

Performance Review Body Monitoring Report

SES RP3 - 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	Main PRB findings - 2023	3
1.3	Traffic (SES RP3 area)	3
1.4	Safety (SES RP3 area)	4
1.5	Environment (SES RP3 area)	5
1.6	Capacity (SES RP3 area)	5
1.7	Cost-efficiency (SES RP3 area)	6
2	SAFETY - SES RP3	6
2.1	PRB monitoring	6
2.2	Actual versus planned number of ANSPs achieving the level of the EoSM targets for RP3 ahead of 2024	7
2.3	Rate of runway incursions (RIs) (PI#1)	9
2.4	Rate of separation minima infringements (SMIs) (PI#2)	11
2.5	Quality of occurrences reporting	13
3	ENVIRONMENT - SES RP3	14
3.1	PRB monitoring	14
3.2	En route performance	14
4	CAPACITY - SES RP3	15
4.1	PRB monitoring	15
4.2	En route performance	16
4.3	Terminal performance	18
5	COST-EFFICIENCY - SES RP3	19
5.1	PRB monitoring	19
5.2	En route charging zone	19

1 OVERVIEW

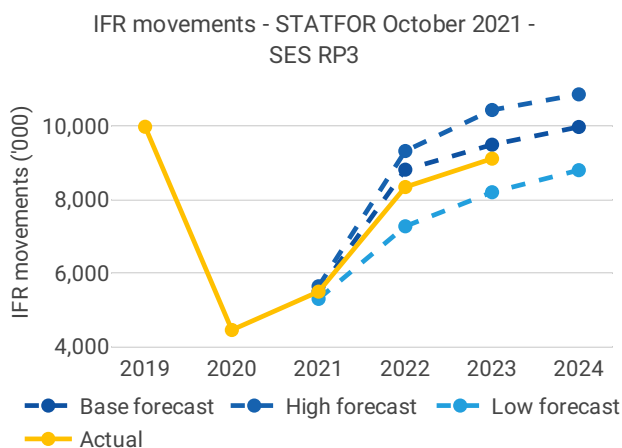
1.1 Contextual information

No of ACCs	49	Share en route / terminal costs 2023	83% / 17%	No of main ANSPs	29
No of airports in the scope of the performance plan:		En route charging zone(s)	29	No of other ANSPs	14
• ≥80'K	42	Terminal charging zone(s)	26	No of MET Providers	26
• <80'K	103				

1.2 Main PRB findings - 2023

Air traffic management in Europe in 2023 saw traffic growth continue to recover following the COVID-19 downturn (+9% compared to 2022, remaining 9% below traffic movements in 2019) and continued to be impacted by Russia's ongoing war of aggression against Ukraine. Overall, safety management performance has remained strong. While a number of Member States have experienced some degradation, RP3 targets can still be met by the end of 2024 if attention is focused on ensuring that the necessary measures are implemented. In a now all too familiar pattern, Union-wide capacity performance continues to deteriorate. A number of Member States have not implemented sufficient capacity measures to meet air traffic demand, despite traffic remaining 4% below the traffic forecast for 2023 (STATFOR October 2021 forecast). For some Member States, this lack of much needed capacity has occurred despite requesting, and being granted, deviations from the cost efficiency targets in order to invest in additional measures to achieve capacity targets. Most of these Member States have incurred lower actual costs compared to planned and only a minority achieved their 2023 en route capacity targets. This means that airspace users are incurring the costs of both increased delays and higher unit rates for the capacity that has not been provided. This poor Union-wide capacity performance has a direct knock-on effect on the lack of achievement of the Union-wide environment target. Airspace users have had to fly longer routes and burn more fuel (at additional cost) to mitigate the effect of congested airspace.

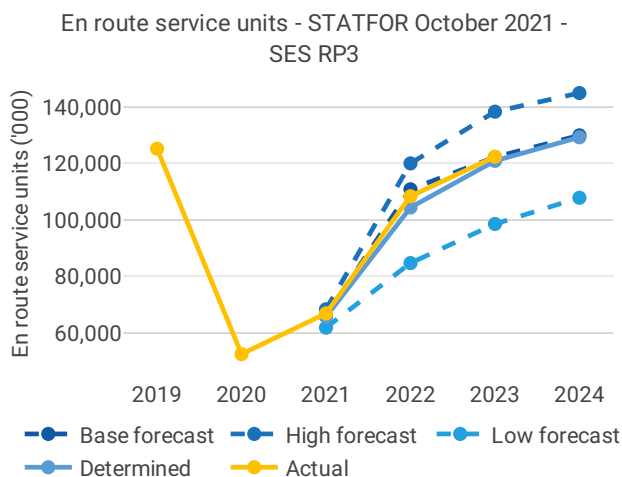
1.3 Traffic (SES RP3 area)



- 9,117K IFR movements were recorded in 2023 at SES level, +9% compared to 2022 (8,345K).

- Actual 2022 IFR movements represent 91% of the actual 2019 level (9,985K).

- Some ANSPs experienced unexpected and significant higher growth in traffic compared to the EU average (due to the impact of geopolitical events such as the Russia's war of aggression against Ukraine). At the same time, other ANSPs have yet to achieve the same levels of traffic as experienced in 2019.



- 122,491K service units were recorded in 2023 at SES level, +13% compared to 2022 (108,508K).

- Actual 2023 service units were +1.2% above the plan (120,905K).

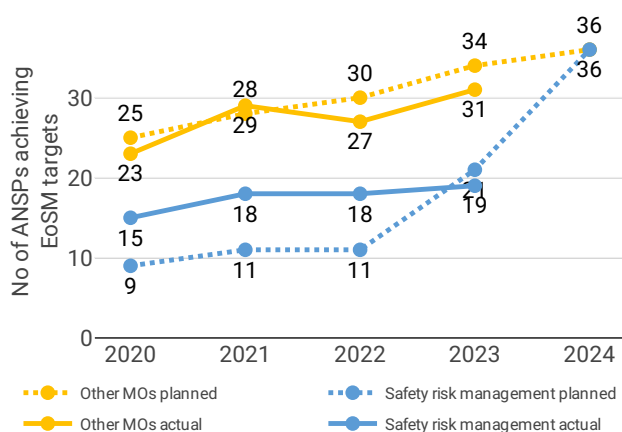
- Actual 2023 service units represent 98% of the actual 2019 level (125,158K).

- At Union-wide level, service units continue to increase more quickly than movements. This leads to revenue for many ANSPs growing faster than the workload generated by additional movements. However, this is not uniform across all Member States, with a number of Member States experienc-

ing the opposite.

- Some ANSPs experienced unexpected and significant higher growth in traffic compared to the EU average (due to the impact of geopolitical events such as the Russia's war of aggression against Ukraine). At the same time, other ANSPs have yet to achieve the same levels of traffic as experienced in 2019.

1.4 Safety (SES RP3 area)



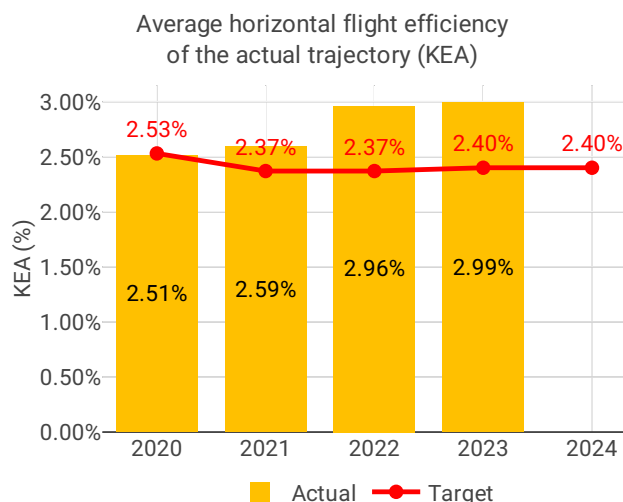
- 18 ANSPs achieved the RP3 targets for the effectiveness of safety management for all Management Objectives (one year before the end of RP3). The remaining 18 ANSPs can still meet the targets by the end of RP3, but will need to ensure measures are implemented. The risk that ANSPs will not meet the target has increased.

- Safety levels, measured through the safety PIs on occurrences, continue to improve with Union-wide rates of runway incursions and separation minima infringements decreasing again in 2023.

- The rate of accidents and serious incidents with ANS contribution continued to decrease, remain-

ing in line with the trend over the past ten years.

1.5 Environment (SES RP3 area)



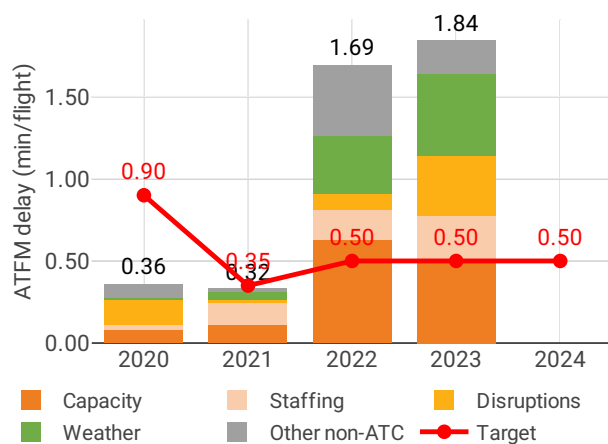
- The Union-wide horizontal flight efficiency (KEA) performance target was not achieved in 2023 (2.99% compared to the target of 2.40%) and performance was at the worst level since 2016. 25 Member States did not achieve their national targets.

- 2023 marked the first full year of the effects of Russia's war of aggression against Ukraine on environmental performance, which is reflected in the KEA score being 2.99% in 2023 compared to 2.96% in 2022.

- For terminal airspace, both additional ASMA (arrival sequencing and metering area) time and additional taxi-out time increased. Combined, this shows a +5% increase compared to 2022, mainly driven by taxi-out performance. However, it is worth noting that performance remains better than 2019 levels.

