

# Performance Review Board

## Monitoring Report

### Spain - 2024



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## Contents

<b>1</b>	<b>OVERVIEW</b>	<b>2</b>
1.1	Contextual information.....	2
1.2	Traffic (En route traffic zone) .....	2
1.3	Safety (Main ANSP) .....	3
1.4	Environment (Member State) .....	4
1.5	Capacity (Member State).....	4
1.6	Cost-efficiency (En route/Terminal charging zone(s)) .....	6
<b>2</b>	<b>SAFETY - SPAIN</b>	<b>8</b>
2.1	PRB monitoring .....	8
2.2	Effectiveness of Safety Management (EoSM) (KPI#1) .....	8
2.3	Safety occurrences.....	9
2.4	Use of automated safety data recording system (ASDRS) (PI#3) .....	11
<b>3</b>	<b>ENVIRONMENT - SPAIN</b>	<b>12</b>
3.1	PRB monitoring .....	12
3.2	En route performance .....	12
3.3	Terminal performance.....	13
3.4	Civil-Military dimension .....	16
<b>4</b>	<b>CAPACITY - SPAIN</b>	<b>19</b>
4.1	PRB monitoring .....	19
4.2	En route performance .....	20
4.3	Terminal performance.....	26
<b>5</b>	<b>COST-EFFICIENCY - SPAIN</b>	<b>33</b>
5.1	PRB monitoring .....	33
5.2	En route charging zone - Spain Continental .....	34
5.3	En route charging zone - Spain Canarias .....	38
5.4	Terminal charging zone.....	43

## 1 OVERVIEW

### 1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/776 of 13 April 2022

#### List of ACCs 5

Barcelona ACC  
Madrid ACC  
Palma ACC  
Sevilla ACC  
Canarias ACC

#### No of airports in the scope of the performance plan:

•  $\geq 80'K$  6  
•  $< 80'K$  1

#### Exchange rate (1 EUR=)

2017: 1 EUR  
2024: 1 EUR

#### Share of Union-wide:

• traffic (TSUs) 2024 10.2%  
• en route costs 2024 12.1%

#### Share en route / terminal costs 2024

89% / 11%

#### En route charging zone(s)

Spain Continental  
Spain Canarias

#### Terminal charging zone(s)

Spain

#### Main ANSP

• ENAIRE

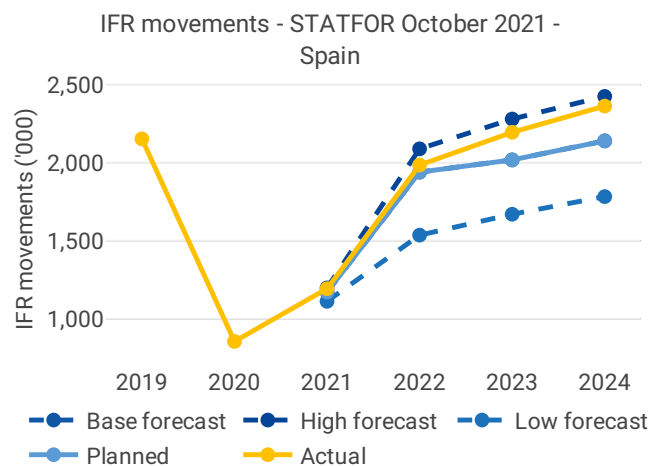
#### Other ANSPs

• FERRONATS  
• ANSP EA

#### MET Providers

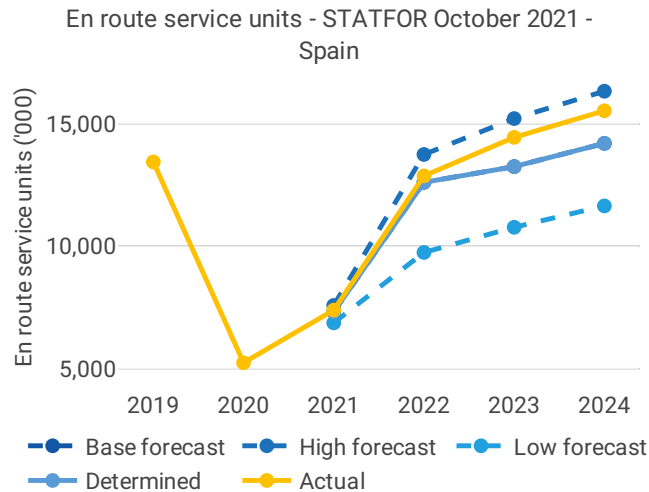
• AEMET

### 1.2 Traffic (En route traffic zone)



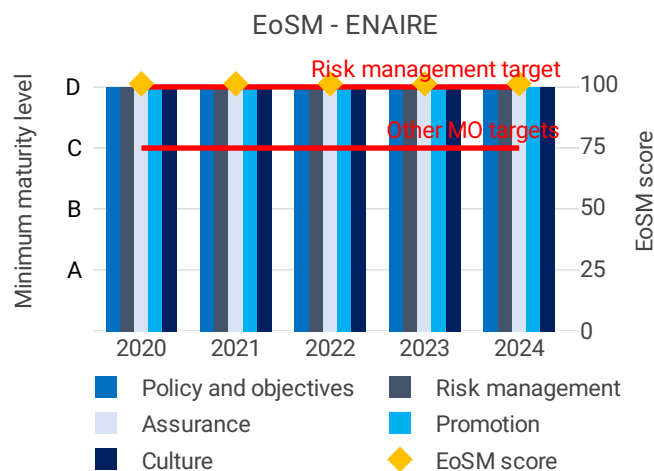
- Spain recorded 2,632K actual IFR movements in 2024, +7.7% compared to 2023 (2,194K).
- Actual 2024 IFR movements were +10.4% above the plan (2,139K).
- Actual 2024 IFR movements are +9.8% above the actual 2019 level (2,152K).





- Spain recorded 15,527K actual service units in 2024, +7.5% compared to 2023 (14,442K).
- Actual 2024 service units were +9.4% above the plan (14,197).
- Actual 2024 service units are +15.3% above the actual 2019 level (13,439K).

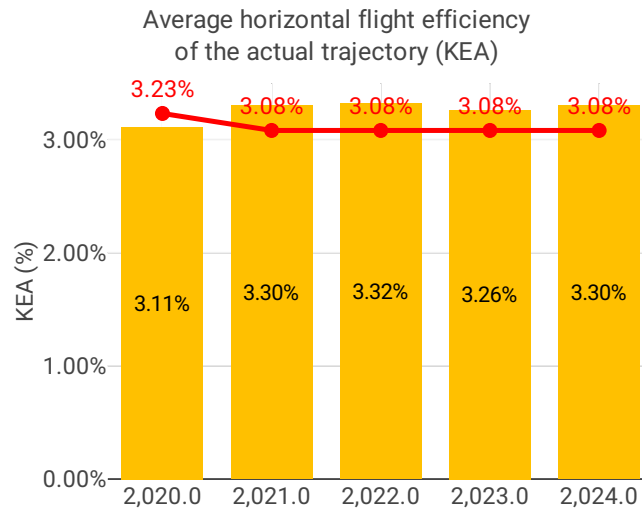
### 1.3 Safety (Main ANSP)



- ENAIRE exceeded the RP3 EoSM targets during the first year of RP3, achieving maturity level D in all five Management Objectives, and has remained on this high level since then. ENAIRE implemented a continuous monitoring process to ensure maintaining high safety performance.
- SKYWAY achieved the RP3 EoSM targets in 2023 with maturity level D on three of five Management Objectives, including Safety Risk Management. SKYWAY remained above target in 2024.
- Spain recorded an increase in the rate of separation minima infringements compared with 2023. The rate of runway incursions increased slightly between 2023 and 2024.

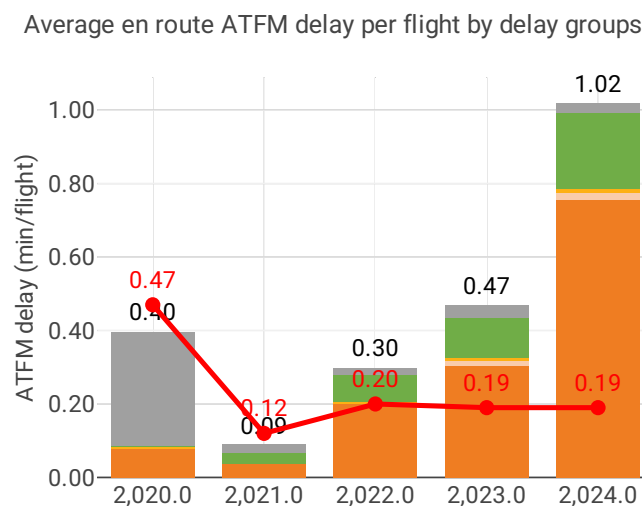


## 1.4 Environment (Member State)



- Spain achieved a KEA performance of 3.30% compared to its target of 3.08% and did not contribute positively towards achieving the Union-wide target.
- The NSA states that main factors for not meeting the KEA target were increased traffic demand leading to congestion in key airspace sectors, sector staffing and adverse weather conditions.
- Both KEP and SCR remained stable in comparison to 2023.
- The share of CDO flights increased from 40.67% to 41.68% in 2024.
- Additional taxi out time increased from 2.24 to 2.40 min/flight, while additional time in terminal airspace increased from 1.11 to 1.32 min/flight in 2024 compared to 2023.

## 1.5 Capacity (Member State)

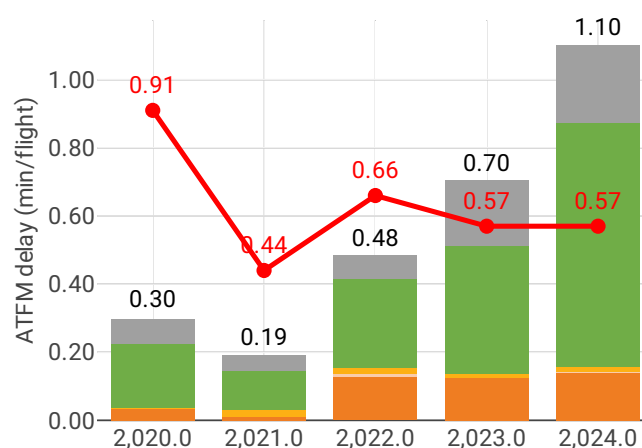


- Spain registered 1.02 minutes of average en route ATFM delay per flight during 2024, which remained 1.02 after the post-ops adjustment process, thus not achieving the local target value of 0.19. Delays in Spain increased by 0.55 minutes per flight year-on-year.
- Most of the delays accumulated between June and November, mostly driven by ATC Capacity issues.



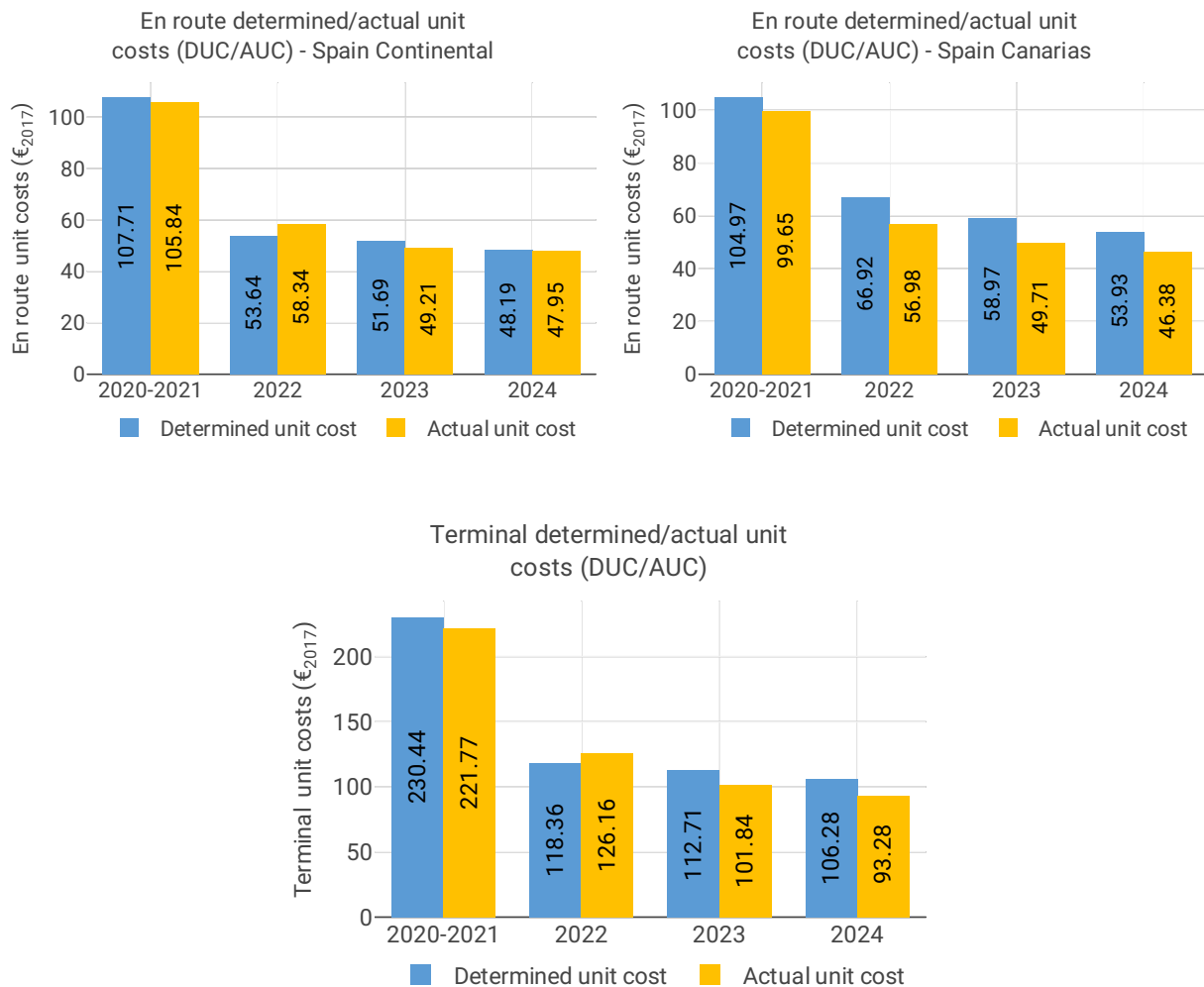
- The share of delayed flights with delays longer than 15 minutes in Spain increased by 3 percentage points compared to 2023 and was higher than 2019 values.
- The average number of IFR movements was 10% above 2019 levels in Spain in 2024.
- The number of ATCOs in OPS is 353, being over the 2024 plan in Barcelona by 15 FTEs. The number of ATCOs in OPS is 430, being over the 2024 plan in Madrid by 32 FTEs. The number of ATCOs in OPS is 134, being over the 2024 plan in Palma by 13 FTEs. The number of ATCOs in OPS is 161, being over the 2024 plan in Sevilla by 28 FTEs. The number of ATCOs in OPS is 176, being over the 2024 plan in Canarias by 14 FTEs
- The yearly total of sector opening hours in Sevilla ACC was 43,649, showing a 8.9% increase compared to 2023. Sector opening hours are 6.7% above 2019 levels. The yearly total of sector opening hours in Barcelona ACC was 65,819, showing a 6.6% increase compared to 2023. Sector opening hours are 9.0% above 2019 levels. The yearly total of sector opening hours in Madrid ACC was 96,591, showing a 0.8% increase compared to 2023. Sector opening hours are 6.4% below 2019 levels. The yearly total of sector opening hours in Palma ACC was 35,603, showing a 2.4% decrease compared to 2023. Sector opening hours are 8.1% below 2019 levels. The yearly total of sector opening hours in Canarias ACC was 29,562, showing a 3.3% increase compared to 2023. Sector opening hours are 5.6% above 2019 levels.
- Madrid ACC registered 13.15 IFR movements per one sector opening hour in 2024, being 15.2% above 2019 levels. Barcelona ACC registered 16.09 IFR movements per one sector opening hour in 2024, being 3.4% above 2019 levels. Palma ACC registered 10.32 IFR movements per one sector opening hour in 2024, being 23.6% above 2019 levels. Sevilla ACC registered 12.26 IFR movements per one sector opening hour in 2024, being 17.3% above 2019 levels. Canarias ACC registered 13.99 IFR movements per one sector opening hour in 2024, being 9.5% above 2019 levels
- There was a significant deterioration in capacity performance in 2024 in Spain compared to 2023, mostly due to ATC capacity problems. Spain should ensure that additional capacity improvement measures are defined and implemented in order to prevent further deterioration of the performance and to close the capacity gap. Actual 2025 figures up to August indicate that issues are still present.

