PERFORMANCE REVIEW BOARD
of the Single European Sky

Performance Review Board
Monitoring Report
Portugal - 2024

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Contents

1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/767 of 13 April 2022

List of ACCs 1
Lisbon ACC

No of airports in the scope of the performance plan:
- **≥80'K** 2
- **<80'K** 8

Exchange rate (1 EUR=)
2017: 1 EUR
2024: 1 EUR

Share of Union-wide:
- **traffic (TSUs) 2024** 3.4%
- **en route costs 2024** 2.3%

Share en route / terminal costs 2024 78% / 22%

En route charging zone(s)
Portugal Continental

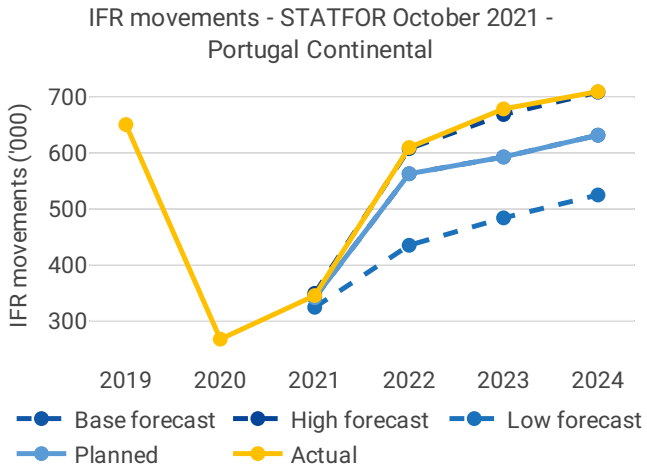
Terminal charging zone(s)
Portugal

Main ANSP
- NAV Portugal (Continental)

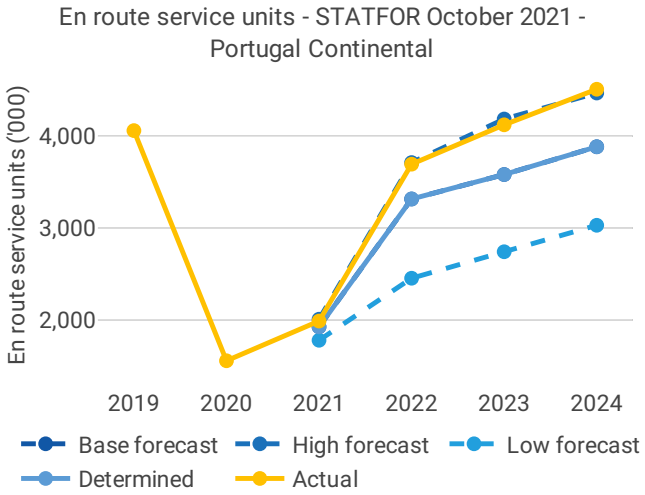
Other ANSPs
- Estado Maior da Força Aérea
- Estado Maior da Armada

MET Providers
- IPMA

1.2 Traffic (En route traffic zone)

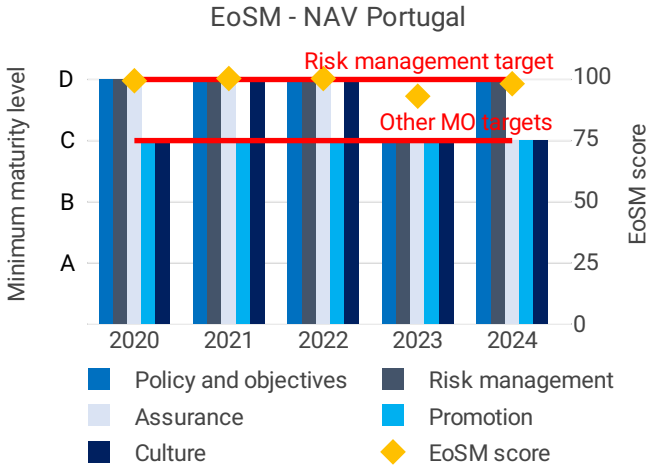


- Portugal-Lisboa recorded 723K actual IFR movements in 2024, +6.8% compared to 2023 (677K).
- Actual 2024 IFR movements were +14.4% above the plan (632K).
- Actual 2024 IFR movements are +11.1% above the actual 2019 level (651K).



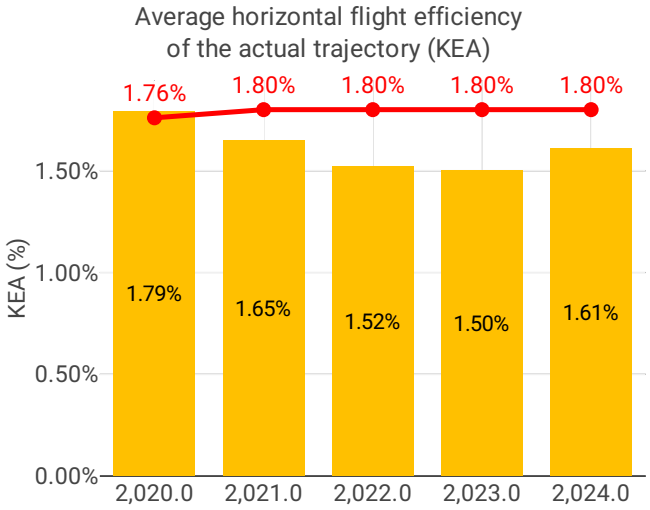
- Portugal-Lisboa recorded 4,510K actual service units in 2024, +9.4% compared to 2023 (4,123K).
- Actual 2024 service units were +16.1% above the plan (3,884K).
- Actual 2024 service units are +11.1% above the actual 2019 level (4,060K).

1.3 Safety (Main ANSP)



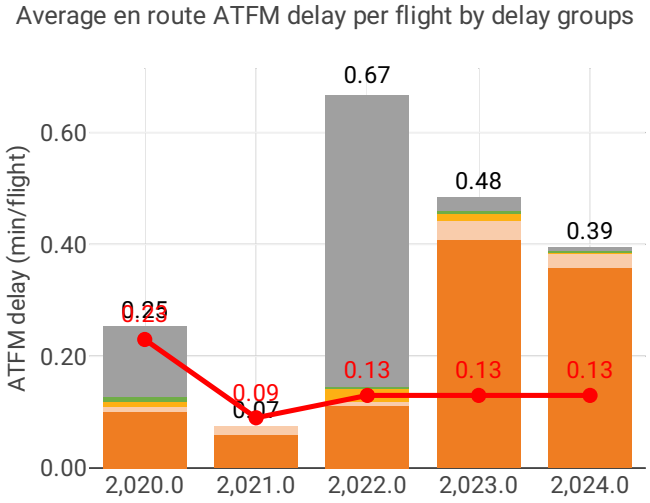
- NAV Portugal achieved the RP3 EoSM targets for all five Management Objectives in 2020. However, in 2023, the ANSP experienced a decline in performance, failing to maintain the required level for Safety Risk Management. In response, NAV Portugal implemented targeted measures in 2024, particularly in the area of occurrence analysis and monitoring, which enabled the organisation to recover and achieve the required RP3 EoSM target level D in this management objective.
- Portugal recorded stable performance with respect to safety occurrences, with lower rates of separation infringement and runway incursion. The NSA approved the State safety plan related to monitoring of occurrences and implementation and efficiency of specific measures.

1.4 Environment (Member State)



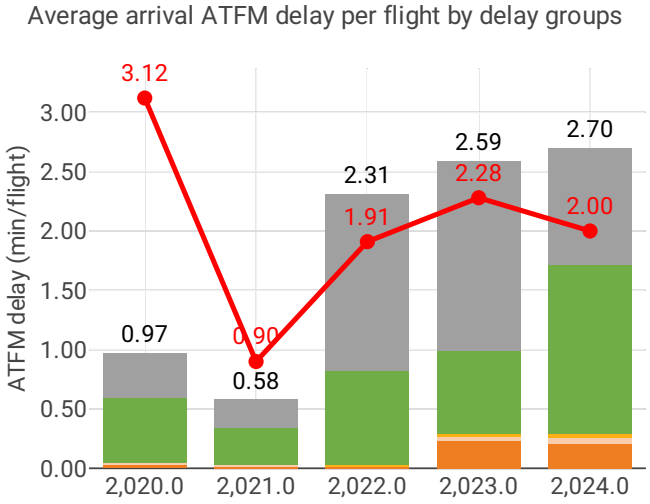
- Portugal achieved a KEA performance of 1.61% compared to its target of 1.80% and contributed positively towards achieving the Union-wide target.
- Both KEP and SCR deteriorated compared to 2023 levels and had similar values, meaning airlines planned the most efficient routes available.
- The share of CDO flights decreased from 53.10% to 46.22% in 2024.
- Additional taxi out time increased from 2.70 to 3.06 min/flight, while additional time in terminal airspace increased from 1.51 to 2.17 min/flight in 2024 compared to 2023.

1.5 Capacity (Member State)



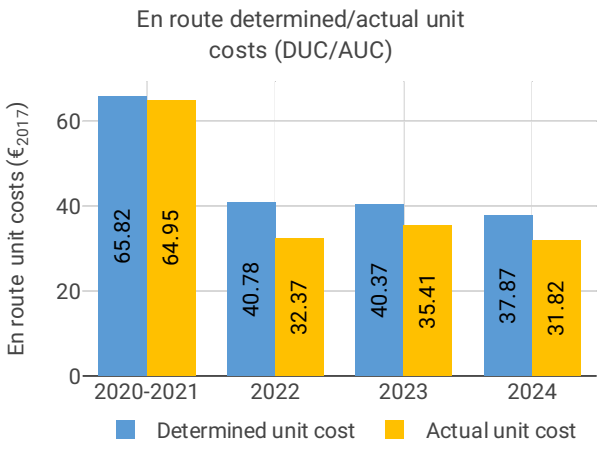
- Portugal registered 0.39 minutes of average en route ATFM delay per flight during 2024, which remained 0.39 after the post-ops adjustment process, thus not achieving the local target value of 0.13. Delays in Portugal decreased by 0.09 minutes per flight year-on-year.
- Most of the delays were generated in March and between October and December, mainly driven by the lack of ATC Capacity.
- The share of delayed flights with delays longer than 15 minutes in Portugal decreased by 2 percentage points compared to 2023 and was lower than 2019 values.

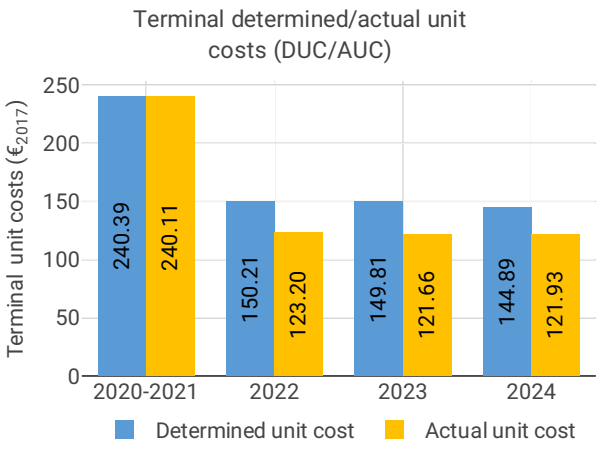
- The average number of IFR movements was 11% above 2019 levels in Portugal in 2024.
- The number of ATCOs in OPS is 160, being below the 2024 plan in Lisbon by 22 FTEs.
- The yearly total of sector opening hours in Lisbon ACC was 69,059, showing a 1.3% increase compared to 2023. Sector opening hours are in line with 2019 levels.
- Lisbon ACC registered 9.69 IFR movements per one sector opening hour in 2024, being 10.5% above 2019 levels.
- Despite investments into the new ATM system, a capacity gap in Portugal remains. Portugal should continue to expedite the training and recruitment of controllers and improve the allocation of ATCO resources to ensure that the capacity gap is closed. Actual 2025 figures up to August indicate a performance improvement.