1.6 Capacity (SES RP3 area)

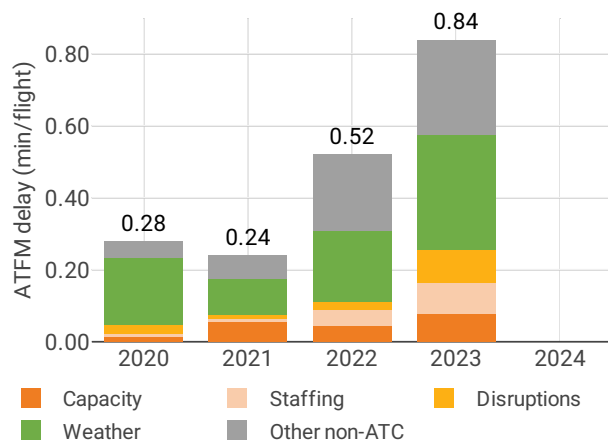
Average en route ATFM delay per flight by delay groups



- The actual Union-wide average en route ATFM delay was 1.84 minutes per flight in 2023, 1.34 minutes per flight higher than the Union-wide target, and higher than in 2019, despite fewer IFR movements during the year. Note that traffic distribution was uneven across the network, impacting on ANSPs in different ways. For some ANSPs, this exacerbated existing capacity problems.

- 13 Member States did not achieve their local targets, indicating that some ANSPs still have unresolved capacity issues. Adverse weather also contributed significantly to en route ATFM delays in 2023.

Average arrival ATFM delay per flight by delay groups

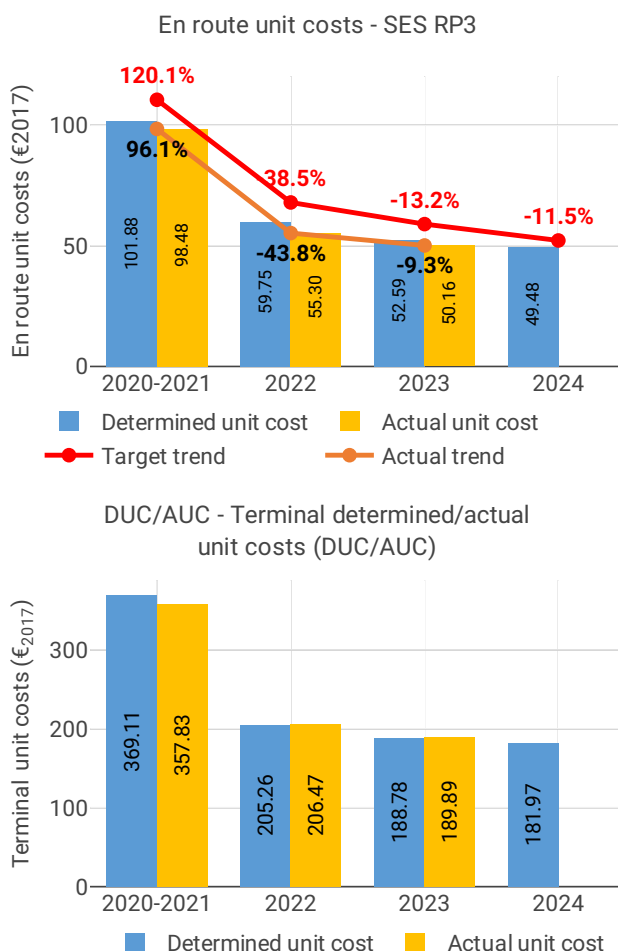


- Six out of the 13 Member States which did not achieve capacity targets experienced double-digit traffic growth compared to 2022. Conversely, four Member States did not achieve their capacity targets even though traffic demand remained at or significantly below the forecasted level on average.

- Terminal capacity performance deteriorated compared to 2022 by 60% mostly due to disruptions, adverse weather, and non-ATC problems at airports. All-cause departure delays were 19.23 minutes per flight, 0.2 minutes per flight higher than in 2022.

• ANSPs and Member States must focus on delivering continuous capacity improvements in 2024 and during RP4 to catch up with traffic recovery and accommodate future traffic growth.

1.7 Cost-efficiency (SES RP3 area)



- In 2023, the real en route actual unit cost (AUC) Union-wide was -4.6% lower than the determined unit cost (DUC). En route actual costs were -3.4% below determined costs, while actual service units were +1.2% higher than the determined service units.

- The decrease in actual costs compared to plan was mainly attributable to staff costs and depreciation. Many ANSPs have not implemented their ATCO and investment plans and have not achieved their capacity targets.

- The en route actual unit cost for airspace users (AUCU) was +7.9% higher than the DUC (nominal), mainly due to the application of the 2023 inflation adjustment (where the weighted average actual index was +11% higher than the determined figure).

2 SAFETY - SES RP3

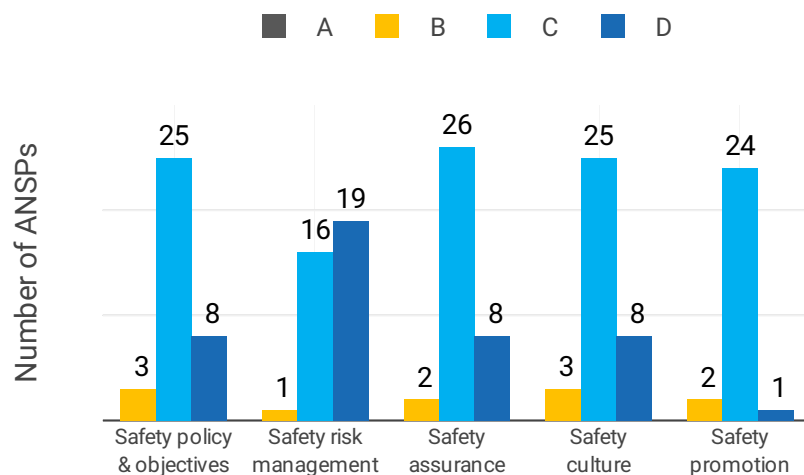
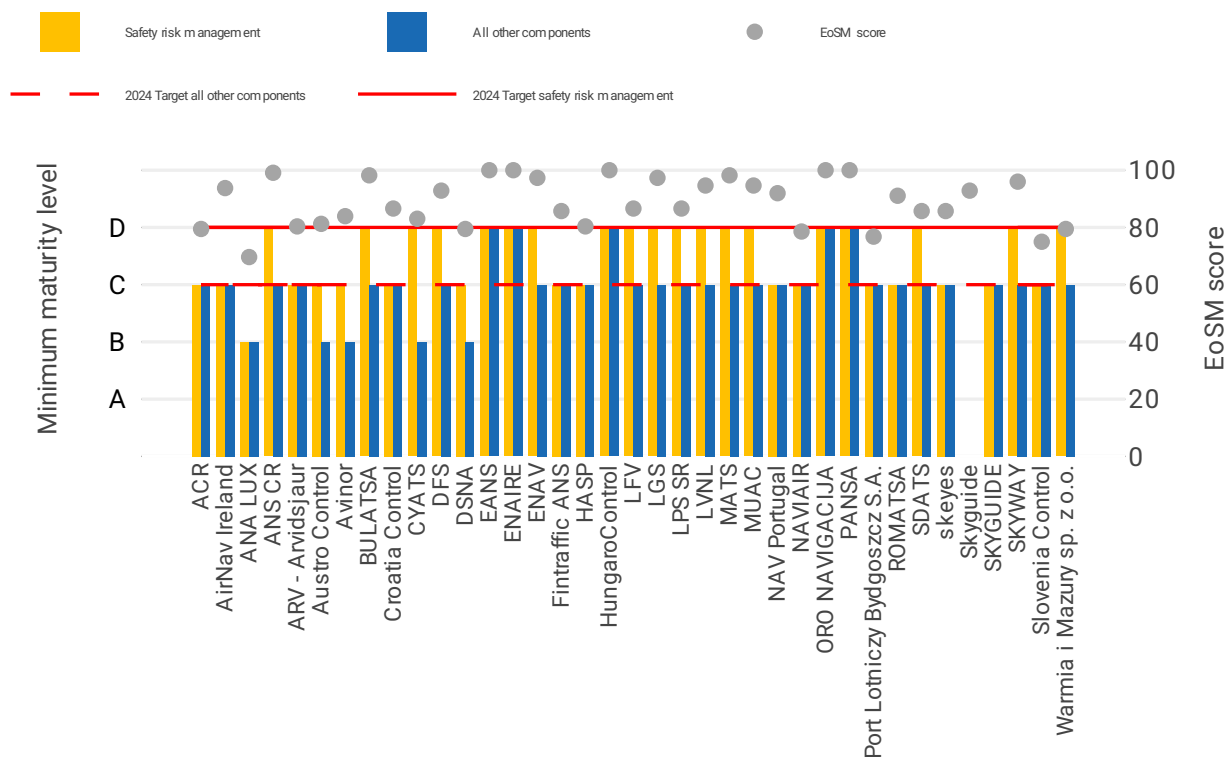
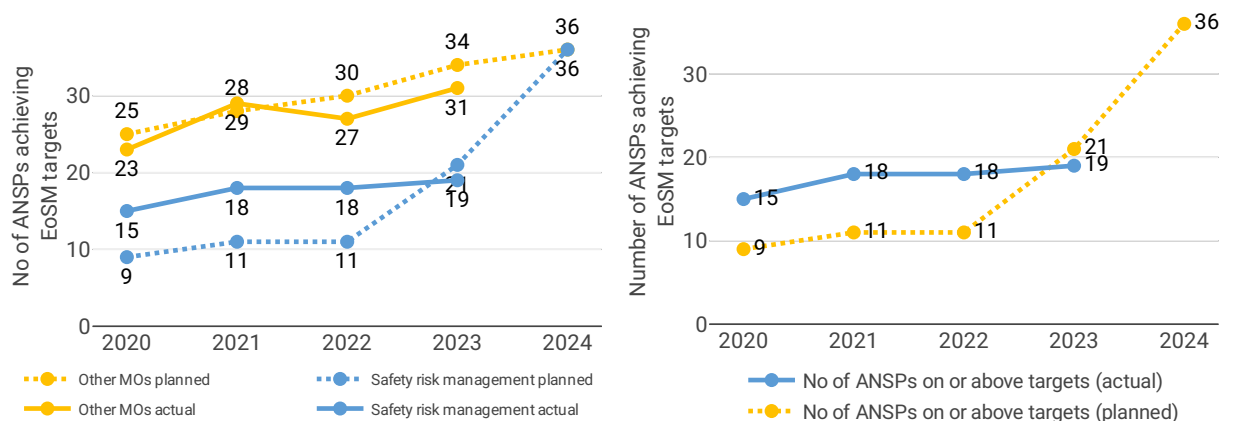
2.1 PRB monitoring

- 18 ANSPs achieved the RP3 targets for the effectiveness of safety management for all Management Objectives (one year before the end of RP3). The remaining 18 ANSPs can still meet the targets by the end of RP3, but will need to ensure measures are implemented. The risk that ANSPs will not meet the target has increased.

