliance in 2021 was 96.6%. With regard to the 3.4% of flights that did not adhere, 2.2% was early, 1.2% was late.

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

ATC pre-departure delay

The share of unidentified delay reported by Brussels was above 40% for more than 2 months in the year, preventing the calculation of this indicator. This was due to the special traffic composition in the first half of the year. Brussels had proper reporting before the pandemic and with the traffic recovery the reporting has improved since June 2021.

All causes pre-departure delay

The total (all causes) delay in the actual off block time at Brussels increased in 2021 (EBBR: 2020: 13.88 min/dep.; 2021: 15.29 min/dep.). The highest average delay per flight was observed in the month of February, exceeding the 27 min/dep.

According to FABEC monitoring report: *During 2021 the efficiency of airport operations suffered from the fact that travel restrictions and corresponding PLF regulations changed from time to time, leading to extra difficulties at departure, arrival and during transit resulting in delays for passengers and flights.*

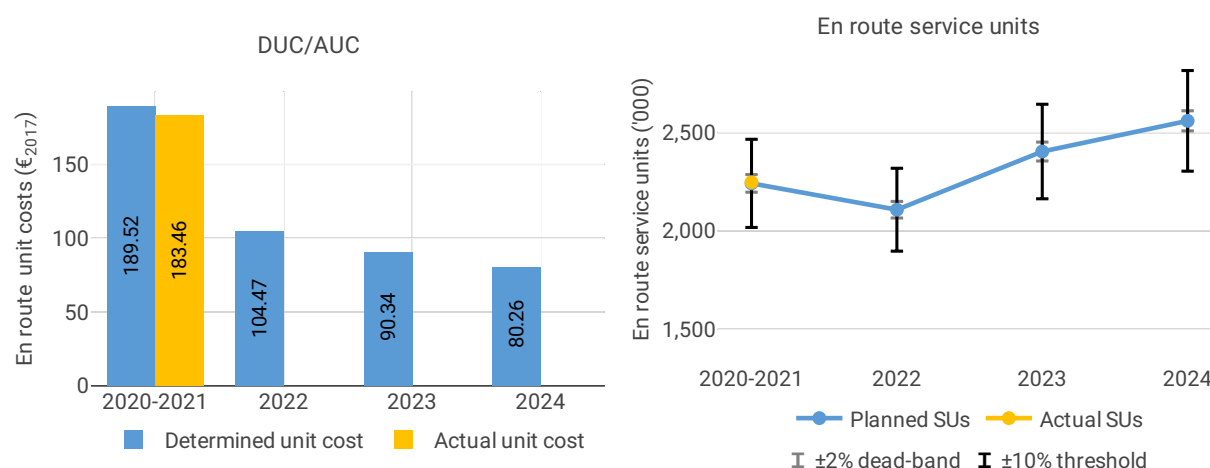
5 COST-EFFICIENCY - BELGIUM

5.1 PRB monitoring

- The en route 2020/2021 actual unit cost of Belgium-Luxembourg was 183.46 €2017, -3.0% lower than the determined unit cost (189.52 €2017).
- The terminal actual unit cost of Belgium was 385.89 €2017, -3.1% lower than the determined unit cost (398.33 €2017).
- The en route 2021 actual service units (1,167K) were in line with the determined service units (1,161K).
- The en route 2021 actual total costs were -12 M€2017 (-5.5%) lower than determined, mainly due to lower other operating costs (-8.1 M€2017, or -15%) and lower staff costs (-3.1 M€2017, or -2.1%). The NSA did not provide explanations for the variations of costs.
- Skeyes spent 13.0 M€2017 in 2021 related to costs of investments, -3.0% less than determined (13.4 M€2017), due to both lower depreciation and cost of capital stemming from a lower net book value. The NSA explained that there have been changes in the planned schedule of some investments.
- The en route actual unit cost incurred by users of Belgium-Luxembourg in 2020/2021 was 195.76€, while the terminal actual unit cost incurred by users was 324.46€ for Belgium and 303.05€ for Luxembourg.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the en route AUC was -3.0% (or -5.76€2017) lower than the planned DUC. This results from the combination of slightly higher than planned TSUs (+0.3%) and lower than planned en-route costs in real terms (-2.8%, or -11.9 M€2017).

En route service units

The difference between actual and planned TSUs (+0.3%) falls within the $\pm 2\%$ dead band. Hence the resulting additional en-route revenue is kept by the ANSPs.

