PRB | Performance review body of the single european sky

Performance Review Body Monitoring Report

Estonia - 2022

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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

No of airports in the scope of the performance plan:
- **≥80'K** 0
- **<80'K** 2

Exchange rate (1 EUR=)
2017: 1 EUR
2022: 1 EUR

Share of Union-wide:
- **traffic (TSUs) 2022** 0.4%
- **en route costs 2022** 0.4%

Share en route / terminal costs 2022 90% / 10%

En route charging zone(s)
Estonia

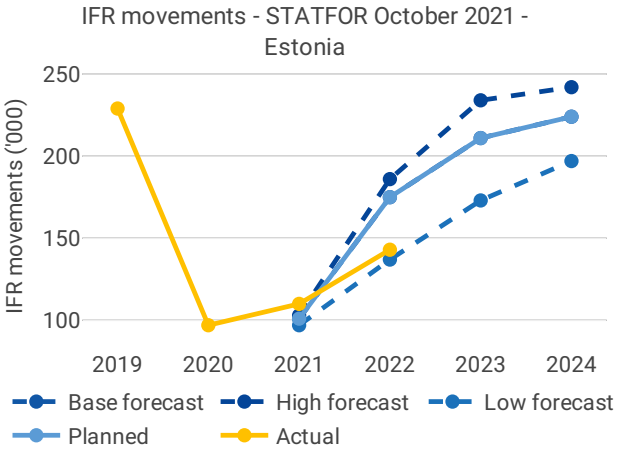
Terminal charging zone(s)
Estonia

Main ANSP
- EANS

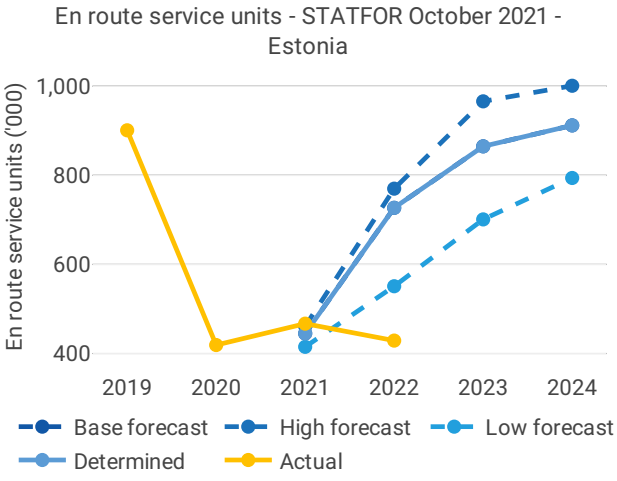
Other ANSPs
–

MET Providers
–

1.2 Traffic (En route traffic zone)

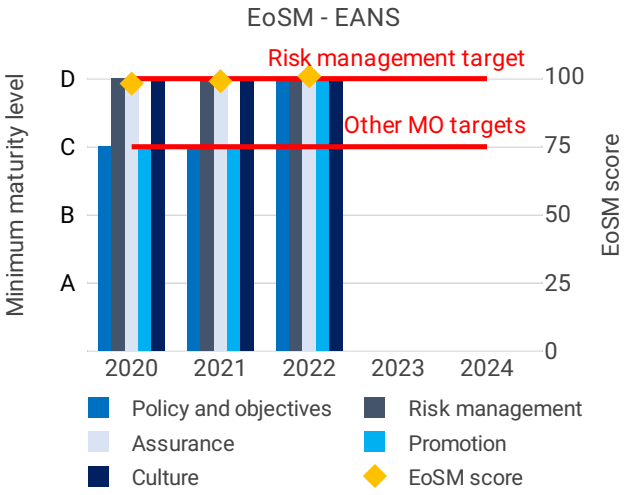


- Estonia recorded 143K actual IFR movements in 2022, +30% compared to 2021 (110K).
- Actual 2022 IFR movements were -18% below the plan (175K).
- Actual 2022 IFR movements represent 62% of the actual 2019 level (229K).



- Estonia recorded 429K actual en route service units in 2022, -8.2% compared to 2021 (467K).
- Actual 2022 service units were -41% below the plan (727K).
- Actual 2022 service units represent 48% of the actual 2019 level (901K).

1.3 Safety (Main ANSP)

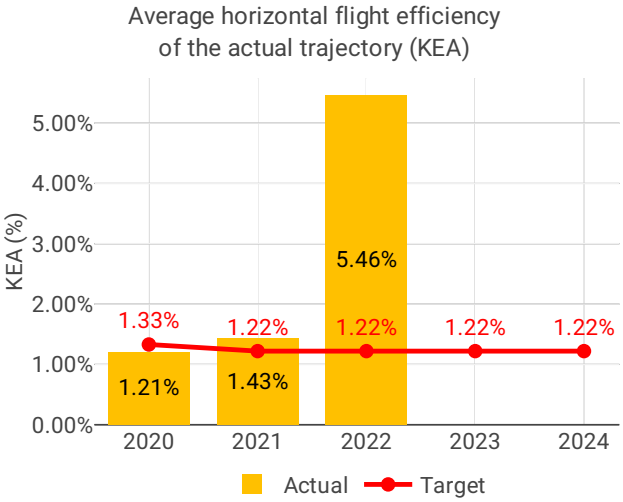


• Estonia already achieved the RP3 target levels at the start of the reference period but continued to improve its performance continuously. In 2022 Estonia reached the maximum maturity level for all five management objectives.

• Estonia recorded lower rates of occurrences in 2022 relative to 2021. Both rates were below the Union-wide average. The NSA closely monitored the rate of occurrences and assessed the effectiveness of implemented measures.

• EANS could improve its safety management by implementing automated safety data recording systems.

1.4 Environment (Member State)



• Estonia achieved a KEA performance of 5.46% compared to its target of 1.22% and did not contribute positively to achieving the Union-wide target.

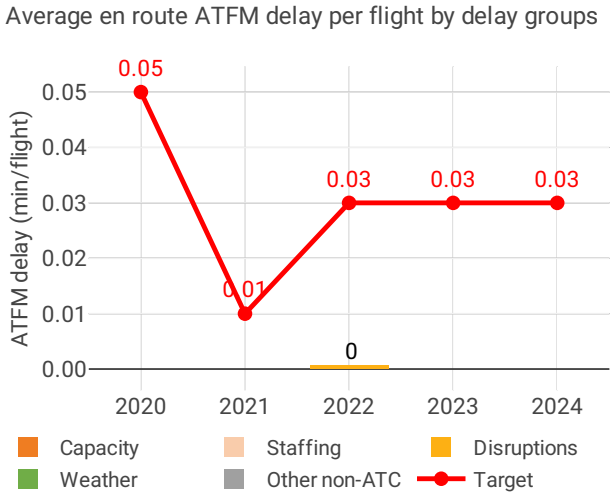
• The NSA states that the target was not achieved because of the traffic to/from Kaliningrad which does not follow the optimal routes due to the restrictive measures following Russia's war of aggression against Ukraine.

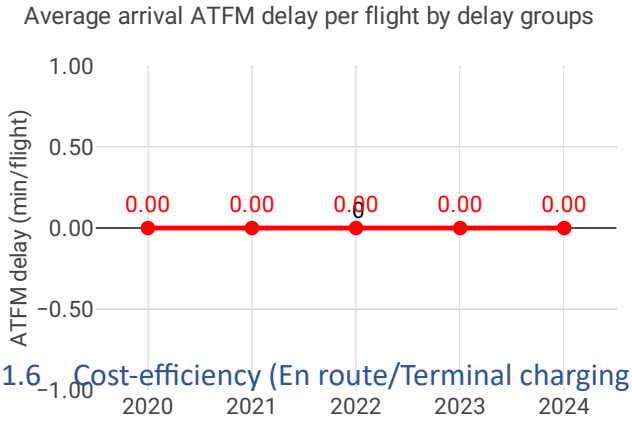
• Both KEP and SCR deteriorated in comparison to 2021. The value of these two indicators is similar, meaning airspace users plan close to the shortest route available.

• The share of CDO flights increased by 18.6% compared to 2021.

• During 2022, additional time in terminal airspace decreased from 0.44 to 0.19 min/flight, while additional taxi out time increased from 1.03 to 1.39 min/flight.

1.5 Capacity (Member State)





- Estonia registered zero minutes of average en route ATFM delay per flight during 2022, thus achieving the local target value of 0.03.

- The average number of IFR movements was 38% below 2019 levels in Estonia in 2022.