Average arrival ATFM delay per flight by delay groups



- Spain registered an average airport arrival ATFM delay of 1.10 minutes per flight in 2024, thus not achieving the local target of 0.57 minutes.
- Compared to 2023, average arrival ATFM delays in Spain were 56% higher in 2024, while the number of IFR arrivals increased by 8%.
- The main drivers of delays were weather, accounting for 65% of delays, and other, non-ATC related causes, responsible for 21%.

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



- The en route 2024 actual unit cost of Spain Continental was 47.95€<sub>2017</sub>, -0.5% lower than the determined unit cost (48.19€<sub>2017</sub>). The en route 2024 actual unit cost of Spain Canarias was 46.38€<sub>2017</sub>, -14% lower than the determined unit cost (53.93€<sub>2017</sub>). The terminal 2024 actual unit cost was 93.28 €<sub>2017</sub>, -12% lower than the determined unit cost (106.28€<sub>2017</sub>).
- The en route 2024 actual service units of Spain Continental (13.4M) were +7.9% higher than the determined service units (12.4M). The en route 2024 actual service units of Spain Canarias (2.1M) were +20% higher than the determined service units (1.8M).



- The en route 2024 actual total costs of Spain Continental were +44M€2017 (+7.3%) higher than determined. The gap is mainly driven by higher than expected staff costs for ENAIRE (+32M€2017, or + 9.1%). The NSA explains that this is “mainly due to obligations derived by national laws on Public Employees salary and on Social Security Scheme National Law”, as well as the recruitment of new ATCOs and a court ruling mandating ENAIRE to pay back salaries related to promotions.
- The en route 2024 actual total costs of Spain Canarias were +3.0M€2017, (+3.2%) higher than determined. As for the Continental charging zone, the differences mainly resulting from ENAIRE staff costs (+3.2M€2017, or +6.2%).
- ENAIRE costs of investments were 149M€2017 in 2024 for both en route and terminal charging zones, +8.5% higher than determined (137M €2017). This is mainly due to higher cost of capital (+10M€, or + 31%), which the NSA attributed to a higher WACC rate than planned, and an increase in the total asset base.
- The en route Spain Continental actual unit cost incurred by users in 2024 was 57.26€ (+12% higher than the 2024 DUC), while the en route Spain Canarias actual unit cost incurred by users in 2024 was 48.03€ (-16% lower than the 2024 DUC). The terminal actual unit cost incurred by users in 2024 was 30.61€ (-73% lower than the 2024 DUC). The difference between the AUCU and the DUC for the en route charging zones is primarily attributed to the cross-financing adjustment of 20M€ from Spain Canarias to Spain Continental. For the terminal charging zone the difference between the AUCU and DUC is mainly due to adjustment of other revenues.

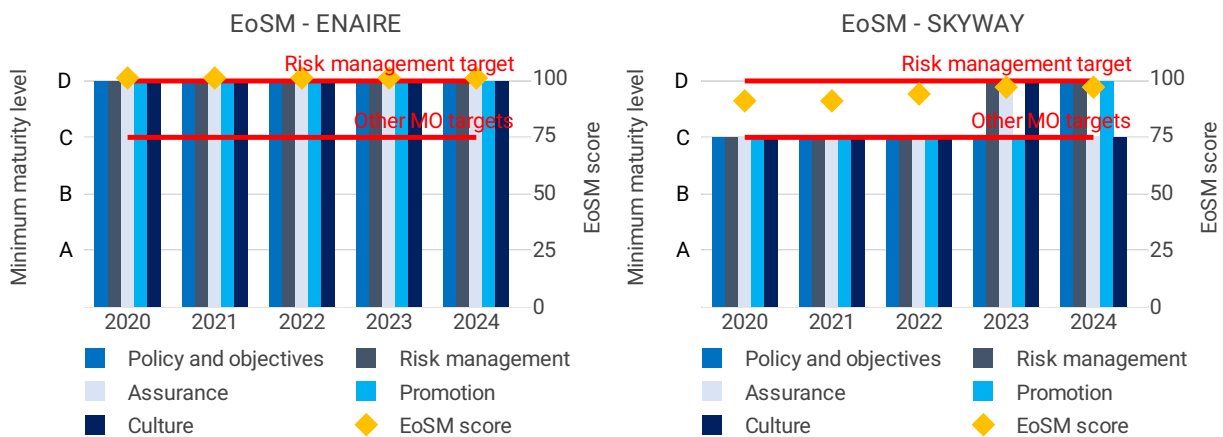


## 2 SAFETY - SPAIN

### 2.1 PRB monitoring

- ENAIRE exceeded the RP3 EoSM targets during the first year of RP3, achieving maturity level D in all five Management Objectives, and has remained on this high level since then. ENAIRE implemented a continuous monitoring process to ensure maintaining high safety performance.
- SKYWAY achieved the RP3 EoSM targets in 2023 with maturity level D on three of five Management Objectives, including Safety Risk Management. SKYWAY remained above target in 2024.
- Spain recorded an increase in the rate of separation minima infringements compared with 2023. The rate of runway incursions increased slightly between 2023 and 2024.

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



### Focus on EoSM

All five EoSM components of ENAIRE meet or exceed the RP3 target level. Maximum maturity level is maintained. All five EoSM components of SKYWAY meet, or exceed, the RP3 target level, with four questions below maximum maturity.

ENAIRE exceeded the RP3 EoSM targets during the first year of RP3, achieving maturity level D in all five Management Objectives, and has remained on this high level since then. This achievement was significantly better than planned, as ENAIRE planned to achieve the RP3 targets during the last year of the reference period, and only planned reaching maturity level D in Safety Risk Management.

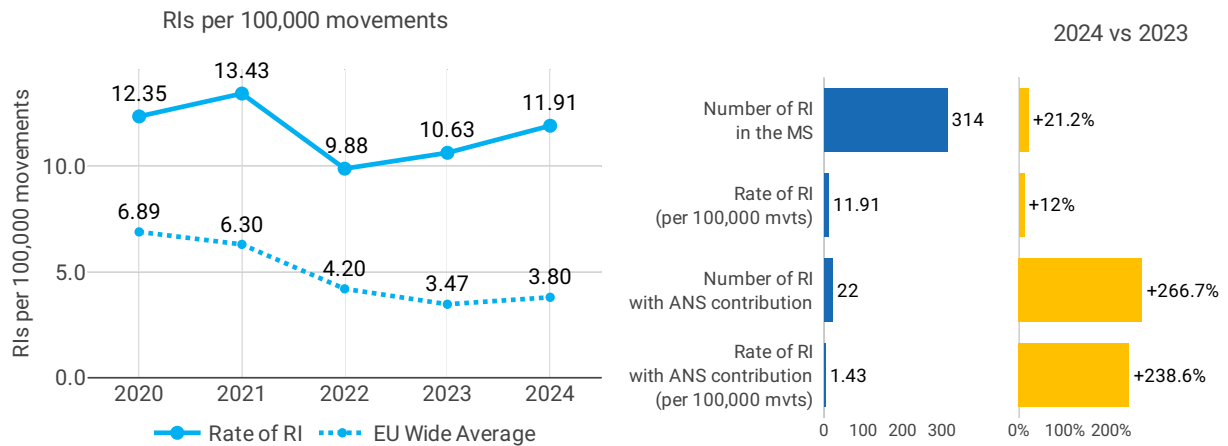
ENAIRE implemented a continuous monitoring process to ensure the maintenance of the high-levels of safety performance.

SKYWAY achieved the RP3 EoSM targets in 2023, achieving maturity level D in three of the five Management Objectives, including Safety Risk Management. SKYWAY remained above target in 2024. Moreover, SKYWAY achieved the RP3 targets ahead of their plan as well as higher than planned maturity levels in two management objectives (Safety Policy and Objectives and Safety Promotion).



## 2.3 Safety occurrences

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



Rate of RIs per 100,000 airport movements - Spain				
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Madrid - Barajas	420,326	2	0.48
2	Barcelona	348,050	8	2.30
3	Palma de Mallorca	243,406	1	0.41
4	Málaga	176,988	0	0.00
5	Gran Canaria	144,137	3	2.08
6	Alicante	118,579	4	3.37
7	Ibiza	86,420	4	4.63

### Focus on runway incursions

Spain recorded a rise in the number of occurrences at the Member State level, which caused the rate of RIs to increase compared with 2023. From the peak in 2021 and a decrease in the rate the following year, Spain has experienced an increasing rate of RIs since 2022. In 2024, the number of runway incursions increased to 314, the highest figure in the five-year period, being a 17% increase compared to 2023. The rate has remained above the Union-wide average throughout RP3. Additionally, the rate of RIs with ANS contribution increased (>200%) from 2023 to 2024, significantly more than at Member State level.

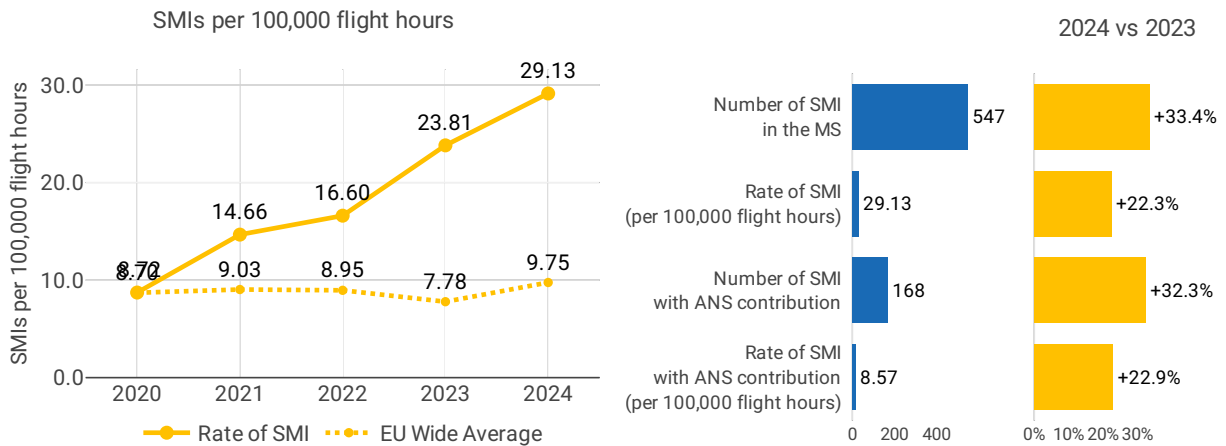
In 2024, Spain reported occurrences based on occurrence classes A, B and C whereas, in previous years the RCS data classification was used. This may affect the comparison of rates in 2024 with previous years.

The NSA implemented measures to reduce the number of RIs. In February 2025, the proposal for a new action plan at the Barcelona-El Prat Tower (LEBL) was presented, with a series of measures to reduce this type of incidents. Moreover, measures have been planned for implementation in 2025 for airports in Alicante (LEAL) and Ibiza (LEIB), in line with the global action plan for the prevention of runway incursions (GAPPRI).

The NSA will supervise and oversee this implementation during the planned regulatory audits.



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



Rate of SMI with ANS contribution per 100,000 flight hours											
#	ANSP	Flight hours					Number of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	ENAIRES	664,154	954,783	1,558,956	1,721,932	1,849,142	25	59	89	127	168
2	SKYWAY	77,124	NA	74,025	98,304	110,639	0	NA	0	0	0

#	ANSP	Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	ENAIRES	4	15	6	7	9		+290%	-61%	+29%	+23%
2	SKYWAY	0	NA	0	0	0		0%		0%	0%

**Focus on separation minima**

Throughout RP3, Spain recorded an increase in RIs at the Member State level, both in absolute numbers and in the rate. Since 2021, these increases are well above the Union-wide average. A similar trend has been recorded for the SMIs with ANS contribution reported by ENAIRES.

SKYWAY has not reported any SMI with ANS contribution throughout RP3.

In 2024, Spain reported occurrences based on occurrence classes A, B and C whereas, in previous years the RCS data classification was used. This may affect the comparison of rates in 2024 with previous years.

The NSA has implemented measures to address the increase of SMIs (action plan for the reduction of separation minima infringements in October 2022, and the action plan for speed adherence in the final approach to LEPA in July 2023). These measures are continued and complemented by further action plans (action plan in LECM-RUTA updated and activated in May 2024 for their mitigation, and several operational measures activated in the LECM TMA aimed at reducing the number of incidents in TMA). The effectiveness and the need for implementing further actions is monitored by the NSA.



### 2.3.3 Quality of occurrences reporting

The number of occurrences reported at Member State level seems consistent with the occurrences reported at the ANSP level for SMIs and RIs.

Throughout RP3, Spain recorded a high number of RIs and SMIs. The rate of a Member State is significantly dependent on a number of factors like the reporting culture, the principles for determining safety impact, the use of automated safety data recording system, the operational environment, etc. In addition, the identification of occurrences that have an ATM/CNS contribution is not a straightforward exercise and is subject to interpretations and subjective judgement that can differ from one ANSP and NSA to another. Hence, any comparison of number of occurrences or the rate for one Member State with another Member State should be done with great caution.

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

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



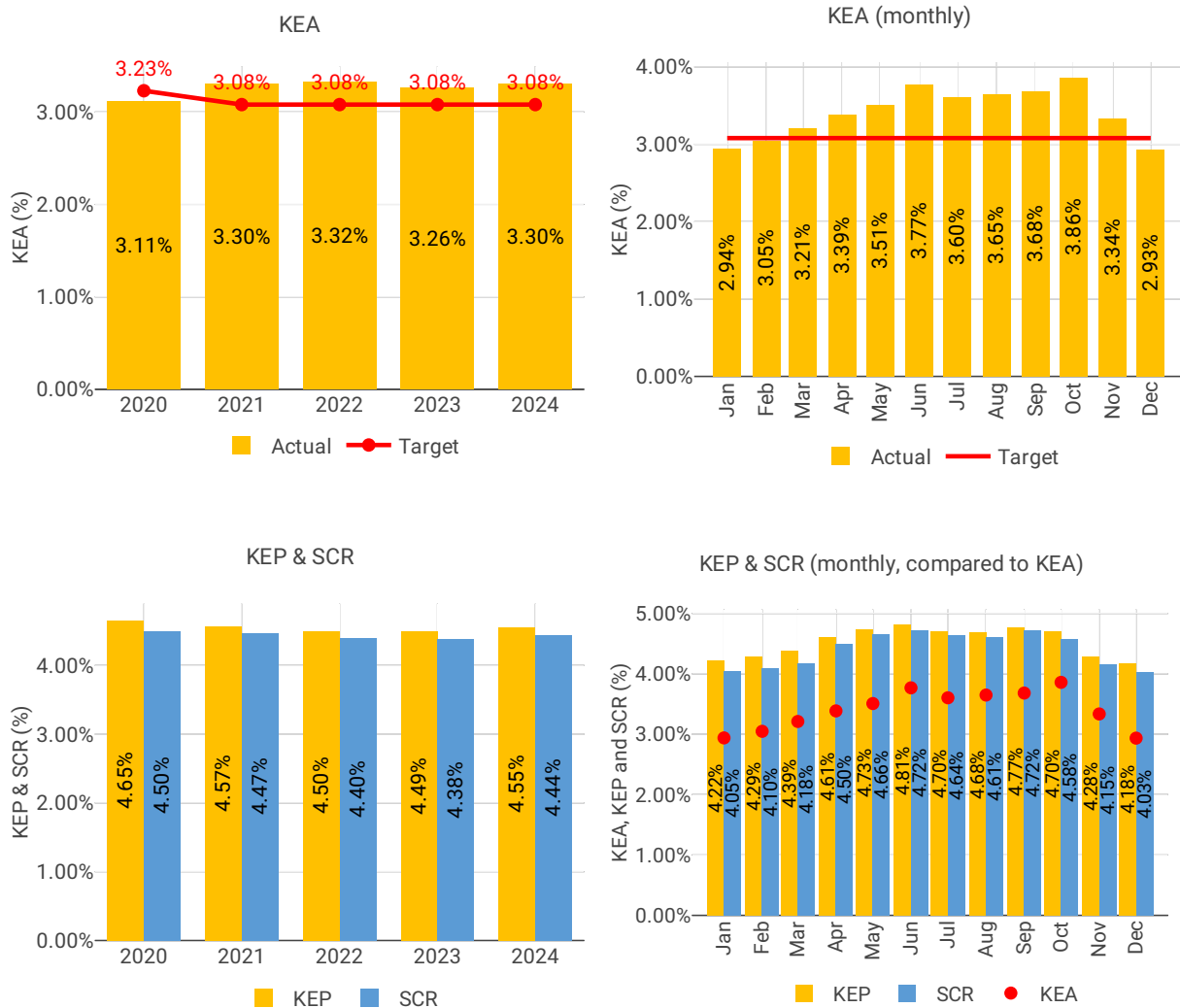
### 3 ENVIRONMENT - SPAIN

#### 3.1 PRB monitoring

- Spain achieved a KEA performance of 3.30% compared to its target of 3.08% and did not contribute positively towards achieving the Union-wide target.
- The NSA states that main factors for not meeting the KEA target were increased traffic demand leading to congestion in key airspace sectors, sector staffing and adverse weather conditions.
- Both KEP and SCR remained stable in comparison to 2023.
- The share of CDO flights increased from 40.67% to 41.68% in 2024.
- Additional taxi out time increased from 2.24 to 2.40 min/flight, while additional time in terminal airspace increased from 1.11 to 1.32 min/flight in 2024 compared to 2023.