- Portugal registered an average airport arrival ATFM delay of 2.70 minutes per flight in 2024, thus not achieving the local target of 2.00 minutes.
- Compared to 2023, average arrival ATFM delays in Portugal were 4% higher in 2024, while the number of IFR arrivals increased by 2%.
- The main drivers of delays were weather, accounting for 53% of delays, and other, non-ATC related causes, responsible for 36%.

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





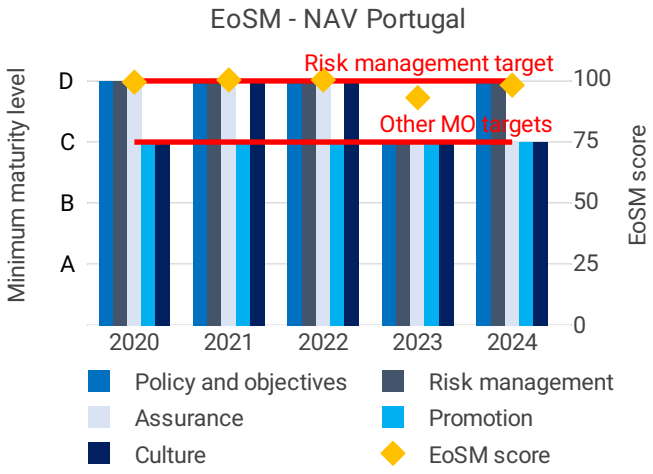
- The en route 2024 actual unit cost of Portugal was 31.82€2017, -16% lower than the determined unit cost (37.87€2017). The terminal 2024 actual unit cost was 121.93€2017, -16% lower than the determined unit cost (144.89€2017).
- The en route 2024 actual service units of Portugal (4.5M) were +16% higher than the determined service units (3.9M).
- The en route 2024 actual total costs were -3.6M€2017, (-2.5%) lower than determined, with all cost categories registering lower-than-planned costs. This difference is mainly driven by lower staff costs (-1.8M€2017, or -1.9%) for NAV Portugal. However, in nominal terms, staff costs were +10.4% higher than planned, mainly due to overtime resulting from higher traffic.
- NAV Portugal costs of investments were 18M€2017 in 2024 for both en route and terminal charging zones, -3.9% lower than determined (19M€2017). The difference is mainly resulting from lower cost of capital, due to lower net book value of fixed assets.
- The en route actual unit cost incurred by users in 2024 was 37.71€ (-5.2% lower than the 2024 DUC), while the terminal actual unit cost incurred by users in 2024 was 147.40€ (-3.6% lower than the 2024 DUC). Both these changes were mostly led by the effect of higher traffic than expected.

2 SAFETY - PORTUGAL

2.1 PRB monitoring

- NAV Portugal achieved the RP3 EoSM targets for all five Management Objectives in 2020. However, in 2023, the ANSP experienced a decline in performance, failing to maintain the required level for Safety Risk Management. In response, NAV Portugal implemented targeted measures in 2024, particularly in the area of occurrence analysis and monitoring, which enabled the organisation to recover and achieve the required RP3 EoSM target level D in this management objective.
- Portugal recorded stable performance with respect to safety occurrences, with lower rates of separation infringement and runway incursion. The NSA approved the State safety plan related to monitoring of occurrences and implementation and efficiency of specific measures.

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



Focus on EoSM

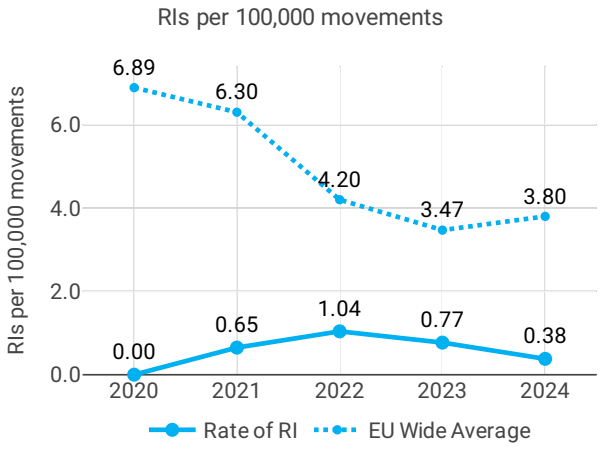
All five EoSM components of the ANSP meet or exceed the RP3 target level. Over 2024, significant improvements were observed for “Safety Policy and Objectives” and “Safety Risk Management” allowing achievements of the maximum level D.

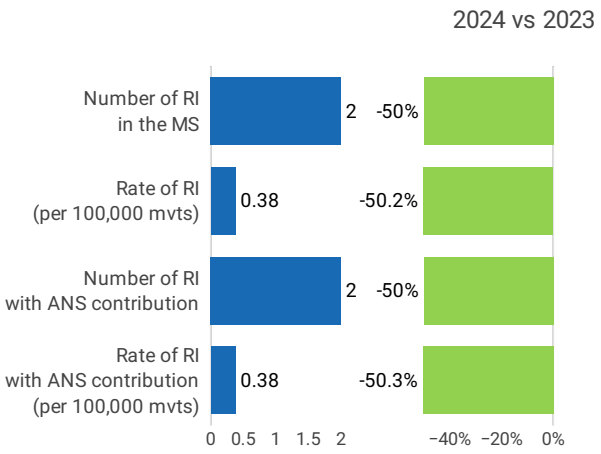
NAV Portugal started RP3 achieving the RP3 EoSM targets for all five Management Objectives in 2020, reaching maturity level D on three of five Management Objective. In 2021, NAV Portugal further improved Safety Culture to reach maturity level D. However, in 2023, the ANSP experienced a decline in performance failing to maintain already achieved maturity levels. While still on target for four out of five Management Objectives, Safety Risk Management was defined at maturity level C. In response, NAV Portugal implemented targeted measures in 2024, particularly in the area of occurrence analysis and monitoring, which enabled the organisation to achieve the RP3 EoSM targets.

The NSA performed a focused audit to validate the ANSP version of the EoSM to assess the actual achievement of the reported levels.

2.3 Safety occurrences

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





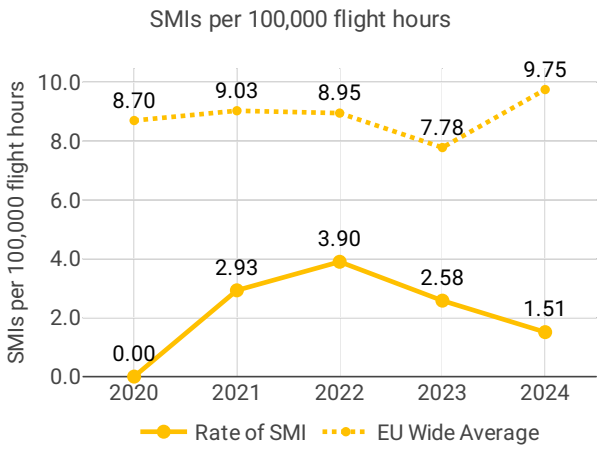
Rate of RIs per 100,000 airport movements - Portugal				
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Lisbon	229,811	0	0.00
2	Porto	107,071	1	0.93
3	Faro	67,093	0	0.00
4	Cascais	42,119	0	0.00
5	Madeira	33,385	0	0.00
6	Ponta Delgada	27,531	1	3.63
7	Horta	5,860	0	0.00
8	Porto Santo	3,673	0	0.00
9	Santa Maria	3,135	0	0.00
10	Flores	2,287	0	0.00
11	Montijo	0	0	NA

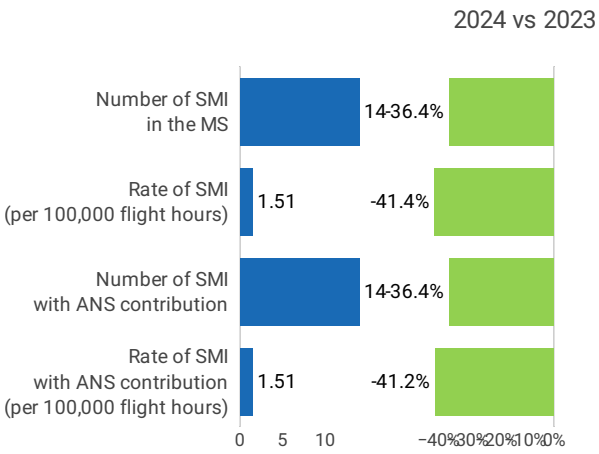
Focus on runway incursions

Throughput RP3, Portugal recorded a low rate of RIs at the Member State level, well below the Union-wide average. The rate also remained stable between 2023 and 2024. The number RI occurrences with ANS contribution decreased despite an increased number of movements, with the rate of RIs with ANS contribution being reduced by 50%.• Throughput RP3, Portugal recorded a low rate of RIs at the Member State level, well below the Union-wide average. The rate also remained stable between 2023 and 2024. The number RI occurrences with ANS contribution decreased despite an increased number of movements, with the rate of RIs with ANS contribution being reduced by 50%.

NAV Portugal performed an increased number of observational safety surveys directed to the application of runway incursion preventative measures, namely the adherence to the Global Action Plan for the Prevention of Runway Incursions (GAPPRI) recommendations.

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





Rate of SMI with ANS contribution per 100,000 flight hours											
		Flight hours					Number of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	NAV Portugal	175,009	215,958	406,816	854,121	924,446	10	13	30	22	14

		Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	NAV Portugal	6	6	7	3	2		+5%	+23%	-65%	-41%

Focus on separation minima

After an initial increase in the number of occurrences, the rate of SMIs at the Member State level recorded from 2022 a steady downwards trend. The trend continued in 2024 with a 36% reduction in the number of SMI occurrences compared with 2023 and a corresponding decrease of the rate of SMIs. The rate of SMIs at the Member State level remains below the Union-wide average.

The rate of SMIs with ANS contributions peaked in 2022 after a significant increase in flight hours and the number of SMI occurrences, but since then showed a downward trend, which continued into 2024 despite an increase in flight hours.

The NSA specifies that the ATM system allows improvements in the situational awareness of ATCOS, by means of several safety mechanisms included within the system (e.g. STCA, APW, AIW, MTCD). Moreover, the recent implementation of the point merge system and the restructuring of Lisbon's terminal area airspace also contributed to improve the situation awareness and positively affected the rate of SMIs.

2.3.3 Quality of occurences reporting

The number of occurrences reported at Member State level seems consistent with the occurrences reported at the ANSP level for SMIs and RIs. In 2020, there were not reported any SMIs at the Member State level, while SMIs with ANS contributions were reported. These numbers should be consistent.