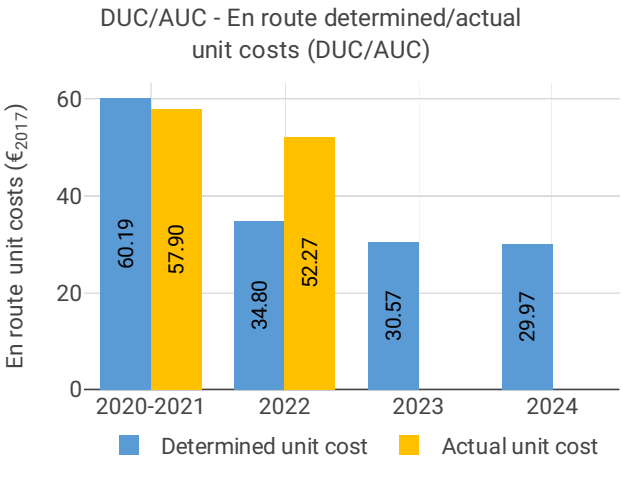
- The number of ATCOs is not planned to change significantly by the end of RP3. The actual values of ATCOs in OPS remained below the plan in 2022.

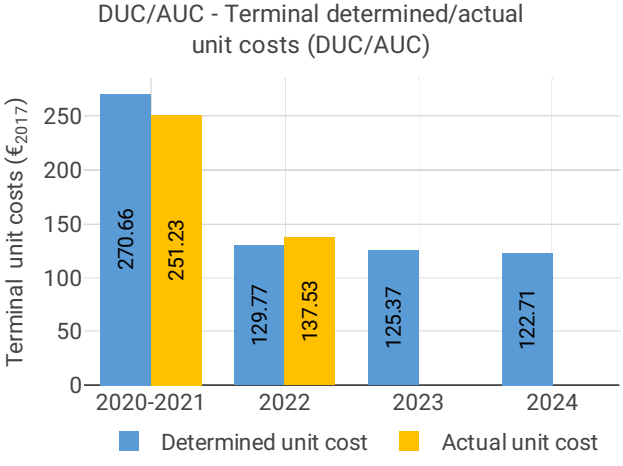
- The share of delayed flights with delays longer than 15 minutes in Estonia increased by 28.57 p.p. compared to 2021 and was higher than 2019 values.

- The yearly total of sector opening hours in Tallinn ACC was 10,116 in 2022, showing a 15.4% increase compared to 2021. Sector opening hours are 20.3% below 2019 levels.

- Tallinn ACC registered 13.15 IFR movements per one sector opening hour in 2022, being 24.4% below 2019 levels.

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





- The en route 2022 actual unit cost of Estonia was 52.22 €2017, 50% higher than the determined unit cost (34.80 €2017). The terminal 2022 actual unit cost was 137.53 €2017, 6.0% higher than the determined unit cost (129.77 €2017).

- The en route 2022 actual service units (429K) were 41% lower than the determined service units (727K).

- In 2022, the en route actual total costs were 2.9 M€2017 (-12%) lower than determined. The main contributor was the decrease in staff costs (-1.9 M€2017, or -15%) as a result of the significantly higher in inflation than planned, and other operating costs (-0.9 M€2017, or -12%), due to cost-cutting measures to reduce losses.

- EANS spent 4.8 M€2017 in 2022 related to costs of investments, in line with determined. However, depreciation costs decreased due to changes in implementation dates of investments, while cost of capital increased due to a significant higher financing through equity than planned.

- The en route actual unit cost incurred by users in 2022 was 66.39€, while the terminal actual unit cost incurred by users was 127.88€.

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. In 2022 Estonia reached the maximum maturity level for all five management objectives.

• Estonia recorded lower rates of occurrences in 2022 relative to 2021. Both rates were below the Union-wide average. The NSA closely monitored the rate of occurrences and assessed the effectiveness of implemented measures.

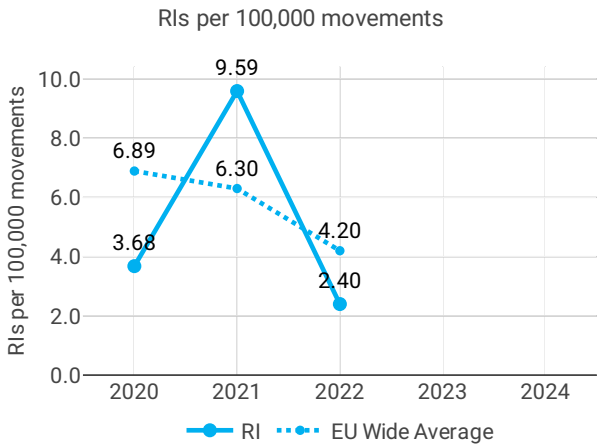
• EANS could improve its safety management by implementing automated safety data recording systems.

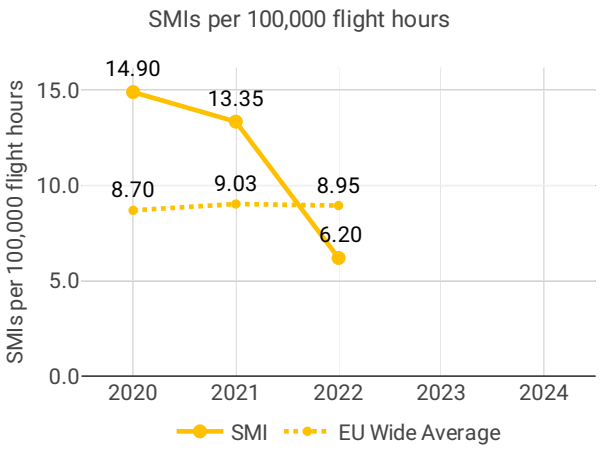
2.2 Effectiveness of Safety Management (EoSM) (KPI#1)

Focus on EoSM

All five EoSM components of the ANSP meet, or exceed, already the RP3 target level. Maturity has further improved compared with 2021, the ANSP now achieving maximum level for all components.

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 5.46% 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/from Kaliningrad which does not follow the optimal routes due to the restrictive measures following Russia's war of aggression against Ukraine.

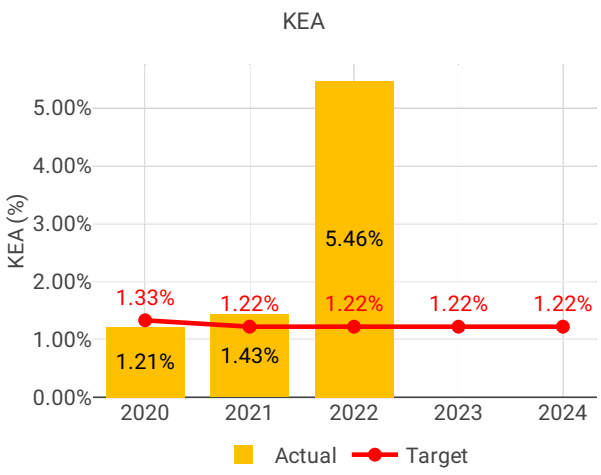
• Both KEP and SCR deteriorated in comparison to 2021. The value of these two indicators is similar, meaning airspace users plan close to the shortest route available.

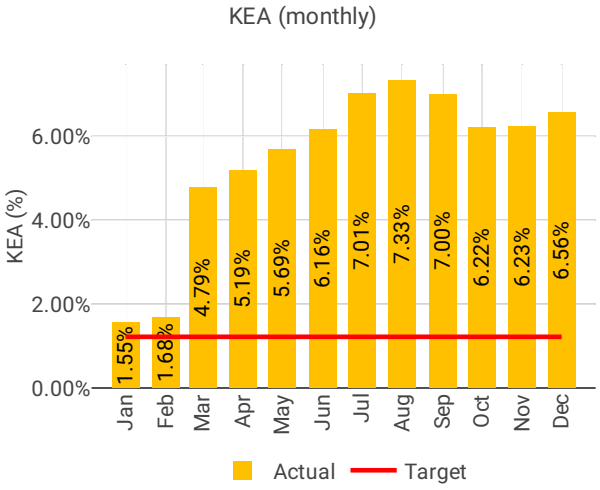
• The share of CDO flights increased by 18.6% compared to 2021.

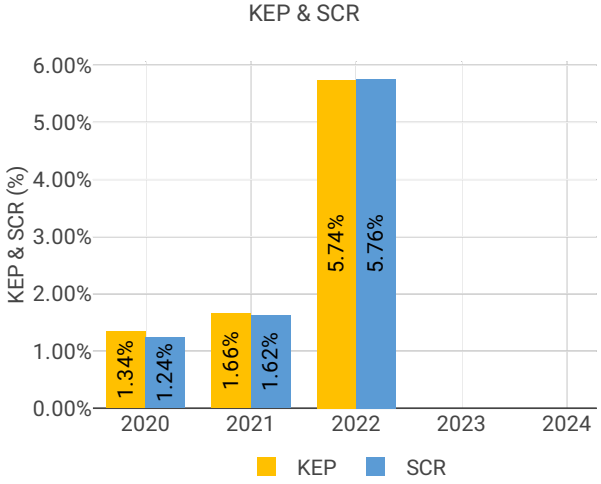
• During 2022, additional time in terminal airspace decreased from 0.44 to 0.19 min/flight, while additional taxi out time increased from 1.03 to 1.39 min/flight.