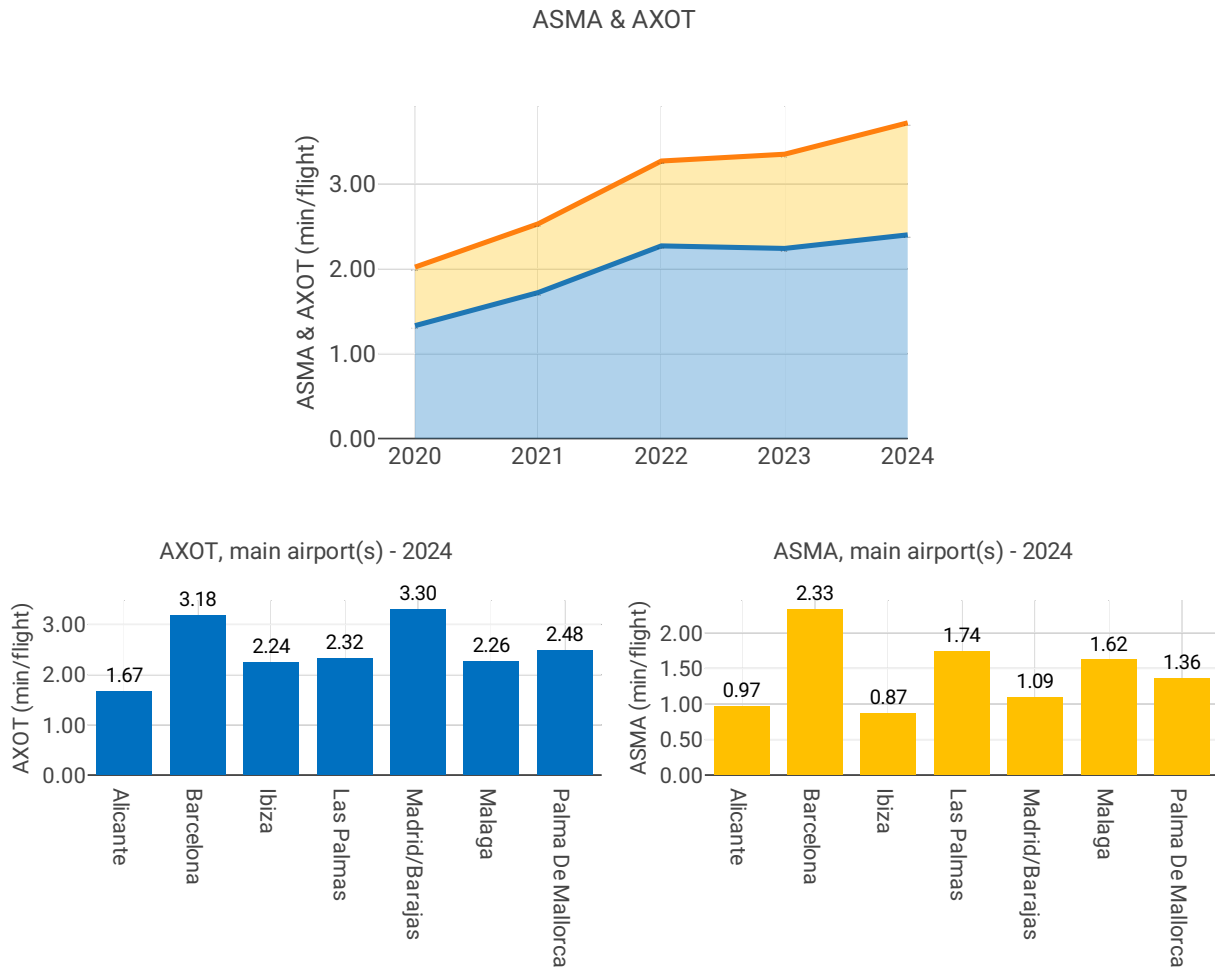
#### 3.2 En route performance

##### 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

The additional taxi out time (aggregated for the 6 airports monitored in RP3) increased in 2024 by 6.9% in relation to the value of 2023. Both Madrid (LEMD; 2019: 4.01 min/dep.; 2020: 2.12 min/dep.; 2021: 2.11 min/dep.; 2022: 2.57 min/dep.; 2023: 3.29 min/dep.; 2024: 3.3 min/dep.) and Barcelona (LEBL; 2019: 4.48 min/dep.; 2020: 1.84 min/dep.; 2021: 2.33 min/dep.; 2022: 3.6 min/dep.; 2023: 2.93 min/dep.; 2024: 3.18 min/dep.) observed additional taxi-out times above the SES average for 2024 (2.91 min/dep.)

According to the Spanish monitoring report: *In general, the greatest increase throughout the year occurs in the high season months of each airport, variations in this indicator are related to traffic especially at airports such as LEPA and LEMG. In 2024 taxi times at GCLP are higher than 2023 due to traffic increase and RWY closure several days a year for works at the access points to the thresholds of RWY 03L and 03R. Taxi times at LEBL are high in Jun, September and October due to frequent adverse weather conditions. Regarding the implementation of Manual TWR-Update DPI, it has been fully implemented in Madrid, Barcelona, Palma de Mallorca y Málaga, as well as in Las Palmas (A-TWR). Autoswitch for departures is now fully implemented*



in Madrid, as well as in Barcelona and Málaga. Although LEIB did not reach >80k movements in 2016-2018, it does in 2023 and 2024 and is monitored together with these 6 airports as it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2024 it reaches a value of 2,24, 12,0% higher than the 2023 value (2,00). The additional taxi out time (aggregated for the 7 airports monitored in RP3) has a value of 2,75 slightly higher than 2023 and 2022 values.

## ASMA

The additional time in terminal area (aggregated for the 6 airports monitored in RP3) in 2024 increased by 20% in relation to the value of 2023.

Malaga observed the highest increase (51%) in the additional ASMA times (LEMG; 2019: 1.26 min/arr.; 2020: 0.81 min/arr.; 2021: 0.95 min/arr.; 2022: 1.08 min/arr.; 2023: 1.07 min/arr.; 2024: 1.62 min/arr.), followed by Gran Canaria (GCLP; 2019: 1.55 min/arr.; 2020: 0.84 min/arr.; 2021: 1.08 min/arr.; 2022: 1.29 min/arr.; 2023: 1.23 min/arr.; 2024: 1.74 min/arr.) and Barcelona (LEBL; 2019: 2.58 min/arr.; 2020: 1.13 min/arr.; 2021: 1.07 min/arr.; 2022: 1.7 min/arr.; 2023: 2,03 min/arr.; 2024: 2,33 min/arr.). Barcelona resulted in the second highest value across the SES monitored airports. Together with Barcelona (LEBL), Palma (LEPA), Gran Canaria (GCLP) and Malaga (LEMG) resulted in additional ASMA time above the SES average (1.28 min/arr.). Madrid and Alicante also observed increases in 2024 but their additional ASMA times remained under the SES average.

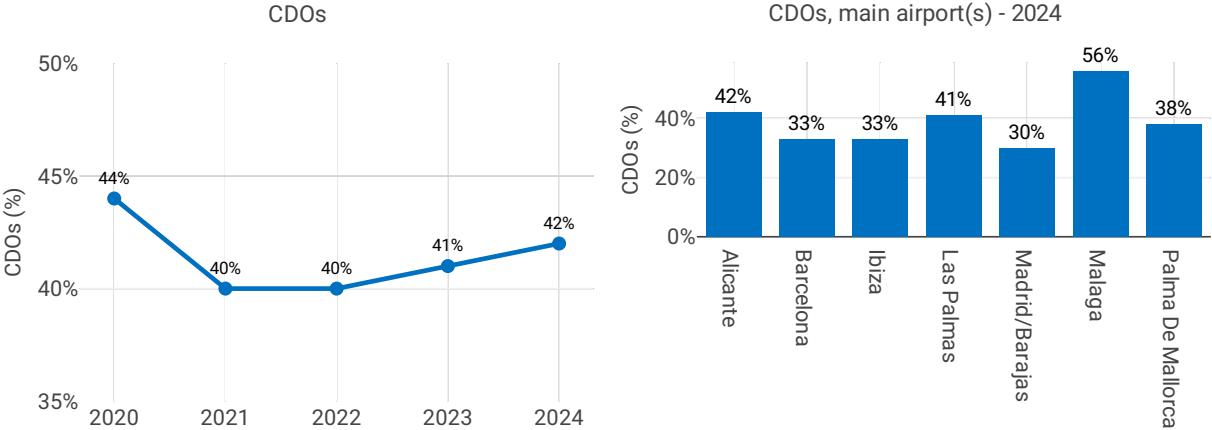
According to the Spanish monitoring report: *In general, the greatest increase throughout the year occurs in the high season months of each airport, variations in this indicator are related to traffic, especially at airports such as LEPA. High ASMA times during the latter part of the year at GCLP due to new procedures in Canarias TMA. There is a peak in ASMA times at LEMD due to RWY14R/32L closure for maintenance during October and November. ASMA times at LEBL are high in Jun, September and October due to frequent adverse weather conditions. Some restructuring projects are planned or have been already implemented in the main TMAs in Spain:*

- PBN STARs and RNP APCH in Madrid TMA: Implemented.
- PBN SIDs, ILS & RNP APCH in Palma TMA: planned for 2027-2028.
- Reorganization of Canarias TMA: an specific project will be developed in the coming years.

Although LEIB did not reach >80k movements in 2016-2018, it does in 2023 and 2024 and is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2024 it reaches a value of 0,87, at the same level than 2023 value (0,86). The additional time in terminal area (aggregated for the 7 airports monitored in RP3) has a value of 1,52 in 2024, 20% higher than the previous year (1,27).



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



Focus CDOs

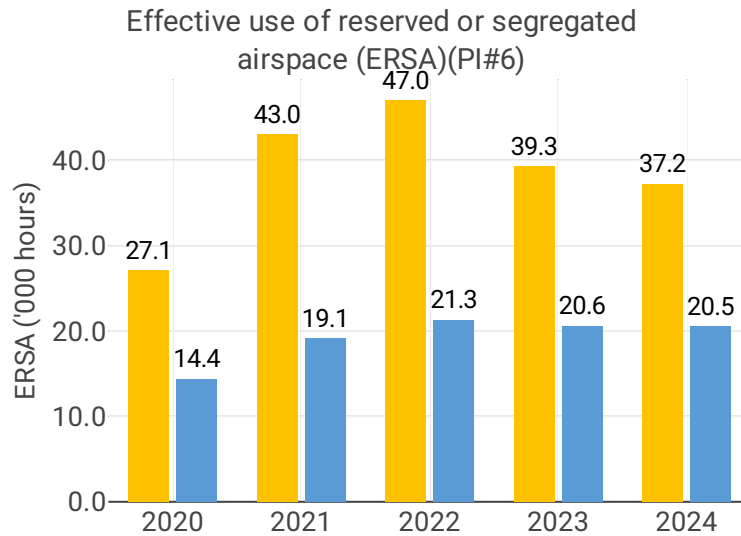
All airports had their share of CDO flights above the overall RP3 value in 2024 (29.3%), ranging from 29.9% (LEMD) to 56.2% (LEMG). The values increased for Malaga (LEMG, +3.9 percentage points), Alicante (LEAL, +3.7 percentage points) and Palma de Mallorca (LEPA, +1.4 percentage points) while the values for the other airports stayed almost the same. Over the summer months, the share of CDO flights is generally lower.

According to the Spanish monitoring report: *The share of arrivals applying continuous descent operation (aggregated for the 7 airports monitored in RP3) has remained at the same level as in 2023 (+2,7%), despite 8% higher traffic levels. The conditions of use of continuous descent procedures mean that the use of this type of procedure is not always compatible with the techniques used when it is necessary to manage medium/high traffic demands at airports/TMAs. Therefore, the authorisation of these procedures must be compatible with the airport's operations in order to meet the demand without establishing restrictions. In the long term, there are plans to modify the structure of the CDA procedures currently published at some airports and to transfer to the arrival procedures section of the AIP the information to proceed with the continuous descent from some point of the STARs to the IAF, to some point of the intermediate approach or to the IF, thus maximising the use of these operations. This PI is monitored by AESA. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*

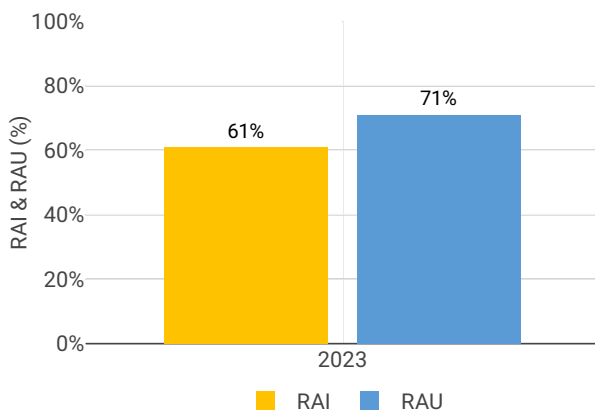
Airport level															
Airport	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.70	1.15	1.49	1.39	1.67	0.41	0.62	0.72	0.92	0.97	45%	40%	37%	39%	42%
Barcelona	1.84	2.33	3.60	2.93	3.18	1.13	1.07	1.70	2.03	2.33	39%	36%	34%	34%	33%
Las Palmas	1.09	1.75	2.03	1.81	2.32	0.84	1.08	1.29	1.23	1.74	47%	43%	41%	41%	41%
Ibiza	1.18	1.94	2.19	2.00	2.24	0.61	1.05	0.90	0.86	0.87	41%	31%	32%	34%	33%
Madrid/Barajas	2.12	2.11	2.57	3.29	3.30	0.62	0.52	0.64	0.89	1.09	32%	28%	28%	29%	30%
Malaga	1.39	2.20	2.56	2.00	2.26	0.81	0.95	1.08	1.07	1.62	54%	47%	50%	52%	56%
Palma De Mallorca	0.69	1.83	2.32	2.41	2.48	0.35	1.13	1.39	1.30	1.36	47%	38%	37%	37%	38%



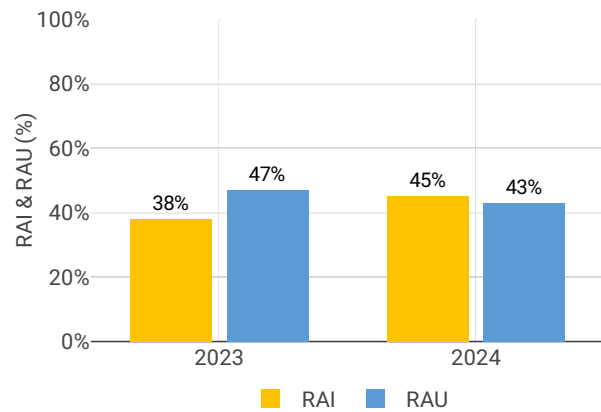
### 3.4 Civil-Military dimension



RAI & RAU via available conditional routes (PIs#7 & 8)



RAI & RAU via available restricted and segregated airspace (PIs#7 & 8)



### Focus on Civil-Military dimension

#### Update on Military dimension of the plan

Civil-Military coordination regarding Flexible Use of Airspace is on progress. Spain has a well established specific working group called UPEA inside CIDETRA (previous CIDETMA) to deal with FUA improvements implementation. More efforts are needed to better disseminate FUA implemented developments to civil operators as a means to ensure that flight plans use more efficient routes by taking advantage of released airspace (CURA).