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

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

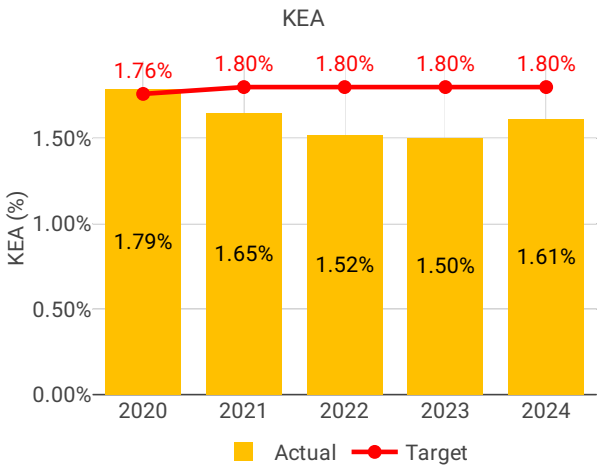
3 ENVIRONMENT - PORTUGAL

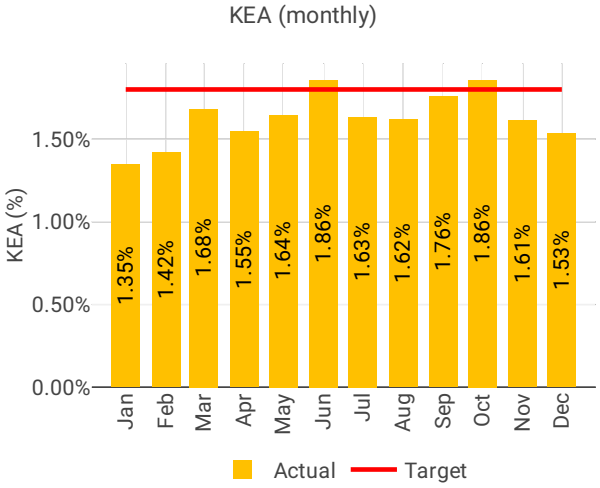
3.1 PRB monitoring

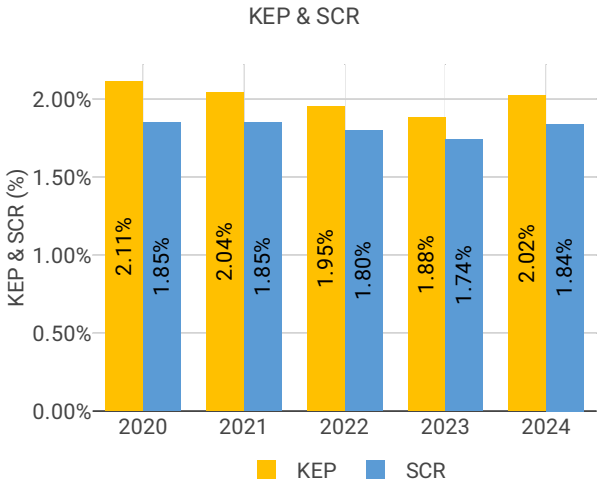
- Portugal achieved a KEA performance of 1.61% compared to its target of 1.80% and contributed positively towards achieving the Union-wide target.
- Both KEP and SCR deteriorated compared to 2023 levels and had similar values, meaning airlines planned the most efficient routes available.
- The share of CDO flights decreased from 53.10% to 46.22% in 2024.
- Additional taxi out time increased from 2.70 to 3.06 min/flight, while additional time in terminal airspace increased from 1.51 to 2.17 min/flight in 2024 compared to 2023.

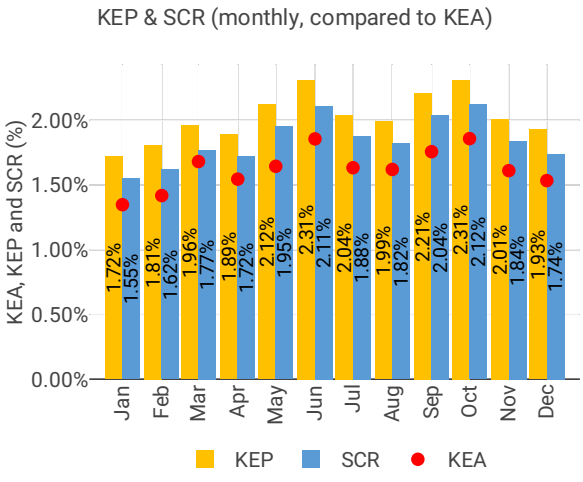
3.2 En route performance

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



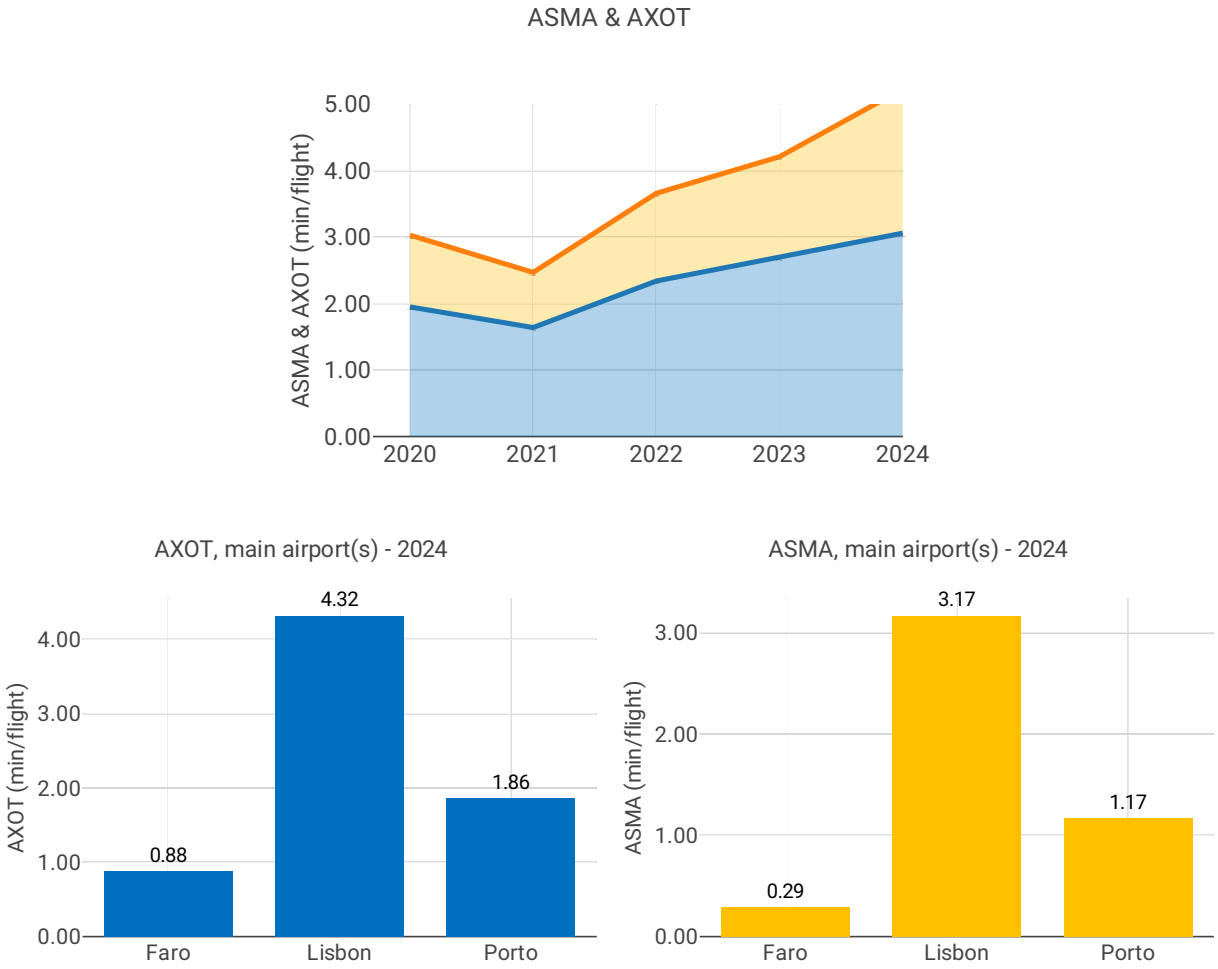






3.3 Terminal performance

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



Focus on ASMA & AXOT

AXOT

Additional taxi-out times at Lisbon (LPPT; 2019: 3.96 min/dep.; 2020: 2.68 min/dep.; 2021: 1.93 min/dep.; 2022: 3.18 min/dep.; 2023: 3.82 min/dep.; 2024: 4.32 min/dep.) increased again in 2024 resulting in the second highest additional taxi-out times in the SES area and well above the SES average of 2.91 min/dep.

According to the Portuguese monitoring report: *Regular performance and capacity reports by the ANSP are presented to the NSA in which the ENV KPI is specifically addressed.*

Furthermore, the Portuguese NSA promotes meetings with all stakeholders of the sector, before the start of the summer, and along the summer, in order to try smooth the operations in the main Portuguese airports.

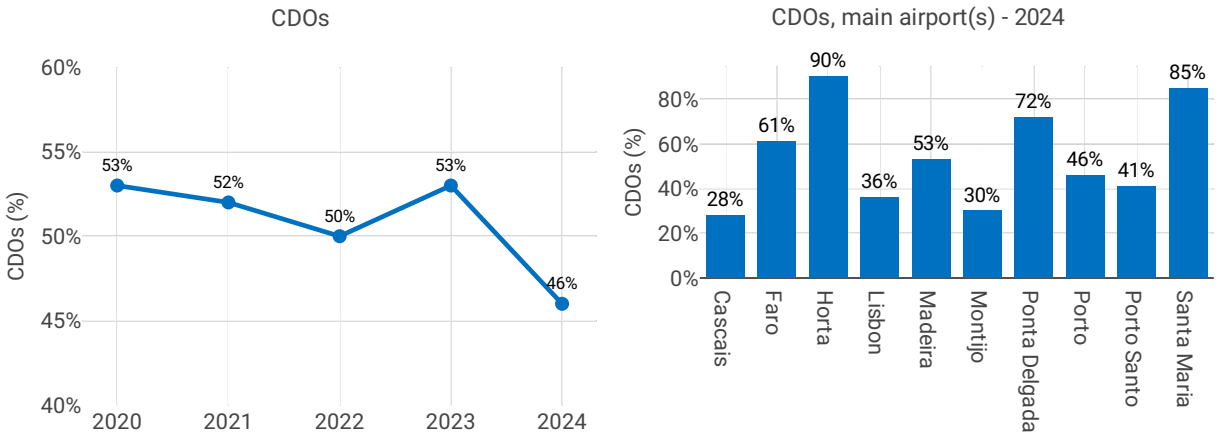
ASMA

Additional times in the terminal airspace at Lisbon (LPPT; 2019: 2.75 min/arr.; 2020: 1.51 min/arr.; 2021: 1.15 min/arr.; 2022: 1.84 min/arr.; 2023: 2,12 min/arr.; 2024: 3.17 min/arr.) experimented a drastic increase in 2024, resulting in the highest value observed amongst the SES monitored airports, well above the SES average of 1.28 min/arr and the pre-COVID value for Lisbon. This increase has been particularly noted since the implementation of Point Merge in the Lisbon approach in May 2024, which coincided with reduced arrival ATFM delays.

A decrease in the duration of ATFM regulations for arrivals, coupled with higher acceptance rates within these regulations, contributed to an increased arrival flow. This, in turn, was managed within the ASMA area, leading to longer additional ASMA times.