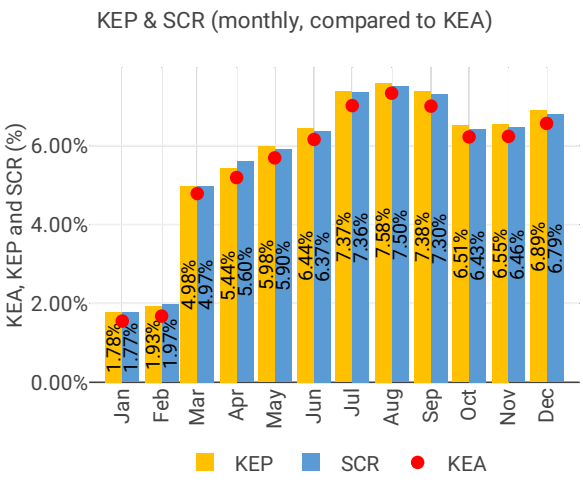
3.2 En route performance

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)



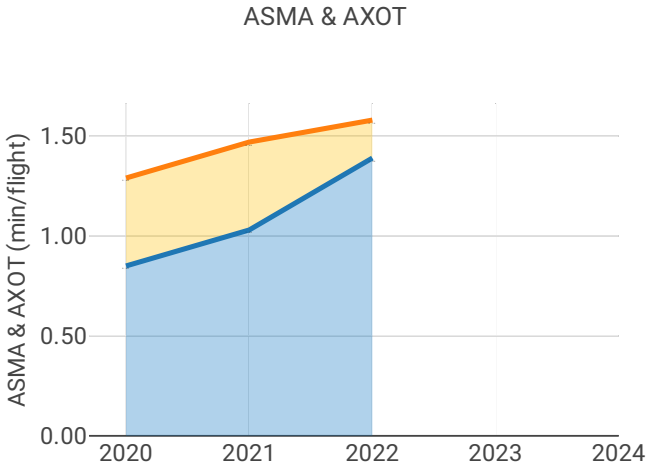


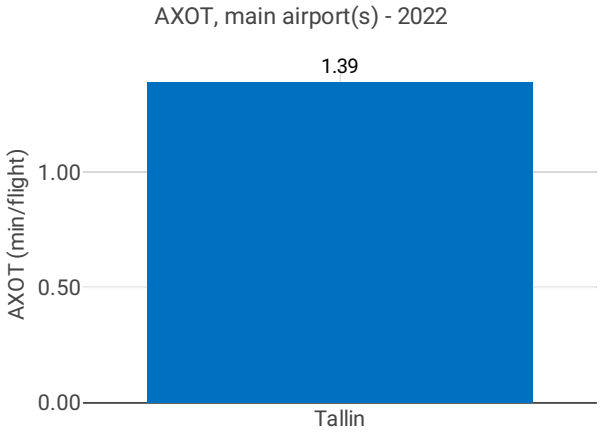


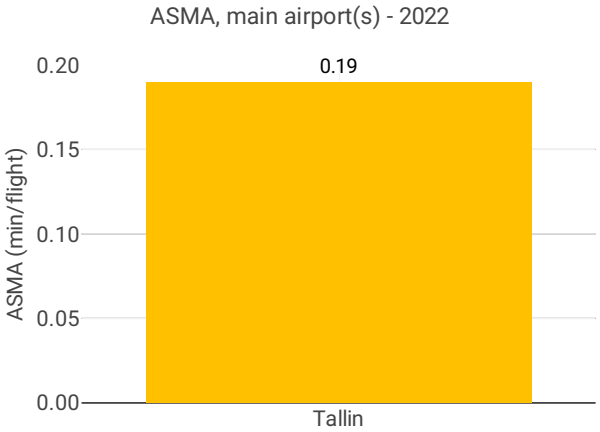


3.3 Terminal performance

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







Focus on ASMA & AXOT

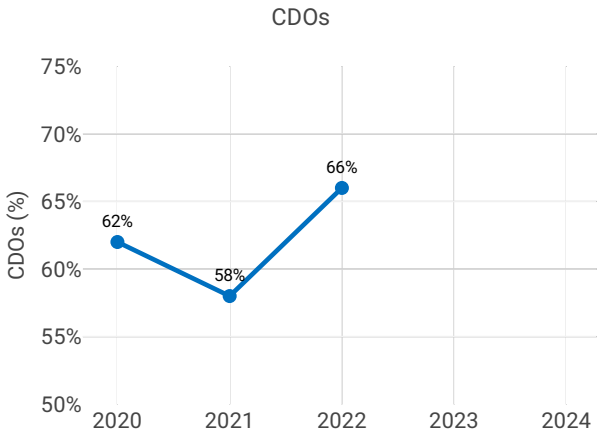
AXOT

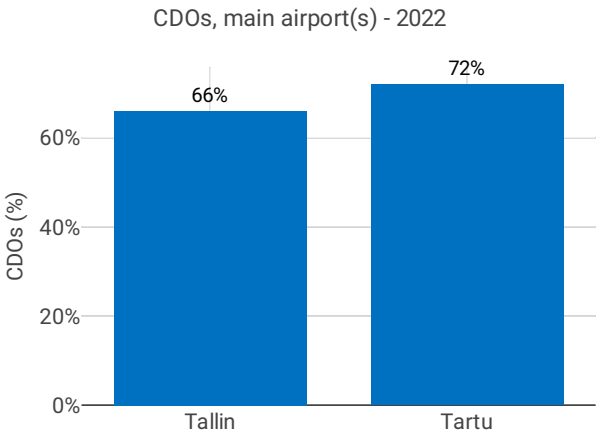
This indicator is not monitored for airports below 80,000 IFR movements average during the 2016-2018 period, so it is not monitored for any airport in this state.

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)





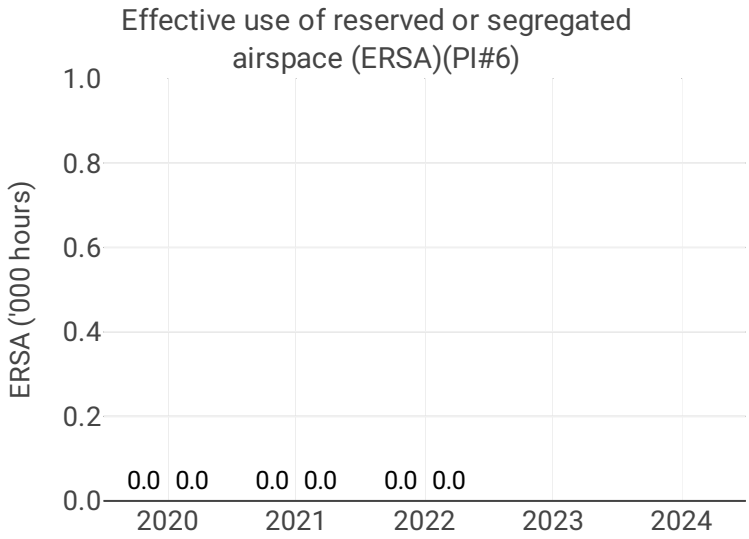
Focus CDOs

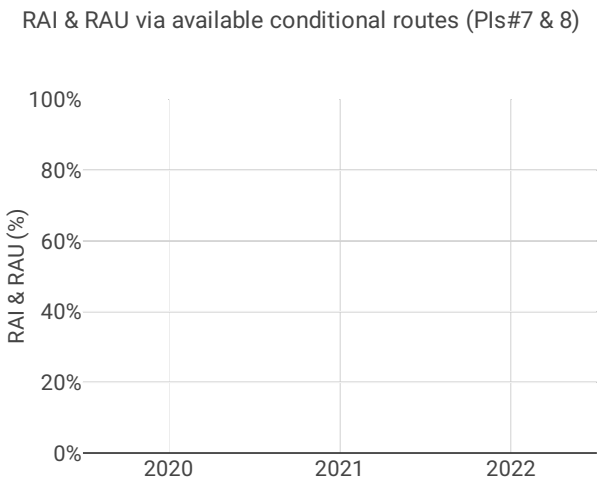
The shares of CDO flights have significantly increased (EETN: +10.0 percentage points; EETU: +27.3 percentage points) with respect to 2021. They are still well above the overall RP3 value in 2022 (29.0%) and in the top 10 of all observed values in 2022.