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## **Military - related measures implemented or planned to improve capacity**

The Spanish Air and Space Force has actively participated in the general meetings for the implementation of the Spanish Free Route Airspace Program, taking part in the CB FRA meetings with Portugal and in the development of the interconnection with Morocco (these actions are carried out within the framework of a specific group composed by ENAIRE and the Spanish Air and Space Force created for the purpose of further improving the coordination for the implementation of FRA, with a special focus on ASM related issues). In addition, close coordination is maintained with the Network Manager and MILO (continuous update of the planning and coordination of Large Exercises). A group of initiatives has been launched to improve VPA implementation, ARES modulation and FUA-R use. Implementation of the Spanish SCC transition plan continues. The civil-military procedure for the creation of variable geometry ARES is in place and a review of P, R and D areas is underway. Improved civil-military coordination for ad-hoc requests and major exercises is in place. Spain Mil and Civ participate in the OEP's FUA initiatives as champions in the preparation of large exercises. Spain Military has participated in the development of Eurocontrol's ASM-ATFCM integration CONOPS and is a member of the ASM-ATFCM Focus Group.

### **Initiatives implemented or planned to improve PI#6**

NSA monitors values and promotes a better adjustments on the booked them to the needs. 2024 shows an increase of 3 points in the use percentage. It is worth to highlight that Spain provides with actual use figures, instead of ERSA. The particularities of this indicator have been analyzed in our airspace since there are no monthly data published at SES portal and they are provided by the Spanish Air Force NSA.

### **Initiatives implemented or planned to improve PI#7**

In the coming years, ENAIRE aims to improve this Performance Indicator (PI) through a number of measures, continuing with the introduction of new FUA restrictions to allow additional traffic flows through RSAs with military activity, the development of adjustable boundary procedures, the implementation of modular RSAs and improvements in the management of military RPAS activity. In addition, the implementation of FRA is expected to support more efficient flight planning through optimal routing.

This PI is monitored annually to evaluate the evolution of the indicators because our ANSP, ENAIRE, which provides the data to calculate the indicator, requests it from Eurocontrol and for the time being they are not in a position to request it on a more frequent basis. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.

### **Initiatives implemented or planned to improve PI#8**

In the coming years, ENAIRE expects to improve this Performance Indicator (PI) with the definition of new FUA restrictions allowing new traffic flows through an RSA with military activity, the definition of adjustable boundary procedures, new modular RSAs, improvements in military RPAS activity management, etc. We also expect the implementation of FRA to improve flight planning through optimal routing.

This PI is monitored annually to evaluate the evolution of the indicators because our ANSP, ENAIRE, which provides the data to calculate the indicator, requests it from Eurocontrol and



for the time being they are not in a position to request it on a more frequent basis. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.



## 4 CAPACITY - SPAIN

### 4.1 PRB monitoring

- Spain registered 1.02 minutes of average en route ATFM delay per flight during 2024, which remained 1.02 after the post-ops adjustment process, thus not achieving the local target value of 0.19. Delays in Spain increased by 0.55 minutes per flight year-on-year.
- Most of the delays accumulated between June and November, mostly driven by ATC Capacity issues.
- The share of delayed flights with delays longer than 15 minutes in Spain increased by 3 percentage points compared to 2023 and was higher than 2019 values.
- The average number of IFR movements was 10% above 2019 levels in Spain in 2024.
- The number of ATCOs in OPS is 353, being over the 2024 plan in Barcelona by 15 FTEs. The number of ATCOs in OPS is 430, being over the 2024 plan in Madrid by 32 FTEs. The number of ATCOs in OPS is 134, being over the 2024 plan in Palma by 13 FTEs. The number of ATCOs in OPS is 161, being over the 2024 plan in Sevilla by 28 FTEs. The number of ATCOs in OPS is 176, being over the 2024 plan in Canarias by 14 FTEs
- The yearly total of sector opening hours in Sevilla ACC was 43,649, showing a 8.9% increase compared to 2023. Sector opening hours are 6.7% above 2019 levels. The yearly total of sector opening hours in Barcelona ACC was 65,819, showing a 6.6% increase compared to 2023. Sector opening hours are 9.0% above 2019 levels. The yearly total of sector opening hours in Madrid ACC was 96,591, showing a 0.8% increase compared to 2023. Sector opening hours are 6.4% below 2019 levels. The yearly total of sector opening hours in Palma ACC was 35,603, showing a 2.4% decrease compared to 2023. Sector opening hours are 8.1% below 2019 levels. The yearly total of sector opening hours in Canarias ACC was 29,562, showing a 3.3% increase compared to 2023. Sector opening hours are 5.6% above 2019 levels.
- Madrid ACC registered 13.15 IFR movements per one sector opening hour in 2024, being 15.2% above 2019 levels. Barcelona ACC registered 16.09 IFR movements per one sector opening hour in 2024, being 3.4% above 2019 levels. Palma ACC registered 10.32 IFR movements per one sector opening hour in 2024, being 23.6% above 2019 levels. Sevilla ACC registered 12.26 IFR movements per one sector opening hour in 2024, being 17.3% above 2019 levels. Canarias ACC registered 13.99 IFR movements per one sector opening hour in 2024, being 9.5% above 2019 levels
- There was a significant deterioration in capacity performance in 2024 in Spain compared to 2023, mostly due to ATC capacity problems. Spain should ensure that additional capacity improvement measures are defined and implemented in order to prevent further deterioration of the performance and to close the capacity gap. Actual 2025 figures up to August indicate that issues are still present.
- Spain registered an average airport arrival ATFM delay of 1.10 minutes per flight in 2024, thus not achieving the local target of 0.57 minutes.
- Compared to 2023, average arrival ATFM delays in Spain were 56% higher in 2024, while the number of IFR arrivals increased by 8%.

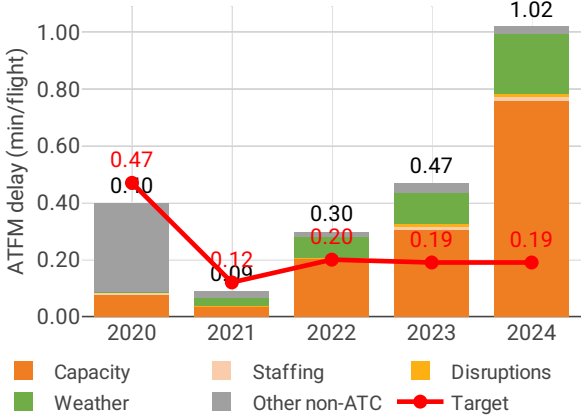


- The main drivers of delays were weather, accounting for 65% of delays, and other, non-ATC related causes, responsible for 21%.

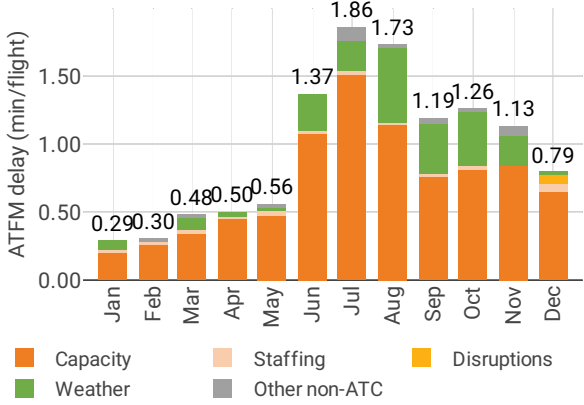
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

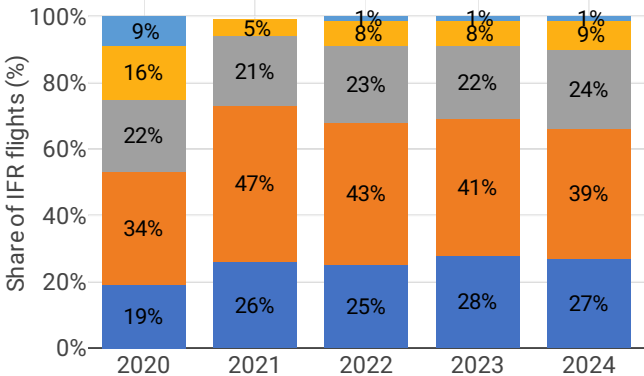
Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay by delay groups - 2024



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



Focus on en route ATFM delay

Summary of capacity performance

Spain experienced an increase in traffic from 2 194k flights in 2023, with 1 029k minutes of en route ATFM delay, to 2 362k flights in 2024 with 2 404k minutes of en route ATFM delay.

There were an additional 6k minutes of en route ATFM delay originating in the Spanish ACCs that were re-attributed to other ANSPs via the NM post operations delay attribution process: 4k minutes of en route ATFM delay were re-attributed to DSNA and a further 2k minutes of en route ATFM delay were re-attributed to the DFS as part of the eNM/S24 measures.



## **NSA's assessment of capacity performance**

Regarding the Canary en-route area, it was expected to reach 353 thousands of flights in line with the scenario base of STATFOR forecast October 2021. However the actual figure in 2024 amounts to 414 thousands of flights, what means an increase of 17,2% above forecasted.

Regarding the Continental Spain en-route area, it was expected to reach 2.006 thousands of flights in line with the scenario base of STATFOR forecast October 2021. However the actual figure in 2024 amounts to 2.221 thousands of flights, what means an increase of 10,7% above forecasted.

Both KPIs, ERD and TAD has been above the 2024 target, as previously informed to the Commission according to Regulation (EU) 2019/317 Article 37(1).

Although the en-route traffic increase in Spain has been very significant, the proportion of increase in ERD indicators has been higher in some regions and since June, targets set for both Spain and each of the 5 ACCs were exceeded. En-route delay minutes in 2024 were double that of 2023, while traffic growth was 7,6%. The main cause of en-route delay continues to be C-ATC Capacity both at national level and in each ACC.

The evolution in the implementation of the capacity plan projects both en route and in arrivals has resulted in delays in the implementation of some projects, nevertheless, a similar number of new projects have been developed to try to address the new challenges identified with the aim of improving capacity and operational management. The improvements that were expected as a result of the implementation of the planned projects identified in the capacity plan and the performance plan (ESPP3), do not seem to have had the optimal result expected. This, together with the consequences of not being able to incorporate sufficient personnel at short term in the collapsed areas and the effects of bad weather, have led to the non-compliance of the targets.

## **Monitoring process for capacity performance**

The AESA Monitoring Process continues to monitor this indicator on a monthly basis taking into account the different causes of delay, since the incentive system implemented for RP3 considers a mechanism modulated by causes of delay. The evolution of the attributable and non-attributable delay causes is monitored in order to apply the incentive mechanism and to identify the reasons in the event of non-compliance.

By 2024 the minutes reallocated by network measures (eNM/24) and the information related to the Post-Operations Performance (approved Post-Ops cases) distributed by Eurocontrol through the Post-operations performance adjustment process, have been taken into account. Throughout the year, recorded air traffic was higher than in 2019 and 2023. All regions have recovered pre-pandemic air traffic levels, with notable increases in Seville (+25%) and the Canary Islands (+16%) compared to 2019. Since the beginning of the year, higher delay values were already observed, which was reflected in a high indicator, but with the summer season, all values increased significantly. The most notable increases in delay have occurred in LECS (3,4 times more delay than in 2023), LECP (6,3 times more delay than in 2023) and LECB (2,5 times more delay than in 2023) and this has led to a significant increase in their respective en-route delay indicators.

Delays were mainly caused by C-ATC Capacity (74% of the 2024 total, compared to 65% in 2023 and 69% in 2022), focused on LECB (41% of the minutes due to this cause), LECS (32% of the minutes) and LECM (16% of the minutes). The minutes for this cause in 2024 are 2,7



times those of 2023. The second leading cause of delay is W-Weather (21% of the 2024 total, compared to 24% in 2023 and 25% in 2022), focused on LECB (63% of the minutes due to this cause). The minutes for this cause in 2024 are double those of 2023. The third cause of delay is S-Staffing (2% of the 2024 total, compared to 3% in 2023 and 0,4% in 2022), focused on LECS (47% of the minutes due to this cause) and LECM (31% of the minutes). The minutes for this cause in 2024, which is present every month, are 1,6 times those of 2023. The cause of delay O-Other accounts for 2% of the delay for 2024, mainly due to the July 19 computer failure and various military exercises in other countries.

In GCCC, the delay minutes are mainly due to C-ATC Capacity (71%) and W-Weather (25%), with March and November values standing out.

In LECB the delay minutes are mainly due to C-ATC Capacity (67%) and W-Weather (29%), highlighting the values from June to October. There are almost 22 k min due to O-Other due to various events.

In LECM the delay minutes are mainly due to C-ATC Capacity (78%) and W-Weather (11%), highlighting the increase in S-Staffing and minutes due to various events such as Spanish military exercises (P-Special Event causes), French military exercises (O-Other event causes), etc. .

In LECP, delay minutes are mainly due to C-ATC Capacity (68%) and W-Weather (25%), mainly concentrated from June to September.

In LECS, delay minutes are mainly due to C-ATC Capacity (85%) and W-Weather (11%), with a significant increase in minutes due to both causes compared to the previous year. The presence of S-Staffing occurs every month but the accumulated minutes are similar to those of the previous year.

The alert mechanism continues to be active to warn, months before the end of the year, of possible non-compliance. In 2024 this mechanism was activated to report to the Commission the expected non-compliance of this indicator, which finally occurred.

### **Capacity planning**

Every week Enaire updated data to the NOP Rolling Seasonal Plan (planned sector openings, maximum possible sector openings, sector capacity reductions if any, availability of support to operations staff, additional information -e.g. other constraints to be highlighted- and special events and major projects), covering an outlook of eight weeks. The plan is a living document regularly updated and published by NM in order to be adapted to the changed conditions of the Air Navigation Service. Also a NOP for the 2025-2029 period was elaborated.

Regarding the current status of the main projects planned for 2024:

-Capacity and Quality of Service & Airspace

- LECB ACC:

3 of the 11 projects planned in RP3 for LECB could not be completed on time. FRA, Marseille interface and SACTA iTEC 4.1 are delayed. Nevertheless, 5 new projects have been developed, some of them already completed, such as new weather procedures in LECBCCC sector, Flow reorganization trial, New tools for accurate study and implementation of ATFM measures, IMPACT 2 Complexity manager and Bordeaux interface.



- LECM ACC:

4 of the 12 projects planned in RP3 for LECM could not be completed on time. Cross border Free Route with Lisboa, High sectors, SACTA iTEC 4.1 and Improved coordination & data analysis are delayed. Nevertheless, 4 new projects have been developed, some of them already completed, such as LECMSAN/LECMSAO sectors, Flow reorganization trial, New tools for accurate study and implementation of ATFM measures and IMPACT 2 Complexity manager.

- LECS ACC:

2 of the 10 projects planned in RP3 for LECS could not be completed on time. FRA and SACTA iTEC 4.1. Nevertheless, 3 new projects have been developed, some of them already completed, such as Splitting LECSSUR sector, Flow reorganization trial and New tools for accurate study and implementation of ATFM measures.

- LECP ACC:

3 of the 8 projects planned in RP3 for LECP could not be completed on time. TMA redesign, SACTA iTEC 4.1 and Improved coordination & data analysis are delayed. Nevertheless, 1 new project have been developed, but not yet completed, New tools for accurate study and implementation of ATFM measures.

- GCCC ACC:

4 of the 11 projects planned in RP3 for GCCC could not be completed on time. FRA, Interface with Morocco, SACTA iTEC 4.1 and Improved coordination & data analysis are delayed. Nevertheless, 2 new projects have been developed, some of them already completed, such as New tools for accurate study and implementation of ATFM measures and IMPACT 2 Complexity manager.

### **Application of Corrective Measures for Capacity (if applicable)**

Since June, the targets set for both Spain and each of the 5 ACCs have been exceeded. Although the en-route traffic increase in Spain is very significant, 9,5% compared to 2023, the proportion of increase in ERD indicators has been higher in LECS, LECP and LECB.

In all ACCs the main cause of delay is C-ATC Capacity, representing from 67% in LECB to 85% in LECS. The minutes for this cause in 2024 are 2,7 times those of 2023 and account for 74% of the total minutes of delay. The ERD ATT indicator of attributable causes of delay (CRSTMP) has also not met its target at national level, as well as by region, since June. Just by counting the minutes per C-ATC Capacity, an ERD indicator greater than 0,75 would have been obtained, far exceeding the national target and those of each ACC. The W-Weather delay is not a determining factor, although it contributes to complex situations in some sectors.