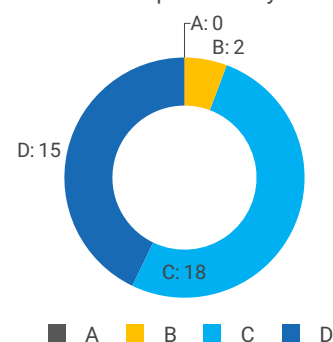
- Safety levels, measured through the safety PIs on occurrences, continue to improve with Union-wide rates of runway incursions and separation minima infringements decreasing again in 2023.

- The rate of accidents and serious incidents with ANS contribution continued to decrease, remaining in line with the trend over the past ten years.

2.2 Actual versus planned number of ANSPs achieving the level of the EoSM targets for RP3 ahead of 2024



Interdependencies –
Number of ANSPs per maturity level



Focus on EoSM

Number of ANSPs on Target

Between 2022 and 2023, five ANSPs improved their minimum maturity level for at least one Management Objective (achieving the RP3 targets in 2023), while three ANSPs showed the minimum maturity level degrading and no longer achieved the target for at least one Management Objective (DSNA for all MOs except Safety Assurance, NAV Portugal for Safety Risk Management, and ROMATSA for Safety Risk Management). For all three ANSPs, the NSA downgraded the EoSM scores based on the verification. According to the performance plans, a total of 21 ANSPs planned to reach the RP3 targets in 2023. However, nine ANSPs were not able to achieve these targets.

Actual versus planned

While in the past ANSPs performed better than planned within the safety risk management area of their performance plans, less progress has been observed in 2023, with only one additional ANSP reaching the target level D. For other Management Objectives, 34 ANSPs had planned to already achieve the RP3 target level in 2022, but only 31 ANSPs managed to do so.

ANSPs achieving the targets and Score

- 19 out of 36 ANSPs achieved the 2024 RP3 target level D for Safety Risk Management.
- 31 out of 36 ANSPs achieved the 2024 RP3 target level C for all other MOs (the four management objectives other than Safety Risk Management).
- 18 out of 36 ANSPs achieved the 2024 EoSM targets for RP3 in full.

The average EoSM score achieved by all ANSPs is 89. The minimum score achieved by an individual ANSPs is 70, while the maximum EoSM score is 100, which is achieved by five ANSPs, compared to seven ANSPs in 2022.

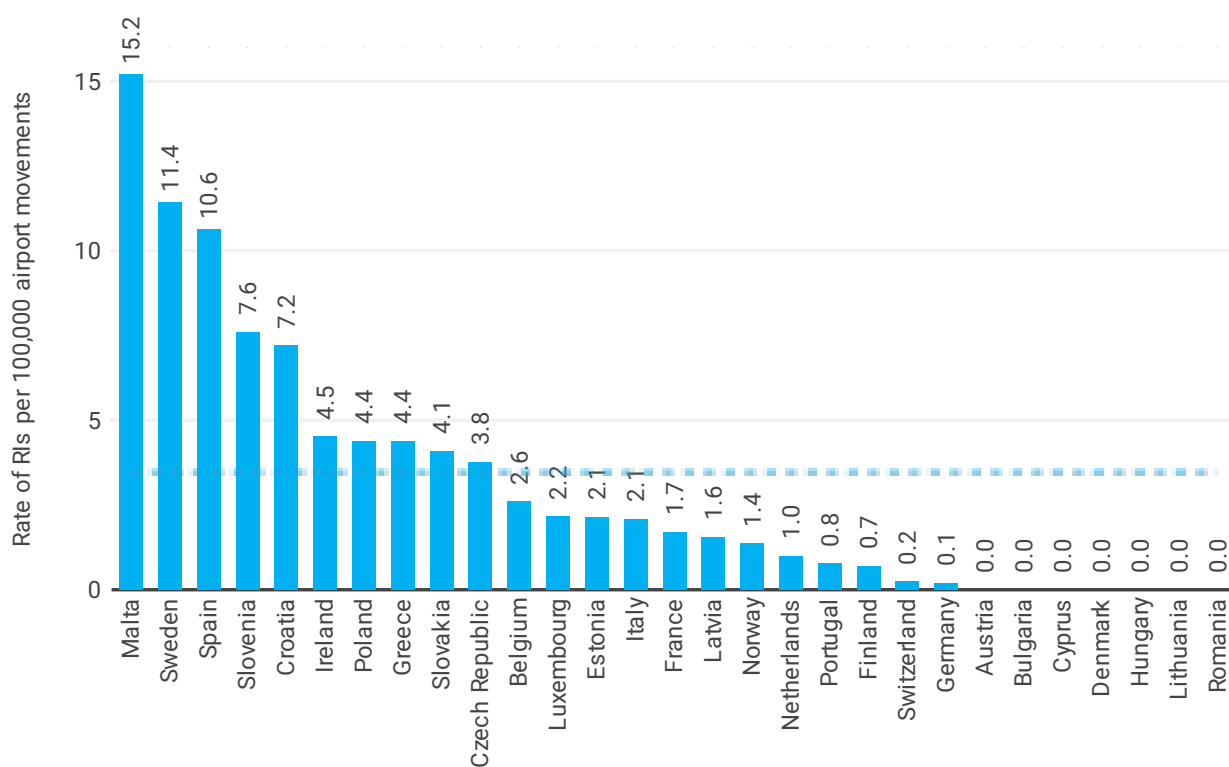
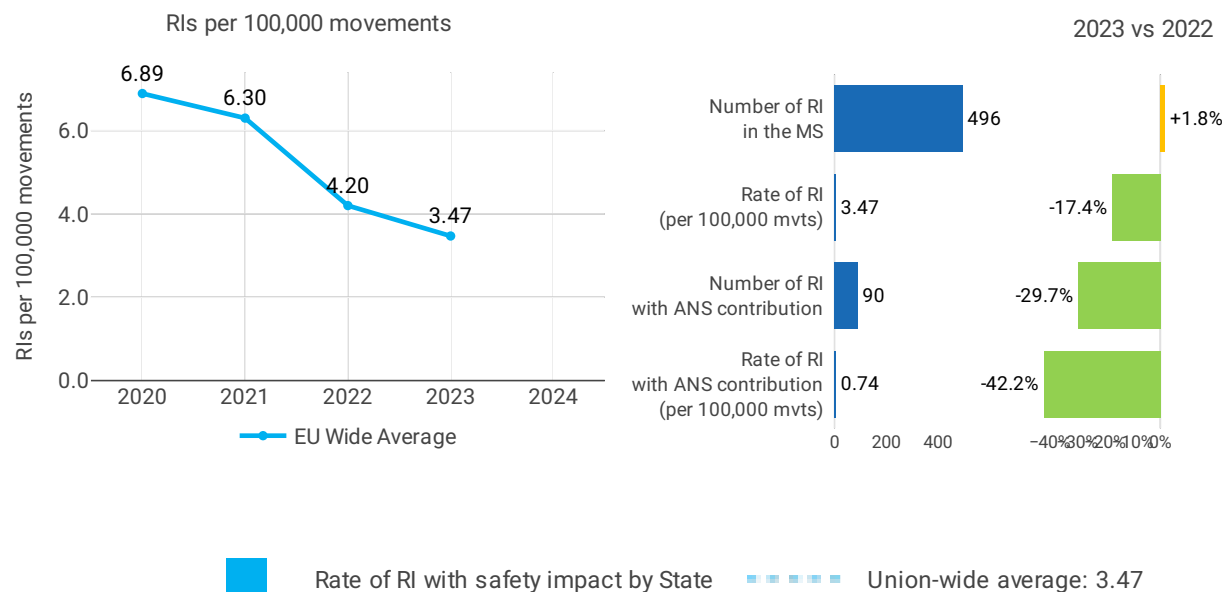
Number of ANSPs per Management Objective

17 ANSPs did not reach the target level D for the Safety Risk Management objective, three ANSPs did not reach the safety culture and safety policy and objectives, while two ANSPs did not reach safety assurance and safety promotion management objectives, respectively. Progress compared with 2022 has been limited, in particular in Safety Risk Management, where the performance of one ANSP degraded to level B.

Interdependency

Most ANSPs are at maturity levels C and D for interdependencies management objective. Despite that there is room for improvement since two ANSPs are at level B, no progress has been observed compared with 2022. This management objective is particularly important to ensure ANSPs cope safely with the impacts related to Russia's war of aggression, and the recovery process after the pandemic when the pressures to trade-off resources towards other business objectives of the organisation are intensified due to loss of traffic and revenues in such period. One ANSP did not report the achieved maturity level.