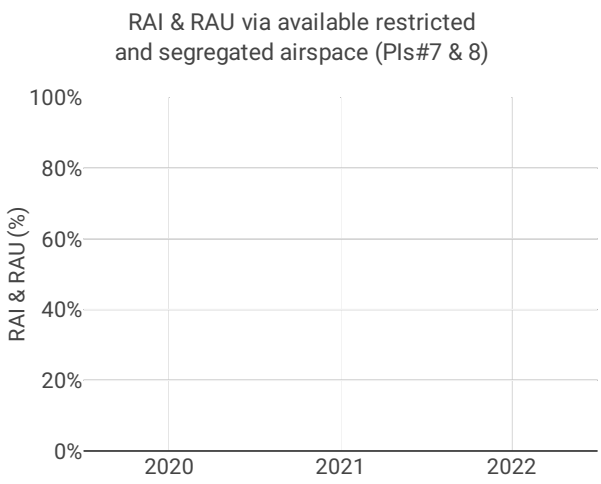
Airport level

	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
Airport Name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Tallin	0.85	1.03	1.39	NA	NA	0.44	0.44	0.19	NA	NA	61%	56%	66%	NA	NA
Tartu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70%	44%	72%	NA	NA

3.4 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

Military traffic significantly affects the environment in the Estonian airspace. Due to our geographical location and political influence, the share of military traffic in Estonian airspace is constantly increasing. The airspace design team collaborates closely with the Air Force to develop the best solutions, allowing for flexible use of SUA and airspace blocks. The LARA system is used for daily operations planning, which is integrated with the air traffic control system.
Significant impact on flight trajectories which will affect flight plan trajectories.
Military airspace users are booking more areas than they are using—resulting in the avoidance of unused airspace.

Military - related measures implemented or planned to improve capacity

FUA - flexible use of airspace, active meetings, and cooperation of the military side.
Regular 3B (3 Baltic states) CIV-MIL meetings to share information.
We are trying to mitigate it by tactical measures—maximum planning efforts on both tactical and pre-tactical levels.

Initiatives implemented or planned to improve PI#6

No data is available.

Initiatives implemented or planned to improve PI#7

Initiatives implemented or planned to improve PI#8

4 CAPACITY - ESTONIA

4.1 PRB monitoring

• Estonia registered zero minutes of average en route ATFM delay per flight during 2022, thus achieving the local target value of 0.03.

• The average number of IFR movements was 38% below 2019 levels in Estonia in 2022.

• The number of ATCOs is not planned to change significantly by the end of RP3. The actual values of ATCOs in OPS remained below the plan in 2022.

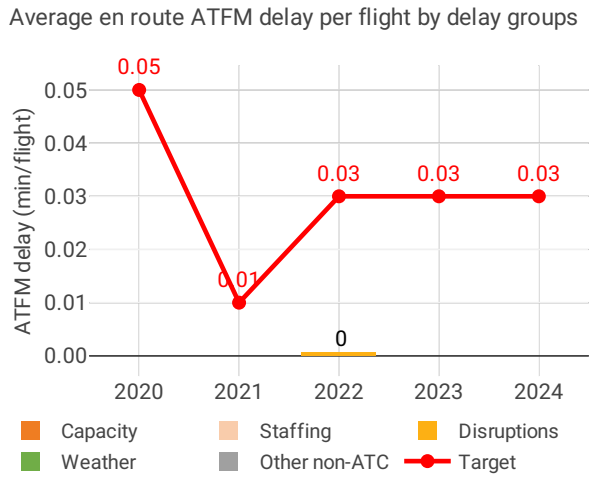
• The share of delayed flights with delays longer than 15 minutes in Estonia increased by 28.57 p.p. compared to 2021 and was higher than 2019 values.

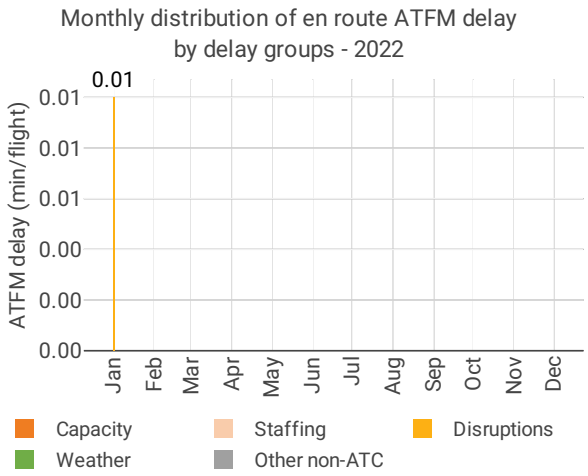
• The yearly total of sector opening hours in Tallinn ACC was 10,116 in 2022, showing a 15.4% increase compared to 2021. Sector opening hours are 20.3% below 2019 levels.

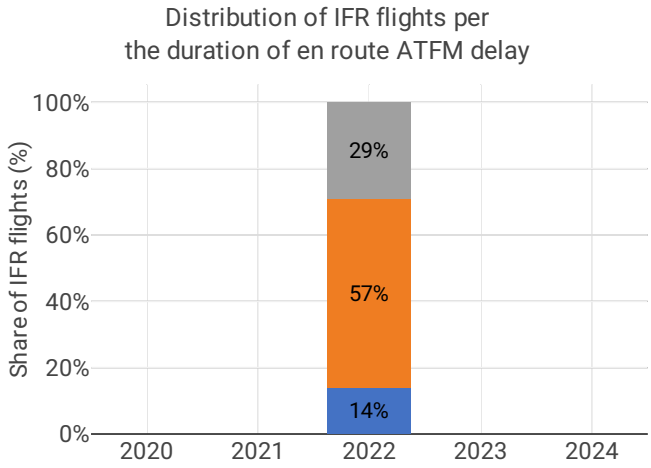
• Tallinn ACC registered 13.15 IFR movements per one sector opening hour in 2022, being 24.4% below 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Estonia experienced an increase in traffic from 109k flights in 2021, to 142k flights in 2022 with zero ATFM delay. However, traffic levels were still substantially below the 227k flights in 2019.

NSA's assessment of capacity performance

2021 was the year of global recovery from the COVID-19 pandemic. We were already optimistic about 2022, and suddenly Russia started the war in Ukraine.
Regarding the controlled traffic, the year 2022 turned out to be much more complicated than expected. In response to Russia's military aggression against Ukraine, which started on 24 February 2022, the European Union took restrictive measures prohibiting Russian airlines, aircraft registered in Russia and aircraft owned, chartered or otherwise controlled by natural or legal persons, entities or bodies of Russia from landing, taking off from or overflying the territory of the European Union. Due to these measures, air traffic between Europe and Asia in the Estonian airspace decreased sharply.
In 2022, the number of IFR flights controlled was 142,277 compared to the 175,000 flights forecast in the performance plan. The volume of service units related to IFR movements to which en route navigation services were provided was 41% lower than the forecast: 428,511 vs. 726,854 service units. On the other hand, due to the sanctions resulting from the war between Russia and Ukraine, there was a significant

increase in the volume of air traffic in the airspace above the international waters for which we are responsible.
En route capacity targets of Estonia, in minutes of ATFM delay per flight for 2022 was 0.03 min. Actual ATFM delay per flight for 2022 is recorded 0.0 min

Monitoring process for capacity performance

Review of the actual values from the NM dashboard.