According to the Portuguese monitoring report: *Regular performance and capacity reports by the ANSP are presented to the NSA in which the ENV KPI is specifically addressed. Furthermore, the Portuguese NSA promotes meetings with all stakeholders of the sector, before the start of the summer, and along the summer, in order to try smooth the operations in the main Portuguese airports.*

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



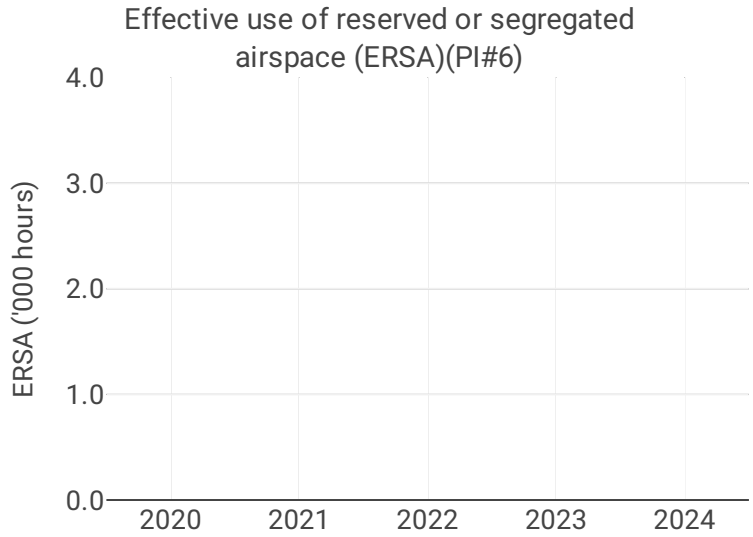
Focus CDOs

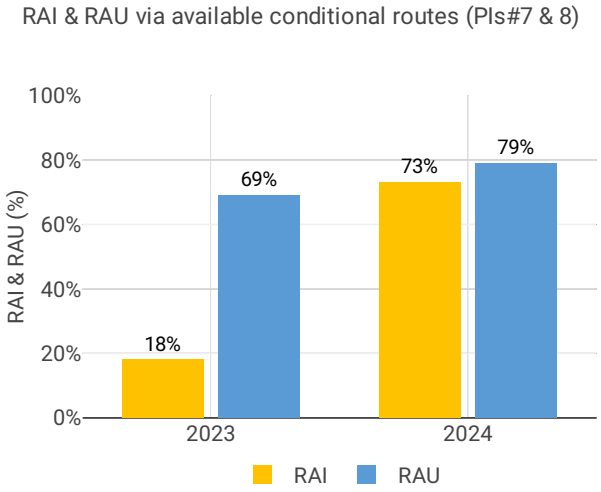
All airports except Cascais and Flores have shares of CDO flights (well) above the overall RP3 value in 2024 (29.3%), ranging from 0.0% (Flores - LPFL) to 90.3% (Horta - LPHR). It should however be noted that Horta had only 206 arriving flights and Flores only 1 arriving flight in 2024. An important decrease is observed at Lisbon which can be linked to the implementation of Point Merge.

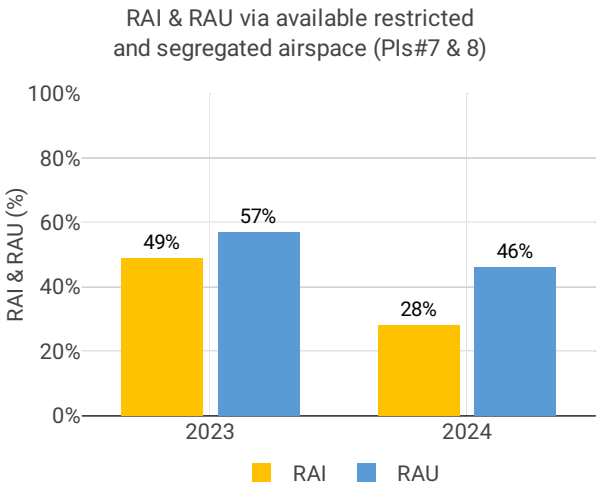
According to the Portuguese monitoring report: *Regular performance and capacity reports by the ANSP are presented to the NSA in which the ENV KPI is specifically addressed.*

Airport level															
	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
Airport	**2020**	**2021**	**2022**	**2023**	**2024**	**2020**	**2021**	**2022**	**2023**	**2024**	**2020**	**2021**	**2022**	**2023**	**2024**
Faro	0.27	0.65	0.65	0.83	0.88	0.33	0.19	0.21	0.30	0.29	62%	58%	57%	61%	61%
Lisbon	2.68	1.93	3.18	3.82	4.32	1.51	1.15	1.84	2.12	3.17	55%	51%	49%	52%	36%
Porto	1.45	1.67	1.61	1.60	1.86	0.61	0.57	0.89	0.93	1.17	46%	43%	41%	45%	46%
Cascais	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	42%	34%	27%	28%	28%
Madeira	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46%	48%	52%	55%	53%
Montijo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30%	32%	23%	17%	30%
Porto Santo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	68%	65%	52%	48%	41%
Santa Maria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		75%	77%	82%	85%
Flores	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		100%	100%		
Horta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		99%	98%	96%	90%
Ponta Delgada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		67%	67%	70%	72%

3.4 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

Airspace design is established in accordance with the FUA principles for strategic, pre-tactical and tactical levels. The military training missions are conducted primarily within the restricted airspace associated with military aerodromes or, when necessary, at the temporary segregated airspace established at strategic level. This type of airspace usage results in direct and short transit routes to and from the established training areas. The average transit route extension between the military aerodromes and the training areas in Portugal is around 20NM. Additionally, the average duration of the training missions, (not including the transit times) is one (1) hour, except during major exercises.A close and active daily coordination between the military and the civil ANSP is, since long, the trademark of the Portuguese ASM. Also, the FUA coordination is supported by the Local and regional Airspace Management Tool (LARA), which enables the required level of civil military interoperability for the ASM process. As a general assessment, the environmental impact of the military during the RP3 period is expected to be low, since the military training activity was reduced due to the pandemic, and the current airspace structure promotes the optimization of transit times between air bases and training areas, thus reducing the associated carbon footprint.

Military - related measures implemented or planned to improve capacity

n/a

Initiatives implemented or planned to improve PI#6

Implementation of the A_FUA functionallity as per regulation 2021/116 will improve the use of airspace by both the civil and the military. Also with the implementation of the LARA tool more accurate statistic reports will be available to evaluate the FUA performance.

Initiatives implemented or planned to improve PI#7

LARA interface is already in place, however, associated statistic tools are still in the final stages of implementation. Furthermore, LARA full implementation is also pending on the signature of the formal agreement between the national AMC and the NM.

Initiatives implemented or planned to improve PI#8

LARA interface is already in place, however, associated statistic tools are still in the final stages of implementation. Furthermore, LARA full implementation is also pending on the signature of the formal agreement between the national AMC and the NM.

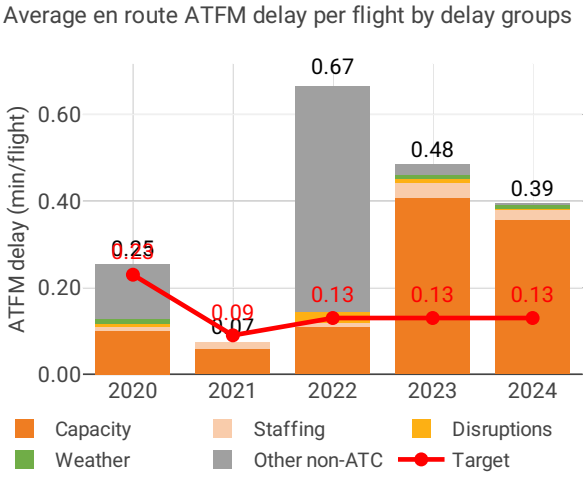
4 CAPACITY - PORTUGAL

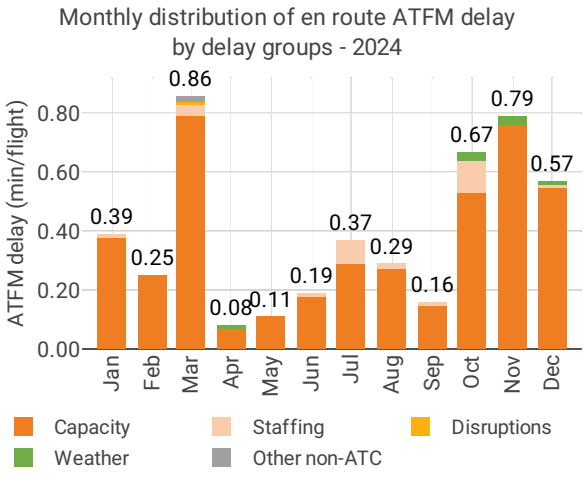
4.1 PRB monitoring

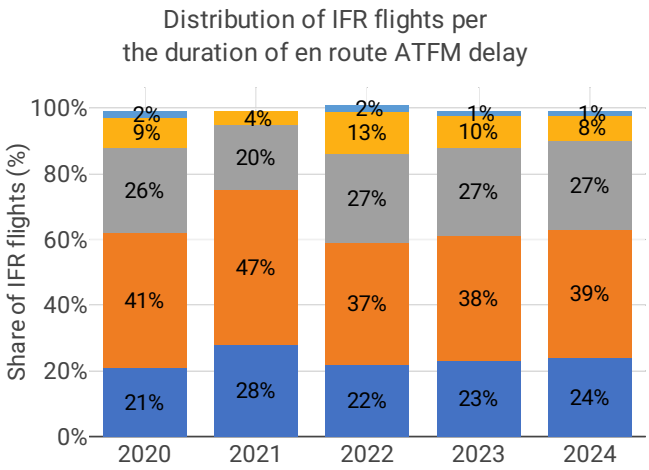
- Portugal registered 0.39 minutes of average en route ATFM delay per flight during 2024, which remained 0.39 after the post-ops adjustment process, thus not achieving the local target value of 0.13. Delays in Portugal decreased by 0.09 minutes per flight year-on-year.
- Most of the delays were generated in March and between October and December, mainly driven by the lack of ATC Capacity.
- The share of delayed flights with delays longer than 15 minutes in Portugal decreased by 2 percentage points compared to 2023 and was lower than 2019 values.
- The average number of IFR movements was 11% above 2019 levels in Portugal in 2024.
- The number of ATCOs in OPS is 160, being below the 2024 plan in Lisbon by 22 FTEs.
- The yearly total of sector opening hours in Lisbon ACC was 69,059, showing a 1.3% increase compared to 2023. Sector opening hours are in line with 2019 levels.
- Lisbon ACC registered 9.69 IFR movements per one sector opening hour in 2024, being 10.5% above 2019 levels.
- Despite investments into the new ATM system, a capacity gap in Portugal remains. Portugal should continue to expedite the training and recruitment of controllers and improve the allocation of ATCO resources to ensure that the capacity gap is closed. Actual 2025 figures up to August indicate a performance improvement.
- Portugal registered an average airport arrival ATFM delay of 2.70 minutes per flight in 2024, thus not achieving the local target of 2.00 minutes.
- Compared to 2023, average arrival ATFM delays in Portugal were 4% higher in 2024, while the number of IFR arrivals increased by 2%.
- The main drivers of delays were weather, accounting for 53% of delays, and other, non-ATC related causes, responsible for 36%.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Portugal experienced an increase in traffic from 677k flights in 2023 with 327k minutes of en route ATFM delay, to 723k flights in 2024 with a reduced level of 282k minutes of en route ATFM delay.