En route costs by entity

Actual real en route costs are -2.8% (-11.9 M€2017) lower than planned. This is driven by the main ANSP, Skeyes (-3.8%, or -9.4 M€2017), the other ANSPs (MUAC and ANA Luxembourg, -1.0%, or -1.4 M€2017 together) and the NSA/EUROCONTROL costs (-2.7%, or -1.0 M€2017).

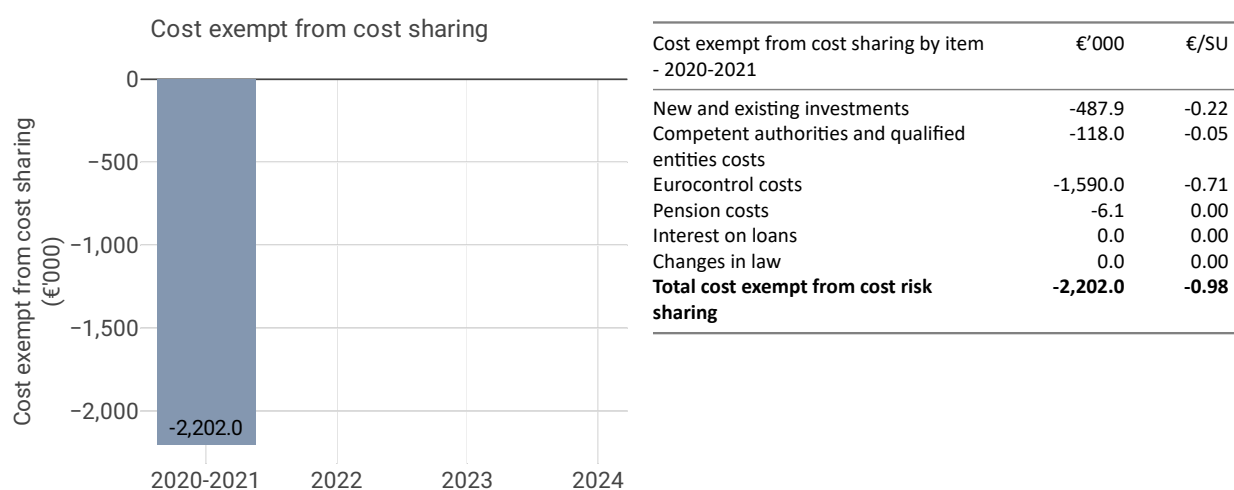
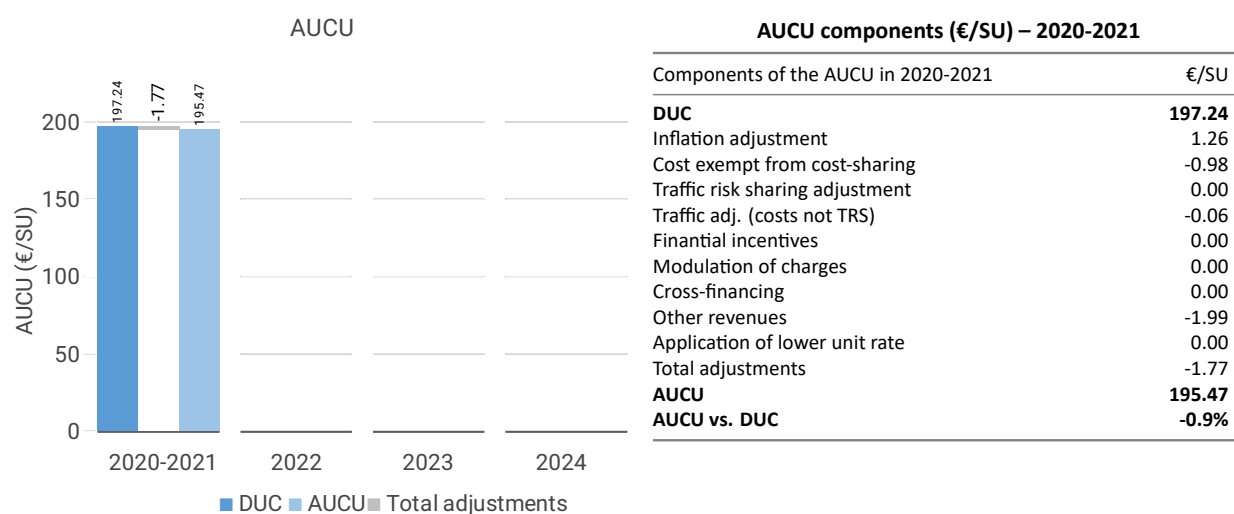
En route costs for the main ANSP at charging zone level