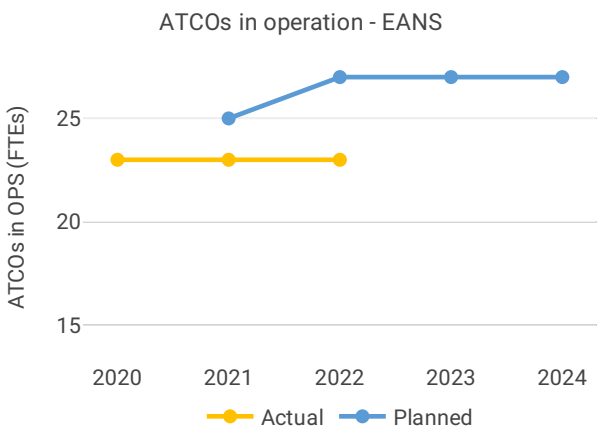
Capacity planning

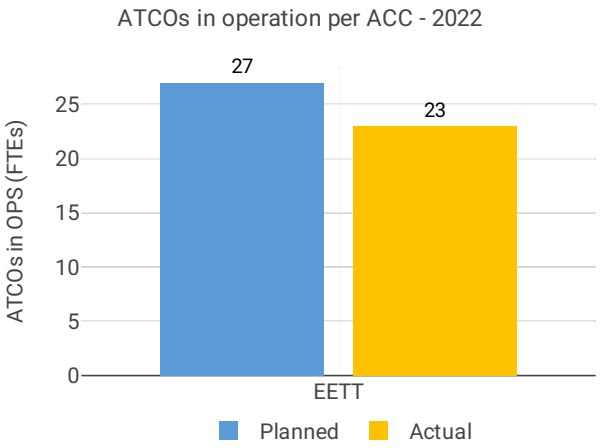
No data available

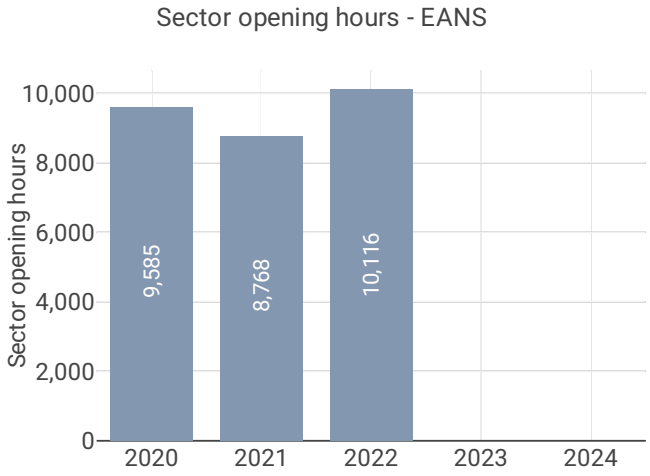
Application of Corrective Measures for Capacity (if applicable)

No data available

4.2.2 Other indicators





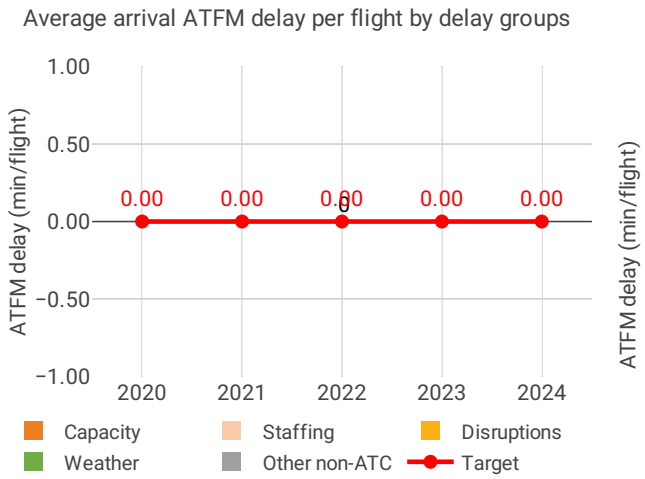


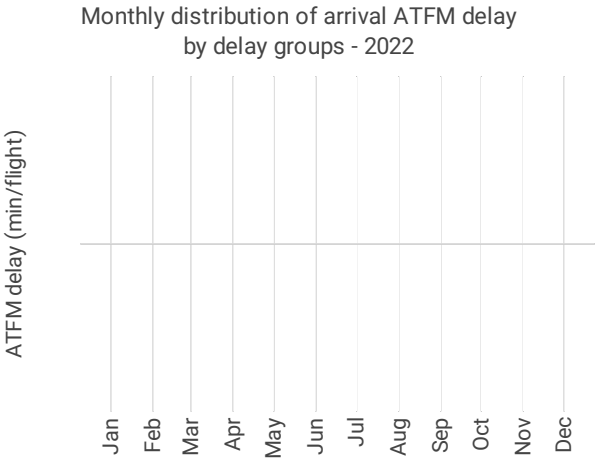
Focus on ATCOs in operations

N/A

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)





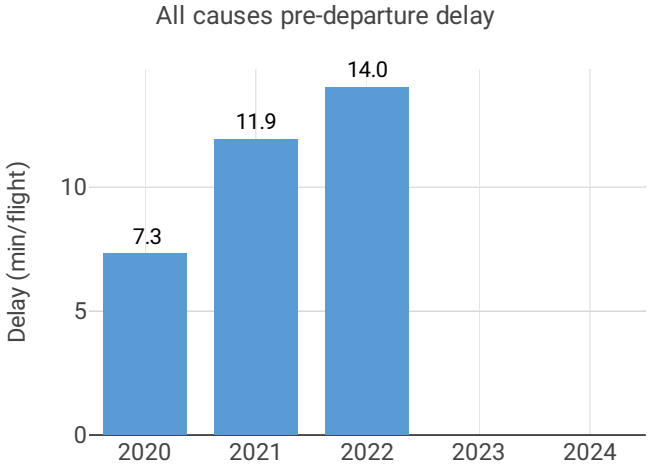
Focus on arrival ATFM delay

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 2022 was 23 % lower than in 2019 even if it increased by 49% with respect to 2021.
Like in the rest of RP3, no arrival ATFM delays were observed in the entire 2022 at these two airports and slot adherence remained very high (2022: 98.3%; 2021: 98.2%).

No arrival ATFM delay was observed at the Estonian airports (Tallinn and Tartu) in 2022.3. Arrival ATFM Delay – National TargetThe national target on arrival ATFM delay in 2022 was met.

Tallin showed very high slot adherence (98.6%) and at Tartu there only 12 regulated departures in 2022 (none in 2020 and 2021), from which 6 departed outside of the STW.
The national average was 98.3%. With regard to the 1.7% of flights that did not adhere, 0.9% was early and 0.3% was late above 95% and the national average was 98.8%, an improvement with respect to 2021 (97.4%). With regard to the 1.2% of flights that did not adhere, 0.6% was early and 1.1% was late.
According to the Estonian monitoring report: *Performance in this area is the same as previous years, no special measures are taken.*

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

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

Focus on performance indicators at airport level

ATFM slot adherence

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.

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

No data available: airport operator data flow not established, or more than two months of missing / non-validated data

5 COST-EFFIENCY - ESTONIA

5.1 PRB monitoring

• The en route 2022 actual unit cost of Estonia was 52.22 €2017, 50% higher than the determined unit cost (34.80 €2017). The terminal 2022 actual unit cost was 137.53 €2017, 6.0% higher than the determined unit cost (129.77 €2017).

• The en route 2022 actual service units (429K) were 41% lower than the determined service units (727K).

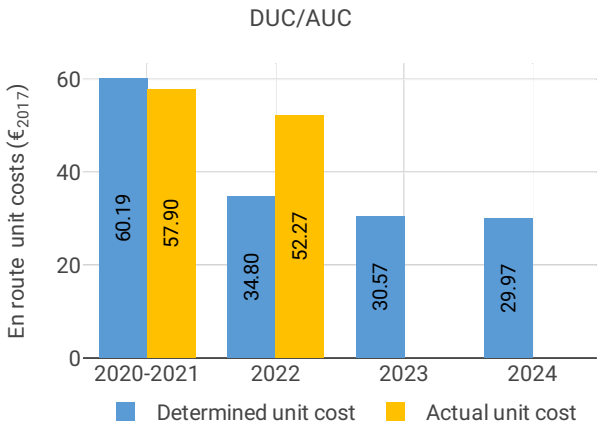
• In 2022, the en route actual total costs were 2.9 M€2017 (-12%) lower than determined. The main contributor was the decrease in staff costs (-1.9 M€2017, or -15%) as a result of the significantly higher in inflation than planned, and other operating costs (-0.9 M€2017, or -12%), due to cost-cutting measures to reduce losses.

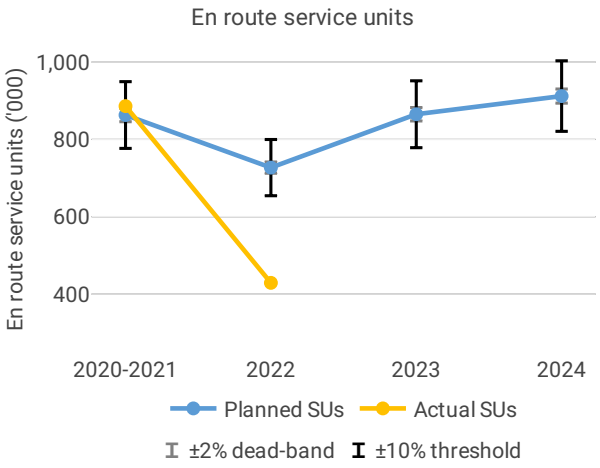
• EANS spent 4.8 M€2017 in 2022 related to costs of investments, in line with determined. However, depreciation costs decreased due to changes in implementation dates of investments, while cost of capital increased due to a significant higher financing through equity than planned.

