



Performance Review Body Monitoring Report

Estonia - 2023

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 - ESTONIA	7
2.1	PRB monitoring	7
2.2	Effectiveness of Safety Management (EoSM) (KPI#1)	7
2.3	Occurrences - Rate of runway incursions (RIs) (PI#1) & Rate of separation minima infringements (SMLs) (PI#2)	7
3	ENVIRONMENT - ESTONIA	8
3.1	PRB monitoring	8
3.2	En route performance	8
3.3	Terminal performance	9
3.4	Civil-Military dimension	10
4	CAPACITY - ESTONIA	11
4.1	PRB monitoring	11
4.2	En route performance	12
4.3	Terminal performance	14
5	COST-EFFICIENCY - ESTONIA	15
5.1	PRB monitoring	15
5.2	En route charging zone	16
5.3	Terminal charging zone	19

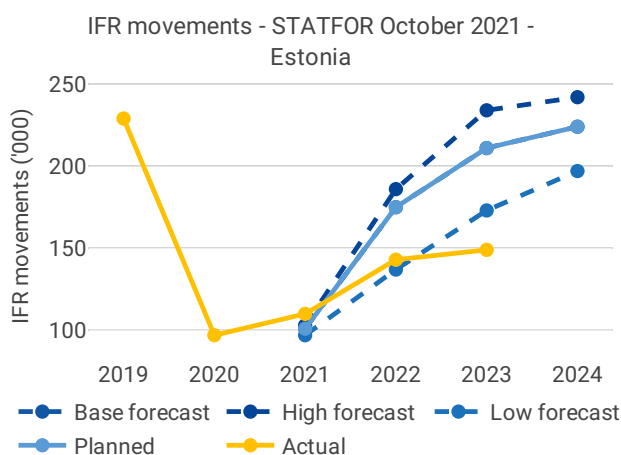
1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/771 of 13 April 2022

List of ACCs 1 Tallinn ACC	Exchange rate (1 EUR=) 2017: 1 EUR 2023: 1 EUR	Main ANSP • EANS
No of airports in the scope of the performance plan: • ≥80'K 0 • <80'K 2	Share of Union-wide: • traffic (TSUs) 2023 0.4% • en route costs 2023 0.4%	Other ANSPs –
	Share en route / terminal costs 2023 89% / 11%	MET Providers –
	En route charging zone(s) Estonia	
	Terminal charging zone(s) Estonia	

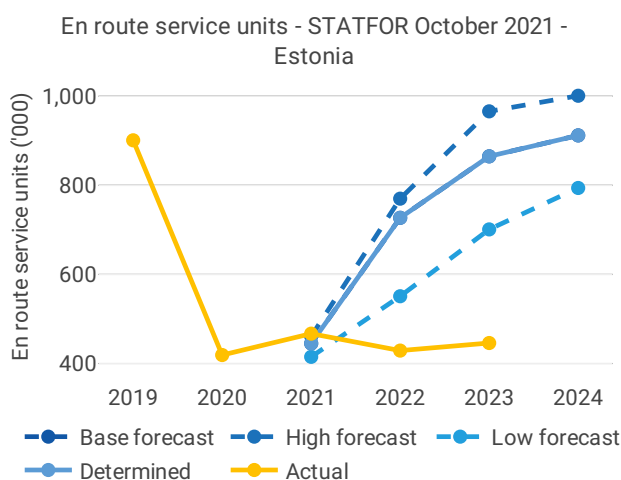
1.2 Traffic (En route traffic zone)



- Estonia recorded 149K actual IFR movements in 2023, +5% compared to 2022 (143K).

- Actual 2023 IFR movements were -29% below the plan (211K).

- Actual 2023 IFR movements represent 65% of the actual 2019 level (229K).

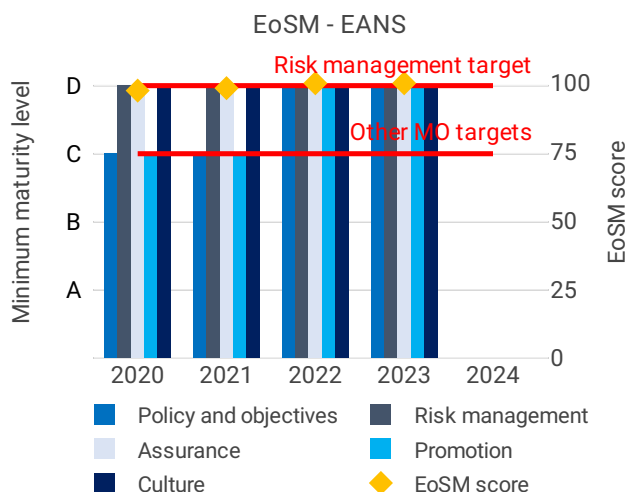


- Estonia recorded 446K actual en route service units in 2023, +4% compared to 2022 (429K).

- Actual 2023 service units were -48% below the plan (865K).

- Actual 2023 service units represent 50% of the actual 2019 level (901K).

1.3 Safety (Main ANSP)

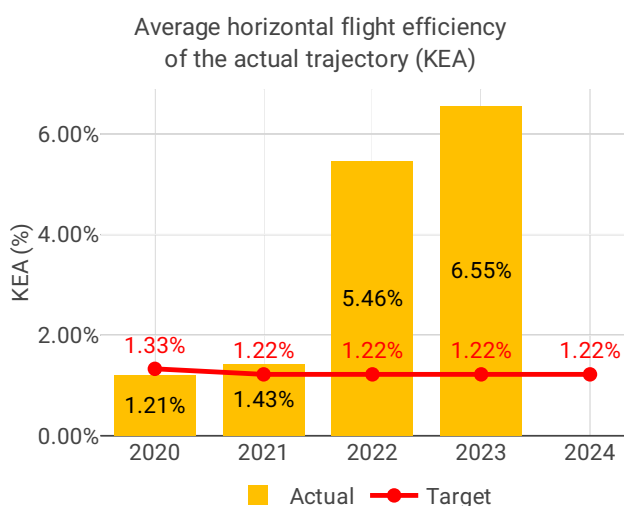


- Estonia already achieved the RP3 target levels at the start of the reference period but continued to improve its performance continuously. Estonia maintained the maximum maturity level for all five management objectives in 2023.

- Estonia recorded a significantly higher rate separation minima infringements (SMI) and the lower rate of runway incursions in 2023 relative to 2022. The NSA closely monitored the rate of occurrences and assessed the effectiveness of implemented measures.

- EANS does not use automated safety data recording systems.

1.4 Environment (Member State)



- Estonia achieved a KEA performance of 6.55% compared to its target of 1.22% and did not contribute positively to achieving the Union-wide target.

- The NSA states that the target was not achieved because of the traffic to and from Kaliningrad which does not follow the optimal routes due to the restrictive measures following Russia's war of aggression against Ukraine.

- Both KEP and SCR deteriorated in comparison to 2022. The value of these two indicators is similar, meaning airspace users plan close to the shortest

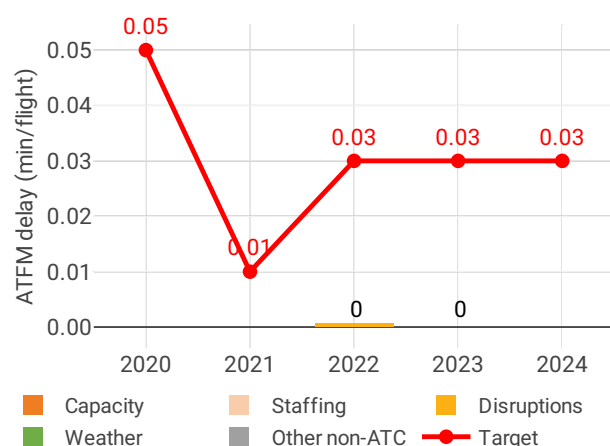
route available.

- The share of CDO flights decreased from 66.29% to 65.15% in 2023.

- During 2023, additional time in terminal airspace increased from 0.19 to 0.23 min/flight, while additional taxi out time decreased from 1.39 to 1.01 min/flight.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



- Estonia registered zero minutes of average en route ATFM delay per flight during 2023, thus achieving the local target value of 0.03. Delays in Estonia remained 0.00 minutes in 2023 compared to the previous year.

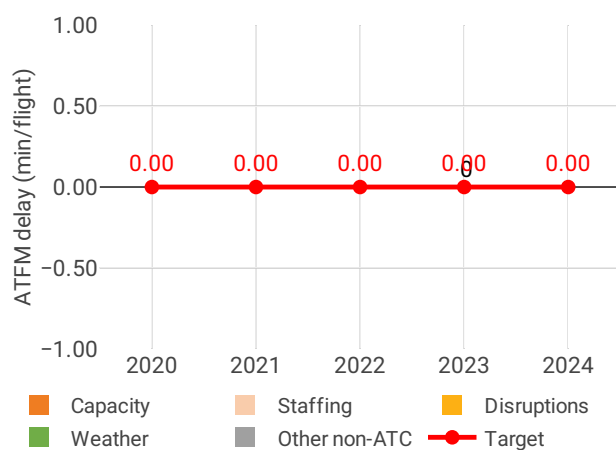
- The average number of IFR movements was 35% below 2019 levels in Estonia in 2023.