The lower than planned en route costs in real terms for Skeyes (-3.8%, or -9.4 M€2017) result from:

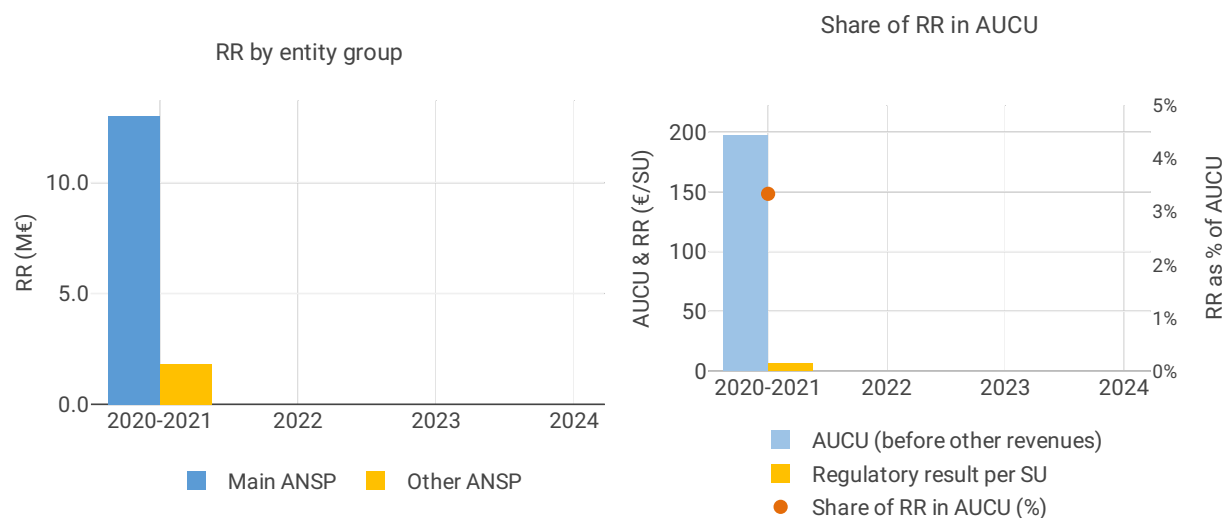
- lower staff costs (-1.8%);
- lower other operating costs (-13.5%);
- slightly lower depreciation (-1.4%); and
- lower cost of capital (-2.7%).

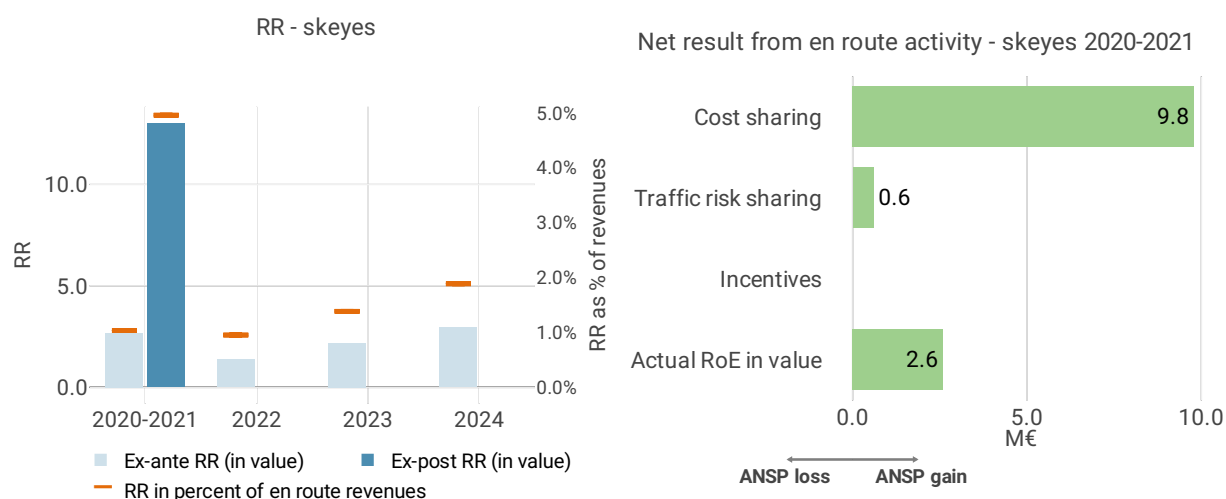
The additional information to the reporting tables does not provide qualitative information explaining the reasons underlying the differences between the determined and actual costs.