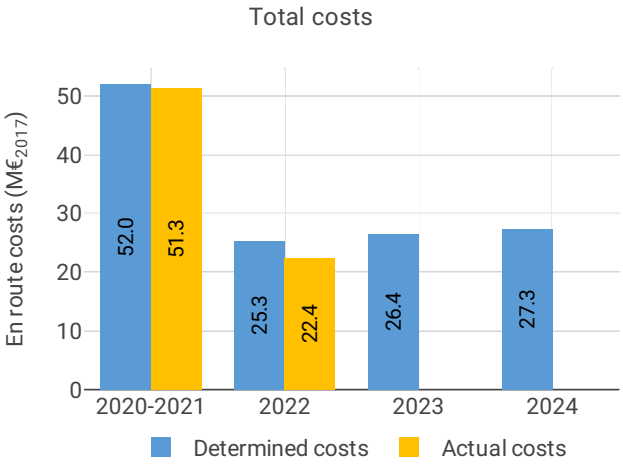
• The en route actual unit cost incurred by users in 2022 was 66.39€, while the terminal actual unit cost incurred by users was 127.88€.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)

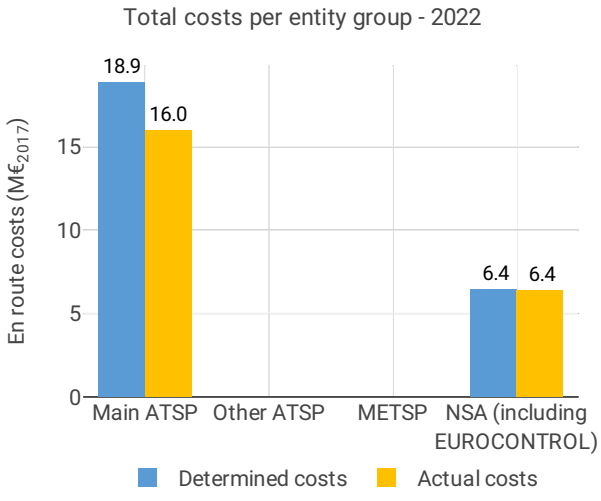


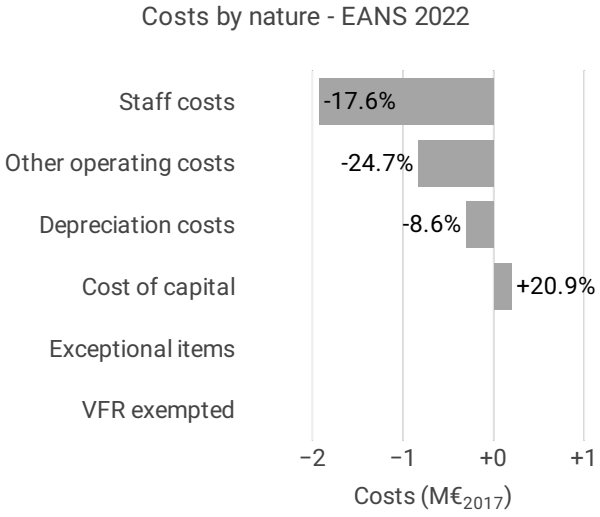




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	53	26	NA	NA
Determined costs	54	27	28	30
Difference costs	0	-1	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	2.5%	2.1%	1.9%
Determined inflation index	NA	110.4	112.7	114.8
Actual inflation rate	NA	19.4%	NA	NA
Actual inflation index	NA	132	NA	NA
Difference inflation index (p.p.)	NA	+21.6	NA	NA





Focus on unit cost

AUC vs. DUC

In 2022, the en route AUC was +50.0% (or +17.42 €2017) higher than the planned DUC. This results from the combination of significantly lower than planned TSUs (-41.0%) and significantly lower than planned en

route costs in real terms (-11.5%, or -2.9 M€2017). It should be noted that actual inflation index in 2022 was +21.6 p.p. higher than planned.

En route service units

The difference between actual and planned TSUs (-41.0%) falls outside the ±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, with the ANSP (EANS) bearing a loss of -0.7 M€2017.

En route costs by entity

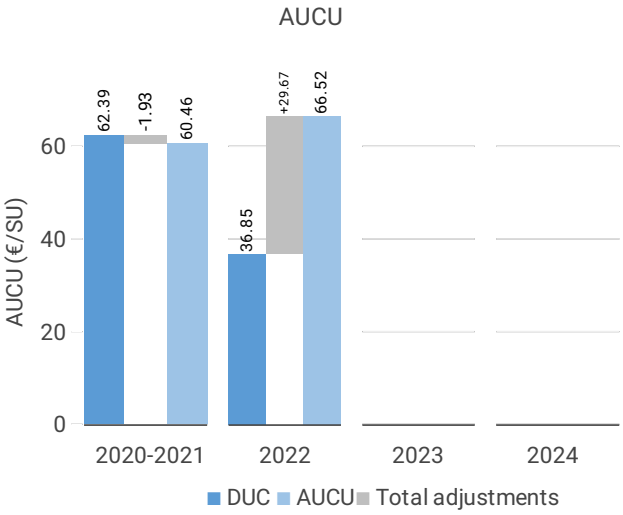
Actual real en route costs are -11.5% (-2.9 M€2017) lower than planned. This is the result of lower costs for the main ANSP, EANS (-15.2%, or -2.9 M€2017) and the NSA/EUROCONTROL (-0.8%, or -0.1 M€2017).

En route costs for the main ANSP at charging zone level

Significantly lower than planned en route costs in real terms for EANS in 2022 (-15.2%, or -2.9 M€2017) result from:

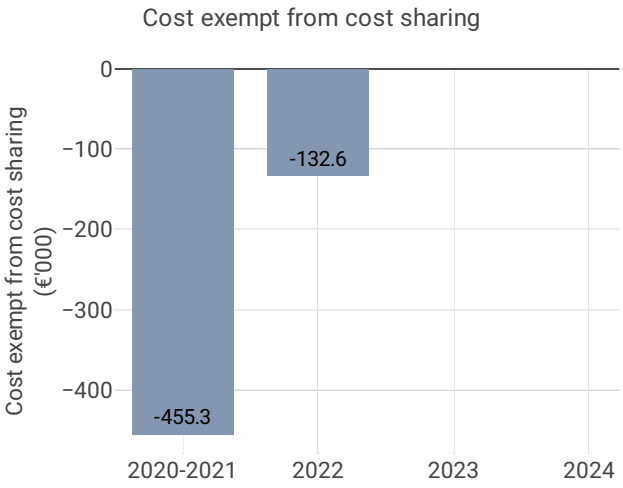
- Significantly lower staff costs (-17.6%) including lower pension costs in 2022. The substantial decrease in real terms is mainly due to the inflation index impact (+21.6 p.p.). In nominal terms, staff costs are -1.4% lower than planned.
- Significantly lower other operating costs in real terms (-24.7%) reflecting the inflation impact 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 (-8.6%) due to a delay in the implementation of new and existing investments,
- Significantly higher cost of capital (+20.9%) due to a higher share of financing through equity than planned in the determined cost.

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



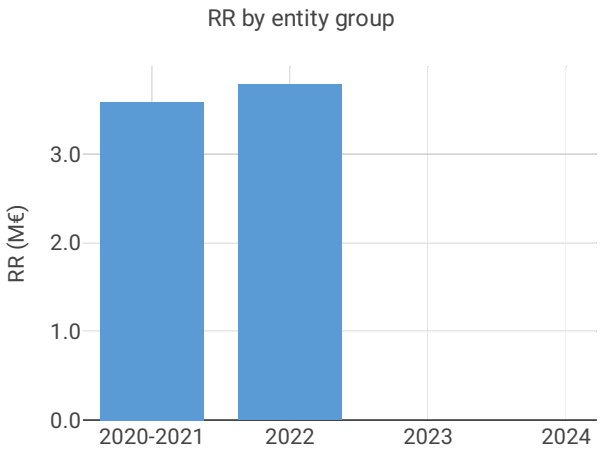
AUCU components (€/SU) – 2022

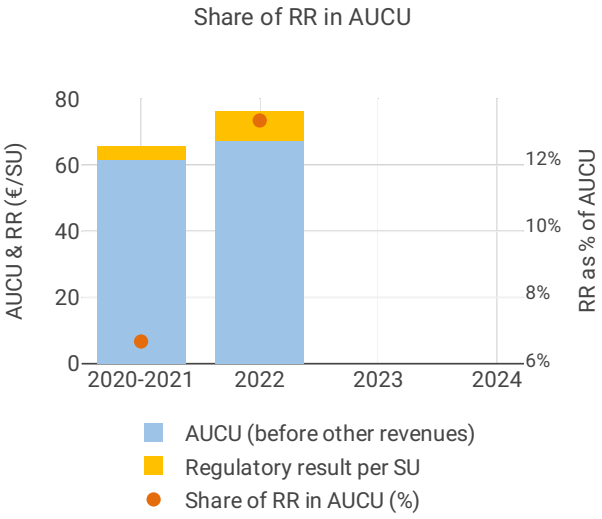
Components of the AUCU in 2022	€/SU
DUC	**36.85**
Inflation adjustment	7.23
Cost exempt from cost-sharing	-0.31
Traffic risk sharing adjustment	17.21
Traffic adj. (costs not TRS)	6.38
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-0.85
Application of lower unit rate	0.00
Total adjustments	29.67
AUCU	**66.52**
AUCU vs. DUC	**+80.5%**