- The number of ATCOs in OPS is expected to decrease by 10% by 2024, with the actual value being below the 2023 plan in Tallinn by 6 FTEs.

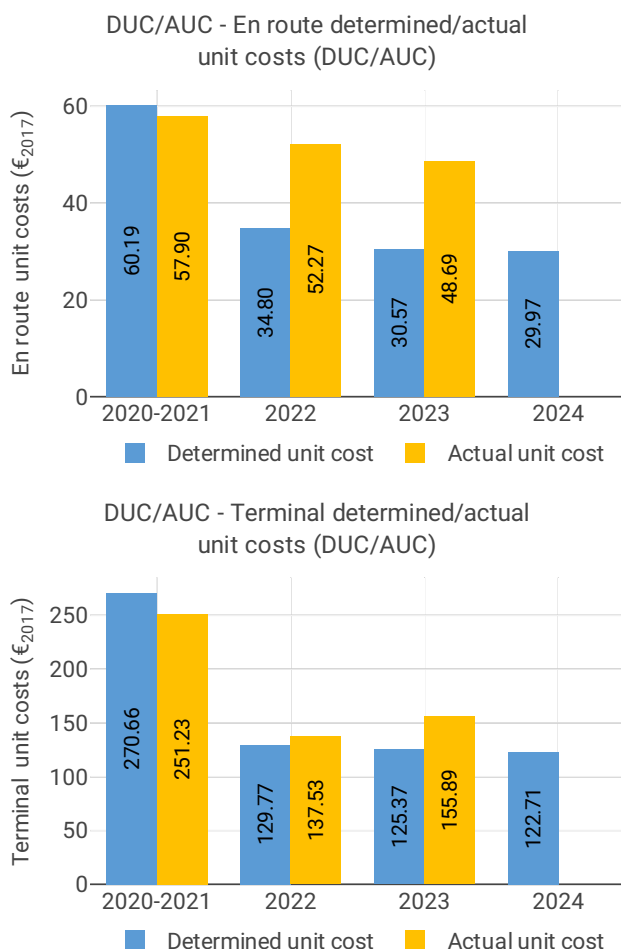
- The yearly total of sector opening hours in Tallinn ACC was 10,212, showing a 0.9% increase compared to 2022. Sector opening hours are 19.6% below 2019 levels.

- Tallinn ACC registered 13.64 IFR movements per one sector opening hour in 2023, being 21.7% below 2019 levels.

Average arrival ATFM delay per flight by delay groups



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



- The en route 2023 actual unit cost of Estonia was 48.69 €2017, +59% higher than the determined unit cost (30.57 €2017). The terminal 2023 actual unit cost was 155.89 €2017, +24% higher than the determined unit cost (125.37 €2017).

- The en route 2023 actual service units (0.4M) were -48% lower than the determined service units (0.9K) mainly due to shifted traffic flows caused by the Russia's war of aggression against Ukraine.

- In 2023, the en route actual total costs were -4.7 M€2017 (-18%) lower than determined. The main contributor was the difference in staff costs (-2.3 M€2017, or -17%). However, in nominal terms, the actual staff costs show a slight gap of +1.6% compared to the determined figures.

- EANS spent 3.7 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, which is -28% less than determined. This reduction was largely due to a gap in depreciation costs (-1.2 M€2017, -32%) stemming from delays in the implementation dates of investments.

- The en route actual unit cost incurred by users in 2023 was 70.08€ (+114% above the 2023 DUC), while the terminal actual unit cost incurred by

users was 135.95€ (+1.0% above the 2023 DUC). The difference between the AUCU and the DUC for the en route charging zone is primarily attributed to lower than planned SUs, while for the terminal charging zone, it is mainly due to the inflation adjustment (+0.4 M€).

- The en route regulatory result for EANS amounted to +5.2 M€, or 22% of the 2023 revenue. This may indicate that the airspace users are charged for costs which have not materialised in 2023.

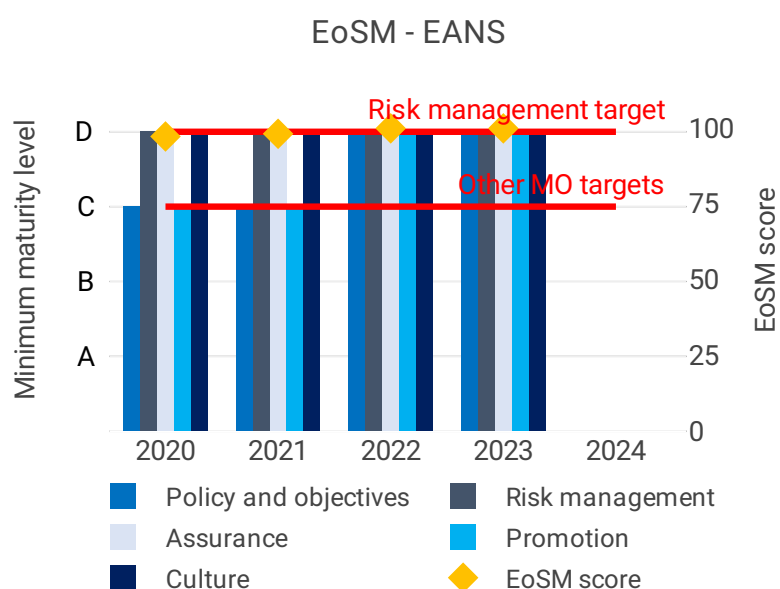
- The PRB will take into consideration the implementation of the RP3 performance plan when assessing the RP4 cost-efficiency targets.

2 SAFETY - ESTONIA

2.1 PRB monitoring

- Estonia already achieved the RP3 target levels at the start of the reference period but continued to improve its performance continuously. Estonia maintained the maximum maturity level for all five management objectives in 2023.
- Estonia recorded a significantly higher rate separation minima infringements (SMI) and the lower rate of runway incursions in 2023 relative to 2022. The NSA closely monitored the rate of occurrences and assessed the effectiveness of implemented measures.
- EANS does not use automated safety data recording systems.

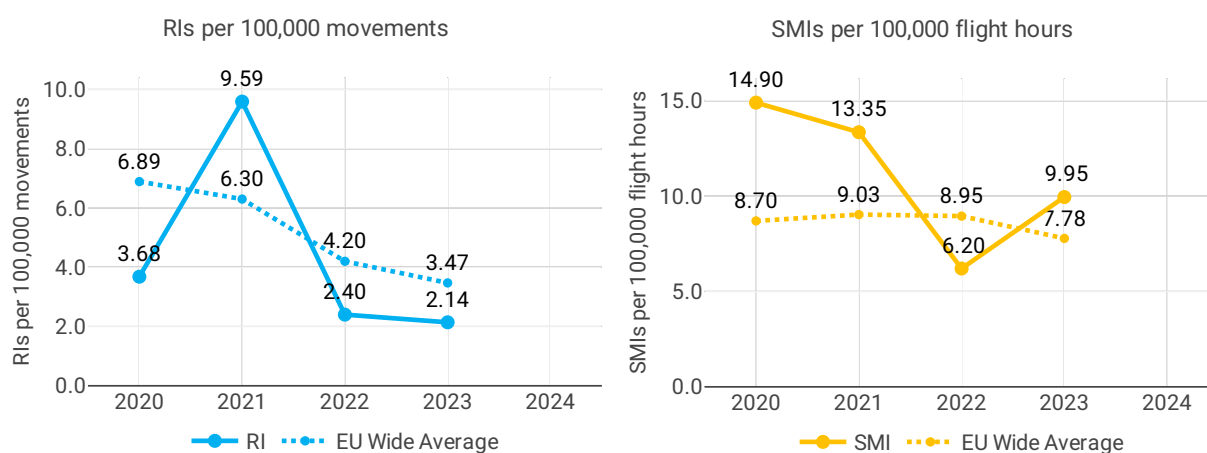
2.2 Effectiveness of Safety Management (EoS) (KPI#1)



Focus on EoS

All five EoS components of the ANSP meet, or exceed, already the RP3 target level. Maximum maturity level was maintained compared with 2022.