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



Rate of RI per 100,000 airport movements

TOP 10 APTs in terms of movements					TOP 10 APTs in terms of number of RIs					TOP 10 APTs in terms of rate of RIs				
#	Airport name	APT mvts.	Number of RI	Rate RI per 100,000 mvts.	#	Airport name	APT mvts.	Number of RI	Rate RI per 100,000 mvts.	#	Airport name	APT mvts.	Number of RI	Rate RI per 100,000 mvts.
1	Paris-Charles-de-Gaulle	548,705	4	0.73	1	Dublin	241,597	12	4.97	1	Radom	1,053	1	94.97
2	Amsterdam - Schiphol	458,568	3	0.65	2	Warsaw	165,434	9	5.44	2	Tartu	3,896	1	25.67
3	Frankfurt	430,389	1	0.23	3	Warszawa - Modlin	21,508	5	23.25	3	Warszawa - Modlin	21,508	5	23.25
4	Madrid - Barajas	389,223	0	0.00	4	Athinai- Eleftherios Venizelos	246,513	5	2.03	4	Bydgoszcz	4,378	1	22.84
5	Barcelona	319,056	2	0.63	5	Stavanger	70,933	4	5.64	5	Dôle-Tavaux	9,678	1	10.33
6	Munich	299,771	0	0.00	6	Paris-Charles-de-Gaulle	548,705	4	0.73	6	Groningen	9,910	1	10.09
7	Rome - Fiumicino	266,510	0	0.00	7	Amsterdam - Schiphol	458,568	3	0.65	7	Stavanger	70,933	4	5.64
8	Athinai- Eleftherios Venizelos	246,513	5	2.03	8	Malta International	59,196	3	5.07	8	Hyères-Le Palyvestre	35,943	2	5.56
9	Zürich	243,029	0	0.00	9	Bergen	98,452	2	2.03	9	Warsaw	165,434	9	5.44
10	Dublin	241,597	12	4.97	10	Krakow - Balice	65,731	2	3.04	10	Istres-Le Tubé	19,164	1	5.22

Focus on runway incursions

RI rate

The rate of runway incursions has decreased since 2021 and decreased again in 2023 from 4.2 to 3.5 occurrences per 100,000 movements.

RI 2022-2023

In 2023, the rate of RIs of all types decreased by 17%, while the rate of RIs with ANS contribution increased by 42%. The absolute number of RIs marginally increased by 1.8%, while the number of RIs with ANS contribution decreased by 30%. Similarly to 2022, in 2023 at Member State level, the management of risks associated to RIs of all types showed improvement.

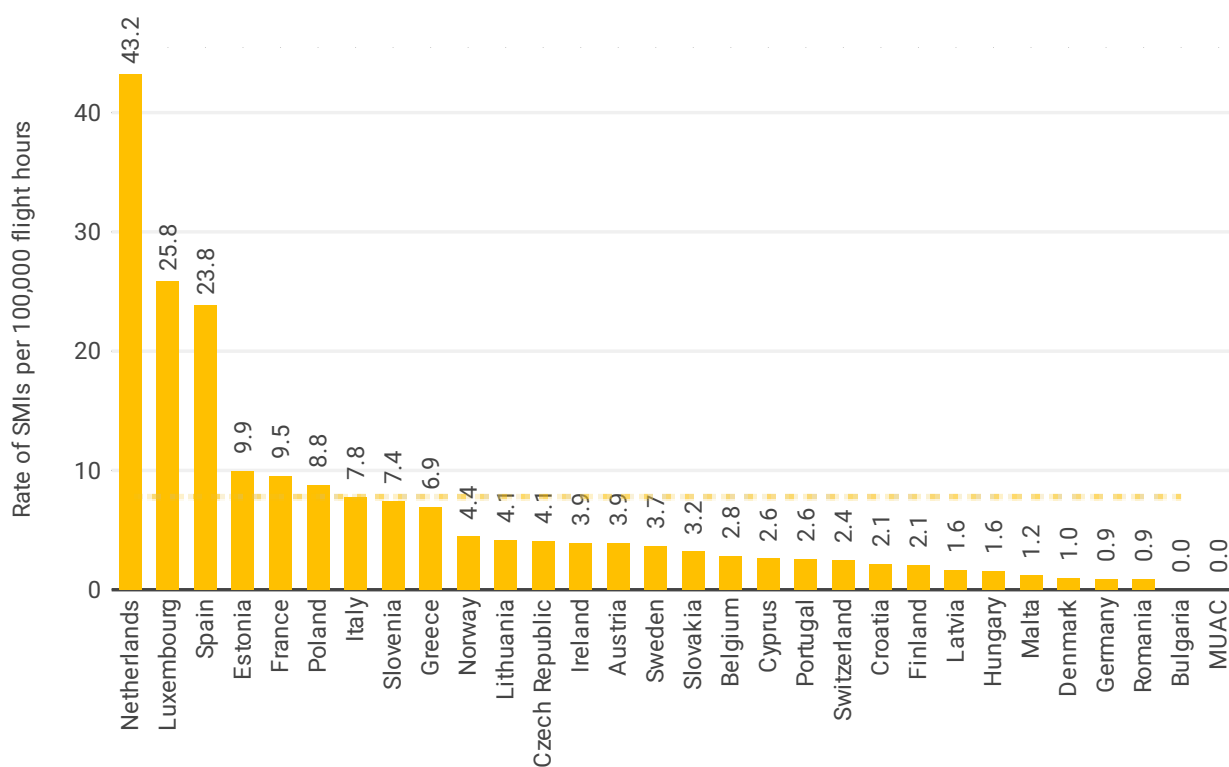
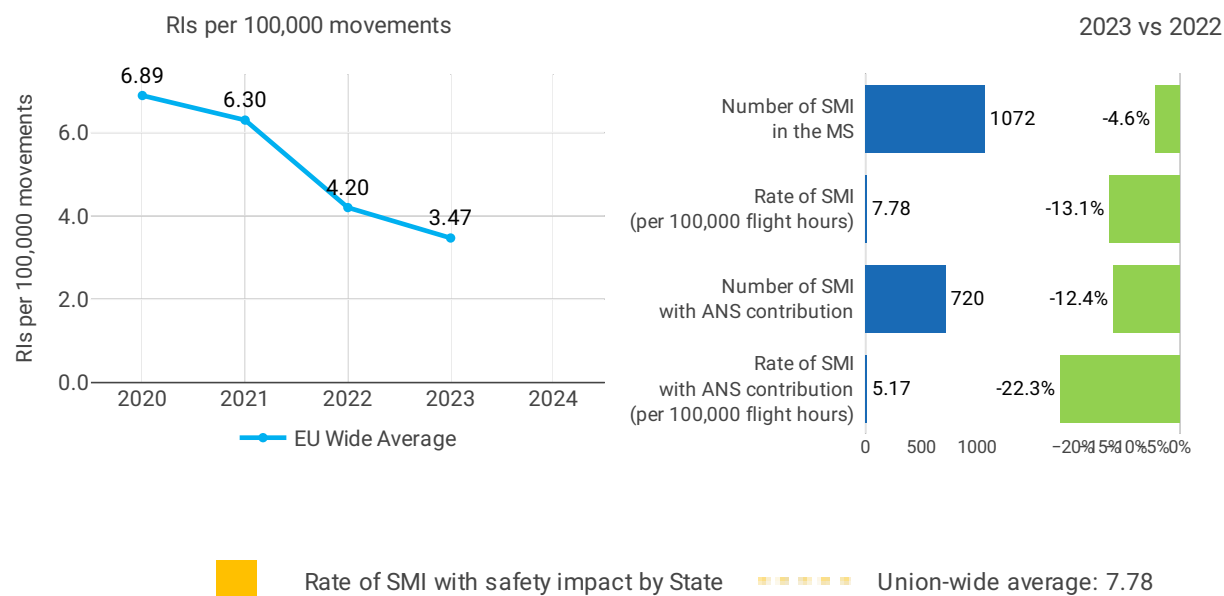
RI with Safety Impact by State

The highest RI with Safety Impact occurred in Malta (15.2), followed by Sweden (11.40) and Spain (10.6). In 2023, seven Member States were above the Union-wide rate, while only four were above the Union-wide rate in 2022.

RI with Safety Impact by Airport

Out of 153 airports included in the performance plans, 43 airports reported RIs with ATS/CNS contribution. The 110 airports included in the performance and charging scheme that reported no RIs are not shown in the figure. The majority of airports reported one or two RIs. This makes the rate of runway incursions at airports with a low number of movements very susceptible to variations in the number of occurrences. For example, of the top ten airports with the highest rates of runway incursions, eight had fewer than 30,000 airport movements. Airports with significantly higher traffic figures and with the highest rates of RIs are EPWA (Warsaw) with 5.44 RI per 100,000 movements, followed by EIDW (Dublin) with 4.97 per 100,000 movements. These providers should consider looking into the reasons contributing to these rates and take appropriate mitigating actions, as necessary.