The non-compliance of ERD was anticipated before the end of the year and was informed to the Commission according to Regulation (EU) 2019/317 Article 37 (1), concluding that the main reasons that have led to this situation are the increase in traffic over the STATFOR forecast set in 2021 and the inability to accommodate new personnel in the short term. Demand to and from Morocco has increased significantly, causing more saturation in LECS and LECB sectors. Demand drift during the day into the night shift has also led to delays at the end of the day. Most of the delay is originated by collapsed sectors and could have been prevented if additional personnel were available in the OPS room.



As a result of the monitoring of the capacity plan and the evolution of the en-route capacity related projects, both of those initially set out in ESPP3 and the new ones considered in NOP, it was observed that about 30% of the planned projects had not been completed but there were a similar number of new projects, not initially planned, already implemented or under development. Nevertheless, the improvements in capacity obtained after the implementation of the completed projects plus the new projects have not been sufficient to meet the volume of traffic managed as well as the current characteristics of the delay in the different regions, resulting in the non-compliance with the targets.

In the report to the Commission, some of the additional measures planned by ENAIRE were explained. Incorporation of new ATCOs and some of the planned projects such as IMPACT 2 Complexity Manager, improvements of the interfaces with neighboring ACCs, redesign of approach sectors and procedures to improve capacity in Palma and Menorca areas (in LECP) will contribute to the objective of meeting the targets.

Endorse ENAIRE to continue implementing the capacity plan in order to achieve the objectives of delays and better air traffic management, focusing on projects that have an impact on the increase of available capacity, as well as on the implementation of projects that improve operations to manage traffic increases. Consider possible improvements in the management of the number of ATCOs available and the time required for the incorporation of new personnel.

Eight remedial measures have been identified to rectify the situation:

- Continued effort to increase staffing levels and/or availability in all ACCs - ongoing;
- IMPACT 2 Complexity Manager at Barcelona, Canarias and Madrid ACCs- achieved in 2024;
- Improvement of interfaces with neighbouring ACCs - Canarias with Morocco, Madrid with Lisbon and France - continuous;
- Redesign of approach sectors and procedures - improve capacity in the Palma and Menorca areas - 2027 - 2028;
- Split of the GXX sector in Palma ACC - being studied for implementation - due in 2026;
- Split of LECSSUR (LECS) sector - split already made and division level raised to FL355 - in 2024;
- Cross-border FRA - Madrid & Canarias to implement FRA with Lisbon ACC - due in 2025;
- Significant use of scenarios in Madrid, Barcelona and Sevilla ACCs - to manage overloads in upper sectors. Some re-routings to avoid congested areas - achieved in 2024.

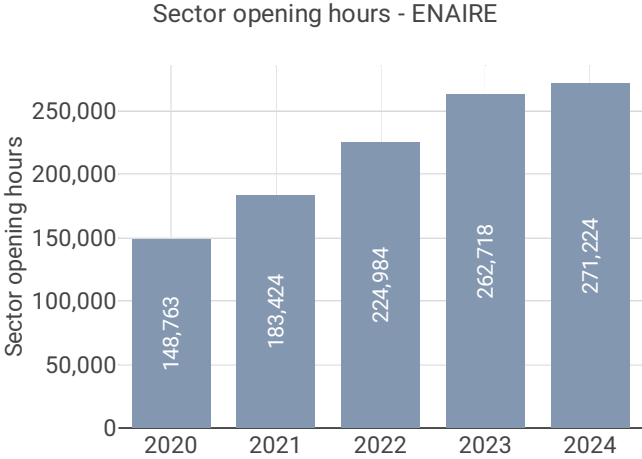
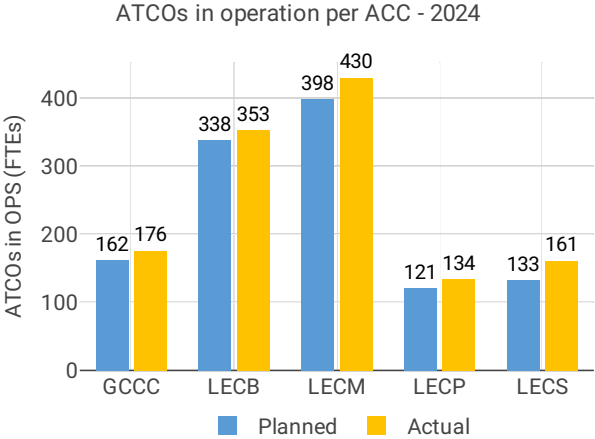
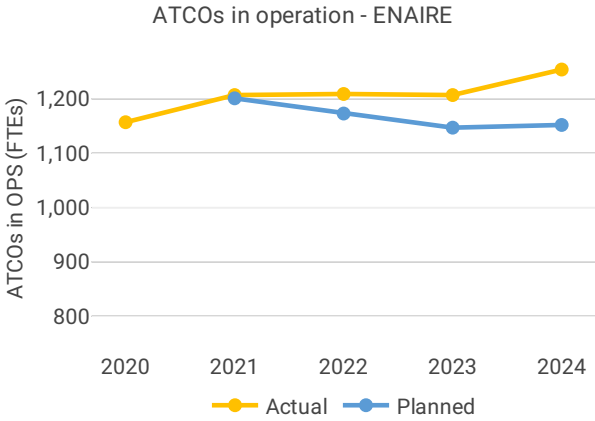
### **En route Capacity Incentive Scheme**

**ENAIRE:** Spain uses an incentive scheme based only on delays attributed to C,R,S,T,M & P delay codes. The CRSTMP target was set at 0.15 minutes per flight and the actual performance is reported as 0.79 minutes per flight (CRSTMP only). This results in a reported penalty of €3 052 565

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**

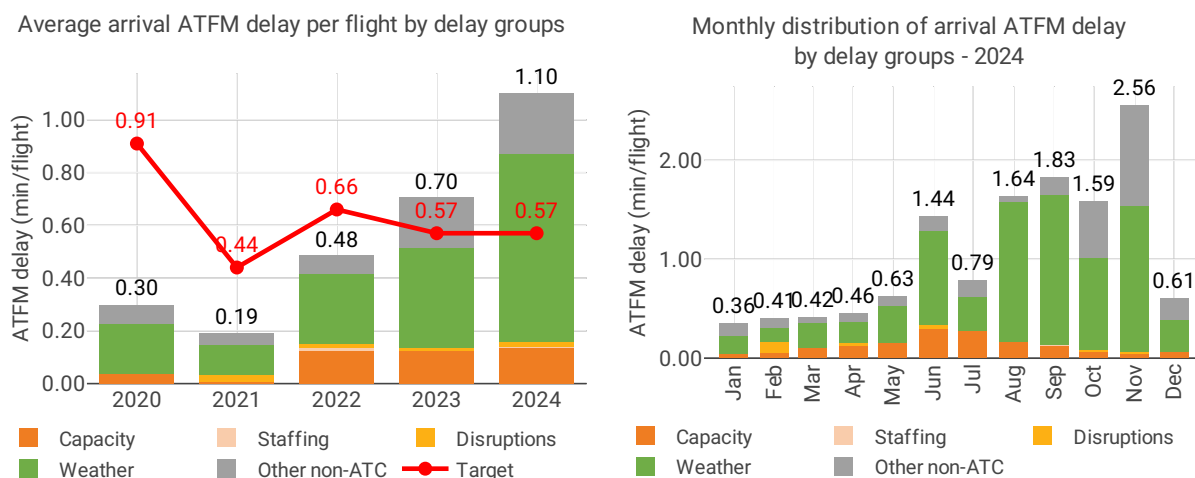
Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs): it's been considered all the operative ATCOs (C4) who started working for all reasons: CMCD, transfer, secondment, article 88 (II ATCOs collective bargaining agreement), new recruitments, unpaid leave return (voluntary or without job post reservation), change of designation, etc.

Number of ATCOs in OPS planned to stop working in the OPS room (FTEs): it's been considered all the operative ATCOs (C4) who stopped working for all reasons: retirements, RAE or RA concessions, dismissals, CMCD, transfer, end of a secondment, end of article 88 application, voluntary unpaid leave, change of designation, etc.



## 4.3 Terminal performance

### 4.3.1 Arrival ATFM delay (KPI#2)



### Focus on arrival ATFM delay

Spain includes seven airports under RP3 monitoring. However in accordance with IR (EU) 2019/317 and the traffic figures, Ibiza is not monitored for pre-departure delays. The Airport Operator Data Flow, necessary for the monitoring of these pre-departure delays, is correctly implemented where required. Nevertheless, the quality of the reporting from 4 of the 6 the Spanish airports does not allow for the calculation of the ATC pre-departure delay, with more than 60% of the reported delay not allocated to any cause.

Traffic at the ensemble of Spanish airports under monitoring in 2024 was 6% higher than in 2019, with an increase of 8% with respect to 2023. Average arrival ATFM delays in 2024 was 1.10 min/arr, compared to 0.70 min/arr in 2023. The national target was not met. ATFM slot adherence remained very high (2023: 98%; 2024: 98.1%).

The national average arrival ATFM delay at Spanish airports in 2024 was 1.10 min/arr, an increase with respect to the 2023 value (0.70 min/arr) and also higher than the 2019 value (1.02 min/arr) and than the SES average for 2024 (0.93 min/arr).

The highest increases were observed at Barcelona (LEBL: 2023: 0.65 min/arr; 2024: 1.61 min/arr), Gran Canaria (GCLP: 2023: 0.52 min/arr; 2024: 1.51 min/arr) and Palma (LEPA: 2023: 1.32 min/arr; 2024: 2.07 min/arr)

65% of the delays at Spanish airports were attributed to Weather followed by 16% to Aerodrome Capacity and 13% to ATC Capacity.

According to the Spanish monitoring report: *The AESA Monitoring Process continues to monitor this indicator on a monthly basis taking into account the different causes of delay, since the incentive system implemented for RP3 considers a mechanism modulated by causes of delay. The evolution of the attributable and non-attributable delay causes is monitored in order to apply the incentive mechanism and to identify the reasons in the event of non-compliance.*

*By 2024 the information related to the Post-Operations Performance (approved Post-Ops cases) distributed by Eurocontrol through the Post-operations performance adjustment process, have been taken into account. By June, 5 of the 7 airports were already failing to meet their target, as*



well as the national target (SPA7), and by September, all of them were already non-compliant. The largest increases in delay have occurred at GCLP and LEBL (3 times more delay than in 2024) and this has led to a significant increase in their respective arrival delay indicators.

Delays were mainly caused by W-Weather (65% of the 2024 total, compared to 53% in 2023 and 54% in 2022), focused on LEBL (47% of the minutes due to this cause) and LEPA (37% of the minutes due to this cause). The minutes for this cause in 2024 are double those of 2023. Weather continues to be the leading cause of delay at national level and in LEBL, LEPA, LEMD and LEIB. Weather is expected to become increasingly important due to the effects of climate change, which is already affecting Spain.

The second leading cause of delay is G-Aerodrome Capacity (16% of the 2024 total, compared to 11% in 2023 and 7% in 2022), focused on GCLP (56% of the minutes due to this cause) and LEMD (29% of the minutes due to this cause). The minutes for this cause in 2024 are 2,5 times those of 2023.

The third cause of delay is C-ATC Capacity (13% of the 2024 total, compared to 18% in 2023 and 26% in 2022), focused on LEPA (43% of the minutes due to this cause) and LEMD (40% of the minutes). There is some improvement in the delay due to this cause because the minutes for this cause in 2024 are similar to those of 2023 despite the increase in traffic.

Delay minutes in GCLP are 13% of the total SPA7 and are mainly due to G-Aerodrome Capacity (73%) and W-Weather (9%), with October and November values standing out.

Delay minutes in LEAL are 0,5% of the total SPA7 and are mainly due to G-Aerodrome Capacity (60%) and E-Aerodrome Services (26%) but they are few minutes.

Delay minutes in LEBL are 34% of the total SPA7 and are mainly due to W-Weather (92%) and V-Environmental Issues (5%), highlighting the values from June to November.

Delay minutes in LEIB are 2% of the total SPA7 and are mainly due to W-Weather (55%) and some minutes due to G-Aerodrome Capacity and E-Aerodrome Services. Delay minutes in LEMD are 17% of the total SPA7 and are mainly due to W-Weather (38%), C-ATC Capacity (29%) and G-Aerodrome Capacity (27%).

Delay minutes in LEMG are 4% of the total SPA7 and are mainly due to C-ATC Capacity (37%), W-Weather (29%) and G-Aerodrome Capacity (26%), with a significant increase in minutes due to C-ATC Capacity and G-Aerodrome Capacity compared to the previous year.

Delay minutes in LEPA are 30% of the total SPA7 and are mainly due to W-Weather (80%) and C-ATC Capacity (18%).

Regarding the particularity of the LEAL and LEIB airports, in which different ANSPs are involved, from 2023 onwards it is necessary to differentiate TAD value for LEAL and LEIB aerodromes for incentive purposes. LEAL and LEIB arrival delay can be differentiate between SKYWAY (Aerodrome ATC service provider) and ENAIRE (Approach ATC service provider). According the document "Monitoring of delays in arrivals in RP3 for Alicante and Ibiza airports" prepared by AESA, the part of delay that would correspond to ENAIRE or SKYWAY (previously FerroNATS) for these two airports would be as follows:

- LEAL: ENAIRE: 0,00 min/flight. SKYWAY: 0,07 min/flight. A few minutes due to E-Aerodrome Services and G-Aerodrome Capacity mainly. Attributable delay causes is zero for both providers.



- LEIB: ENAIRE: 0,12 min/flight . SKYWAY: 0,31 min/flight. Delay minutes due to W-Weather, G-Aerodrome Capacity and E-Aerodrome Services, so more minutes are allocated to the TWR-AD environment than to the APP-TMA environment. Attributable delay causes is zero for both providers.

The alert mechanism continues to be active to warn, months before the end of the year, of possible non-compliance. In 2024 this mechanism was activated to report to the Commission the expected non-compliance of this indicator, which finally occurred.

Identification and analysis by the NSA of the underlying reasons or circumstances having led to the performance target not being achieved

The targets have been exceeded both at the Spanish level and at the 7 airports. W-Weather was the first cause of delay at national level and very significant at LEBL and LEPA, G-Aerodrome Capacity was the next cause due to the minutes accumulated mainly at GCLP and LEMD, C-ATC Capacity was the third cause globally and the most significant at LEMG, the only airport where, considering only this cause of delay, its target would have already been failed to be met. Globally (SPA7) the delay minutes for W-Weather and G-Aerodrome Capacity are double compared to 2023 but those for C-ATC Capacity are similar.

Although the arrival traffic increase in Spain is very significant, 10% compared to 2023, the proportion of increase in TAD indicators has been higher in LEBL, LEPA and GCLP.

The TAD ATT indicator of attributable causes of delay (CRSTMP) has also not met its target at national level, as well as at 4 of the 7 airports (LEMD, LEPA, LEMG and GCLP).

The non-compliance of TAD was anticipated before the end of the year and was informed to the Commission according to Regulation (EU) 2019/317 Article 37 (1), concluding that the main reasons that have led to this situation are meteorological issues especially in the warm Mediterranean Sea. Lack of capacity in LEMD because of implementation of parallel independent approaches and TCAS notifications. Environmental concerns in LEPA that have been delaying implementation of capacity improving projects. Shifts in demand during the day that bring higher than expected traffic counts to the night shift in LEPA and LEMG. Significantly increase of demand to LEMG. In GCLP the main factor has been Aerodrome Capacity, additionally between September and November 2024, the transition plan for the introduction of the new procedures reduced capacities causing some delay.

As a result of the monitoring of the capacity plan and the evolution of the arrival capacity related projects initially set out in ESPP3, it was observed that about 41% of the planned projects had not been completed but there were a similar number of new projects, not initially planned, already implemented or under development. Nevertheless, the improvements in capacity obtained after the implementation of the completed projects plus the new projects have not been sufficient to meet the volume of traffic managed as well as the current characteristics of the delay in the different regions, together with the occurrence of bad weather, resulting in the non-compliance with the targets.

Recommendations to the ANSP to rectify the situation

In the report to the Commission, some of the additional measures planned by ENAIRE were explained. Manual TWR, Auto-switch, RECAT departures and Improved procedures in LEPA approach will contribute to the objective of meeting the targets. An improvement in LEMD with the implementation of simultaneous parallel independent approaches in South Configuration.