2.3 Occurrences - Rate of runway incursions (RIs) (PI#1) & Rate of separation minima infringements (SMIs) (PI#2)



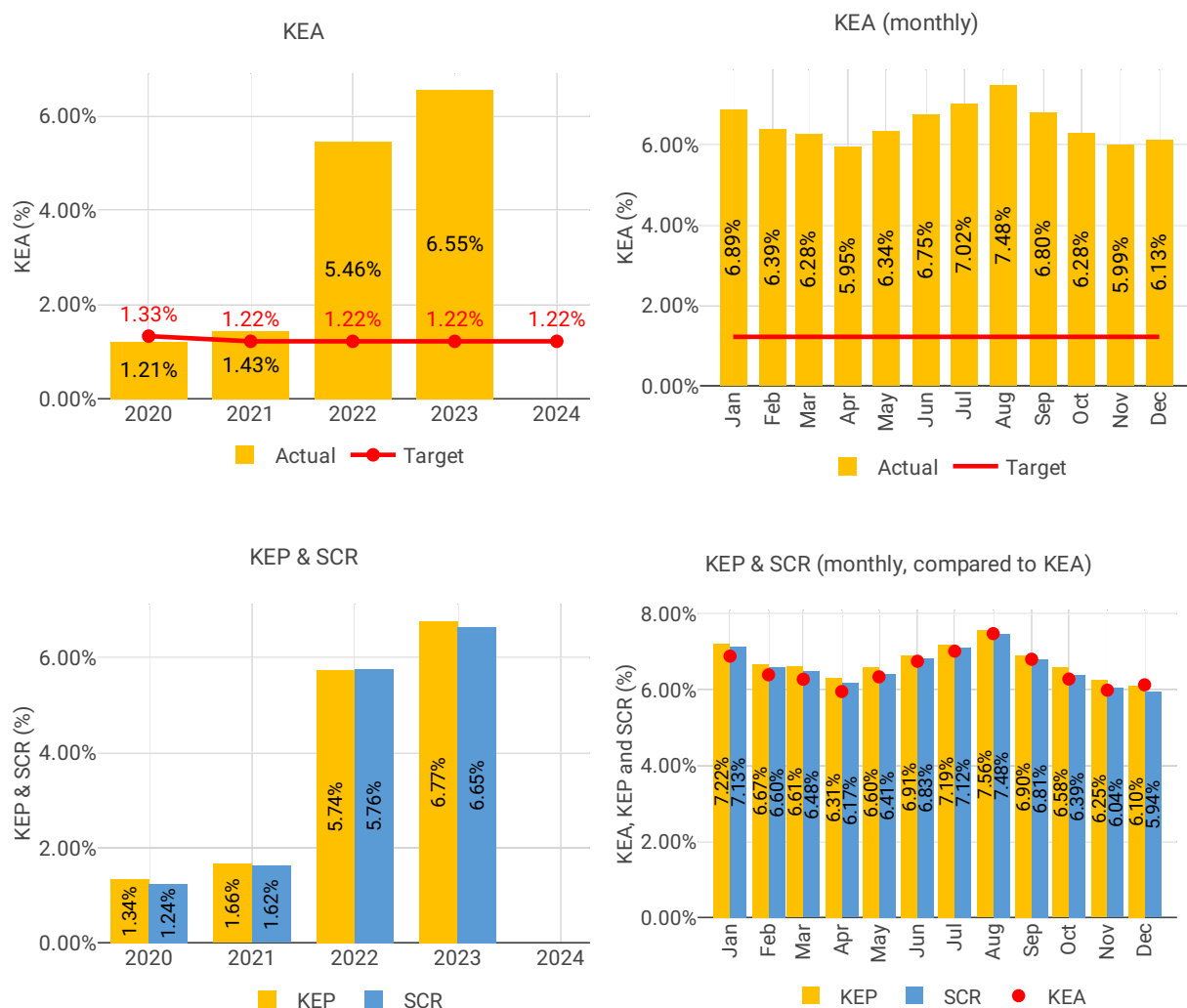
3 ENVIRONMENT - ESTONIA

3.1 PRB monitoring

- Estonia achieved a KEA performance of 6.55% compared to its target of 1.22% and did not contribute positively to achieving the Union-wide target.
- The NSA states that the target was not achieved because of the traffic to and from Kaliningrad which does not follow the optimal routes due to the restrictive measures following Russia's war of aggression against Ukraine.
- Both KEP and SCR deteriorated in comparison to 2022. The value of these two indicators is similar, meaning airspace users plan close to the shortest route available.
- The share of CDO flights decreased from 66.29% to 65.15% in 2023.
- During 2023, additional time in terminal airspace increased from 0.19 to 0.23 min/flight, while additional taxi out time decreased from 1.39 to 1.01 min/flight.

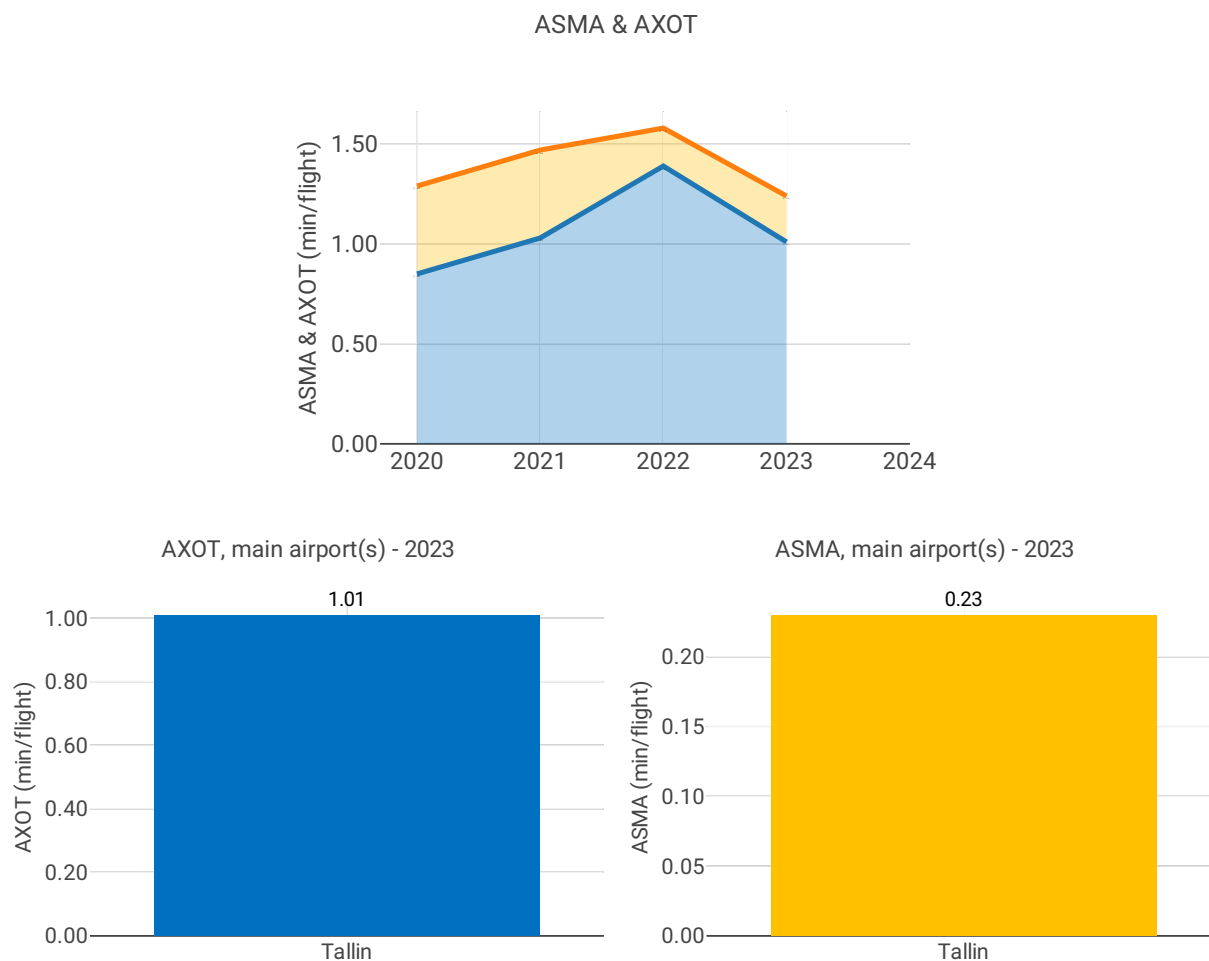
3.2 En route performance

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

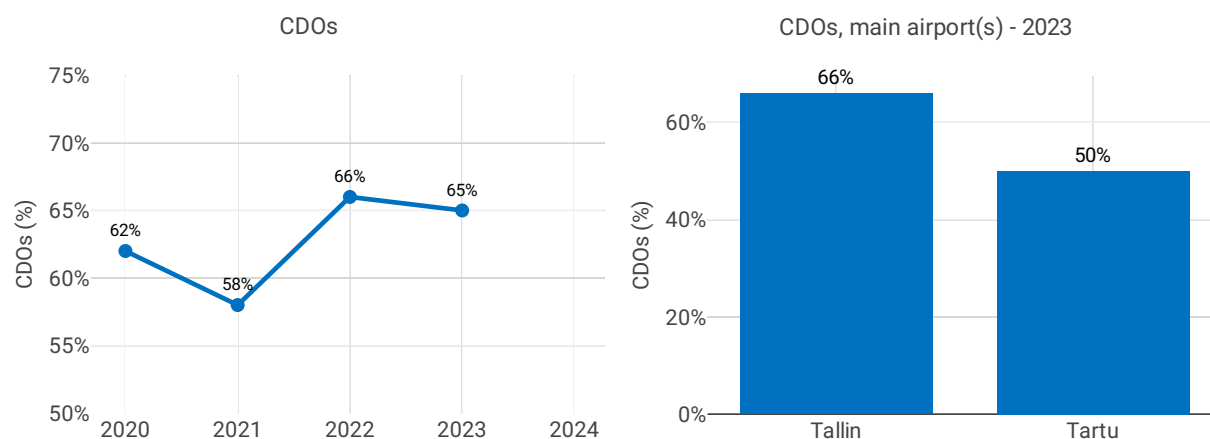
AXOT

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

ASMA

This indicator is not monitored for airports below 80 000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