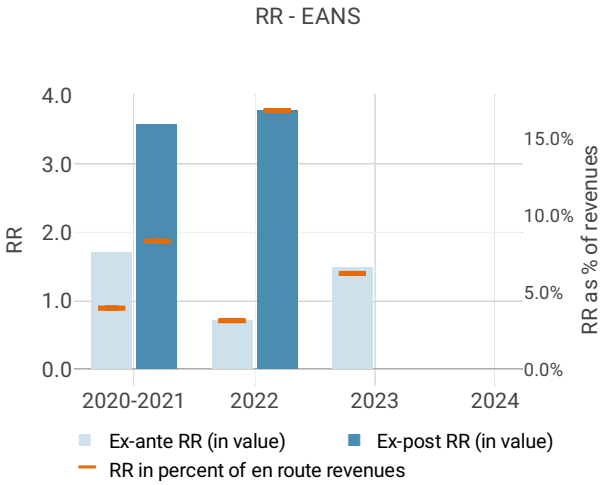


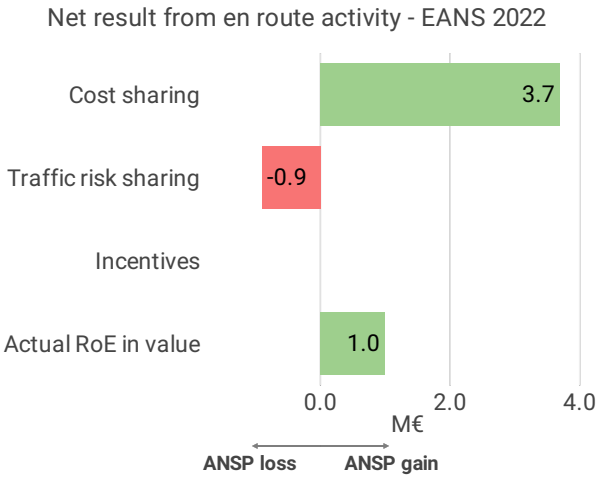
Cost exempt from cost sharing by item - 2022	€'000	€/SU
New and existing investments	-64.3	-0.15
Competent authorities and qualified entities costs	21.3	0.05
Eurocontrol costs	-53.6	-0.13
Pension costs	-36.0	-0.08
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-132.6**	**-0.31**

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 2022

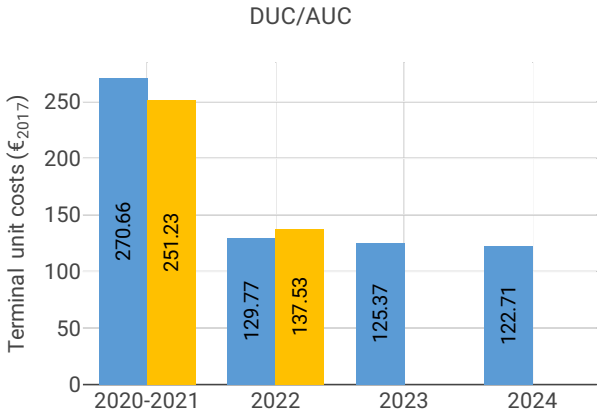
EANS reported a net gain of +2.7 M€, as a combination of a gain of +3.6 M€ arising from the cost sharing mechanism, with a loss of -0.9 M€ arising from the traffic risk sharing mechanism.

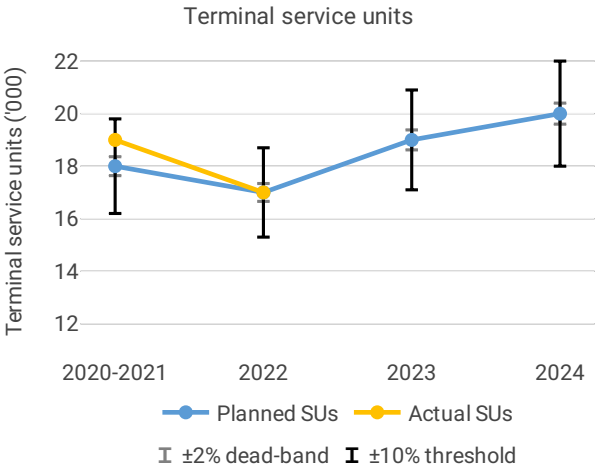
EANS overall regulatory results (RR) for the en route activity

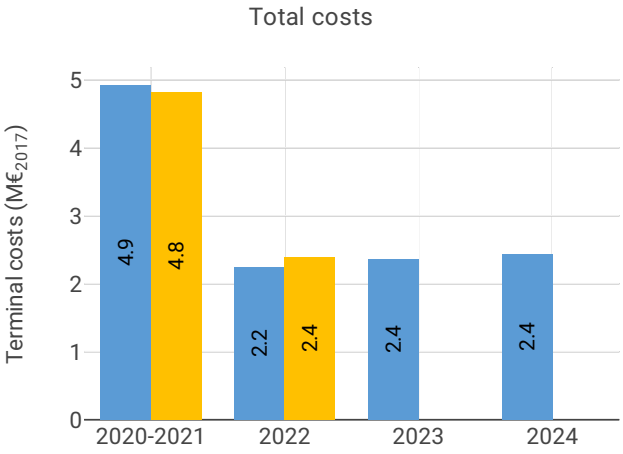
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+2.7 M€) and the actual RoE (+1.0 M€) amounts to +3.7 M€ (16.7% of the en route revenues). The resulting ex-post rate of return on equity is 26.9%, which is higher than the 7.3% planned in the PP.

5.3 Terminal charging zone

5.3.1 Unit cost (KPI#1)

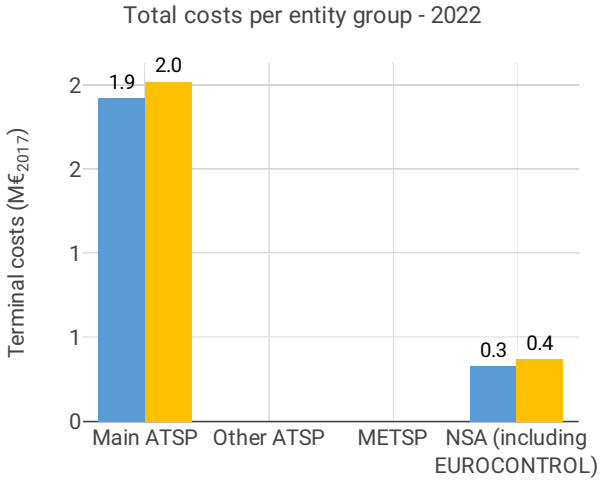


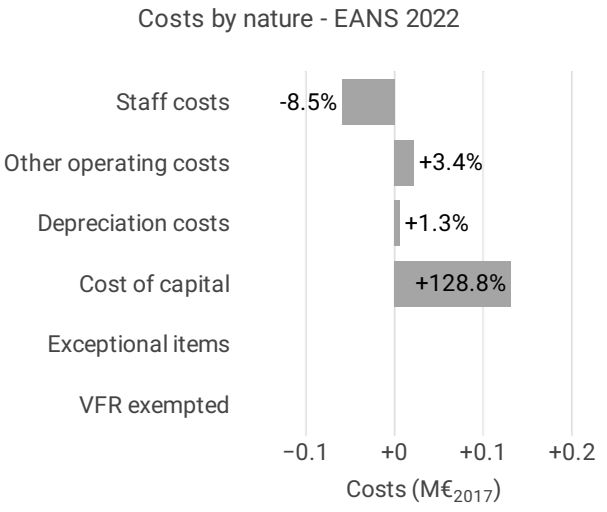




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	5	3	NA	NA
Determined costs	5	2	3	3
Difference costs	0	0	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	2.5%	2.1%	1.9%
Determined inflation index	NA	110.4	112.7	114.8
Actual inflation rate	NA	19.4%	NA	NA
Actual inflation index	NA	132	NA	NA
Difference inflation index (p.p.)	NA	+21.6	NA	NA





Focus on unit cost

AUC vs. DUC

In 2022, the terminal AUC was +6.0% (or +7.76 €2017) higher than the planned DUC. This results from the combination of significantly higher than planned terminal costs in real terms (+6.2%, or +0.1 M€2017) and slightly higher than planned TNSUs (+0.2%). It should be noted that actual inflation index in 2022 was +21.6 p.p. higher than planned.