There were an addition <1k minutes of en route ATFM delay, originating in Portugal, that were re-attributed to the DSNA in France, in accordance with the NM post operations delay reattribution process, endorsed by the NMB, due to eNM/S24 measures to mitigate the capacity shortfalls in France.

NSA's assessment of capacity performance

After a very healthy recovery in traffic in 2022 and 2023, in 2024 traffic levels continued to grow. Specifically, in Lisbon FIR, traffic increased 7%, when compared to 2023, and is 11% above 2019 levels.

Continued growth in traffic in 2024 took a toll regarding capacity targets, as elementary sectors reached maximum capacity. Accordingly, in 2024 an airspace restructuring started to

be studied, and is expected to be in place by the end of 2025. This structural measure combined with the continued efforts to train and recruit ATCOs are expected to have a positive impact in the available capacity, and compliance with performance targets.

Monitoring process for capacity performance

NAV Portugal and ANAC have a capacity monitoring process in place that consists of quarterly reports and follow-up meetings to monitor and present corrective measures whenever necessary.

Capacity planning

In 2024, the primary cause of enroute delays was ATC Capacity, accounting for a total of 257,469 minutes, representing 91% of the overall delay on elementary sectors. To address the limitation of opening more enroute sectors in the Lisbon ACC, three measures are being implemented.

- In the short term, dynamic sectorization of the West Sector provides more options in terms of sectorization.
- Medium-term plans include opening two middle sectors in the WEST and CENTRO sectors to increase capacity during peak periods.
- Long-term solutions involve a complete restructuring of the Lisbon Airspace with Eurocontrol's support, which is already underway.

NAV Portugal remains committed to recruiting 24 new Air Traffic Controllers (ATCOs) annually. These new ATCOs are allocated to the ACC with 5 ATCOs for Approach Control Service (APS) and 8 ATCOs for ACS qualification each year.

Finally, it is important to note that NAV Portugal has offered to the network an 8.0% increase in capacity (131 movements per hour) in 2024 compared to the initial reference value indicated by NM (126 movements per hour). This reflects a 15% increase in capacity compared to 2023.

Application of Corrective Measures for Capacity (if applicable)

The NSA corroborates the analysis presented by NAV Portugal, included in the "capacity planning" item above, and, moreover, we consider that it is also worth mentioning the sharp increase in traffic in 2024, and the fact that it was considerably above expectations for the year.

In view of the above, and with regard to the mitigation measures being implemented, NAV Portugal is working on three different axes so that this situation can be reversed or at least mitigated from 2025 onwards:

- Recruitment and training of ATCOs;
- Airspace Optimisation;
- Increasing Sector Capacity.

With regard to the first point, and as already mentioned, NAV Portugal aims to reduce the current number of ATCOs gap. Therefore, efforts continue in the area of ATCO training, both in initial training (ab initio) and in operational training in ATC units, with a view to sustainably reducing the gap in the number of ATCOs. Specifically, NAV Portugal's training center

continues to train 24 new trainees every year for initial training, the maximum annual capacity. Specifically, at the Lisbon ACC, 7 OJT ACS and 5 OJT APS operational trainings took place, with another 6 ACS and 5 APS operational trainings having been completed in 2024, meaning a total of 23 new ATCOs at the Lisbon ACC by 2024. On the other hand, the extension of the operational age limit from 58 to 60, is also a measure that will promote an increase in the availability of human resources (ATCO).

With regard to the second point, there are two lines of work being pursued:

- One which involves to vertically divide the West and Centro sectors and making them more flexible, which consists of creating new volumes of airspace with increased efficiency. This issue is already being addressed by NAV Portugal together with the NM. Once validated, these new airspaces volumes will make it possible to choose a more efficient and less penalising sectorisation.

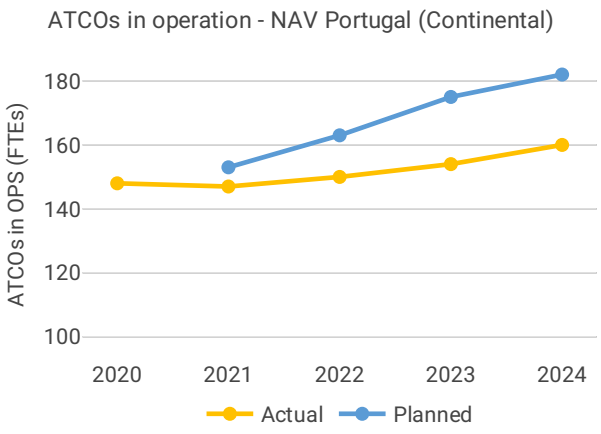
- NAV Portugal is developing an airspace restructuring study with the aim of increasing total airspace capacity in the Lisbon FIR and thus mitigating some of the situations described above regarding the West sector and other sectors. This study is being liaised with the Network Manager with a view to being analyzed, simulated and validated.

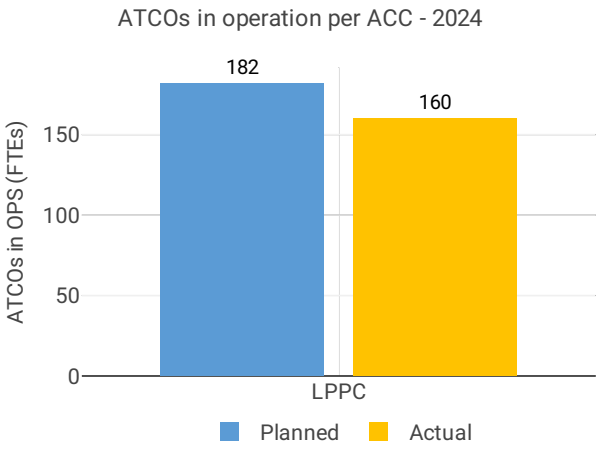
En route Capacity Incentive Scheme

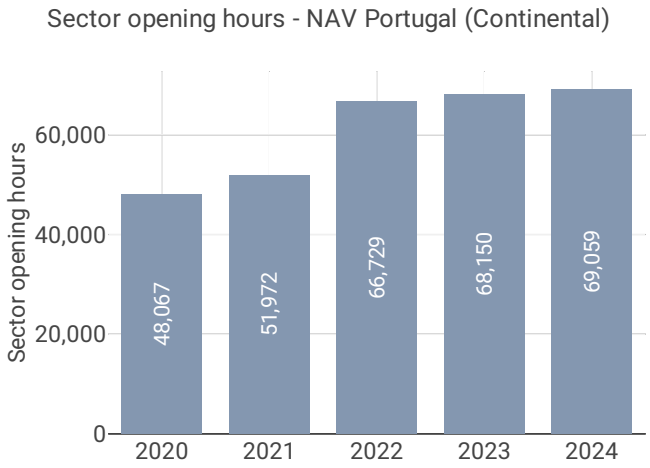
NAV Portugal (Continental): Portugal uses an incentive scheme based only on delays attributed to C,R,S,T,M & P delay codes. The CRSTMP target was set at 0.12 minutes per flight and the actual performance is reported as 0.39 minutes per flight (CRSTMP only). This results in a reported penalty of €669 201

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





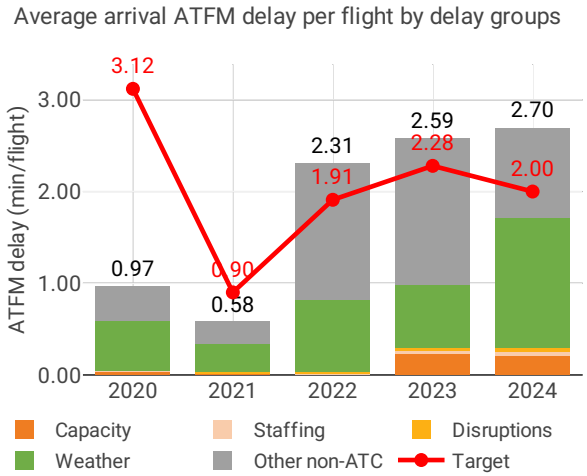


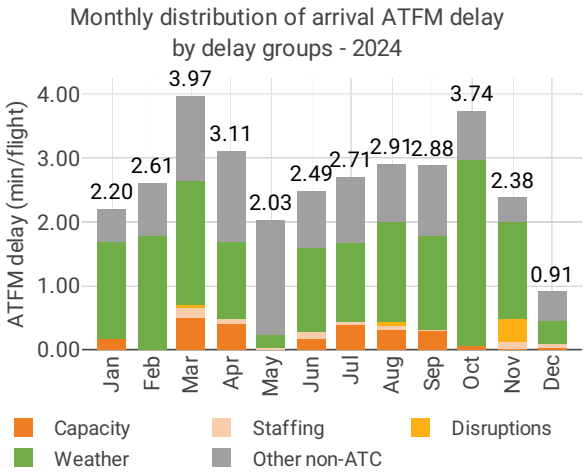
Focus on ATCOs in operations

It should be borne in mind that 10 new ATCOs entered service in Q1 2025 in the ACC (6 ACS e 4 APS), making a total of 26 new ATCOs. This planning gap is mainly the result of qualification times (on average 8 to 9 months), but due to various circumstances the respective qualifications may take place in the first few weeks of the year after.

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)





Focus on arrival ATFM delay

The scope of RP3 monitoring for Portugal comprises 10 airports in 2020, However, in accordance with IR (EU) 2019/317 and the traffic figures, only two of these airports (Lisbon (LPPT) and Porto (LPPR)) must be monitored for pre-departure delays. The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is correctly established where required and the monitoring of all capacity indicators can be performed. Traffic at these 10 airports in 2024, after an increase of 2% versus 2023, was 9% higher than in 2019.

Average arrival ATFM delay in 2024 was 2.70 min/arr, compared to 2.59 min/arr in 2023. The national target was not met. Average ATFM slot adherence for the Portuguese airports was 97.1% in 2024.

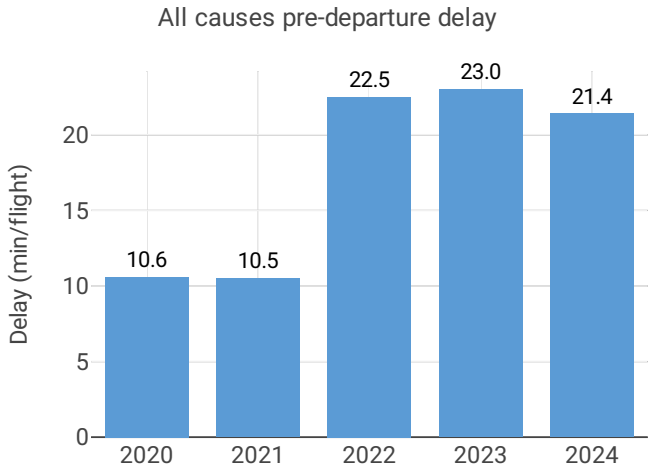
The national average arrival ATFM delay at Portuguese airports in 2024 was 2.70 min/arr, again higher than the previous year. The deterioration this time is driven by the increase of delays at Porto (LPPR: 2023: 0.88 min/arr; 2024: 3.02 min/arr) resulting in the 4th highest arrival ATFM delays in the SES area.