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

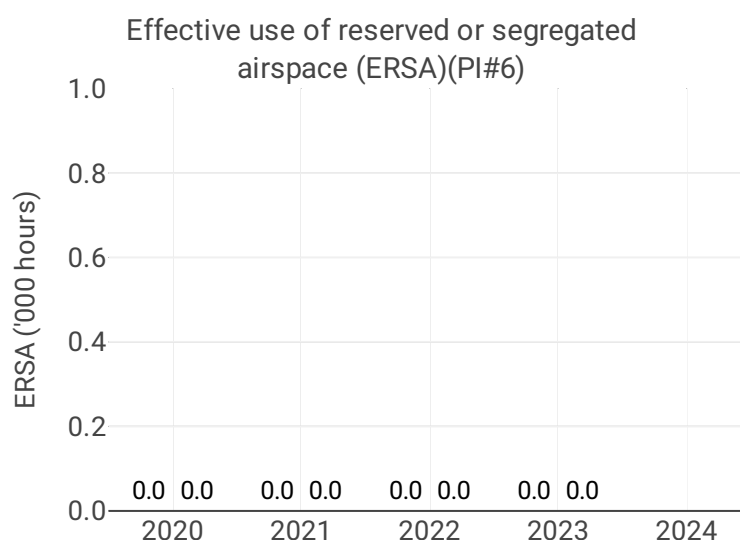


Focus CDOs

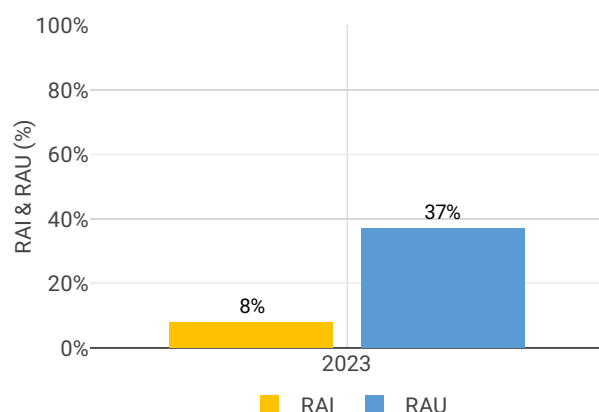
The share of CDO flights has stayed stable for Tallin (EETN) but has significantly decreased again for Tartu (EETU): -22.5 percentage points with respect to 2022. They are still well above the overall RP3 value in 2023 (28.8%). Tallin (EETN) is in the top 10 of all observed values in 2023.

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
Tallin	0.85	1.03	1.39	1.01	NA	0.44	0.44	0.19	0.23	NA	61%	56%	66%	66%	NA
Tartu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70%	44%	72%	50%	NA

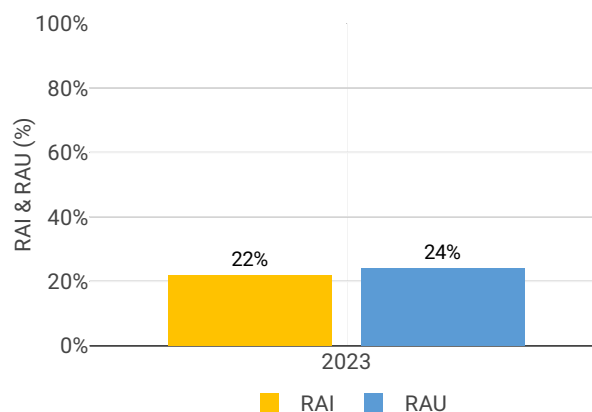
3.4 Civil-Military dimension



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

N/A

Military - related measures implemented or planned to improve capacity

N/A

Initiatives implemented or planned to improve PI#6

No data available.

Initiatives implemented or planned to improve PI#7

FRA has been implemented.

Initiatives implemented or planned to improve PI#8

No data available.

4 CAPACITY - ESTONIA

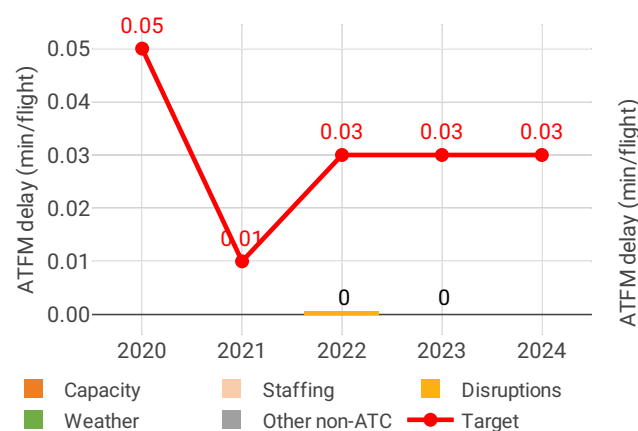
4.1 PRB monitoring

- Estonia registered zero minutes of average en route ATFM delay per flight during 2023, thus achieving the local target value of 0.03. Delays in Estonia remained 0.00 minutes in 2023 compared to the previous year.
- The average number of IFR movements was 35% below 2019 levels in Estonia in 2023.
- The number of ATCOs in OPS is expected to decrease by 10% by 2024, with the actual value being below the 2023 plan in Tallinn by 6 FTEs.
- The yearly total of sector opening hours in Tallinn ACC was 10,212, showing a 0.9% increase compared to 2022. Sector opening hours are 19.6% below 2019 levels.
- Tallinn ACC registered 13.64 IFR movements per one sector opening hour in 2023, being 21.7% below 2019 levels.
- Estonia registered an average airport arrival ATFM delay of zero minutes per flight in 2023, achieving the local target of zero minutes.
- Compared to 2022, the number of IFR arrivals in Estonia decreased by 1%, while the average airport arrival ATFM delay remained zero minutes.

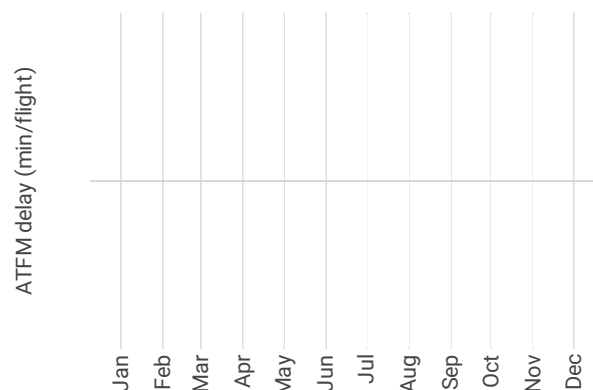
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

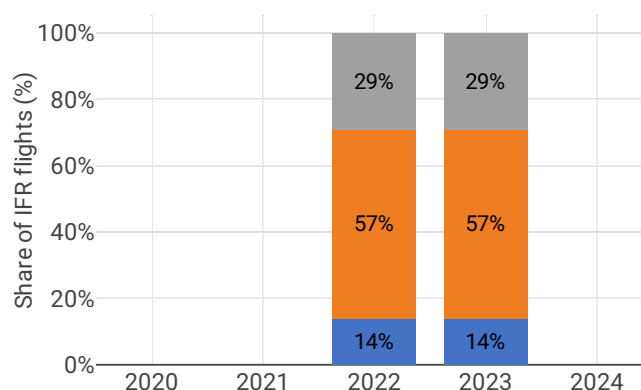
Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay by delay groups - 2023



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



Focus on en route ATFM delay

Summary of capacity performance

Estonia experienced an increase in traffic from 142k flights in 2022, to 148k flights in 2023 with zero ATFM delay. Traffic levels remain significantly below the 227k flights handled in 2019.

NSA's assessment of capacity performance

In operational context, in 2023 we faced significant challenges and modest recovery across different quarters. The year was largely impacted by the ongoing Russian aggression against Ukraine, comparable in its effects to the COVID-19 pandemic. The Estonian airspace continues to be impacted by sanctions and the resulting decrease in air traffic between Europe and Asia.

In 2023, Estonia experienced a slight increase in flights compared to the previous year but still faced significant decrease compared to 2019.

The en route capacity targets of Estonia, measured in minutes of ATFM delay per flight for 2023, was set at 0.03 minutes. The actual ATFM delay per flight for 2023 was recorded at 0.0 minutes. No capacity issues have been identified. Air traffic flows have remained significantly below 2019 levels due to the sanctions on Russia and airspace closures caused by Russia's war against Ukraine.

Monitoring process for capacity performance

Review of the actual values from the NM dashboard.