Terminal service units

The difference between actual and planned TNSUs (+0.2%) falls inside the ±2% dead band. Hence gain of additional terminal revenues is kept by the ANSP .

Terminal costs by entity

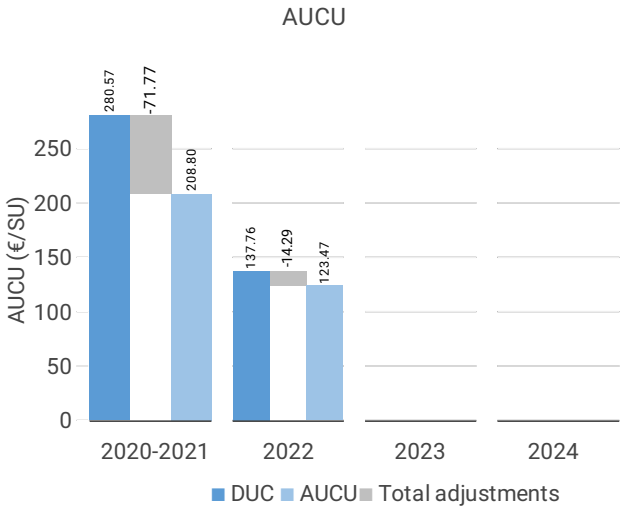
Actual real terminal costs are +6.2% (+0.1 M€2017) higher than planned. This is the result of higher costs for the main ANSP, EANS (+5.2%, or +0.1 M€2017) and the NSA (+11.6%, or +0.04 M€2017).

Terminal costs for the main ANSP at charging zone level

Higher than planned terminal costs in real terms for EANS in 2022 (+5.2%, or +0.1 M€2017) result from:
- Significantly lower staff costs (-8.5%),
- Higher other operating costs (+3.4%),

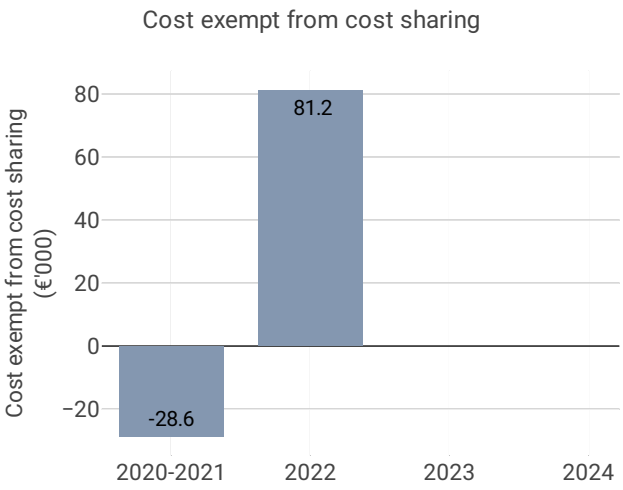
These changes should be seen in the light of the high actual inflation in 2022 (19.4%). Note that in nominal terms, staff costs and other operating costs are much higher than planned (respectively +9% and +24%). Based on additional information to terminal reporting tables provided by Estonia, this is due to the fact that *"a higher proportion of actual costs were allocated to terminal costs"* due to a significant loss of en route traffic.
- Slightly higher depreciation (+1.3%),
- Significantly higher cost of capital (+128.8%) due to an additional equity injection that increased the weighted average cost of capital rate (%) and the share of financing through equity.

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



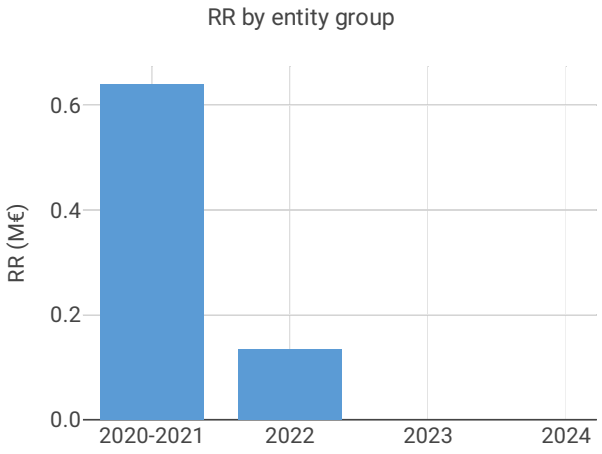
AUCU components (€/SU) – 2022

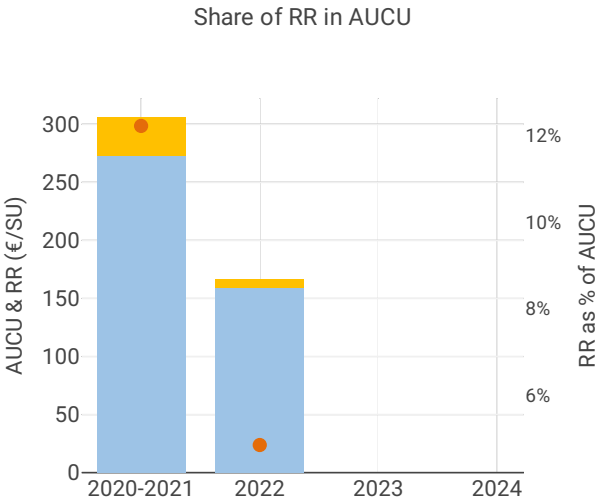
Components of the AUCU in 2022	€/SU
DUC	**137.76**
Inflation adjustment	16.60
Cost exempt from cost-sharing	4.67
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.05
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-35.51
Application of lower unit rate	0.00
Total adjustments	-14.29
AUCU	**123.47**
AUCU vs. DUC	**-10.4%**

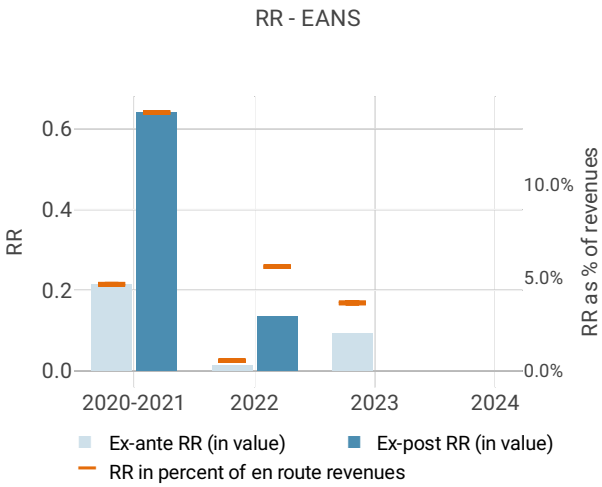


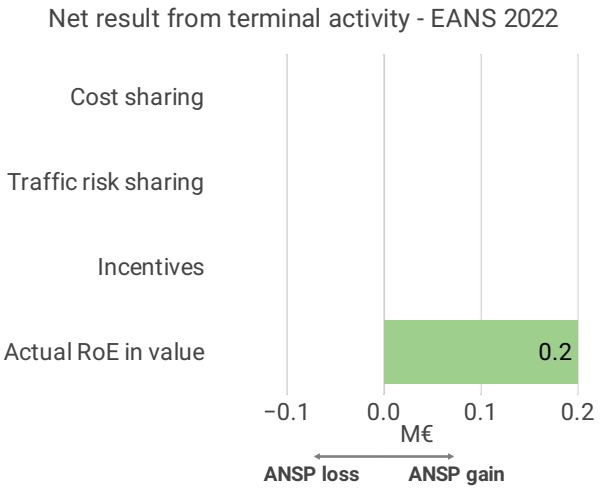
Cost exempt from cost sharing by item - 2022	€'000	€/SU
New and existing investments	27.7	1.59
Competent authorities and qualified entities costs	38.5	2.21
Eurocontrol costs	0.0	0.00
Pension costs	15.0	0.86
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**81.2**	**4.67**

5.3.3 Regulatory result (RR)









Focus on regulatory result

EANS net gain on activity in the Estonia terminal charging zone in the year 2022

EANS reported a net gain of +0.034 M€, as a combination of a gain of +0.031 M€ arising from the cost sharing mechanism, with a gain of +0.003 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 gain from the terminal activity mentioned above (+0.034 M€) and the actual RoE (+0.177 M€) amounts to +0.211 M€ (8.5% of the terminal revenues). The resulting ex-post rate of return on equity is 8.7%, which is higher than the 7.3% planned in the PP.