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



Rate of SMI with ANS contribution per 100,000 flight hours

#	State	Flight hours					Number of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	France	1,051,941	1,415,222	2,178,853	2,368,932	NA	133	272	304	226	NA
2	Spain	741,278	954,783	1,632,981	1,820,236	NA	25	59	89	127	NA
3	Germany	700,899	952,606	1,263,985	1,329,631	NA	6	8	22	12	NA
4	Italy	494,359	747,998	1,141,849	1,242,479	NA	26	33	81	78	NA
5	Greece	276,276	418,381	650,415	738,472	NA	24	31	42	51	NA
6	Portugal	175,009	215,958	406,816	854,121	NA	10	13	30	22	NA
7	MUAC	289,985	311,843	545,651	605,633	NA	5	0	8	17	NA
8	Norway	235,547	257,160	646,054	441,775	NA	27	14	84	14	NA
9	Romania	171,847	247,561	384,582	455,861	NA	3	4	12	4	NA
10	Poland	221,029	278,330	361,376	386,507	NA	8	15	39	34	NA
11	Sweden	199,288	218,597	333,262	352,610	NA	2	19	31	16	NA
12	Austria	155,355	202,666	317,434	359,408	NA	7	9	14	4	NA
13	Hungary	116,008	149,648	259,939	313,567	NA	2	7	6	6	NA
14	Ireland	131,294	105,105	288,261	331,211	NA	2	7	8	13	NA
15	Switzerland	150,242	137,471	318,606	325,987	NA	0	2	5	3	NA
16	Croatia	106,693	155,957	249,018	281,231	NA	0	0	3	5	NA
17	Bulgaria	127,863	174,114	290,422	342,298	NA	1	0	0	0	NA
18	Czech Republic	113,261	135,047	178,983	194,893	NA	7	11	8	6	NA
19	Denmark	98,936	99,279	183,043	200,904	NA	0	2	0	2	NA
20	Cyprus	78,614	116,453	167,670	191,955	NA	0	3	6	5	NA
21	Netherlands	88,456	101,649	155,388	169,414	NA	31	47	33	37	NA
22	Belgium	55,762	134,413	97,089	100,450	NA	1	5	6	13	NA
23	Finland	57,321	62,275	88,850	97,259	NA	0	3	8	2	NA
24	Slovakia	41,055	54,376	86,171	100,173	NA	0	2	0	1	NA
25	Malta	40,016	44,905	62,700	84,404	NA	0	1	0	1	NA
26	Slovenia	28,029	40,145	61,705	67,568	NA	0	2	4	3	NA
27	Latvia	39,170	46,440	52,501	53,203	NA	1	0	1	1	NA
28	Lithuania	36,493	47,794	47,286	48,220	NA	1	0	2	2	NA
29	Estonia	33,558	37,464	48,360	50,258	NA	4	5	3	5	NA
30	Luxembourg	5,067	11,425	17,665	11,608	NA	0	3	4	3	NA

#	State	Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	France	12.6	19.2	13.9	9.5	NA	NA	+52%	-27%	-32%	NA
2	Spain	3.4	6.2	5.4	7.0	NA	NA	+83%	-12%	+28%	NA
3	Germany	0.9	0.8	1.7	0.9	NA	NA	-2%	+107%	-48%	NA
4	Italy	5.3	4.4	7.1	6.3	NA	NA	-16%	+61%	-11%	NA
5	Greece	8.7	7.4	6.5	6.9	NA	NA	-15%	-13%	+7%	NA
6	Portugal	5.7	6.0	7.4	2.6	NA	NA	+5%	+22%	-65%	NA
7	MUAC	1.7	0.0	1.5	2.8	NA	NA	-100%	0%	+91%	NA
8	Norway	11.5	5.4	13.0	3.2	NA	NA	-53%	+139%	-76%	NA
9	Romania	1.8	1.6	3.1	0.9	NA	NA	-7%	+93%	-72%	NA
10	Poland	3.6	5.4	10.8	8.8	NA	NA	+49%	+100%	-18%	NA
11	Sweden	1.0	8.7	9.3	4.5	NA	NA	+769%	+7%	-51%	NA
12	Austria	4.5	4.4	4.4	1.1	NA	NA	-2%	-1%	-75%	NA
13	Hungary	1.7	4.7	2.3	1.9	NA	NA	+172%	-51%	-17%	NA
14	Ireland	1.5	6.7	2.8	3.9	NA	NA	+338%	-58%	+41%	NA
15	Switzerland	0.0	1.4	1.6	0.9	NA	NA	0%	+8%	-41%	NA
16	Croatia	0.0	0.0	1.2	1.8	NA	NA	0%	0%	+48%	NA
17	Bulgaria	0.8	0.0	0.0	0.0	NA	NA	-100%	0%	0%	NA
18	Czech Republic	6.2	8.2	4.5	3.1	NA	NA	+32%	-45%	-31%	NA
19	Denmark	0.0	2.0	0.0	1.0	NA	NA	0%	-100%	0%	NA
20	Cyprus	0.0	2.6	3.6	2.6	NA	NA	0%	+39%	-27%	NA
21	Netherlands	35.0	46.2	21.2	21.8	NA	NA	+32%	-54%	+3%	NA
22	Belgium	1.8	3.7	6.2	12.9	NA	NA	+108%	+66%	+109%	NA
23	Finland	0.0	4.8	9.0	2.1	NA	NA	0%	+87%	-77%	NA
24	Slovakia	0.0	3.7	0.0	1.0	NA	NA	0%	-100%	0%	NA
25	Malta	0.0	2.2	0.0	1.2	NA	NA	0%	-100%	0%	NA
26	Slovenia	0.0	5.0	6.5	4.4	NA	NA	0%	+30%	-31%	NA
27	Latvia	2.5	0.0	1.9	1.9	NA	NA	-100%	0%	-1%	NA
28	Lithuania	2.7	0.0	4.2	4.2	NA	NA	-100%	0%	-2%	NA
29	Estonia	11.9	13.3	6.2	9.9	NA	NA	+12%	-54%	+60%	NA
30	Luxembourg	0.0	26.3	22.6	25.8	NA	NA	0%	-14%	+14%	NA

Focus on separation minima

SMI

Despite the increase in traffic levels in 2023 (ANSPs handled 9.1 million flights compared to 8.3 million flights in 2022, or a 9% increase), the SMI occurrence rate has dropped regardless the factors involved, including those with ANS contribution, by 13% and 22%, respectively. The absolute number of occurrences have experienced a decrease of 4.6% and 12%, respectively.

SMI 2022-2023

Member States showed in general a decrease in the rate of SMIs between 2022 and 2023, with some exceptions, indicating an overall improvement across Member States. The highest rate occurred in Luxembourg (25.8). Because the number of controlled hours is very low in its airspace, any small increase in absolute number of occurrences results in very significant changes in the rate, as it has been the case in 2022. Spain recorded almost a 40% increase in the rate of SMIs in 2023 compared to 2022 (23.2 compared to 16.6). Spain activated an Action Plan at national and local levels to mitigate this type of incidents in 2023 and continuing into 2024.

SMI by State

30 ANSPs reported SMIs, which had an ATS/CNS contribution. The highest number of SMIs with ANS contribution occurred in DSNA's airspace (226) but the high number of controlled hours resulted in a lower rate (9), despite being well above the Union average. The rate decreased by -31% with respect to 2022, showing continuous improvement. DSNA should continue to assess occurrences and put in place appropriate mitigations according to their SMS, as necessary. The highest rate of SMIs was in the ANA LUX airspace (25.8 SMIs per 100,000 flight hours), but with a very low absolute number of occurrences (3 SMIs). The rate increased by 14% with respect to 2022. Additionally, skyes and EANS experienced a high increase of rate of SMIs. In both cases, the number of controlled hours is relatively low, hence the sensitivity of the rate to variations in the numbers of SMIs is high. Both should carefully monitor SMIs during the final year of RP3, looking into the reasons contributing to this rate and take appropriate mitigating actions, as necessary.

2.5 Quality of occurrences reporting

Occurrence reporting quality

For the calculation of the indicators related to SMIs and RIs, RP3 safety supporting material requires that occurrences data reported in the ECR under Commission Regulation (EU) No 376/2014 is used. ANSPs and NSAs should ensure that the information provided through the ECR reporting contains the information needed to compute the performance indicators for monitoring SMIs and RIs. EASA would extract the information needed to calculate the SPIs which are then sent to Member States for verification and elaboration in their PMRs. However, so far in RP3, EASA has not been able to extract data from the ECR containing all needed information to compute the SPIs. This is because of the overall poor quality of the data uploaded to the ECR: A significant part of occurrences extracted from ECR did not contain information on severity and risk, as required to compute the SPIs, and in many cases basic information was missing. Member States had to extract the occurrences from their own national databases with no further involvement from or verification by EASA. For the calculation of the indicators related to SMIs and RIs (SPI1a, SPI1b, SPI1c, and SPI1d), the occurrences that should be used in the computation of the different rates are only those that have a "safety impact". Whether an occurrence has a safety impact or not should be determined by NSAs using the common European Risk Classification Scheme (ERCS), and by ANSPs through the severity classification using the Risk Analysis Tool (RAT). This information was barely found encoded in the ECR's occurrences. While there has been some improvement, it is not such that the values may be calculated using ECR data as planned. The delegated act that regulates the application of ERCS entered into force as from 1st January 2023, so the application of it was mandatory during 2023, but still a poor quality of data in the ECR is observed. ANSP's use of the RAT was close to 100% at the end of RP2, but its use is not mandated in RP3. Because EASA has not been able to verify the data submitted, this report relies on the correct application of the ERCS and RAT by NSAs and ANSPs. It is likely that some have not applied the ERCS and RAT resulting in greater subjectivity in ANSP and NSA interpretations of what constitutes

an occurrence that had a safety impact. Nevertheless, this does not invalidate the analysis, but it should be taken into consideration when interpreting the data. In the last year of RP3, Member States should ensure that both the RAT severity and the ERCS risk score are encoded for each occurrence to allow EASA to compute independently the SPIs. Otherwise, they will have to extract and submit the occurrences used in the computation of the SPIs themselves.