Capacity planning

Due to the limited traffic volumes capacity planning remains standard. ATFM delays are anticipated to remain at zero, as capacity continues to align with user demand

Application of Corrective Measures for Capacity (if applicable)

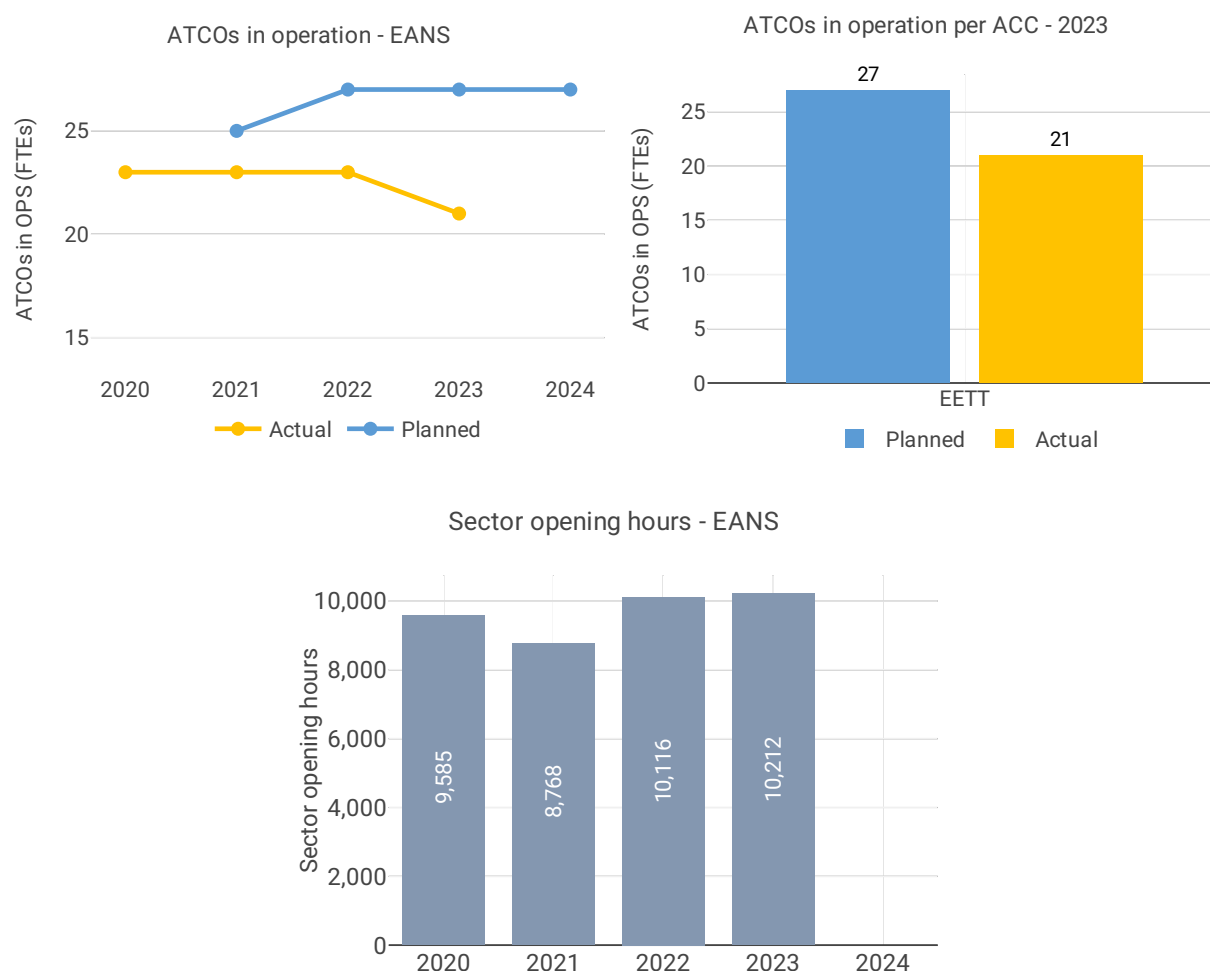
Not applicable.

Additional Information Related to Russia's War of Aggression Against Ukraine Estonian airspace continues to be impacted by sanctions and the resulting decrease in air traffic between Europe and Asia. The ANSP has had to scale down and streamline operations while maintaining readiness for when traffic picks up again.

En route Capacity Incentive Scheme

EANS: Actual performance falls inside the deadband range; therefore no bonus is due. 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.

4.2.2 Other indicators

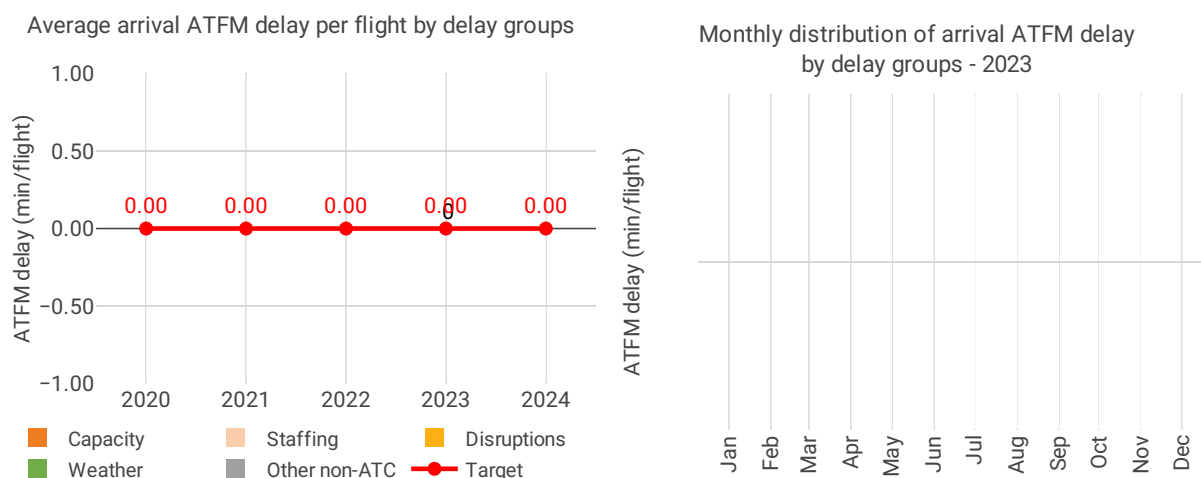


Focus on ATCOs in operations

N/A

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)



Focus on arrival ATFM delay

Estonia identified two airports, Tallinn and Tartu, as subject to RP3 monitoring. In accordance with IR (EU) 2019/317 and the traffic figures at these 2 airports, pre-departure delays are not monitored and the capacity performance focuses on arrival ATFM delays and slot adherence.

Traffic at these Estonian airports in 2023 was still 23% lower than in 2019.

Like in the rest of RP3, no arrival ATFM delays were observed in the entire 2023 at these two airports and slot adherence remained very high (2023: 98.9%; 2022: 98.3%).

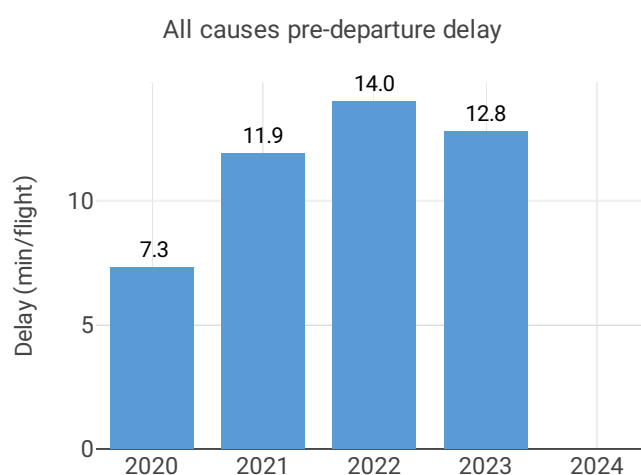
Like in previous years, no arrival ATFM delay was observed at the Estonian airports (Tallinn and Tartu) in 2023. According to the Estonian monitoring report, this is due to *low traffic volumes and well functioning systems*

The Estonian performance plan sets a national target on arrival ATFM delay for all RP3 of 0.0 min/arr. This target, like in the rest of RP3, was met in 2023 with an actual performance of 0.0 min/arr.

The Estonian performance plan does not establish any bonus.

According to the Estonian monitoring report: *Since the number of flights remains low and the number of delays attributable to EANS is zero, there is no point in establishing a bonus, as a bonus should motivate change, but it is impossible to improve non-existent delays.*

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	2020	2021	2022	2023
Tallin	NA	NA	NA	NA	98.5%	98.2%	98.6%	98.9%
Tartu	NA	NA	NA	NA	NA	NA	50.0%	90.9%

Airport name	ATC pre departure delay (PI#2)				All causes pre departure delay (PI#3)			
	2020	2021	2022	2023	2020	2021	2022	2023
Tallin	0.01	0.02	0.11	0.09	7.3	11.9	14.0	12.8
Tartu	NA	NA	NA	NA	NA	NA	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

Tallin showed very high slot adherence (98.9%) and at Tartu there only 11 regulated departures in 2023, from which only 1 departed outside of the STW.

The national average was 98.9%. With regard to the 1.1% of flights that did not adhere, 0.3% was early and 0.8% was late.

According to the Estonian monitoring report: *Performance remained on the same high level.*

ATC pre-departure delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Estonia.

All causes pre-departure delay

This indicator is not monitored for airports below 80 000 IFR movements annual average during the 2016-2018 period, so it is not monitored for any airport in Estonia.