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



5.2.3 Regulatory result (RR)





Focus on regulatory result

Skeyes net gain on activity in the Belgium-Luxembourg en route charging zone in the combined year 2020-2021

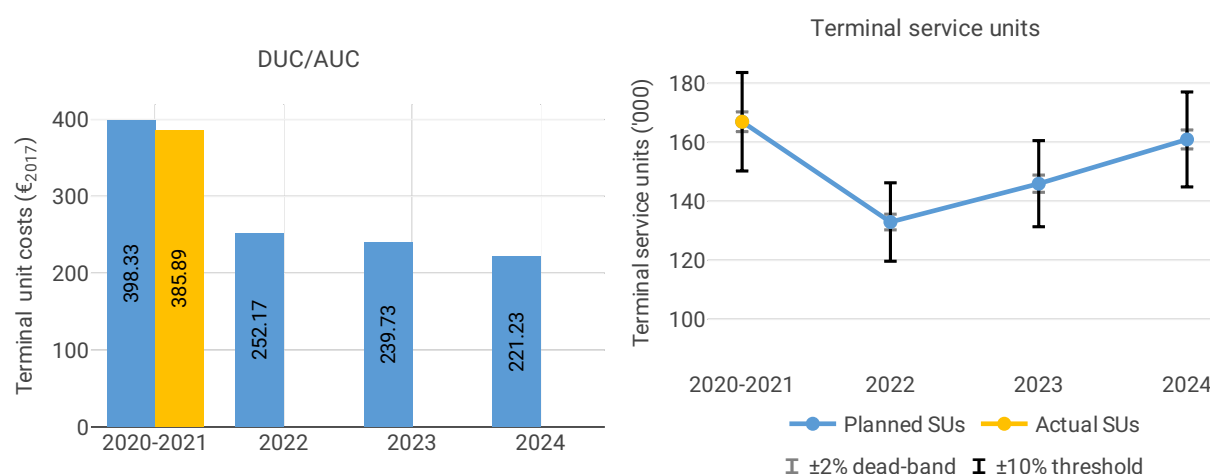
Skeyes reported a net gain of +10.4 M€, resulting from a gain of +9.8 M€ arising from the cost sharing mechanism and a gain of +0.6 M€ arising from the traffic risk sharing mechanism.