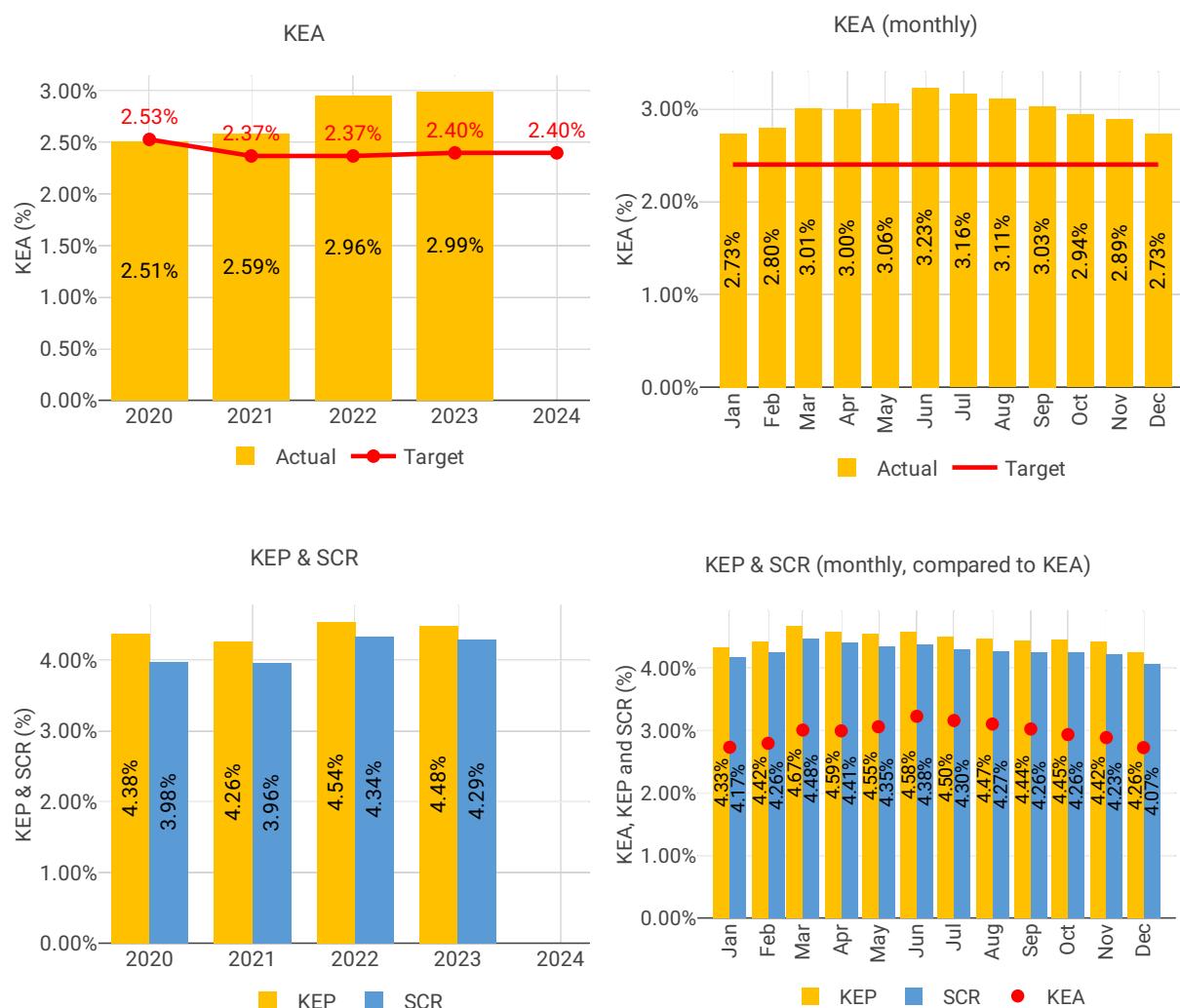
3 ENVIRONMENT - SES RP3

3.1 PRB monitoring

- The Union-wide horizontal flight efficiency (KEA) performance target was not achieved in 2023 (2.99% compared to the target of 2.40%) and performance was at the worst level since 2016. 25 Member States did not achieve their national targets.
- 2023 marked the first full year of the effects of Russia's war of aggression against Ukraine on environmental performance, which is reflected in the KEA score being 2.99% in 2023 compared to 2.96% in 2022.
- For terminal airspace, both additional ASMA (arrival sequencing and metering area) time and additional taxi-out time increased. Combined, this shows a +5% increase compared to 2022, mainly driven by taxi-out performance. However, it is worth noting that performance remains better than 2019 levels.

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)



3.2.2 Summary of performance at local level

KEA (%)		
State	Target	Actual
Austria	1.96	2.11 X
Belgium	3.00	3.59 X
Bulgaria	2.25	3.40 X
Croatia	1.46	1.51 X
Cyprus	3.84	4.73 X
Czech Republic	2.05	2.61 X
Denmark	1.14	1.44 X
Estonia	1.22	6.55 X
Finland	0.88	3.39 X
France	2.83	3.33 X
Germany	2.30	2.69 X
Greece	1.92	2.26 X
Hungary	1.49	2.11 X
Ireland	1.13	1.44 X
Italy	2.67	3.09 X
Latvia	1.25	7.97 X
Lithuania	1.92	13.14 X
Malta	1.80	1.58 ✓
Netherlands	2.62	2.94 X
Norway	1.55	1.29 ✓
Poland	1.65	4.58 X
Portugal	1.80	1.50 ✓
Romania	2.05	3.61 X
Slovakia	2.13	4.05 X
Slovenia	1.55	1.73 X
Spain	3.08	3.26 X
Sweden	1.05	1.75 X
Switzerland	3.95	4.43 X

4 CAPACITY - SES RP3

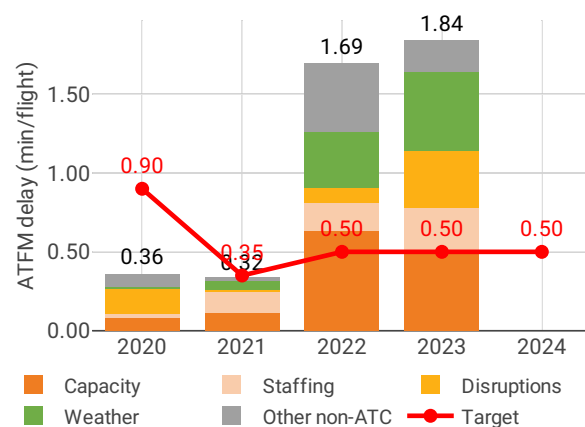
4.1 PRB monitoring

- The actual Union-wide average en route ATFM delay was 1.84 minutes per flight in 2023, 1.34 minutes per flight higher than the Union-wide target, and higher than in 2019, despite fewer IFR movements during the year. Note that traffic distribution was uneven across the network, impacting on ANSPs in different ways. For some ANSPs, this exacerbated existing capacity problems.
- 13 Member States did not achieve their local targets, indicating that some ANSPs still have unresolved capacity issues. Adverse weather also contributed significantly to en route ATFM delays in 2023.
- Six out of the 13 Member States which did not achieve capacity targets experienced double-digit traffic growth compared to 2022. Conversely, four Member States did not achieve their capacity targets even though traffic demand remained at or significantly below the forecasted level on average.
- Terminal capacity performance deteriorated compared to 2022 by 60% mostly due to disruptions, adverse weather, and non-ATC problems at airports. All-cause departure delays were 19.23 minutes per flight, 0.2 minutes per flight higher than in 2022.
- ANSPs and Member States must focus on delivering continuous capacity improvements in 2024 and during RP4 to catch up with traffic recovery and accommodate future traffic growth.

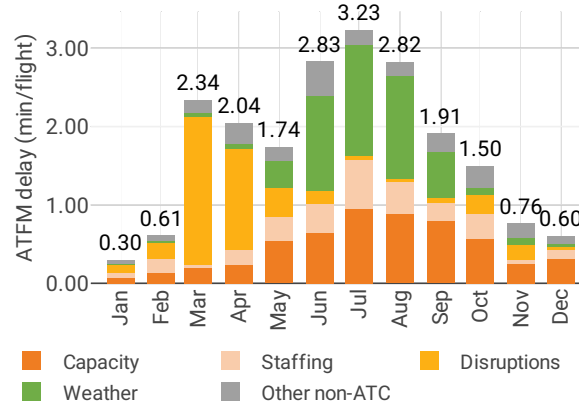
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

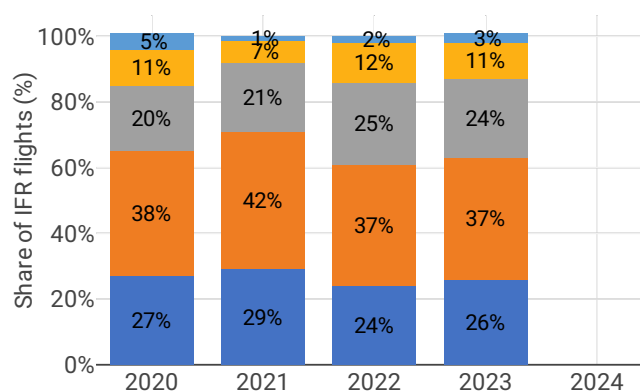
Average en route ATFM delay per flight by delay groups



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



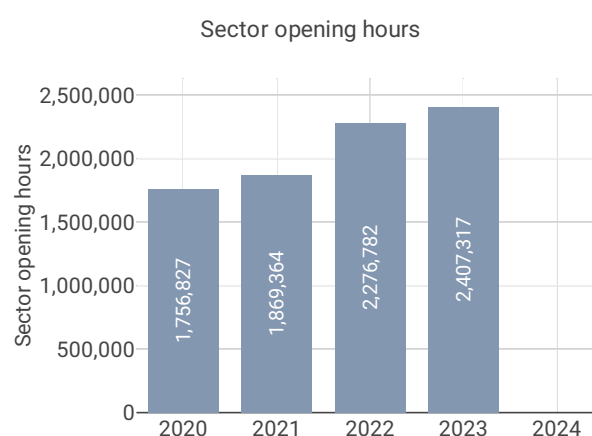
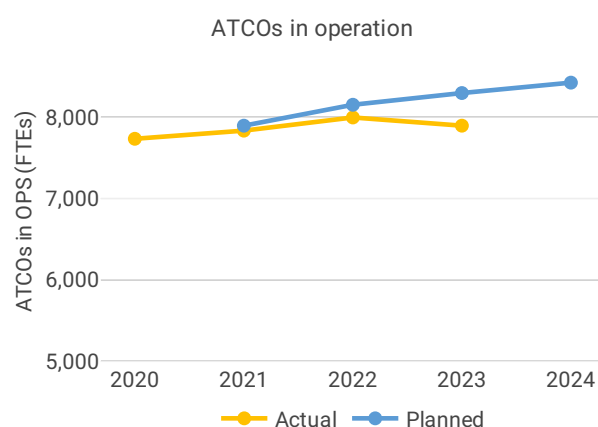
Distribution of IFR flights per the duration of en route ATFM delay