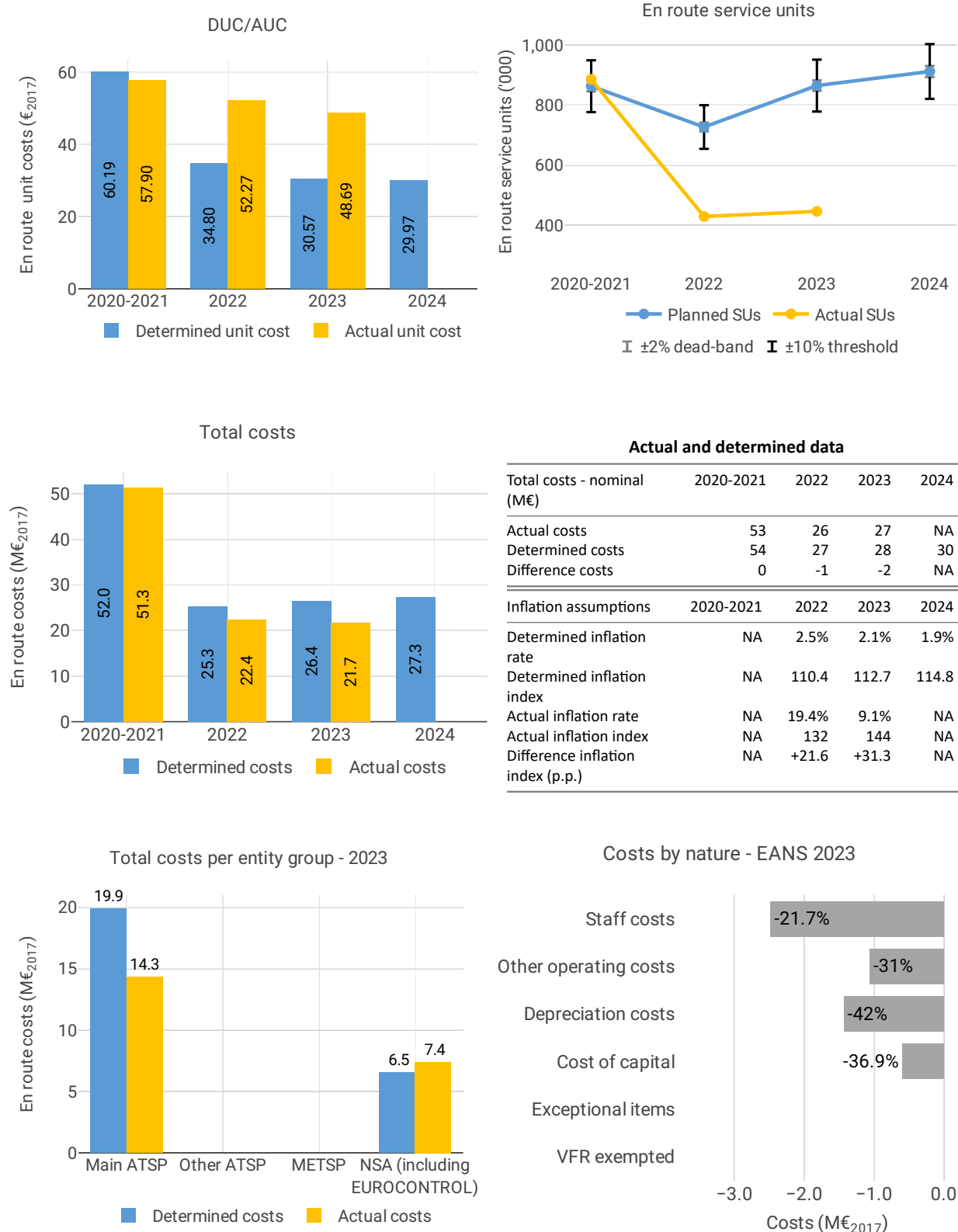
5 COST-EFFICIENCY - ESTONIA

5.1 PRB monitoring

- The en route 2023 actual unit cost of Estonia was 48.69 €2017, +59% higher than the determined unit cost (30.57 €2017). The terminal 2023 actual unit cost was 155.89 €2017, +24% higher than the determined unit cost (125.37 €2017).
- The en route 2023 actual service units (0.4M) were -48% lower than the determined service units (0.9K) mainly due to shifted traffic flows caused by the Russia's war of aggression against Ukraine.
- In 2023, the en route actual total costs were -4.7 M€2017 (-18%) lower than determined. The main contributor was the difference in staff costs (-2.3 M€2017, or -17%). However, in nominal terms, the actual staff costs show a slight gap of +1.6% compared to the determined figures.
- EANS spent 3.7 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, which is -28% less than determined. This reduction was largely due to a gap in depreciation costs (-1.2 M€2017, -32%) stemming from delays in the implementation dates of investments.
- The en route actual unit cost incurred by users in 2023 was 70.08€ (+114% above the 2023 DUC), while the terminal actual unit cost incurred by users was 135.95€ (+1.0% above the 2023 DUC). The difference between the AUCU and the DUC for the en route charging zone is primarily attributed to lower than planned SUs, while for the terminal charging zone, it is mainly due to the inflation adjustment (+0.4 M€).
- The en route regulatory result for EANS amounted to +5.2 M€, or 22% of the 2023 revenue. This may indicate that the airspace users are charged for costs which have not materialised in 2023.
- The PRB will take into consideration the implementation of the RP3 performance plan when assessing the RP4 cost-efficiency targets.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)



Focus on unit cost

AUC vs. DUC

In 2023, the en route AUC was +59.3% (or +18.12 €2017) higher than the planned DUC. This results from the combination of significantly lower than planned TSUs (-48.4%) and significantly lower than planned en

route costs in real terms (-17.9%, or -4.7 M€2017). It should be noted that actual inflation index in 2023 was +31.3 p.p. higher than planned.

En route service units

The difference between actual and planned TSUs (-48.4%) falls outside the $\pm 10\%$ threshold foreseen in the traffic risk sharing mechanism. The resulting loss of en route revenues is therefore shared between the ANSP and the airspace users.

En route costs by entity

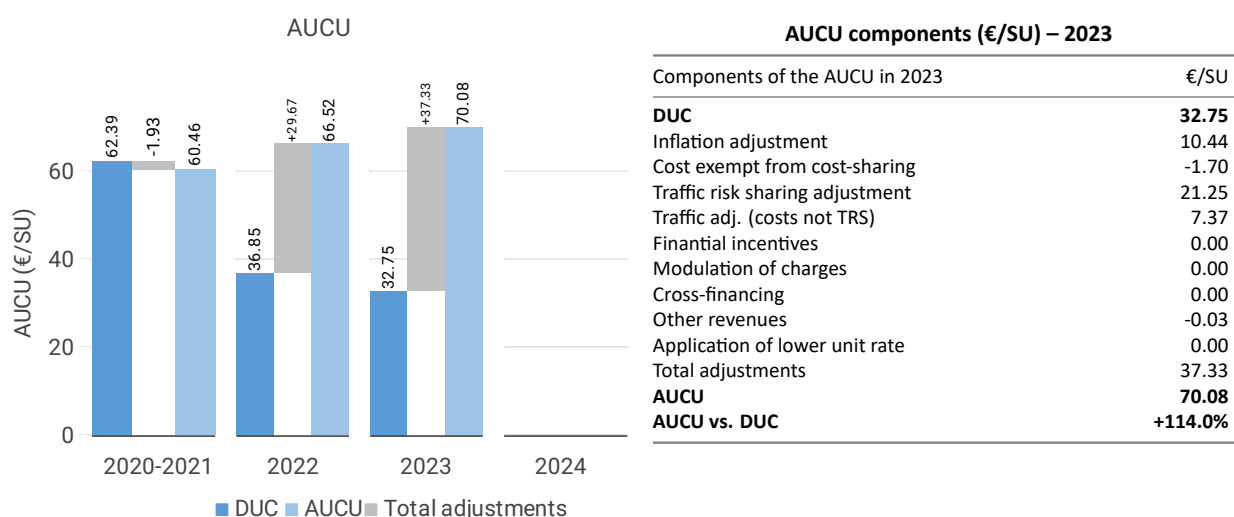
Actual real en route costs are -17.9% (-4.7 M€2017) lower than planned. This is the result of lower costs for the main ANSP, EANS (-28.0%, or -5.6 M€2017) and higher costs for the NSA/EUROCONTROL (+13.1%, or +0.9 M€2017).

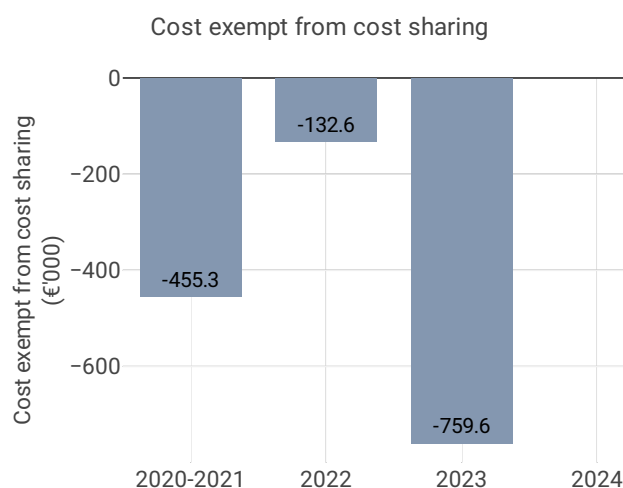
En route costs for the main ANSP at charging zone level

Significantly lower than planned en route costs in real terms for EANS in 2023 (-28.0%, or -5.6 M€2017) result from:

- Significantly lower staff costs (-21.7%) in real terms due to the inflation index impact (+31.3 p.p.) since, in nominal terms, staff costs are in line with the plan (+0.03%).
- Significantly lower other operating costs (-31.0%) reflecting the impact of inflation index but also “*extensive cost-cutting measures to reduce losses. Travelling expenses, equipment maintenance costs and training expenses were the main items for savings*”,
- Significantly lower depreciation (-42.0%), reflecting “*changes in actual investment costs of new investments due to a delayed/postponed implementation*”,
- Significantly lower cost of capital (-36.9%) reflecting the use of lower than planned share of financing through equity.