Lisbon, regardless of a reduction of the delays in 2024 compared to 2023 (LPPT; 2019: 4.13 min/arr; 2020: 1.72 min/arr; 2021: 0.28 min/arr; 2023: 4.88 min/arr; 2024: 4.2 min/arr) showed the highest arrival ATFM delay across the SES monitored airports. 53% of the arrival Portuguese delays were attributed to Weather, followed by 30% due to Aerodrome Capacity issues.

According to the Portuguese monitoring report: *Significant increases in weather-related delays at Porto Airport (LPPR) led to a substantial rise in overall delays from 2023 to 2024. Weather-related delays surged by 6.5 times, from 18,091 minutes in 2023 to 116,801 minutes in 2024. Had these delays remained at 2023 levels, the average delay per flight at LPPR in 2024 would have been 1.18 minutes, well below the PP target of 1.70 minutes. NSA Recommendations: Cooperate with the Airport operator (APO), in order to look for solutions that could contribute to reduce the current level of delays.*

Portugal's performance plan sets a national target on arrival ATFM delay for 2024 of 2 min/arr. This target, with an actual performance of 2.70 min/arr, was not met. The incentive scheme uses modulated pivot values limited to CRSTMP delay causes. According to the Portuguese monitoring report, this pivot value for CRSTMP is 0.34 min/arr in 2024 and based on the attribution of the regulation reason, the actual CRSTMP value for 2023 was 0.476 min/arr. The NSA calculates a penalty of € 126 572.

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



Airport level										
	Avg arrival ATFM delay (KPI#2)					Slot adherence (PI#1)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Cascais	NA	NA	0.36	3.48	0.92	82.6%	88.9%	94.6%	97.5%	97.9%
Faro	0.00	0.00	0.01	0.00	0.06	95.8%	94.3%	95.3%	96.1%	96.6%
Horta	NA	NA	NA	NA	NA	93.8%	90.9%	96.1%	97.3%	97.2%
Lisbon	1.72	0.28	3.96	4.88	4.20	96.5%	98.8%	98.7%	98.8%	98.1%
Madeira	NA	0.03	0.11	0.10	0.14	93.2%	93.7%	92.9%	97.4%	97.8%
Montijo	NA	NA	NA	NA	NA	0.0%	50.0%	37.5%	61.1%	16.7%
Ponta Delgada	NA	NA	NA	0.00	NA	98.2%	97.6%	97.1%	95.0%	92.2%
Porto	0.77	2.14	1.89	0.88	3.02	93.4%	93.5%	94.1%	95.6%	96.2%
Porto Santo	NA	NA	NA	NA	NA	92.9%	97.4%	90.5%	96.7%	97.8%
Santa Maria	NA	NA	NA	NA	NA	100.0%	100.0%	92.0%	86.7%	91.4%

	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Cascais	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Faro	0.09	0.58	0.57	0.50	0.44	8.2	8.5	19.6	19.4	16.5
Horta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lisbon	2.14	1.22	3.22	5.66	4.59	12.0	11.0	25.2	26.4	23.4
Madeira	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Montijo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ponta Delgada	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Porto	0.26	0.25	0.44	0.44	0.69	9.2	10.7	18.4	17.8	20.1
Porto Santo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Santa Maria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

All Portuguese airports showed adherence around or above 90%. The national average was 97.1%. With regard to the 2.8% of flights that did not adhere, 2.2% was early and 0.7% was late.

ATC pre-departure delay

All Portuguese airports showed adherence around or above 90%. The national average was 97.1%. With regard to the 2.9% of flights that did not adhere, 2.2% was early and 0.7% was late.

The performance at Lisbon improved in 2024 although still exceeded the delays of 2019 (LPPT; 2019: 4.16 min/dep.; 2020: 2.13 min/dep.; 2021: 1.22 min/dep.; 2022: 3.22 min/dep.; 2023: 5.66 min/dep.; 2024: 4.59 min/dep.) Like in previous years this delay is the highest in the SES area.

All causes pre-departure delay

The total (all causes) delay in the actual off block time in 2024 decreased at Lisbon (LPPT: 2020: 12.02 min/dep.; 2021: 11.03 min/dep.; 2022: 25.21 min/dep.; 2023: 26.37 min/dep.; 2024: 23.35 min/dep.) and increased at Porto (LPPR: 2020: 9.15 min/dep.; 2021: 10.70 min/dep.; 2022: 18,40 min/dep.; 2023: 17.77 min/dep.; 2024: 20.13 min/dep.). Regardless

the decrease, these average delays at Lisbon are the 3rd highest amongst the SES monitored airports.

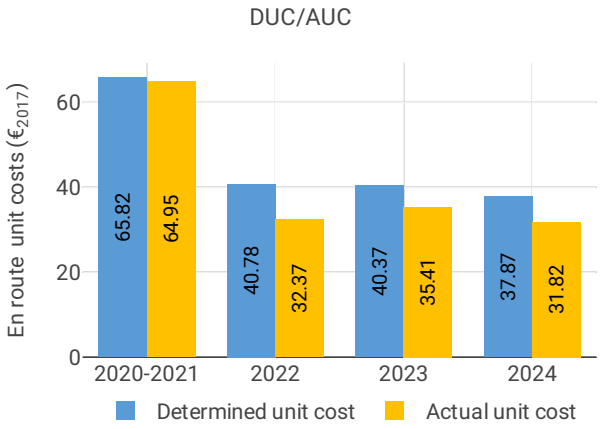
5 COST-EFFICIENCY - PORTUGAL

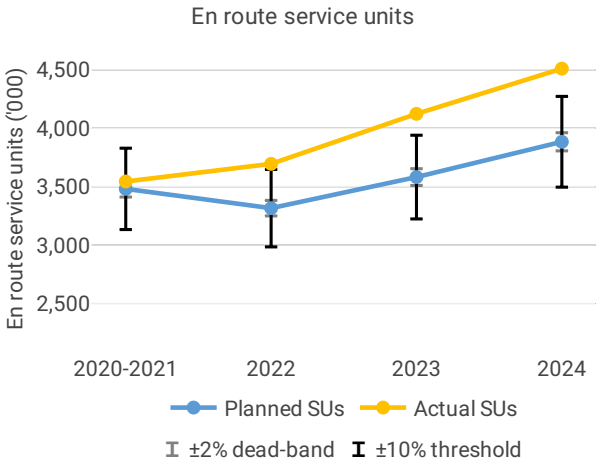
5.1 PRB monitoring

- The en route 2024 actual unit cost of Portugal was 31.82€2017, -16% lower than the determined unit cost (37.87€2017). The terminal 2024 actual unit cost was 121.93€2017, -16% lower than the determined unit cost (144.89€2017).
- The en route 2024 actual service units of Portugal (4.5M) were +16% higher than the determined service units (3.9M).
- The en route 2024 actual total costs were -3.6M€2017, (-2.5%) lower than determined, with all cost categories registering lower-than-planned costs. This difference is mainly driven by lower staff costs (-1.8M€2017, or -1.9%) for NAV Portugal. However, in nominal terms, staff costs were +10.4% higher than planned, mainly due to overtime resulting from higher traffic.
- NAV Portugal costs of investments were 18M€2017 in 2024 for both en route and terminal charging zones, -3.9% lower than determined (19M€2017). The difference is mainly resulting from lower cost of capital, due to lower net book value of fixed assets.
- The en route actual unit cost incurred by users in 2024 was 37.71€ (-5.2% lower than the 2024 DUC), while the terminal actual unit cost incurred by users in 2024 was 147.40€ (-3.6% lower than the 2024 DUC). Both these changes were mostly led by the effect of higher traffic than expected.

5.2 En route charging zone

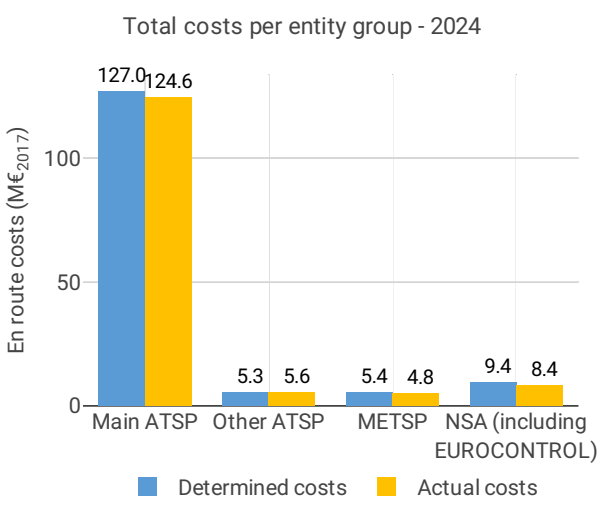
5.2.1 Unit cost (KPI#1)

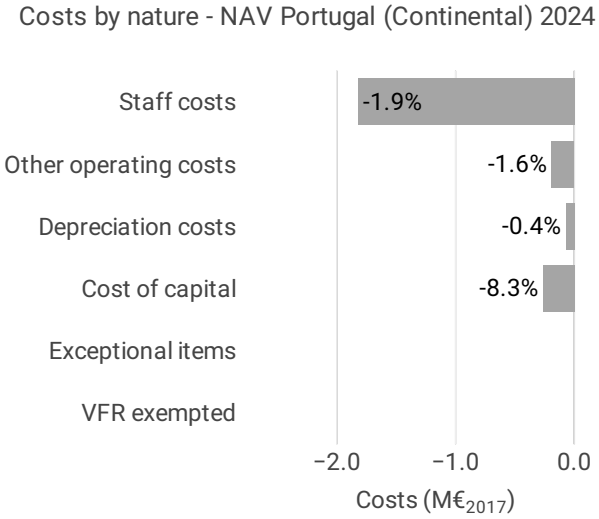




Actual and determined data				
Total costs - nominal (M€)	**2020-2021**	**2022**	**2023**	**2024**
Actual costs	234	130	165	166
Determined costs	233	139	150	155
Difference costs	1	-9	15	12

Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	1.2%	1.3%	1.4%
Determined inflation index	NA	103.6	104.9	106.4
Actual inflation rate	NA	8.1%	5.3%	2.7%
Actual inflation index	NA	110.7	116.6	119.7
Difference inflation index (p.p.)	NA	+7.1	+11.7	+13.4





Focus on unit cost

AUC vs. DUC

In 2024, the en route AUC was -16.0% (or -6.05 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TSUs (+16.1%) and lower than planned en route costs in real terms (-2.5%, or -3.6 M€2017). It should be noted that the actual inflation index in 2024 was +13.4 p.p. higher than planned.

En route service units

The difference between actual and planned TSUs (+16.1%) falls outside the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ANSP and the airspace users (see the main ANSP gain in Box 11).

En route costs by entity

Actual real en route costs are -2.5% (-3.6 M€2017) lower than planned. This is the result of lower costs for the main ANSP, NAV Portugal (-1.8%, or -2.3 M€2017), the NSA/EUROCONTROL (-10.3%, or -1.0 M€2017) and the METSP (-10.5%, or -0.6 M€2017) and higher costs for the other ANSP (Portugal Continental SAR, +5.2%, or +0.3 M€2017).