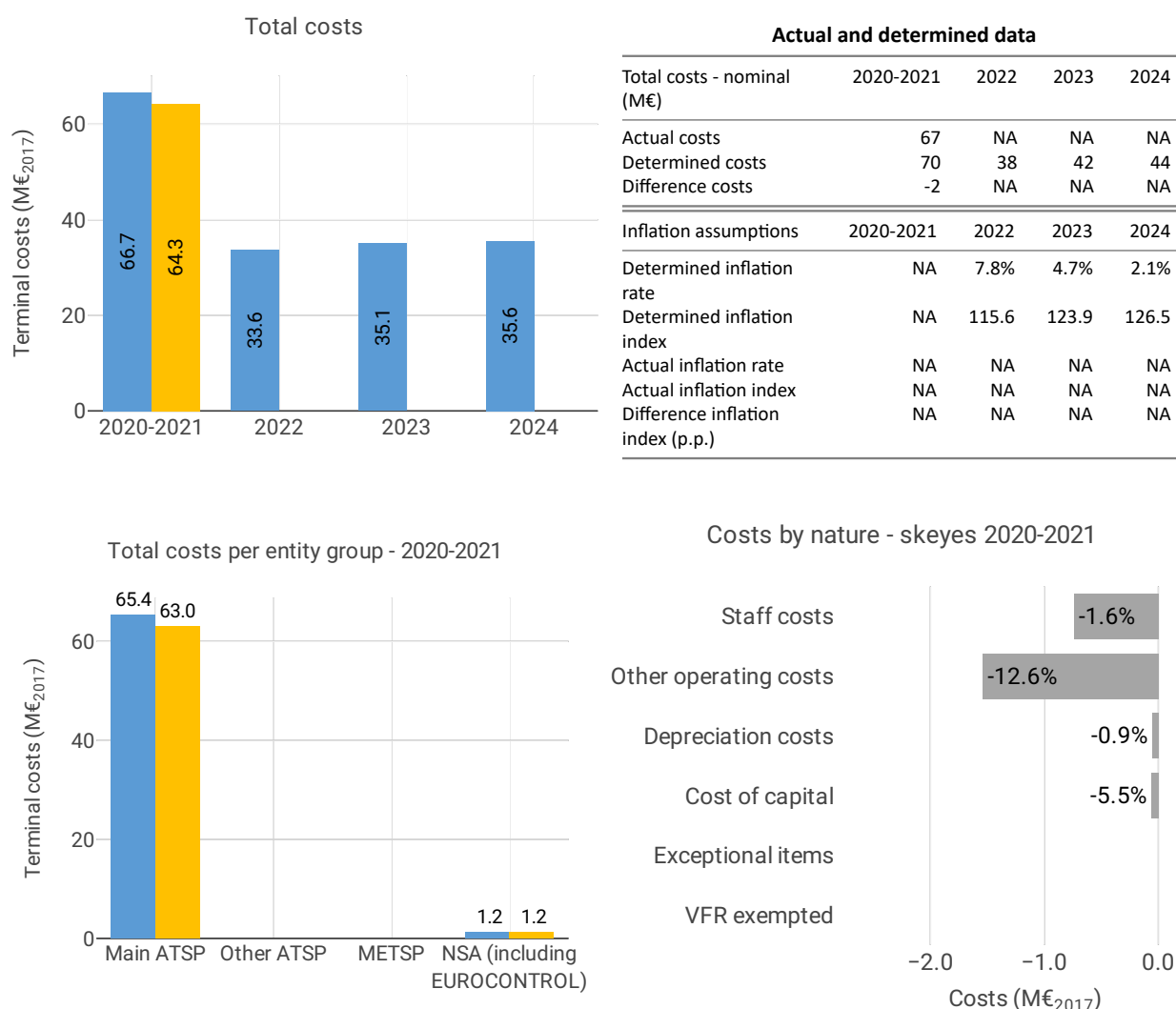
Skeyes overall regulatory results (RR) for the en route activity

Ex-post, the overall RR corresponding to the net gain from the en route activity mentioned above (+10.4 M€) and the RoE (+2.6 M€) amounts to +13.0 M€ (5.0% of the en route revenues), compared to 1.0% ex-ante. The resulting ex-post rate of return on equity is 11.2%, which is higher than the 2.2% planned in the PP.

5.3 Terminal charging zone

5.3.1 Unit cost (KPI#1)





Focus on unit cost

AUC vs. DUC

The AUC for the combined year 2020-2021 is lower than the planned DUC (by -3.1%, or -12.44 €2017). This is due to the combination of lower than planned TNSUs (-0.5%) and lower than planned terminal costs in real terms (by -3.6%, or -2.4 M€2017).

Terminal service units

The difference between actual and planned TNSUs (-0.5%) falls within the $\pm 2\%$ dead band. Hence the resulting loss is borne by the ANSP.

Terminal costs by entity

Actual real terminal costs for 2020-2021 are -3.6% (-2.4 M€2017) lower than planned. This result is driven by the main ANSP, Skeyes (-3.7%, or -2.4 M€2017), while the NSA costs are -0.5% lower than planned.