*New dynamic procedures in LEBL which enable peak capacities of 42 arrivals/hour. The introduction of configurations of three sectors will increase capacity in LEMG and in the TMA. New*

*Encourage ENAIRE to continue implementing the capacity plan in order to achieve the objectives of delays and better air traffic management, focusing on projects that have an impact on the increase of available capacity, as well as on the implementation of projects that improve operations to manage traffic increases. An extra effort to find projects that can reduce the bad weather delay despite the unpredictable nature of this delay would be desirable.*

*What action has the NSA taken to check/monitor the implementation of those measures and what further actions (if any) are planned during the ongoing calendar year? AESA performs several monitoring activities, particularly that of the KPIs associated with a target to be met, which is monitored on a monthly and annual basis. With them, it is possible to keep track of the evolution of the indicators and to maintain an adequate coordination and communication with the parties involved.*

*Additionally, before the end of the year and having previously made a forecast of the possible final values of the KPIs, AESA monitors the implementation status of the projects mentioned in the ESPP3 Performance Plan as well as new projects that may have been included in the NOP and ERNIP and that can have a positive effect in the capacity area, in order to know their evolution as well as the impact on the corresponding indicators. The measures are being implemented and future improvements are expected to be observed in the coming years. AESA will continue its monitoring activities in the new RP4 reference period.*

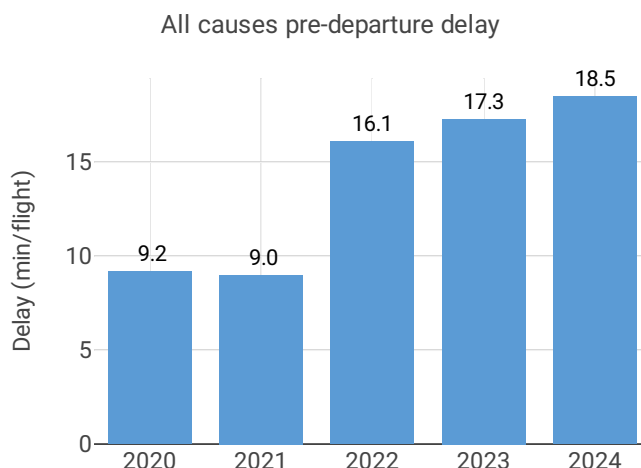
*Monitoring activities continue during the fourth reporting period (RP4). As the year progresses and with the existing follow-up mechanisms thanks to monthly monitoring, if this risk of non-compliance materializes, it will be notified to the Commission according to Regulation (EU) 2019/317 Article 37(1).*

Spain's performance plan sets a national target on arrival ATFM delay for 2024 of 0.57 min/arr. This target was not met, with an actual performance of 1.10 min/arr. The incentive scheme uses modulated pivot values limited to CRSTMP delay causes. According to the Spanish monitoring report, this pivot value for CRSTMP is 0.168 min/arr in 2024 and based on the attribution of the regulation reason, the actual CRSTMP value for 2024 was 0.172 min/arr, which falls within the dead band.

The NSA calculates therefore no bonus or penalty.



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



Airport level										
Airport name	Avg arrival ATFM delay (KPI#2)					Slot adherence (PI#1)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.02	0.00	0.00	0.07	0.07	98.8%	99.7%	99.1%	99.3%	99.5%
Barcelona	0.12	0.06	0.52	0.65	1.61	94.9%	98.7%	99.0%	99.2%	99.3%
Ibiza	NA	0.09	0.40	0.71	0.43	99.0%	98.6%	99.1%	99.6%	99.5%
Las Palmas	0.97	0.44	0.46	0.52	1.51	96.4%	95.5%	98.3%	96.8%	97.5%
Madrid/Barajas	0.49	0.27	0.35	0.69	0.69	94.2%	96.6%	97.4%	97.1%	97.4%
Malaga	0.01	0.02	0.11	0.49	0.40	93.4%	95.0%	95.2%	94.8%	95.0%
Palma De Mallorca	0.05	0.29	1.13	1.32	2.07	97.3%	96.8%	97.9%	98.9%	98.7%

Airport name	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.23	0.23	0.51	0.67	0.63	9.0	8.1	17.4	19.4	19.0
Barcelona	0.00	0.04	0.09	NA	NA	8.7	8.3	15.8	17.1	19.0
Ibiza	NA	NA	0.00	NA	0.12	6.3	9.1	19.7	21.1	20.7
Las Palmas	0.08	0.05	0.29	0.23	0.17	11.3	9.4	15.0	16.1	17.2
Madrid/Barajas	NA	NA	0.04	NA	NA	9.5	9.7	13.1	14.9	16.6
Malaga	0.18	NA	0.52	0.48	0.52	11.3	10.9	19.1	20.8	21.2
Palma De Mallorca	NA	NA	0.30	0.35	0.03	5.4	8.2	20.0	20.6	22.9

## Focus on performance indicators at airport level

### ATFM slot adherence

All Spanish airports showed adherence around or above 95% and the national average was 98.1%. With regard to the 2% of flights that did not adhere, 1.4% were early and 0.6% were late.

The Spanish monitoring reports adds: *The result for 2024 (aggregate of the 7 airports subject to monitoring) improves by 0,1% the result of the previous year, being all results well above the value of 80% set in Regulation (EU) No. 255/2010 of the Commission. ANSPs does not believe it is necessary to establish specific improvement measures. This PI is being monitored by AESA to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*



## ATC pre-departure delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at all 6 Spanish airports subject to monitoring of this indicator. However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes).

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport.

Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL. The high share of unidentified delay reported by 4 out of the 6 Spanish airports under monitoring prevent the calculation of this indicator. At Alicante the delay slightly decreased in 2024 (LEAL; 2022: 0.51 min/dep.; 2023: 0.68 min/dep.; 2024: 0.63 min/dep.). At Malaga the indicator resulted in an annual average of 0.53 min/dep.

According to the Spanish monitoring report: *LEBL and LEMD do not report data for any month. GCLP and LEIB report around half of the months while LEPA only reports 2 months. Only LEAL and LEMG provides data every month. At some airports, such as LEMG and LEIB, data collection has slightly improved compared to 2023.*

*LEIB already reached 80k movements in 2023 and it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. This PI is being monitored by AESA to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder. There has been no change compared to previous years.*

*During 2022 AESA focused on investigating the origin of the lack of data. The delay represented in this indicator is related to IATA code 89 and AESA was able to confirm that the lack of data was due to the fact that these data did not meet the minimum quality required to be considered. PRU sets a minimum threshold on the quality of its data, so if codes ZZZ and 999 exceed 40% of the delay minutes, then the indicator is not published with a numerical value, as it exceeds that minimum threshold set by PRU. Sometimes it happens that the airport operator has no information on the reasons for the delay or it cannot be associated with an IATA code. After several communications with the airport manager, AESA has understood that codes ZZZ and 999 are generally assigned when no code has been given (and therefore the cause of the delay is not known) or when the actual delay does not match the declared delay. The indicator picks*



*up the initial declared delay data but this is subject to change and so there are occasions when it does not match the actual delay. This is why there is so much indeterminacy represented by these ZZZ and 999 codes.*

*There does not seem to be a simple resolution to this situation since the data needed to publish the indicator is collected around the middle of the following month and the process of defining the codes that are more in line with reality is done through a post-operational analysis that takes considerably longer.*

### **All causes pre-departure delay**

The total (all causes) delay in the actual off block time at Spanish airports in 2024 increased once again at 5 of the 6 airports monitored for this indicator. The highest pre-departure delays were observed at Palma (LEPA: 2020: 5.44 min/arr; 8.20 min/arr; 2022: 19.98 min/dep; 2023: 20.62 min/dep; 2024: 22.89 min/dep) and Malaga (LEMG: 2020: 11.33 min/arr; 10.86 min/arr; 2022: 19.14 min/dep; 2023: 20.85 min/dep; 2024: 21.20 min/dep).

*According to the Spanish monitoring report: In general, 2024 values are higher than the 2020-2023 values. The indicator is worsening mainly due to the increase in traffic this year, which at some airports (LEBL and GCLP) has reached an increase of 9% compared to the registered traffic in 2023. The evolution of the indicator throughout 2024 is upward in the first half of the year and then remains stable until the end of the year, this behaviour is given in almost every airport considered in ESPP3 (except GCLP). The aggregated result for 2024 (of the 6 airports subject to monitoring) is 19,06 min/dep, which continues to worsen compared to 2023 (17,57 min/dep) or 2022 (16,20 min/dep).*

*This type of delay seems to increase when the number of movements grows. The historical series with only 5 years (2020-2024) is very small because 2020-2021 are special years and therefore the behaviour of 2022-2024, being only three years, might not be extrapolable for future years considering that ENAIRE has reached its maximum historical level of traffic in 2024.*

*In addition, all cause departure delay is very generic and ATFM delay is only a small contributor. Departure delay can be generated by ATFM en-route delay (not only local airport, but the complete Network), but also reactionary and turnaround delay, technical issues with the aircraft, airport operations, problems with passengers and/or luggage, etc. In other words, it is not always possible to address a specific reason as this delay is quite generic. Consequently, without a clear focus of the problem to address, it is not feasible to establish measures that can significantly impact the improvement of the indicator, beyond those already mentioned in section 2.2.2.C PI #3 of this monitoring report.*

*This PI is being monitored by AESA to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder.*



## 5 COST-EFFICIENCY - SPAIN

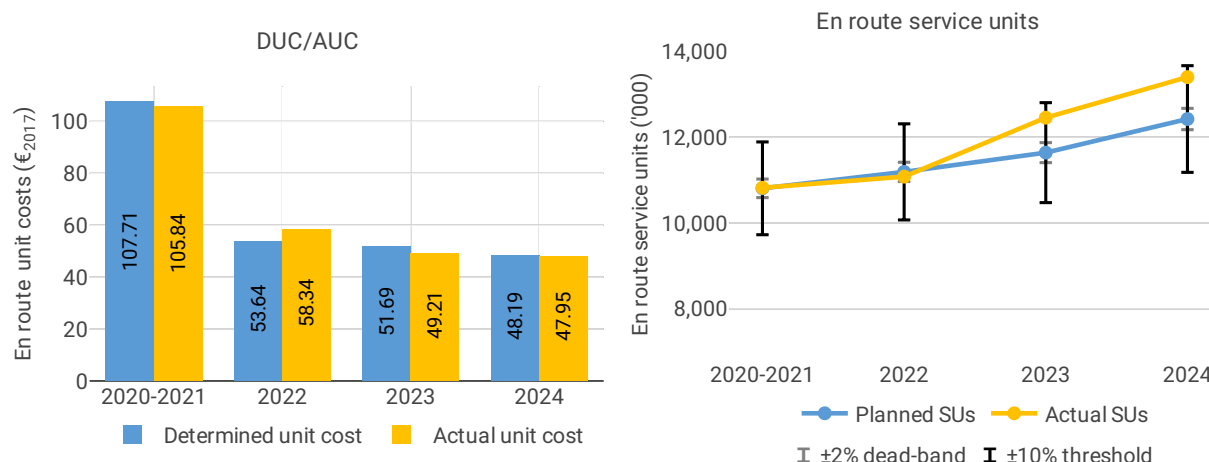
### 5.1 PRB monitoring

- The en route 2024 actual unit cost of Spain Continental was 47.95€2017, -0.5% lower than the determined unit cost (48.19€2017). The en route 2024 actual unit cost of Spain Canarias was 46.38€2017, -14% lower than the determined unit cost (53.93€2017). The terminal 2024 actual unit cost was 93.28 €2017, -12% lower than the determined unit cost (106.28€2017).
- The en route 2024 actual service units of Spain Continental (13.4M) were +7.9% higher than the determined service units (12.4M). The en route 2024 actual service units of Spain Canarias (2.1M) were +20% higher than the determined service units (1.8M).
- The en route 2024 actual total costs of Spain Continental were +44M€2017 (+7.3%) higher than determined. The gap is mainly driven by higher than expected staff costs for ENAIRE (+32M€2017, or + 9.1%). The NSA explains that this is “mainly due to obligations derived by national laws on Public Employees salary and on Social Security Scheme National Law”, as well as the recruitment of new ATCOs and a court ruling mandating ENAIRE to pay back salaries related to promotions.
- The en route 2024 actual total costs of Spain Canarias were +3.0M€2017, (+3.2%) higher than determined. As for the Continental charging zone, the differences mainly resulting from ENAIRE staff costs (+3.2M€2017, or +6.2%).
- ENAIRE costs of investments were 149M€2017 in 2024 for both en route and terminal charging zones, +8.5% higher than determined (137M €2017). This is mainly due to higher cost of capital (+10M€, or + 31%), which the NSA attributed to a higher WACC rate than planned, and an increase in the total asset base.
- The en route Spain Continental actual unit cost incurred by users in 2024 was 57.26€ (+12% higher than the 2024 DUC), while the en route Spain Canarias actual unit cost incurred by users in 2024 was 48.03€ (-16% lower than the 2024 DUC). The terminal actual unit cost incurred by users in 2024 was 30.61€ (-73% lower than the 2024 DUC). The difference between the AUCU and the DUC for the en route charging zones is primarily attributed to the cross-financing adjustment of 20M€ from Spain Canarias to Spain Continental. For the terminal charging zone the difference between the AUCU and DUC is mainly due to adjustment of other revenues.



## 5.2 En route charging zone - Spain Continental

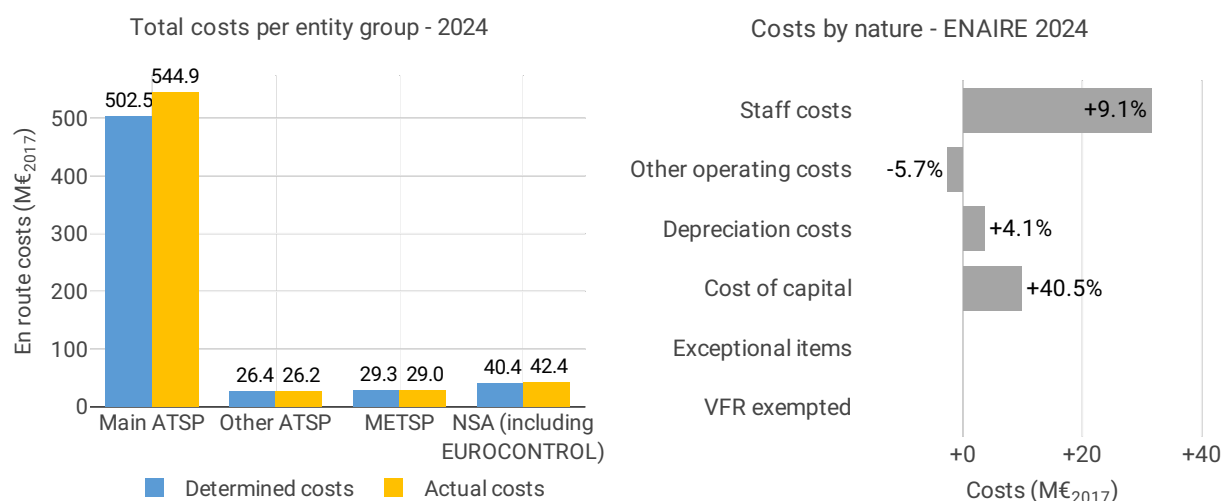
### 5.2.1 Unit cost (KPI#1)



#### Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	1,180	717	692	741
Determined costs	1,191	622	630	634
Difference costs	-11	95	62	108

Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	1.3%	1.5%	1.6%
Determined inflation index	NA	104.9	106.5	108.2
Actual inflation rate	NA	8.3%	3.4%	2.9%
Actual inflation index	NA	114.4	118.2	121.7
Difference inflation index (p.p.)	NA	+9.5	+11.8	+13.5



## Focus on unit cost

### AUC vs. DUC

In 2024, the en route AUC was -0.5% (or -0.24 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TSUs (+7.9%) and significantly higher than planned en route costs in real terms (+7.3%, or +43.9 M€2017). It should be noted that the actual inflation index in 2024 was +13.5 p.p. higher than planned.

### En route service units

The difference between the 2024 actual and planned TSUs (+7.9%) falls outside the  $\pm 2\%$  dead-band, but does not exceed 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

The 2024 actual real en route costs are +7.3% (+43.9 M€2017) higher than planned. This is the result of higher than planned costs for the main ANSP, ENAIRE (+8.5%, or +42.5 M€2017) and the NSA/EUROCONTROL (+4.9%, or +2.0 M€2017) and lower than planned costs for the other ANSP (EA, -0.8%, or -0.2 M€2017) and the MET SP (-1.2%, or -0.3 M€2017).