4.2.2 Summary of performance at local level

En route delay (min/flight)		
State	Target	Actual
Austria	0.17	0.12 ✓
Belgium	0.17	0.18 ✗
Bulgaria	0.07	0.06 ✓
Croatia	0.17	0.43 ✗
Cyprus	0.15	0.04 ✓
Czech Republic	0.11	0.09 ✓
Denmark	0.06	0.10 ✗
Estonia	0.03	0.00 ✓
Finland	0.05	0.00 ✓
France	0.25	2.13 ✗
Germany	0.27	1.93 ✗
Greece	0.15	0.83 ✗
Hungary	0.11	0.81 ✗
Ireland	0.03	0.02 ✓
Italy	0.11	0.14 ✗
Latvia	0.03	0.00 ✓
Lithuania	0.02	0.00 ✓
Malta	0.01	0.00 ✓
Netherlands	0.14	0.06 ✓
Norway	0.11	0.03 ✓
Poland	0.12	0.20 ✗
Portugal	0.13	0.48 ✗
Romania	0.04	0.16 ✗
Slovakia	0.08	0.03 ✓
Slovenia	0.09	0.03 ✓
Spain	0.19	0.47 ✗
Sweden	0.08	0.01 ✓
Switzerland	0.19	0.13 ✓

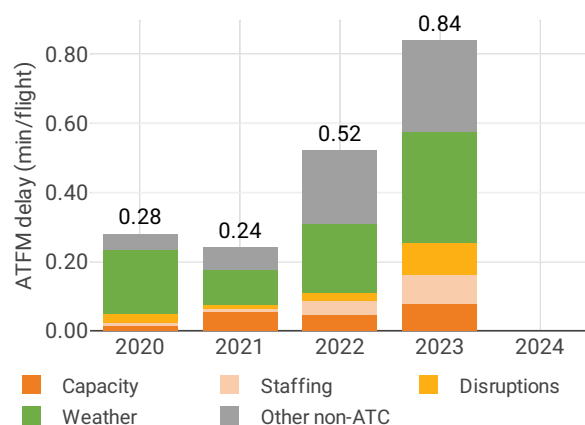
4.2.3 Other indicators



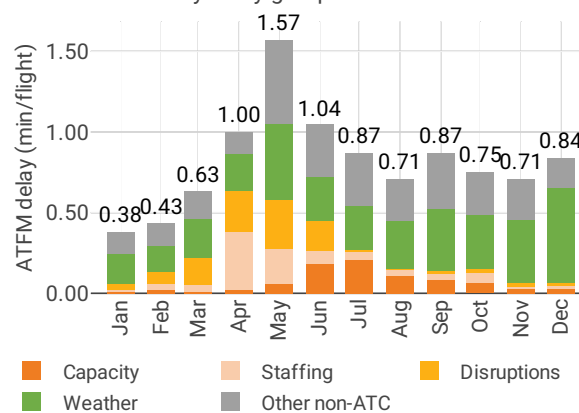
4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)

Average arrival ATFM delay per flight by delay groups



Monthly distribution of arrival ATFM delay by delay groups - 2023

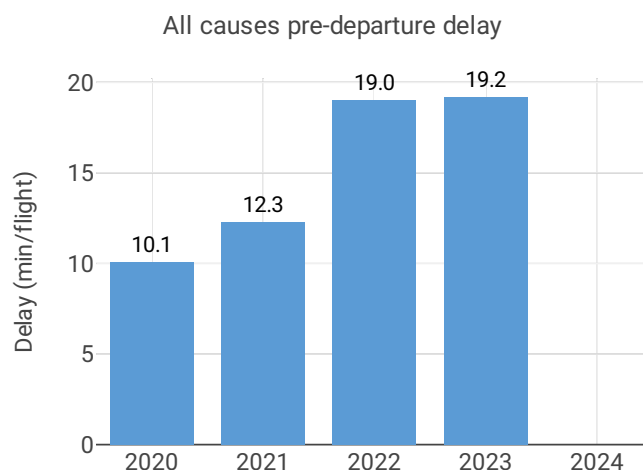


4.3.2 Summary of performance at local level

Arrival delay (min/flight)

State	Target	Actual
Austria	0.84	0.30 ✓
Belgium	1.08	0.43 ✓
Czech Republic	0.40	0.07 ✓
Denmark	0.10	3.09 ✗
Estonia	0.00	0.00 ✓
Finland	0.32	0.14 ✓
France	0.40	0.70 ✗
Germany	0.45	0.54 ✗
Greece	0.40	3.24 ✗
Hungary	0.05	0.02 ✓
Ireland	0.20	0.30 ✗
Italy	0.33	0.15 ✓
Latvia	0.02	0.00 ✓
Luxembourg	0.05	1.36 ✗
Malta	0.01	0.00 ✓
Netherlands	1.60	2.42 ✗
Norway	0.50	0.16 ✓
Poland	0.24	0.19 ✓
Portugal	2.28	2.59 ✗
Romania	0.39	0.00 ✓
Spain	0.57	0.70 ✗
Sweden	0.15	0.30 ✗
Switzerland	1.28	1.50 ✗

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

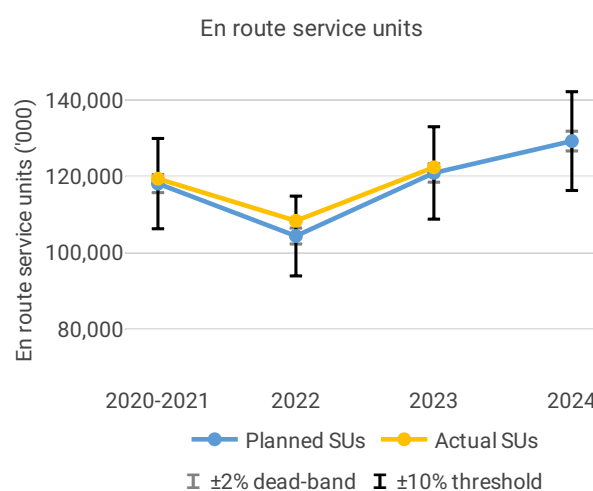
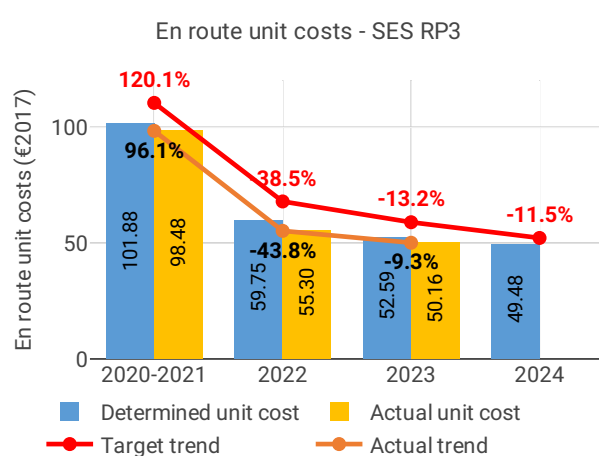


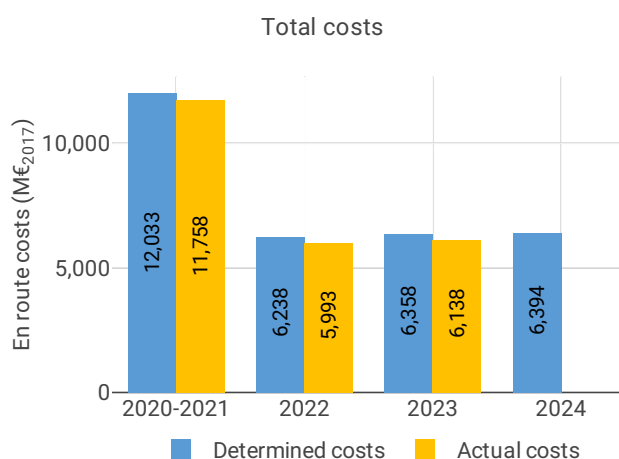
5 COST-EFFICIENCY - SES RP3

5.1 PRB monitoring

- In 2023, the real en route actual unit cost (AUC) Union-wide was -4.6% lower than the determined unit cost (DUC). En route actual costs were -3.4% below determined costs, while actual service units were +1.2% higher than the determined service units.
- The decrease in actual costs compared to plan was mainly attributable to staff costs and depreciation. Many ANSPs have not implemented their ATCO and investment plans and have not achieved their capacity targets.
- The en route actual unit cost for airspace users (AUCU) was +7.9% higher than the DUC (nominal), mainly due to the application of the 2023 inflation adjustment (where the weighted average actual index was +11% higher than the determined figure).