En route costs for the main ANSP at charging zone level

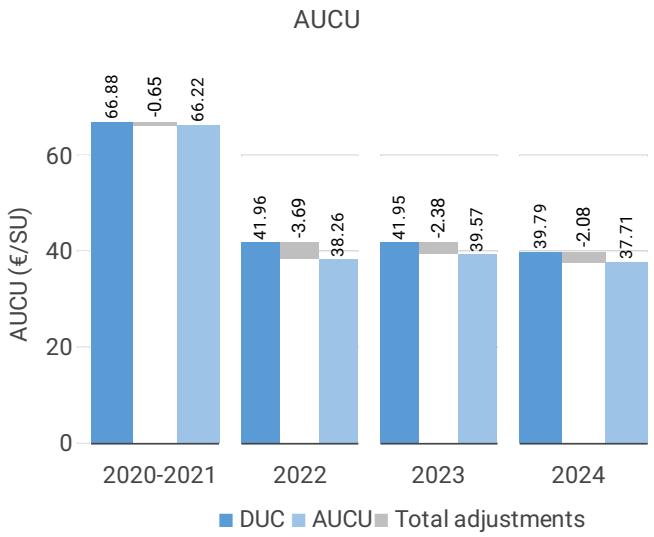
Lower than planned en route costs in real terms for NAV Portugal in 2024 (-1.8%, or -2.3 M€2017) result from:

- Lower staff costs (-1.9%), due to the impact of inflation index (+13.4 p.p.) since in nominal terms, staff costs, were above planned by +10.4%. Although positively impacted by lower annual defined benefit pension costs than expected, staff costs, were higher than planned in nominal terms, *"mainly due to overtime needed to provide services to traffic 16% above planned".*
- Lower other operating costs (-1.6%), due to the impact of inflation index since, in nominal terms, other operating costs were significantly higher than planned (+10.7%).
- Slightly lower depreciation (-0.4%).
- Significantly lower cost of capital (-8.3%), due to lower net book value of fixed assets.

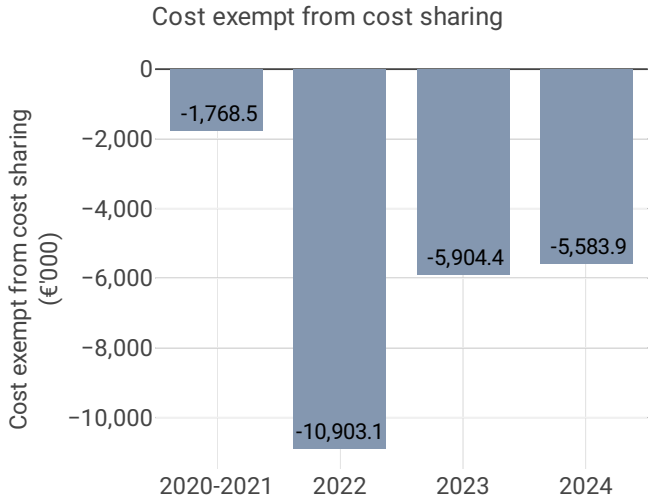
RP3 summary

When considering the whole of RP3 (2020-2024) for Portugal Continental en route charging zone, actual TSUs are +11.3% higher than planned, while actual costs in real terms are -2.6% lower than the determined costs (some -16.7 M€2017). As a result, the weighted average actual unit cost over RP3 (40.28 €2017) is -12.4% lower than planned in the PP (45.99 €2017).

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

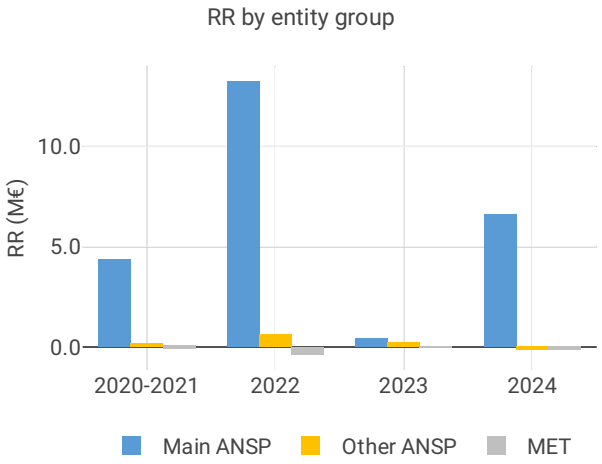


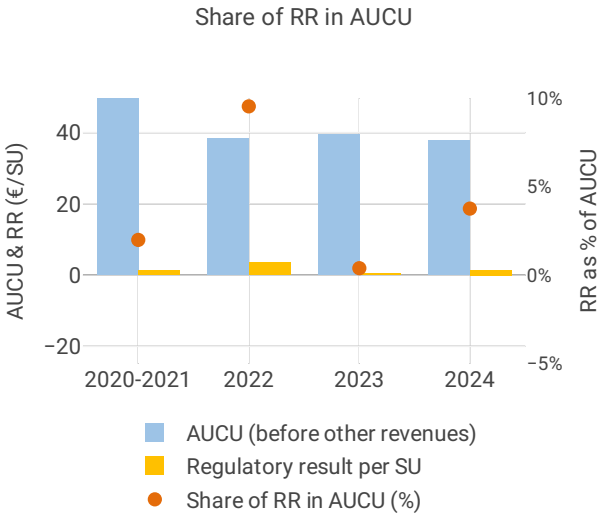
AUCU components (€/SU) – 2024	
Components of the AUCU in 2024	**€/SU**
DUC	**39.79**
Inflation adjustment	3.47
Cost exempt from cost-sharing	-1.24
Traffic risk sharing adjustment	-3.60
Traffic adj. (costs not TRS)	-0.56
Finantial incentives	-0.15
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-2.08
AUCU	**37.71**
AUCU vs. DUC	**-5.2%**

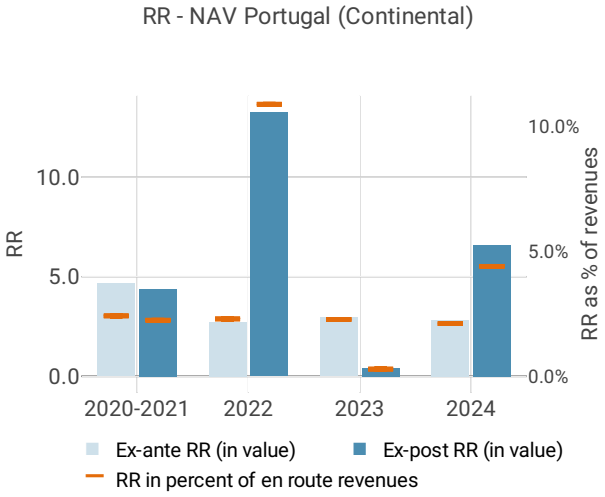


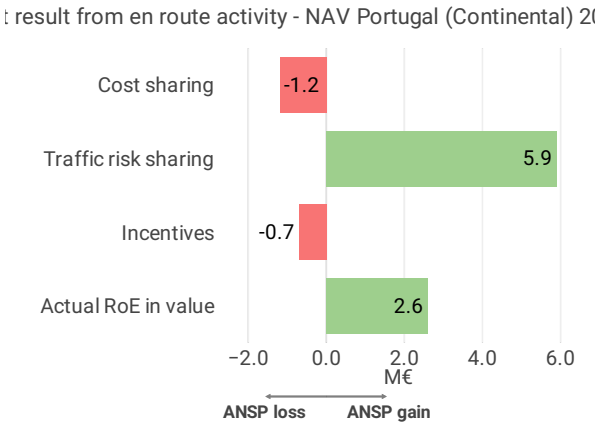
Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	**€'000**	**€/SU**
New and existing investments	-1,412.9	-0.31
Competent authorities and qualified entities costs	-62.5	-0.01
Eurocontrol costs	-906.0	-0.20
Pension costs	-3,202.6	-0.71
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-5,583.9**	**-1.24**

5.2.3 Regulatory result (RR)









Focus on regulatory result

NAV Portugal net gain/loss on activity in the Portugal Continental en route charging zone in the year 2024

NAV Portugal reported a net gain of +4.0 M€, as a combination of a loss of -1.2 M€ arising from the cost sharing mechanism, with a gain of +5.9 M€ arising from the traffic risk sharing mechanism and a loss of -0.7 M€ relating to financial incentives.

NAV Portugal overall regulatory result (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+4.0 M€) and the actual RoE (+2.6 M€) amounts to +6.6 M€ (4.4% of the en route revenues). The resulting ex-post rate of return on equity is 10.8%, which is higher than the 4.2% planned in the PP.

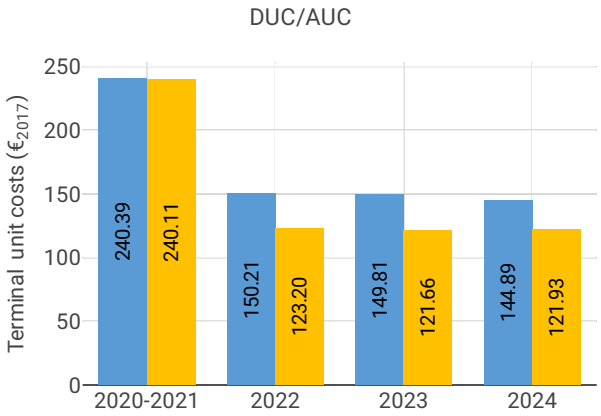
RP3 summary

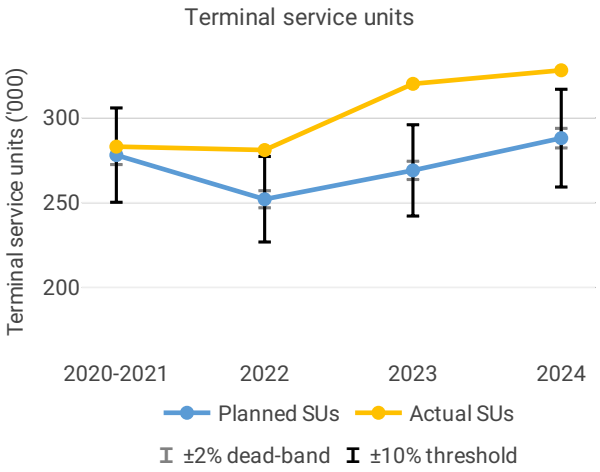
When considering the whole of RP3 (2020-2024), NAV Portugal generated a cumulative loss in respect of cost sharing of -5.4 M€, as actual total costs for RP3 were higher than planned.

The traffic risk sharing mechanism generated gain of +20.2 M€. Adding the loss of -1.3 M€ to be retained by the ATSP in respect of financial incentives and the actual RoE (+11.1 M€ over RP3) leads to an overall regulatory result of +24.6 M€, which corresponds to an average ex-post return on equity of 10.4% (compared to 4.7% initially planned in the PP).