### En route costs for the main ANSP at charging zone level

Significantly higher than planned en route costs in real terms for ENAIRE in 2024 (+8.5%, or +42.5 M€2017) result from:

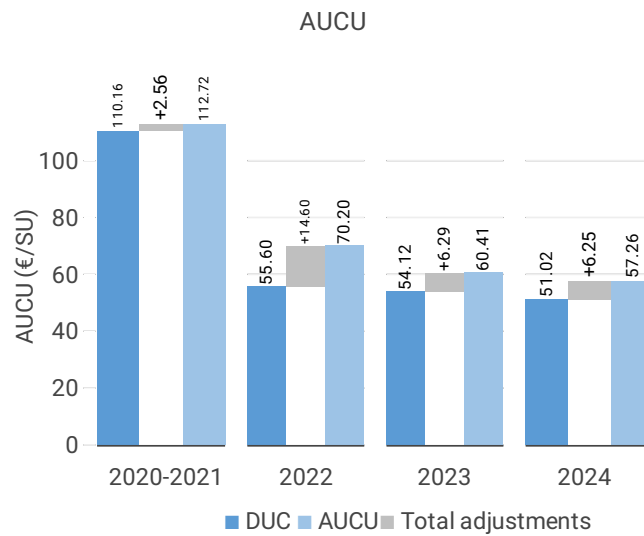
- Significantly higher than planned staff costs (+9.1%), mainly due to “*obligations derived by national laws on Public Employees salary and on Social Security Scheme National Law, (...) “Special Active Reserve” introduced by a national Law 26/2022 of 19 December (...) Judgment 1225/2024 of 30 October 2024, from the Supreme Court (...), in which ENAIRE (has) to pay 12.1 M€ outstanding salaries to air traffic controllers (...) for year 2024*”
- Significantly lower other operating costs (-5.7%) in real terms due to the impact of the inflation index (+13.5 p.p.) since, in nominal terms, operating costs were above the plan (+6.1%) reflecting mainly “*rise in energy costs*”;
- Higher depreciation costs (+4.1%),
- Significantly higher cost of capital (+40.5%), due to higher actual asset-base and higher than planned average interest rate on debts (2.9% vs 0.9% planned).

### RP3 summary

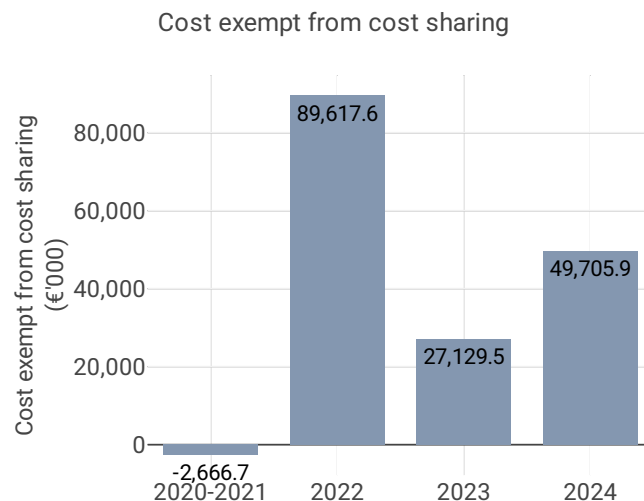
When considering the whole of RP3 (2020-2024) for Spain en route charging zone, actual TSUs are +3.7% higher than planned, while actual costs in real terms are +2.8% higher than the determined costs (some +82.4 M€2017). As a result, the weighted average actual unit cost over RP3 (63.81 €2017) is -0.9% lower than planned in the PP (64.36 €2017).



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

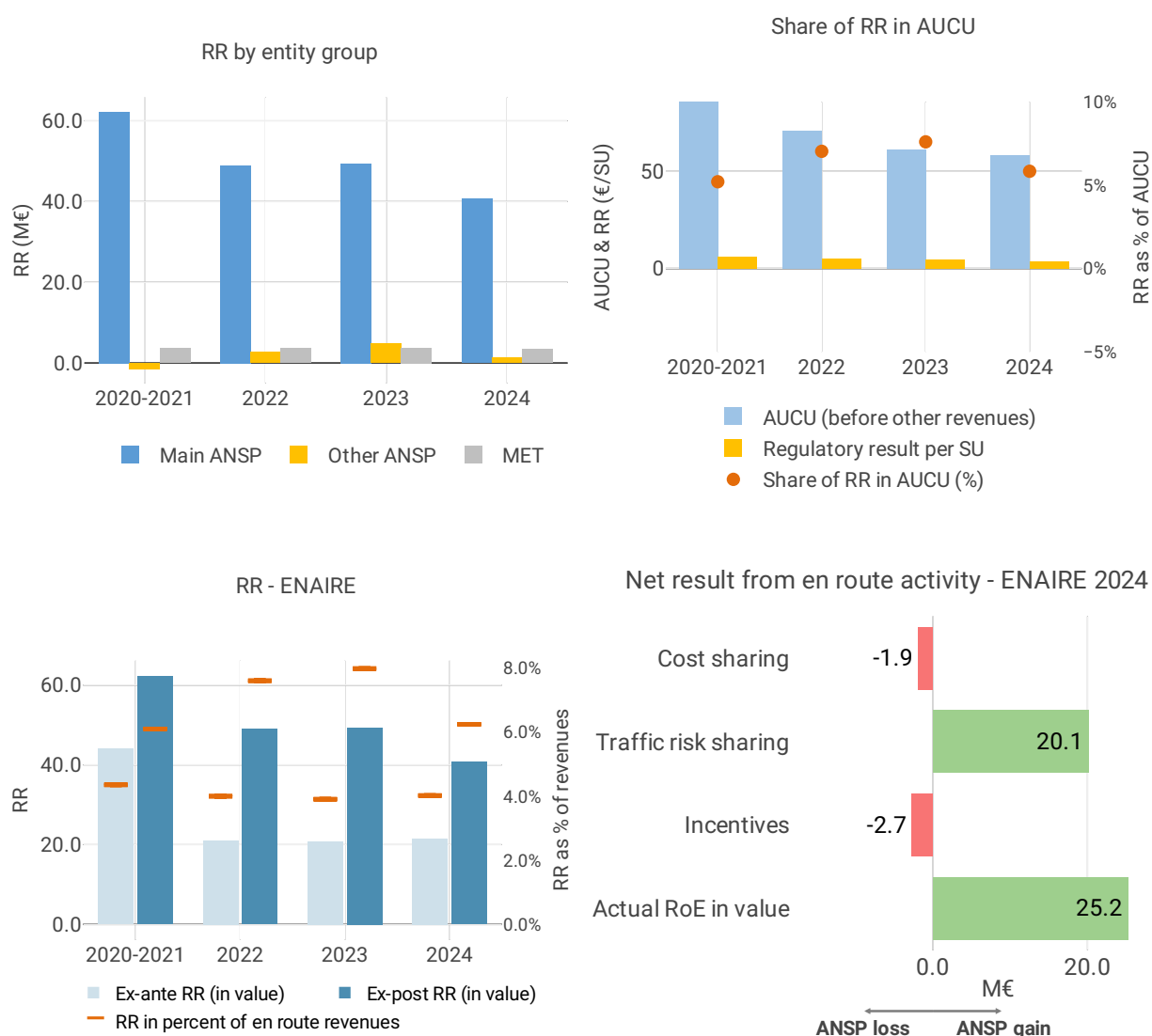


AUCU components (€/SU) - 2024	
<b>Components of the AUCU in 2024</b>	<b>€/SU</b>
<b>DUC</b>	<b>51.02</b>
Inflation adjustment	4.32
Cost exempt from cost-sharing	3.71
Traffic risk sharing adjustment	-1.64
Traffic adj. (costs not TRS)	-0.58
Financial incentives	-0.20
Modulation of charges	0.00
Cross-financing	1.53
Other revenues	-0.89
Application of lower unit rate	0.00
Total adjustments	6.25
<b>AUCU</b>	<b>57.26</b>
<b>AUCU vs. DUC</b>	<b>+ 12.2%</b>



Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	€'000	€/SU
New and existing investments	14,076.8	1.05
Competent authorities and qualified entities costs	488.2	0.04
Eurocontrol costs	1,479.5	0.11
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	33,661.5	2.51
<b>Total cost exempt from cost risk sharing</b>	<b>49,705.9</b>	<b>3.71</b>

### 5.2.3 Regulatory result (RR)



## Focus on regulatory result

**ENAIRE (Continental) net loss on activity in the Spain Continental en route charging zone in the year 2024**



ENAIRE (Continental) reported a net gain of +15.5 M€, as a combination of a loss of -1.9 M€ arising from the cost sharing mechanism, with a gain of +20.1 M€ arising from the traffic risk sharing mechanism and a loss of -2.7 M€ relating to financial incentives.

### ENAIRE (Continental) overall regulatory result (RR) for the en route activity

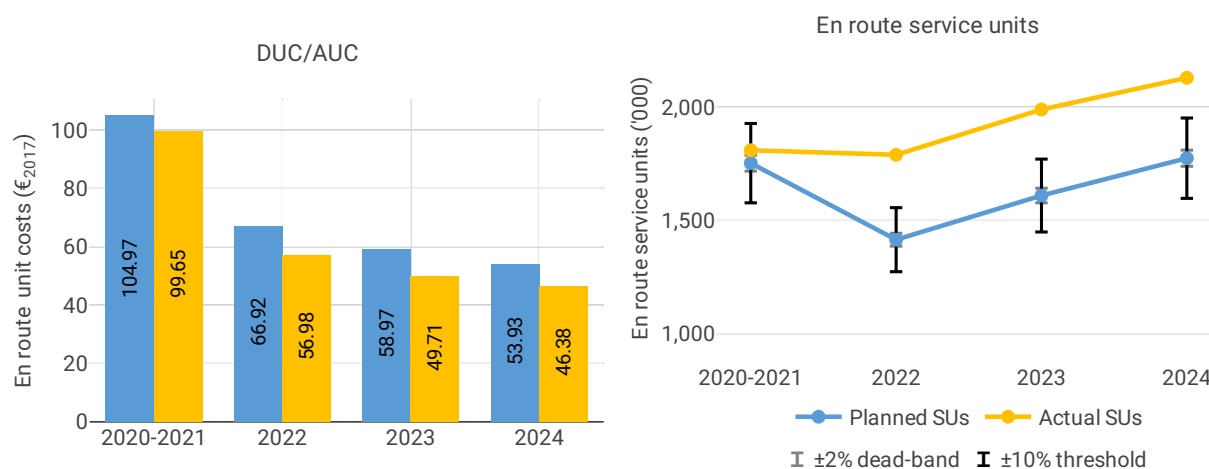
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+15.5 M€) and the actual RoE (+25.2 M€) amounts to +40.7 M€ (6.2% of the en route revenues). The resulting ex-post rate of return on equity is 14.0%, which is higher than the 8.6% planned in the PP.

### RP3 summary

When considering the whole of RP3 (2020-2024), ENAIRE (Continental) generated a cumulative gain in respect of cost sharing of +62.1 M€, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated a gain of +34.7 M€. Adding the loss of -5.3 M€ to be retained by the ATSP in respect of financial incentives and the actual RoE (+109.8 M€ over RP3) leads to an overall regulatory result of +201.3 M€, which corresponds to an average ex-post rate of return on equity of 13.7% (compared to 7.4% initially planned in the PP).

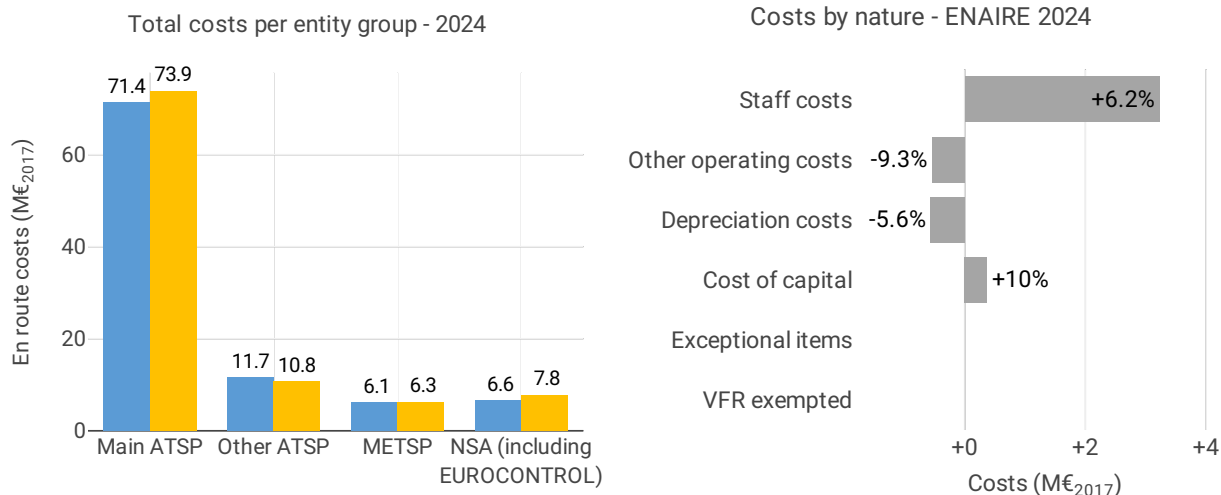
## 5.3 En route charging zone - Spain Canarias

### 5.3.1 Unit cost (KPI#1)



Actual and determined data				
name	2020-2021	2022	2023	2024
Actual costs	186	113	112	115
Determined costs	188	98	100	102
Difference costs	-2	15	13	13
Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	1.3%	1.5%	1.6%
Determined inflation index	NA	104.9	106.5	108.2
Actual inflation rate	NA	8.3%	3.4%	2.9%
Actual inflation index	NA	114.4	118.2	121.7
Difference inflation index (p.p.)	NA	+9.5	+11.8	+13.5





## Focus on unit cost

### AUC vs. DUC

In 2024, the en route AUC was -14.0% (or -7.55 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TSUs (+20.0%) and higher than planned en route costs in real terms (+3.2%, or +3.0 M€2017). It should be noted that the actual inflation index in 2024 was +13.5 p.p. higher than planned.

### En route service units

The difference between the 2024 actual and planned TSUs (+20.0%) 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

The 2024 actual real en route costs are +3.2% (+3.0 M€2017) higher than planned. This is the result of higher than planned costs for the main ANSP, ENAIRE (+3.5%, or +2.5 M€2017), the NSA/EUROCONTROL (+18.5%, or +1.2 M€2017) and the MET service provider (+3.5%, or +0.2 M€2017) and lower than planned costs for the other ANSP (EA, -7.6%, or -0.9 M€2017).

### En route costs for the main ANSP at charging zone level

Higher than planned en route costs in real terms for ENAIRE in 2024 (+3.5%, or +2.5 M€2017) result from:

- Significantly higher than planned staff costs (+6.2%), mainly due to “obligations derived by national laws on Public Employees salary and on Social Security Scheme National Law, (...)” “Special Active Reserve” introduced by a national Law 26/2022 of 19 December (...) Judgment 1225/2024 of 30 October 2024, from the Supreme Court (...), in which ENAIRE (has) to pay 12.1 M€ outstanding salaries to air traffic controllers (...) for year 2024”,
- Significantly lower other operating costs (-9.3%) in real terms due to the impact of the inflation index (+13.5 p.p.) since, in nominal terms, operating costs were above the plan (+2.0%),
- Significantly lower than planned depreciation costs (-5.6%),

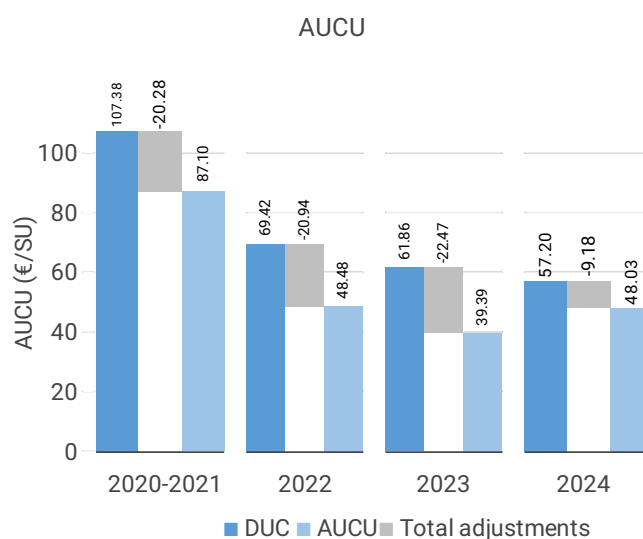


- Significantly higher cost of capital (+10.0%), mainly due to higher than planned average interest rate on debts (2.9% vs 0.9% planned).