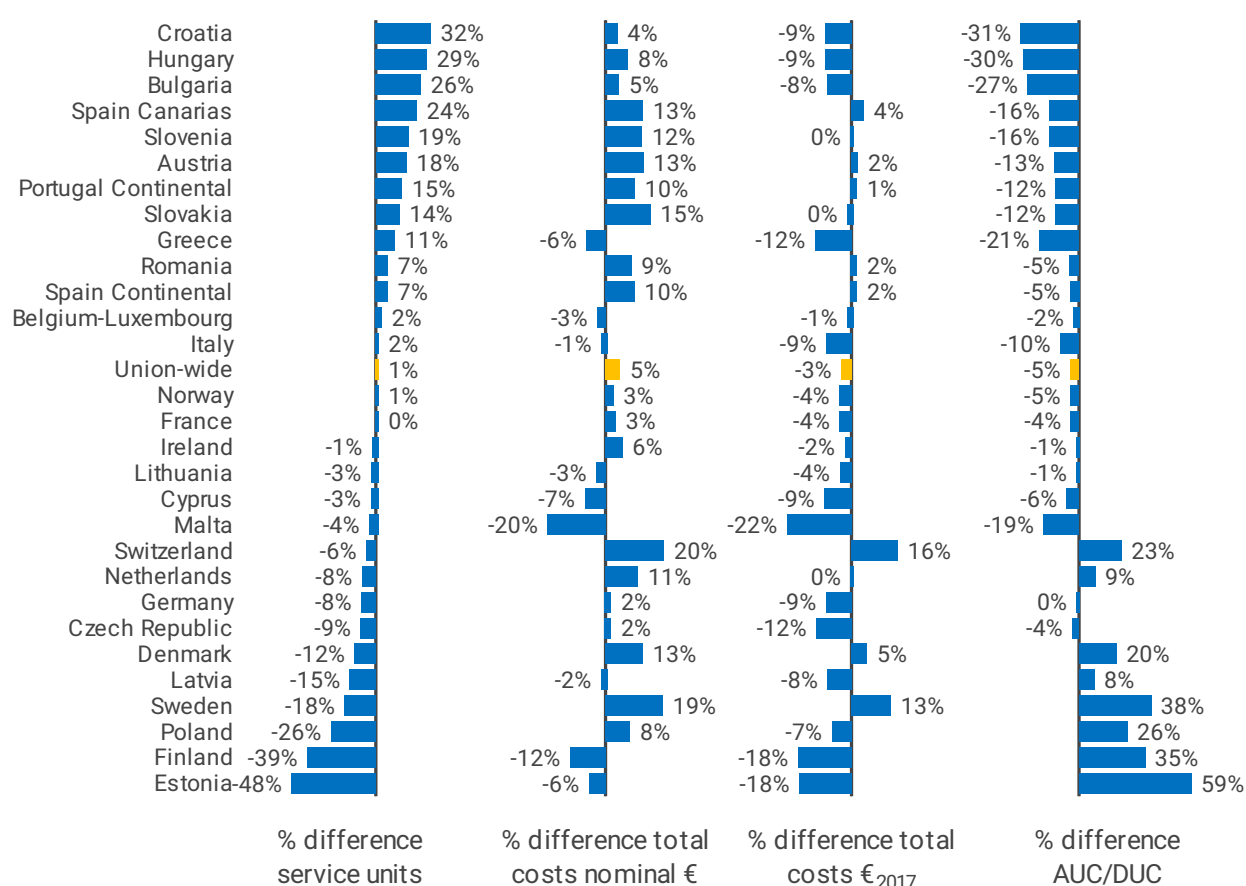
5.2 En route charging zone



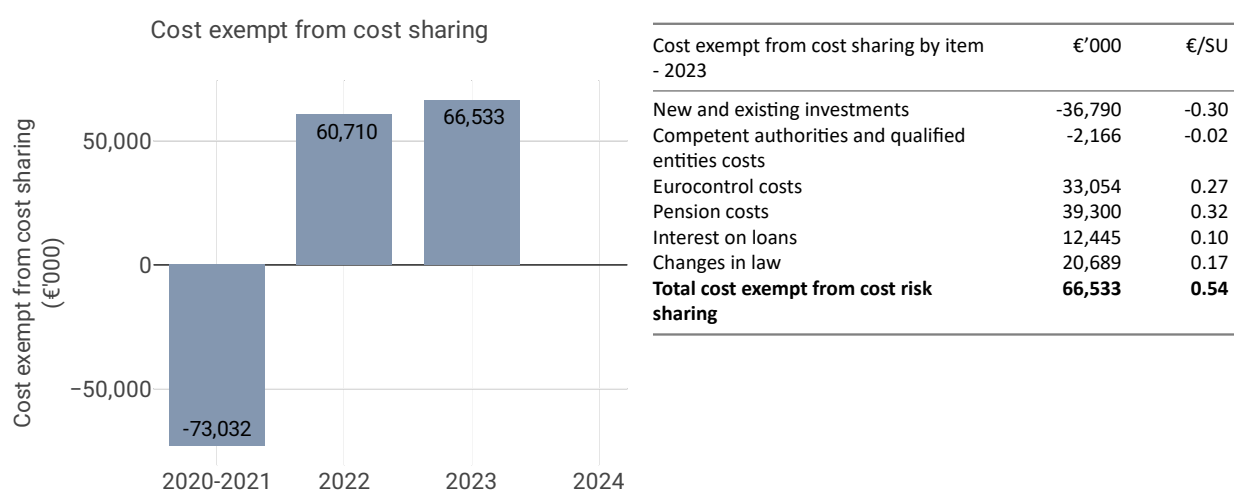
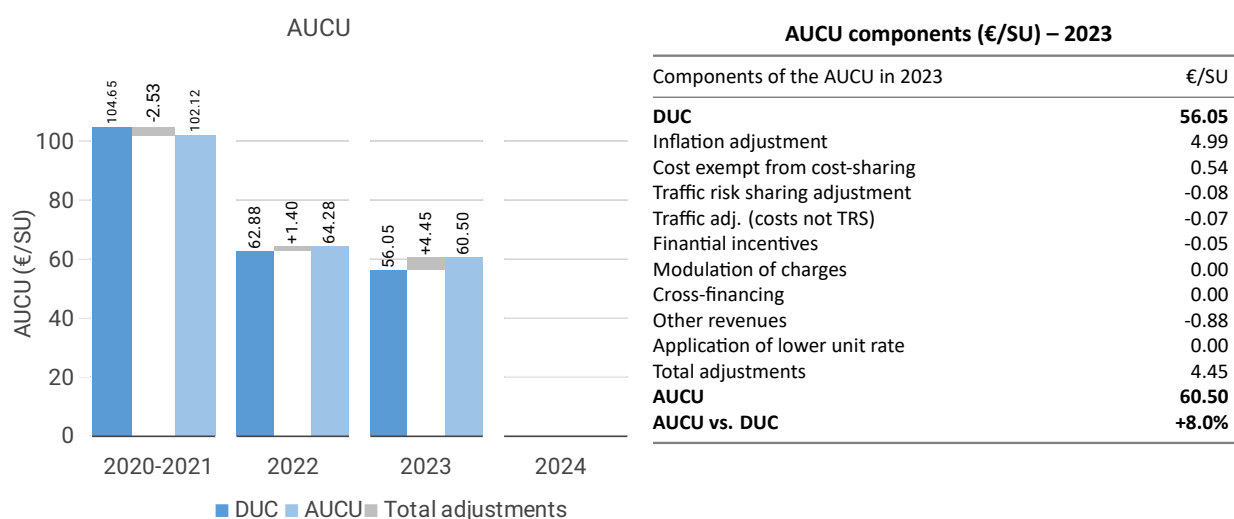


Actual and determined data				
Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	12,238	6,717	7,203	NA
Determined costs	12,476	6,632	6,861	6,988
Difference costs	-238	85	341	NA

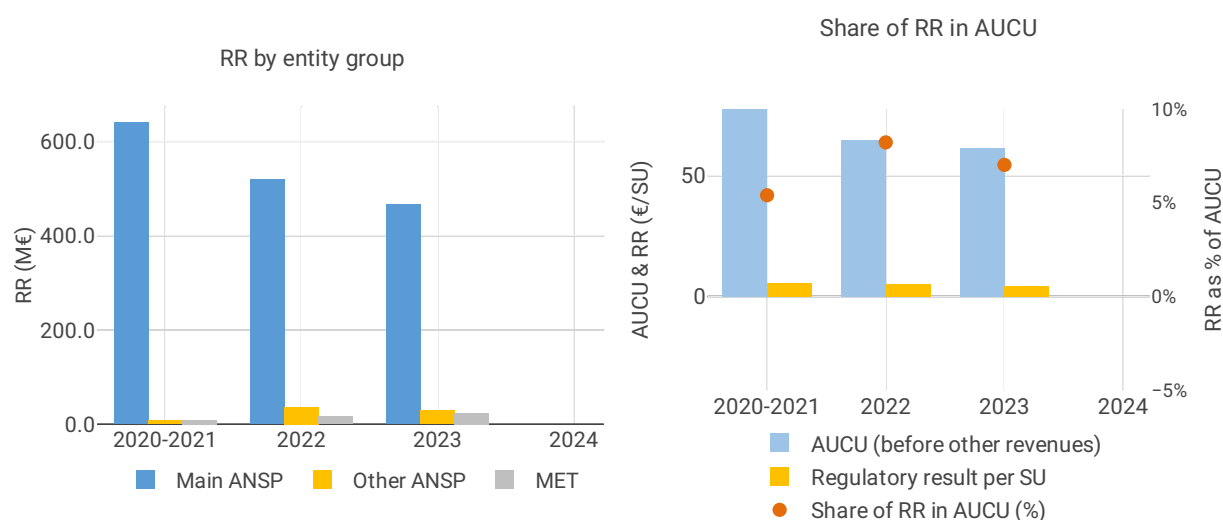
5.2.1 Summary of performance at local level



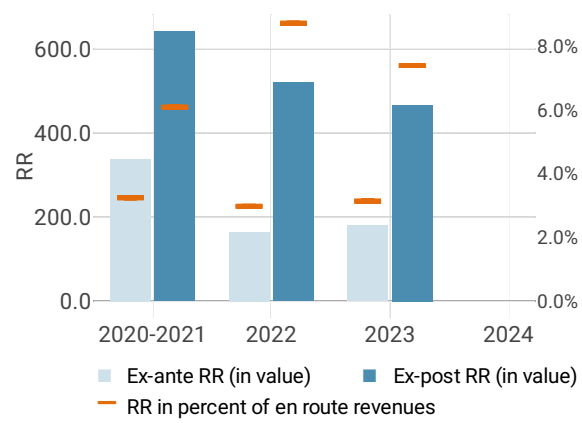
5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)



5.2.3 Regulatory result (RR)



RR - Main ANSPs



Net result from en route activity - Main ANSPs 2023