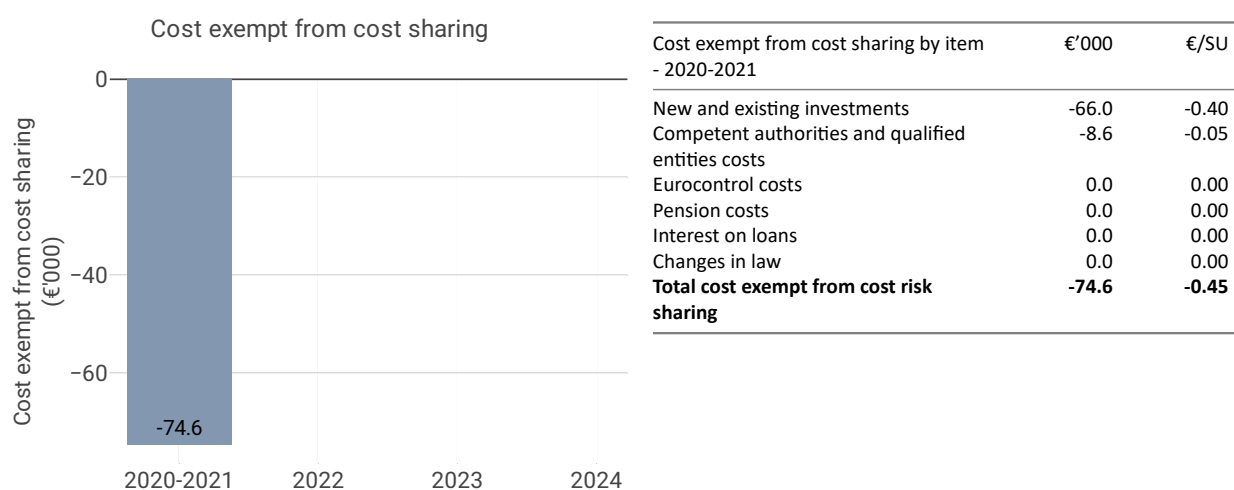
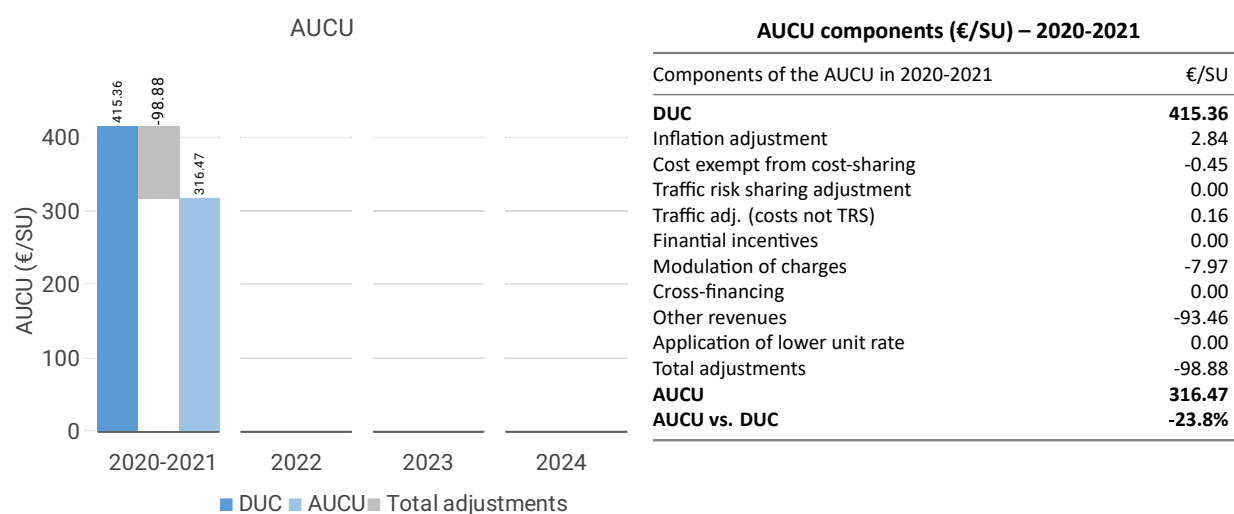
Terminal costs for the main ANSP at charging zone level

Overall, the terminal costs in real terms for Skeyes in 2020-2021 were lower than the determined costs from the performance plan (by -3.7%, or -2.4 M€2017 lower). This results from:

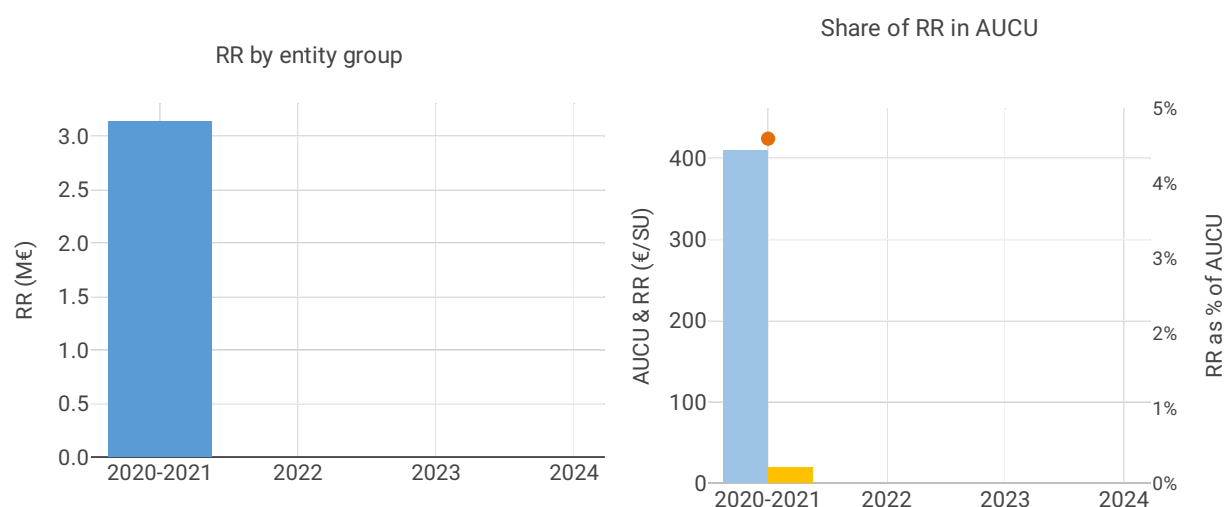
- lower staff costs (-2.4%),
- lower other operating costs (-9.4%),
- lower depreciation (-0.9%); and
- lower cost of capital (-5.5%).

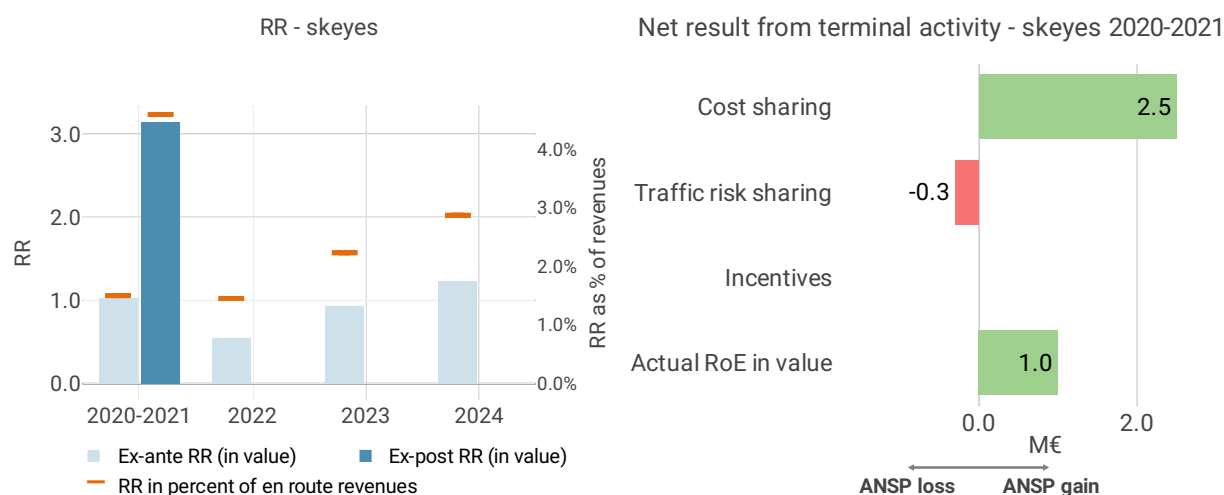
The additional information to the reporting tables provides no qualitative information explaining the reasons underlying the differences between the determined and actual costs.

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



5.3.3 Regulatory result (RR)





Focus on regulatory result

Skeyes net gain on activity in the Belgium-Brussels terminal charging zone in the combined year 2020-2021

Skeyes reported a net gain of +2.2 M€, resulting from a gain of +2.5 M€ arising from the cost sharing mechanism and a loss of -0.3 M€ arising from the traffic risk sharing mechanism.

Skeyes overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR corresponding to the net gain from the terminal activity mentioned above (+2.2 M€) and the RoE (+1.0 M€) amounts to +3.1 M€ (4.6% of the terminal revenues), compared to 1.5% ex-ante. The resulting ex-post rate of return on equity is 7.3%, which is higher than the 2.2% planned in the PP.