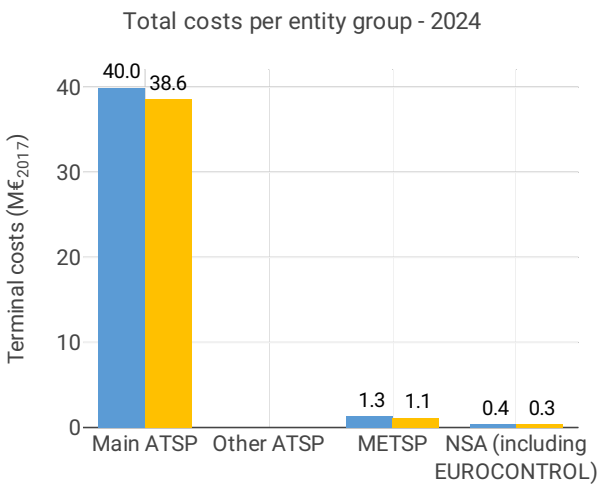
5.3 Terminal charging zone

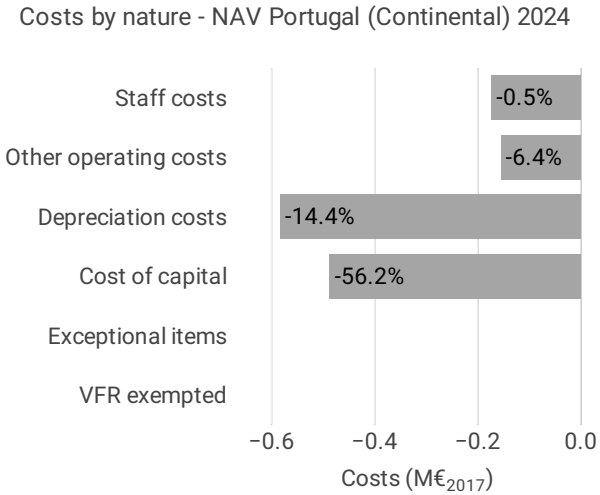
5.3.1 Unit cost (KPI#1)





Actual and determined data				
Total costs - nominal (M€)	**2020-2021**	**2022**	**2023**	**2024**
Actual costs	69	38	45	47
Determined costs	68	39	42	44
Difference costs	1	-1	3	3
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	1.2%	1.3%	1.4%
Determined inflation index	NA	103.6	104.9	106.4
Actual inflation rate	NA	8.1%	5.3%	2.7%
Actual inflation index	NA	110.7	116.6	119.7
Difference inflation index (p.p.)	NA	+7.1	+11.7	+13.4





Focus on unit cost

AUC vs. DUC

In 2024, the terminal AUC was -15.8% (or -22.96 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TNSUs (+14.2%) and lower than planned terminal costs in real terms (-3.9%, or -1.6 M€2017). It should be noted that the actual inflation index in 2024 was +13.4 p.p. higher than planned.

Terminal service units

The difference between actual and planned TNSUs (+14.2%) falls outside the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional terminal revenues is therefore shared between the ANSP and the airspace users (see the main ANSP gain in Box 11).

Terminal costs by entity

Actual real terminal costs are -3.9% (-1.6 M€2017) lower than planned. This is the result of lower costs for the main ANSP, NAV Portugal (-3.5%, or -1.4 M€2017), the MET service provider (-14.4%, or -0.2 M€2017) and the NSA (-13.4%, or -0.1 M€2017).

Terminal costs for the main ANSP at charging zone level

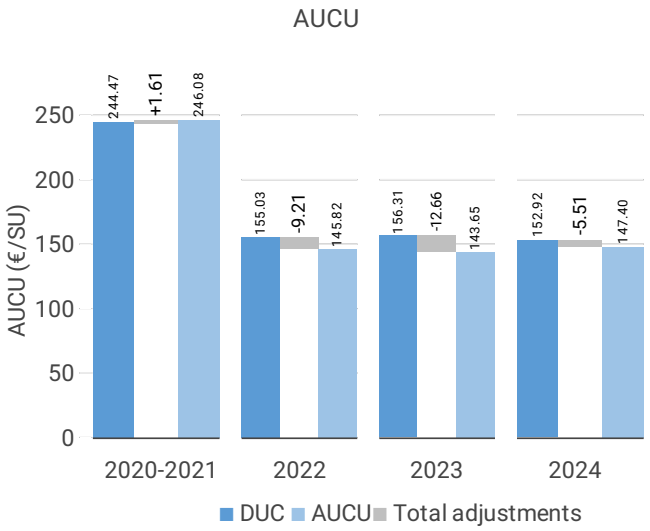
Lower than planned terminal costs in real terms for NAV Portugal in 2024 (-3.5%, or -1.4 M€2017) result from:

- Slightly lower staff costs (-0.5%), due to the impact of inflation index (+13.4 p.p.) since, in nominal terms, staff costs, were above planned by +12.0%, despite lower annual defined benefit pension costs than expected,
- Significantly lower other operating costs (-6.4%), due to the impact of inflation index since, in nominal terms, other operating costs were higher than planned (+5.4%),
- Significantly lower depreciation (-14.4%), due to the postponement of a few projects,
- Significantly lower cost of capital (-56.2%), due to lower net book value of fixed assets.

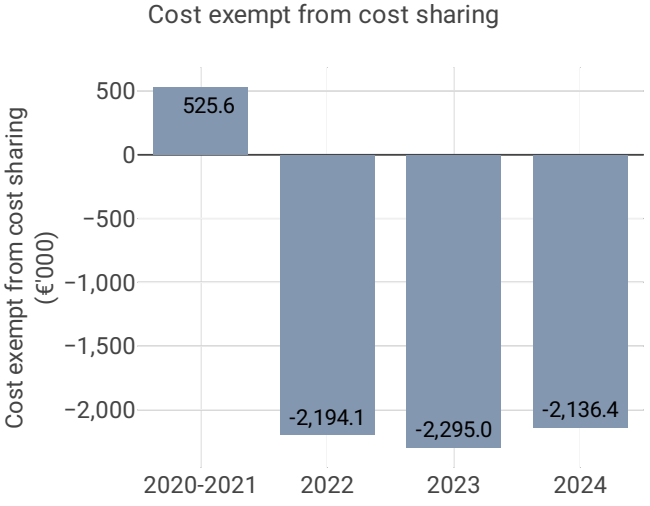
RP3 summary

When considering the whole of RP3 (2020-2024) for Portugal Continental terminal charging zone, actual TNSUs are +11.5% higher than planned, while actual costs in real terms are -2.8% lower than the determined costs (some -5.2 M€2017). As a result, the weighted average actual unit cost over RP3 (149.77 €2017) is -12.8% lower than planned in the PP (171.77 €2017).

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

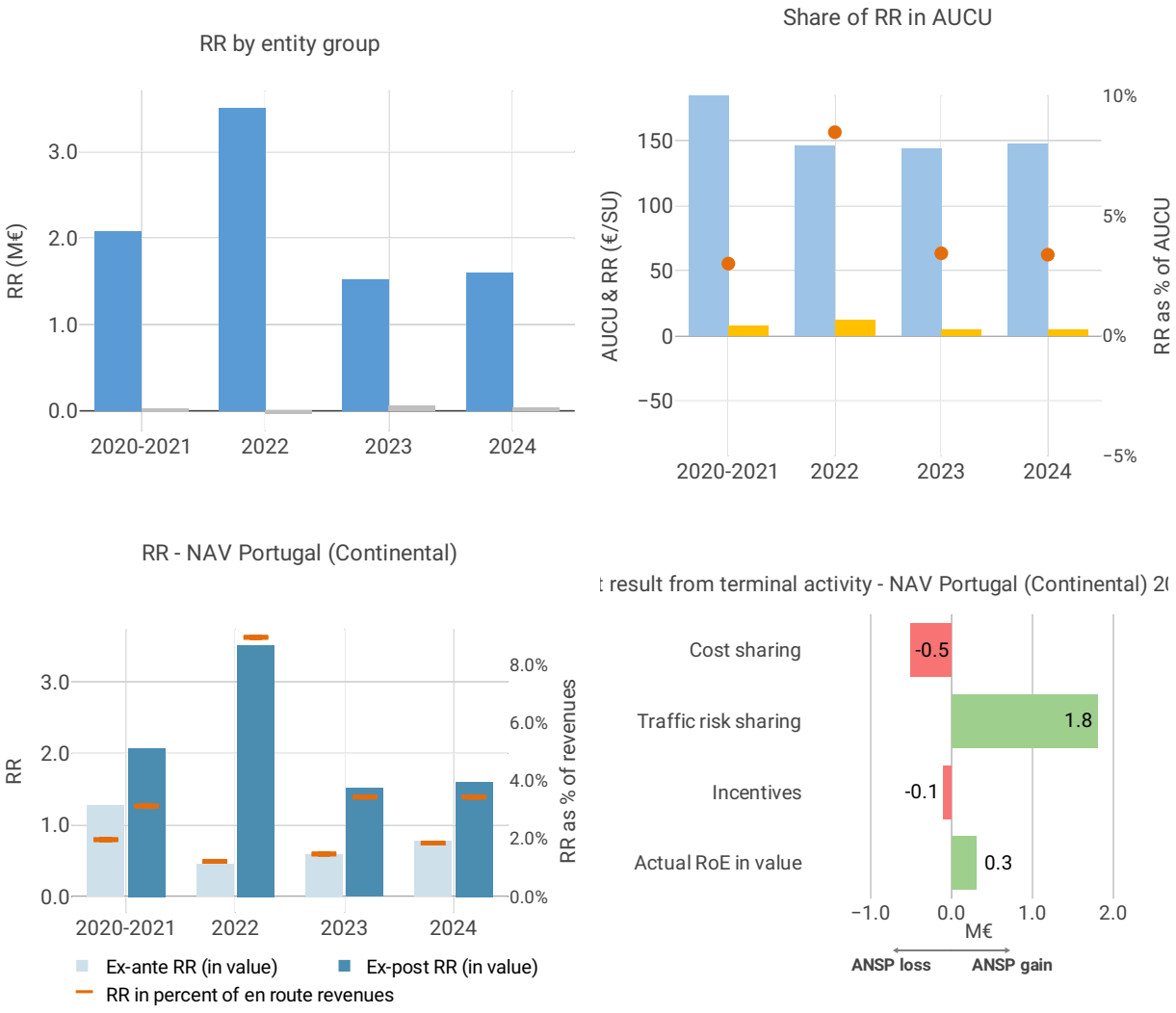


AUCU components (€/SU) – 2024	
Components of the AUCU in 2024	**€/SU**
DUC	**152.92**
Inflation adjustment	14.72
Cost exempt from cost-sharing	-6.51
Traffic risk sharing adjustment	-12.47
Traffic adj. (costs not TRS)	-0.87
Finantial incentives	-0.39
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-5.51
AUCU	**147.40**
AUCU vs. DUC	**-3.6%**



Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	**€'000**	**€/SU**
New and existing investments	-1,236.1	-3.77
Competent authorities and qualified entities costs	-49.3	-0.15
Eurocontrol costs	0.0	0.00
Pension costs	-851.0	-2.59
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-2,136.4**	**-6.51**

5.3.3 Regulatory result (RR)



Focus on regulatory result

NAV Portugal net gain/loss on activity in the Portugal terminal charging zone in the year 2024

NAV Portugal reported a net gain of +1.3 M€, as a combination of a loss of -0.5 M€ arising from the cost sharing mechanism, with a gain of +1.8 M€ arising from the traffic risk sharing mechanism and a loss of -0.1 M€ relating to financial incentives.

NAV Portugal overall regulatory result (RR) for the terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+1.3 M€) and the actual RoE (+0.3 M€) amounts to +1.6 M€ (3.4% of the terminal revenues). The resulting ex-post rate of return on equity is 19.9%, which is higher than the 4.2% planned in the PP.

RP3 summary

When considering the whole of RP3 (2020-2024), NAV Portugal generated a cumulative loss in respect of cost sharing of -0.4 M€, as actual total costs for RP3 were higher than planned. The traffic risk sharing mechanism generated gain of +6.4 M€. Adding the gain of +0.1 M€ to be retained by the ATSP in respect of financial incentives and the actual RoE (+2.6 M€ over RP3) leads to an overall regulatory result of +8.7 M€, which corresponds to an average ex-post return on equity of 17.2% (compared to 4.8% initially planned in the PP).