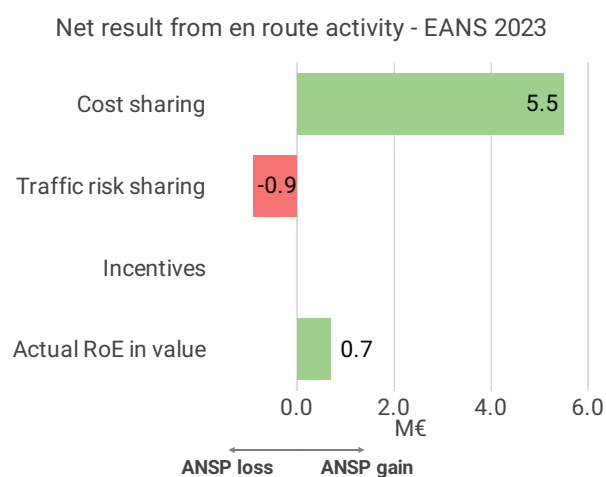
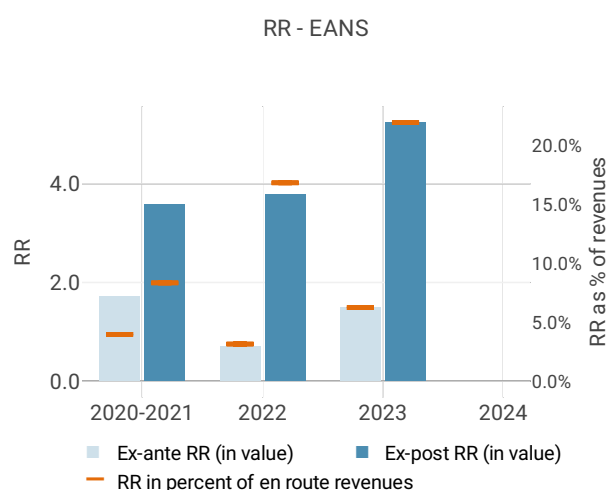
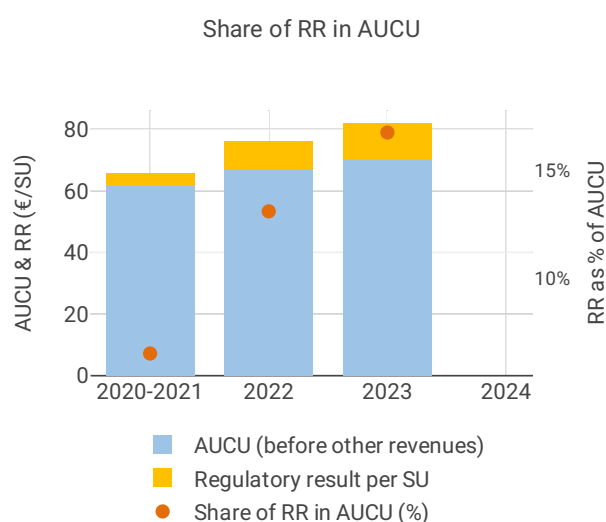
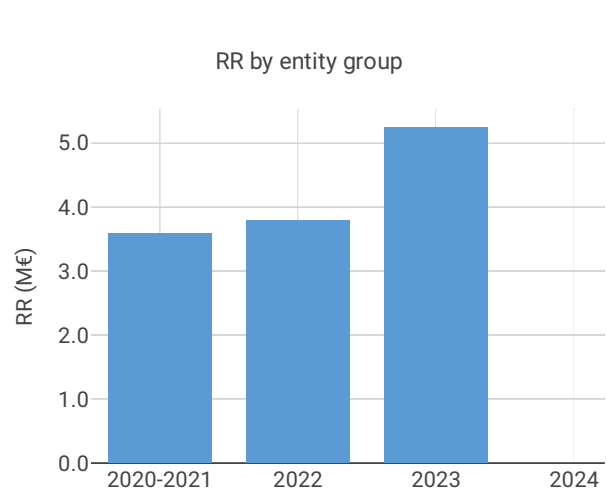
5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)





Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	-1,688.9	-3.78
Competent authorities and qualified entities costs	838.8	1.88
Eurocontrol costs	18.9	0.04
Pension costs	71.6	0.16
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	-759.6	-1.70

5.2.3 Regulatory result (RR)



Focus on regulatory result

EANS net gain on activity in the Estonia en route charging zone in the year 2023

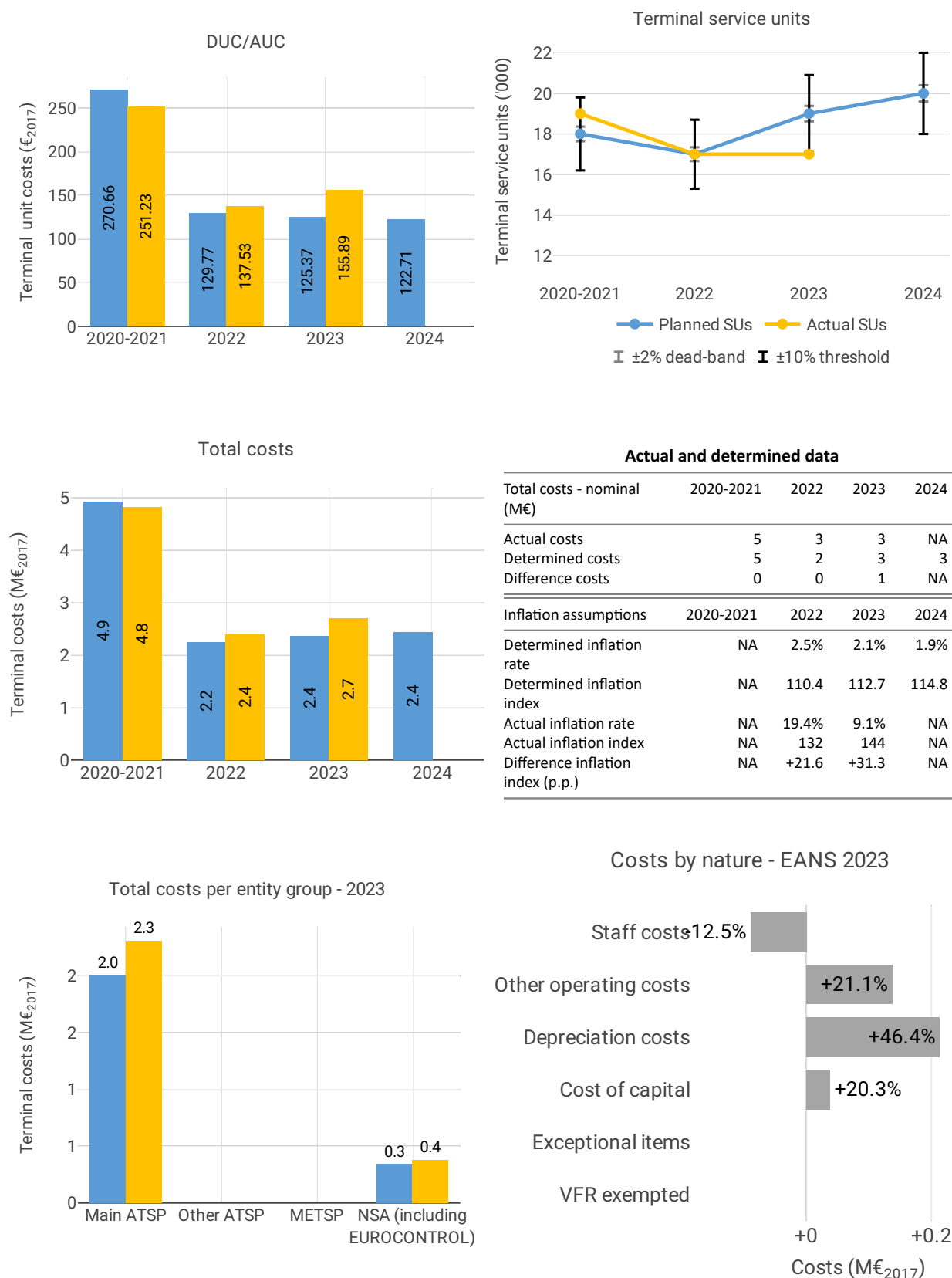
EANS reported a net gain of +4.6 M€, as a combination of a gain of +5.5 M€ arising from the cost sharing mechanism, with a loss of -0.9 M€ arising from the traffic risk sharing mechanism.

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

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+4.6 M€) and the actual RoE (+0.7 M€) amounts to +5.2 M€ (21.9% of the en route revenues). The resulting ex-post rate of return on equity is 57.6%, which is higher than the 7.3% planned in the PP.

5.3 Terminal charging zone

5.3.1 Unit cost (KPI#1)



Focus on unit cost

AUC vs. DUC

In 2023, the terminal AUC was +24.3% (or +30.52 €2017) higher than the planned DUC. This results from the combination of significantly higher than planned terminal costs in real terms (+14.5%, or +0.3 M€2017) and significantly lower than planned TNSUs (-7.9%). It should be noted that actual inflation index in 2023 was +31.3 p.p. higher than planned.

Terminal service units

The difference between actual and planned TNSUs (-7.9%) 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.

Terminal costs by entity

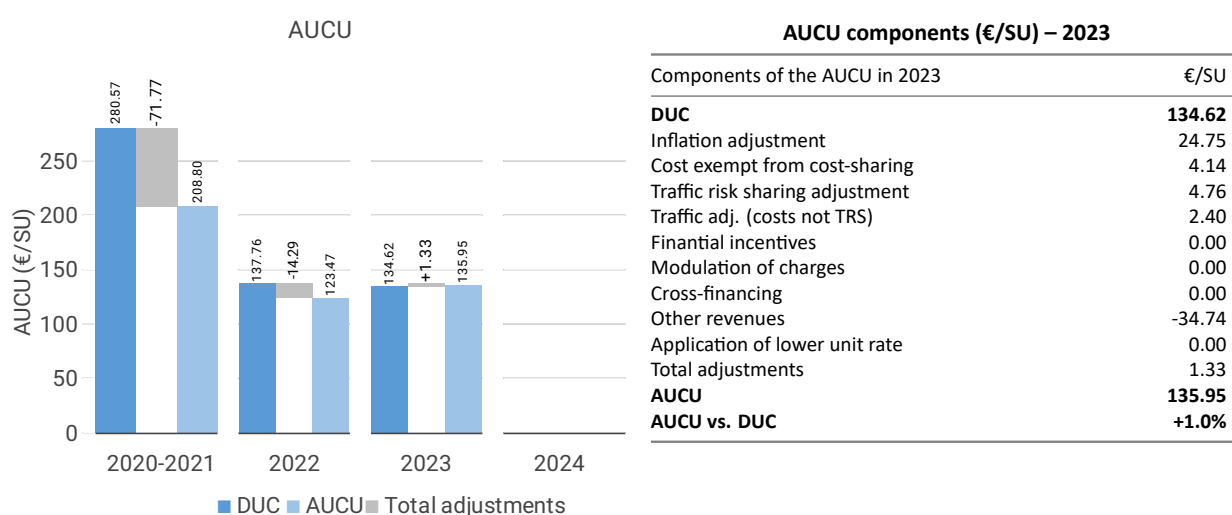
Actual real terminal costs are +14.5% (+0.3 M€2017) higher than planned. This is the result of higher costs for the main ANSP, EANS (+14.8%, or +0.3 M€2017) and the NSA (+12.8%, or +0.04 M€2017).

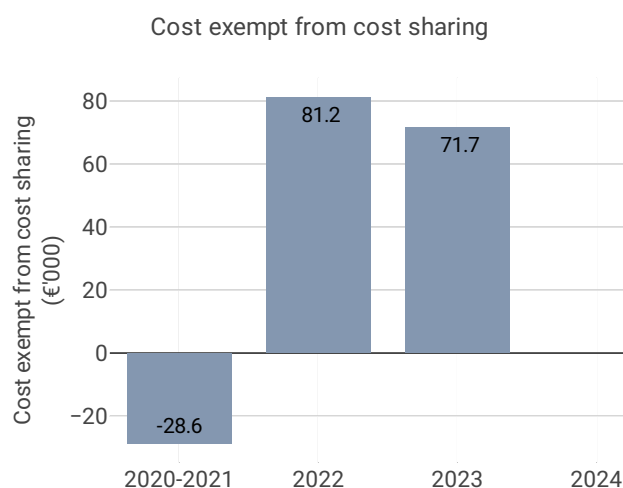
Terminal costs for the main ANSP at charging zone level

Significantly higher than planned terminal costs in real terms for EANS in 2023 (+14.8%, or +0.3 M€2017) result from:

- Significantly lower staff costs (-12.5%) in real terms due to the inflation index impact (+31.3 p.p.). In nominal terms, staff costs are above the plan (+11.8%), which, based on the information provided by Estonia, is due to the fact that “*higher proportion of actual costs were allocated to terminal costs*” due to a significantly lower en route traffic.
- Significantly higher other operating costs (+21.1%), which, as already detailed above, is also explained by the changes in the allocation of actual costs.
- Significantly higher depreciation (+46.4%), reflecting continuation of the investment programme, including projects which had been postponed in previous years.
- Significantly higher cost of capital (+20.3%) reflecting a combination of higher than planned interest rate on debt and higher proportion of financing through equity.

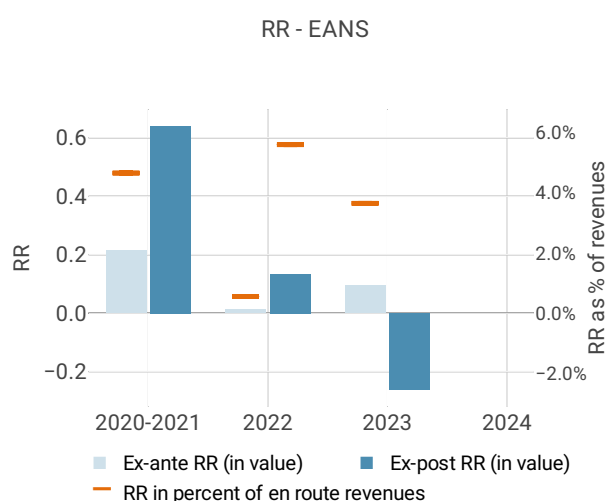
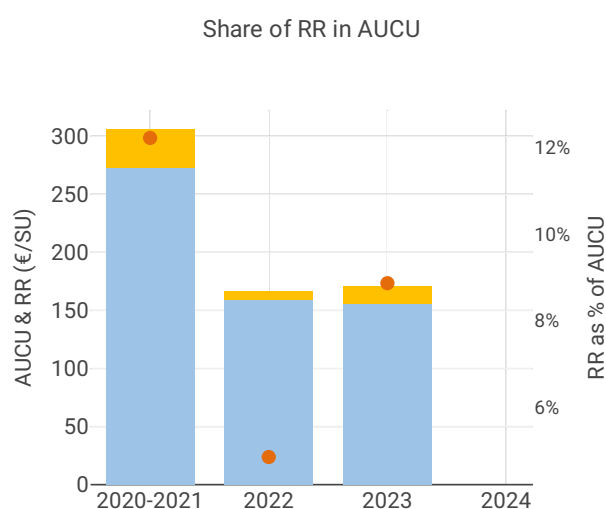
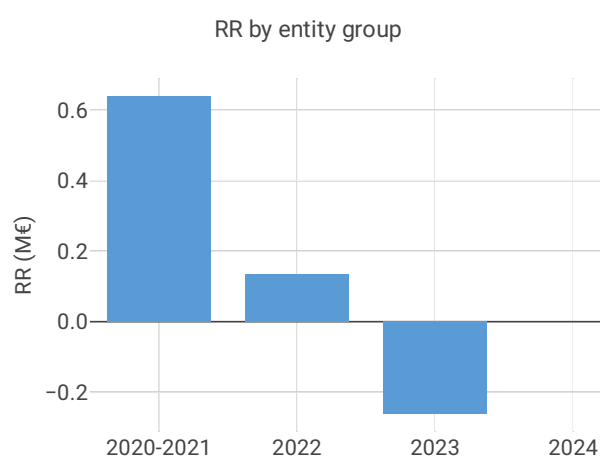
5.3.2 Actual unit cost incurred by the users (AUCU) (PI#1)



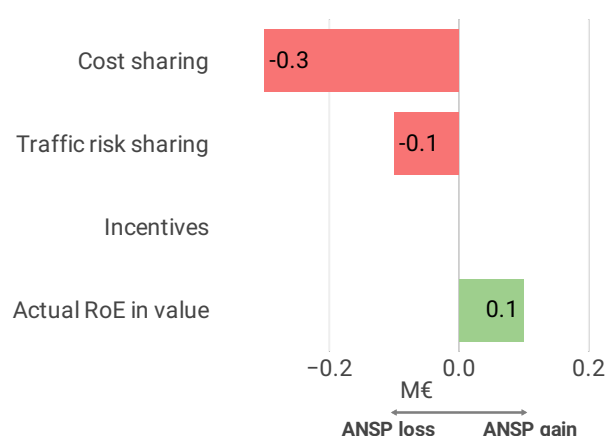


Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	29.4	1.70
Competent authorities and qualified entities costs	43.5	2.51
Eurocontrol costs	0.0	0.00
Pension costs	-1.2	-0.07
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	71.7	4.14

5.3.3 Regulatory result (RR)



Net result from terminal activity - EANS 2023



Focus on regulatory result

EANS net gain on activity in the Estonia terminal charging zone in the year 2023

EANS reported a net loss of -0.4 M€, as a combination of a loss of -0.3 M€ arising from the cost sharing mechanism, with a loss of -0.1 M€ arising from the traffic risk sharing mechanism.

EANS overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-0.4 M€) and the actual RoE (+0.1 M€) amounts to -0.3 M€ (-10.2% of the terminal revenues).