### RP3 summary

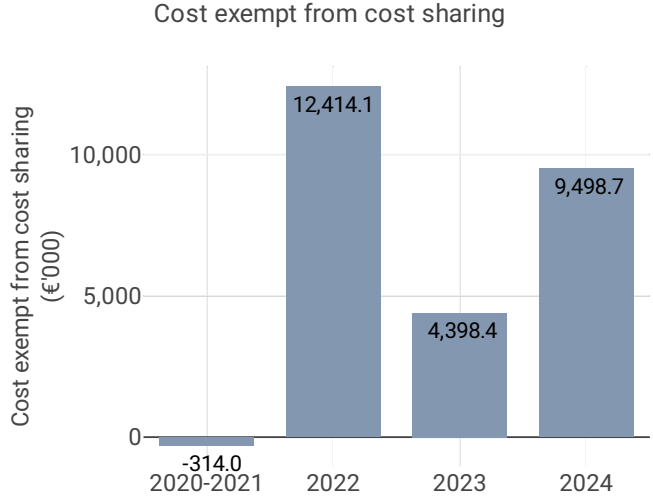
When considering the whole of RP3 (2020-2024) for Spain Canarias en route charging zone, actual TSUs are +17.8% higher than planned, while actual costs in real terms are +2.3% higher than the determined costs (some +10.8 M€2017). As a result, the weighted average actual unit cost over RP3 (62.19 €2017) is -13.2% lower than planned in the PP (71.62 €2017).

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



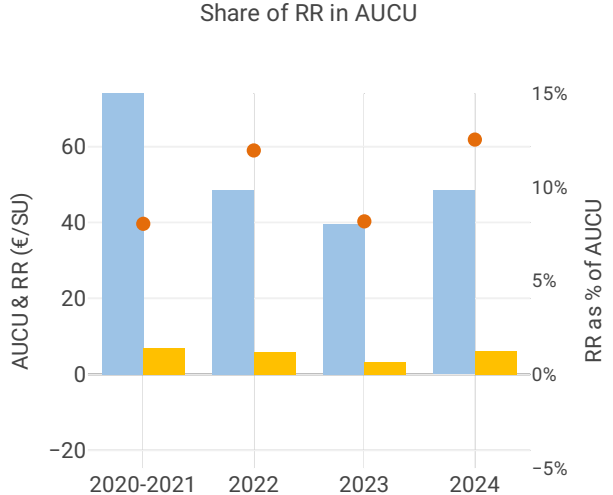
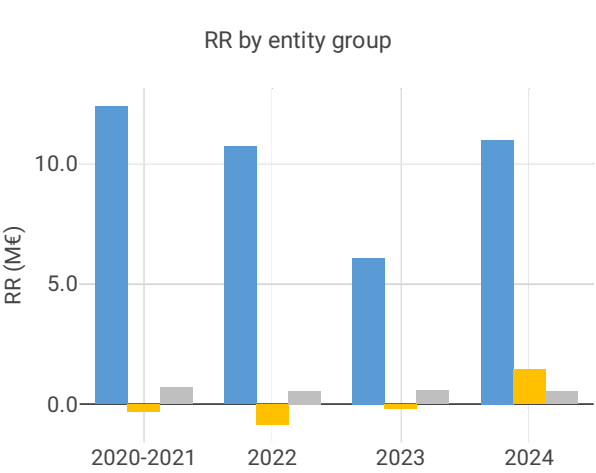
AUCU components (€/SU) - 2024	
Components of the AUCU in 2024	€/SU
<b>DUC</b>	<b>57.20</b>
Inflation adjustment	4.50
Cost exempt from cost-sharing	4.46
Traffic risk sharing adjustment	-5.56
Traffic adj. (costs not TRS)	-2.39
Financial incentives	-0.18
Modulation of charges	0.00
Cross-financing	-9.62
Other revenues	-0.39
Application of lower unit rate	0.00
Total adjustments	-9.18
<b>AUCU</b>	<b>48.03</b>
<b>AUCU vs. DUC</b>	<b>-16.0%</b>

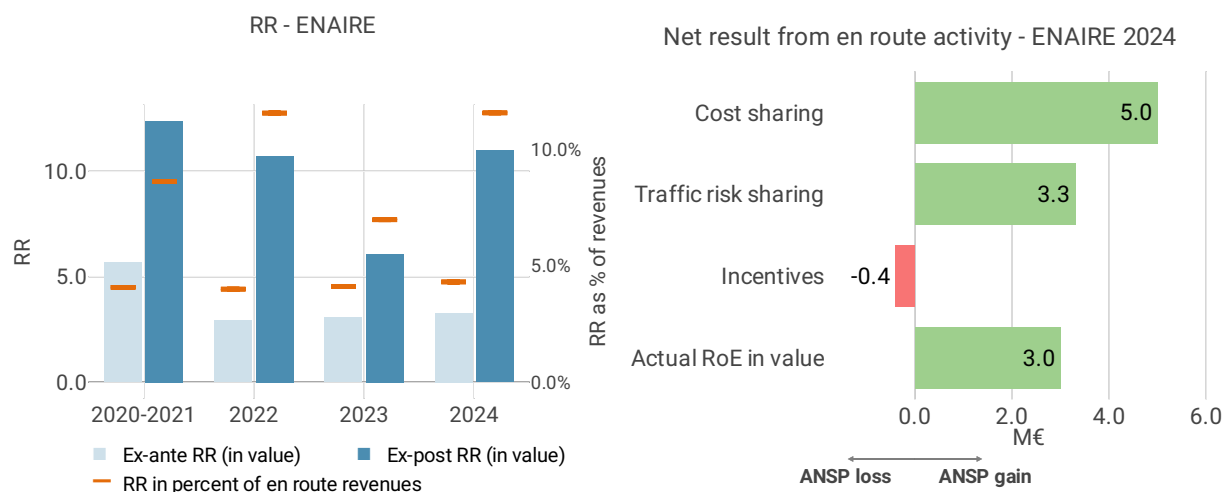




Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	€'000	€/SU
New and existing investments	-83.5	-0.04
Competent authorities and qualified entities costs	170.1	0.08
Eurocontrol costs	1,050.0	0.49
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	8,362.0	3.93
<b>Total cost exempt from cost risk sharing</b>	<b>9,498.7</b>	<b>4.46</b>

5.3.3 Regulatory result (RR)





## Focus on regulatory result

### ENAIRE net loss on activity in the Spain Canarias en route charging zone in the year 2024

ENAIRE reported a net gain of +8.0 M€, as a combination of a gain of +5.0 M€ arising from the cost sharing mechanism, with a gain of +3.3 M€ arising from the traffic risk sharing mechanism and a loss of -0.4 M€ relating to financial incentives.

### ENAIRE 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 (+8.0 M€) and the actual RoE (+3.0 M€) amounts to +11.0 M€ (11.6% of the en route revenues). The resulting ex-post rate of return on equity is 31.7%, which is higher than the 8.6% planned in the PP.

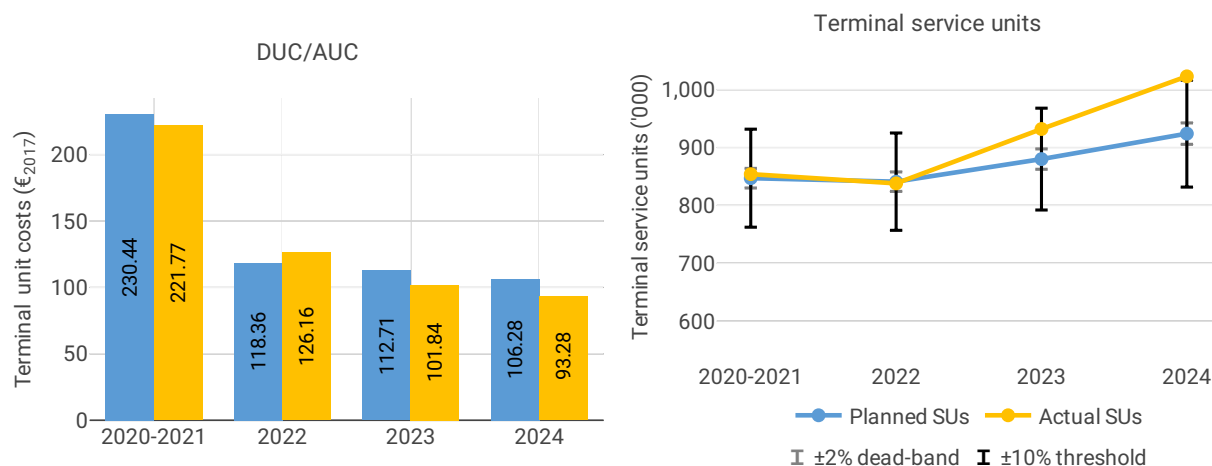
### RP3 summary

When considering the whole of RP3 (2020-2024), ENAIRE generated a cumulative gain in respect of cost sharing of +14.5 M€, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated a gain of +13.2 M€. Adding the loss of -0.8 M€ to be retained by the ATSP in respect of financial incentives and the actual RoE (+13.2 M€ over RP3) leads to an overall regulatory result of +40.2 M€, which corresponds to an average ex-post rate of return on equity of 22.6% (compared to 7.5% initially planned in the PP).



## 5.4 Terminal charging zone

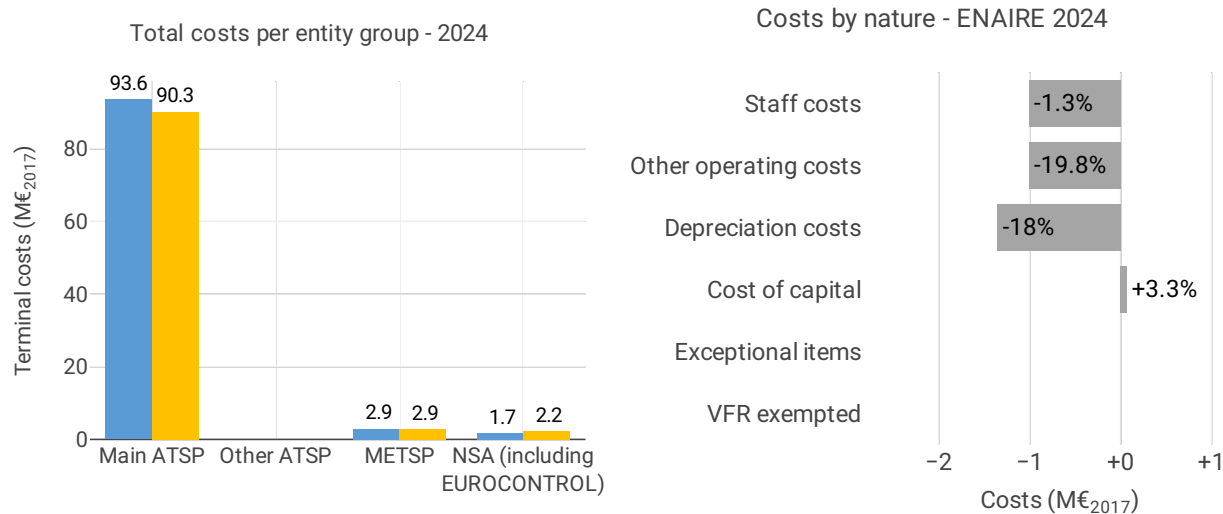
### 5.4.1 Unit cost (KPI#1)



#### Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	196	119	110	114
Determined costs	201	104	105	105
Difference costs	-4	16	5	8

Inflation assumptions	2020-2021	2022	2023	2024
Determined inflation rate	NA	1.3%	1.5%	1.6%
Determined inflation index	NA	104.9	106.5	108.2
Actual inflation rate	NA	8.3%	3.4%	2.9%
Actual inflation index	NA	114.4	118.2	121.7
Difference inflation index (p.p.)	NA	+9.5	+11.8	+13.5



## Focus on unit cost

### AUC vs. DUC

In 2024, the terminal AUC was -12.2% (or -12.99 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TNSUs (+10.7%) and lower than planned terminal costs in real terms (-2.9%, or -2.8 M€2017). It should be noted that the actual inflation index in 2024 was +13.5 p.p. higher than planned.

### Terminal service units

The difference between 2024 actual and planned TNSUs (+10.7%) 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

The 2024 actual real terminal costs are -2.9% (-2.8 M€2017) lower than planned. This is the result of lower than planned costs for the main ANSP, ENAIRE (-3.5%, or -3.3 M€2017) and the MET SP (-1.3%) and higher than planned costs for the NSA (+30.1%, or +0.5 M€2017).

### Terminal costs for the main ANSP at charging zone level

Lower than planned terminal costs in real terms for ENAIRE in 2024 (-3.5%, or -3.3 M€2017) are affected by the impact of inflation index (+13.5 p.p.) since, in nominal terms, the costs were slightly above planned (+7.6%). The variation in real terms results from:

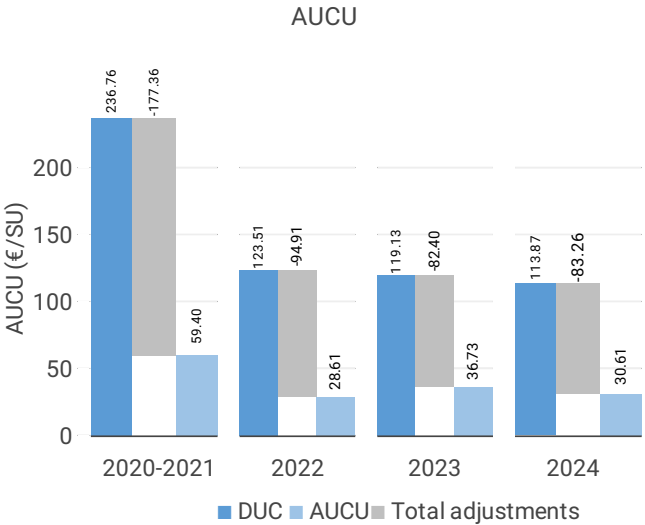
- Slightly lower than planned staff costs in real terms (-1.3%), although higher than planned in nominal terms (+11.0%), mainly due to “(...) *obligations derived by national laws on Public Employees salary and on Social Security Scheme National Law, (...)” Special Active Reserve” introduced by a national Law 26/2022 of 19 December (...) Judgment 1225/2024 of 30 October 2024, from the Supreme Court (...), in which ENAIRE (has) to pay 12.1 M€ outstanding salaries to air traffic controllers (...) for year 2024”,*
- Significantly lower other operating costs (-19.8%), mainly due to “*cost containment measures (...) across all categories of expenditure (...)”*,”
- Significantly lower depreciation cost (-18.0%), mainly due to “*a lower percentage of asset base cost allocation in the TNC charging zone (...)”*,”
- Higher cost of capital (+3.3%), mainly due to a “*higher WACC rate (5.69%)”*.”

### RP3 summary

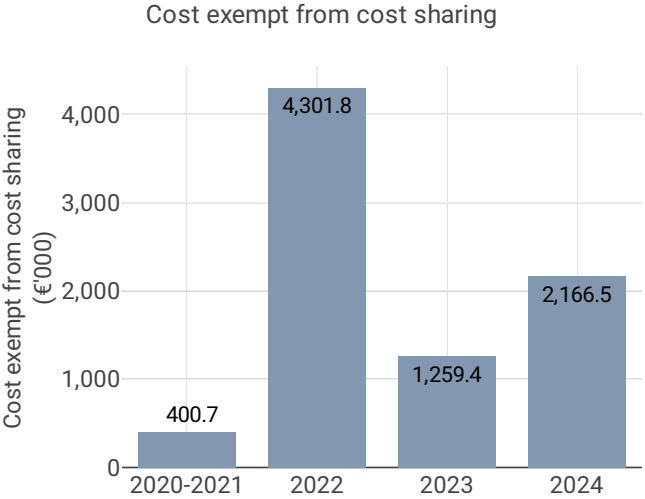
When considering the whole of RP3 (2020-2024) for Spain terminal charging zone, actual TNSUs are +4.4% higher than planned, while actual costs in real terms are -1.3% lower than the determined costs (some -6.6 M€2017). As a result, the weighted average actual unit cost over RP3 (133.12 €2017) is -5.5% lower than planned in the PP (140.92 €2017).



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

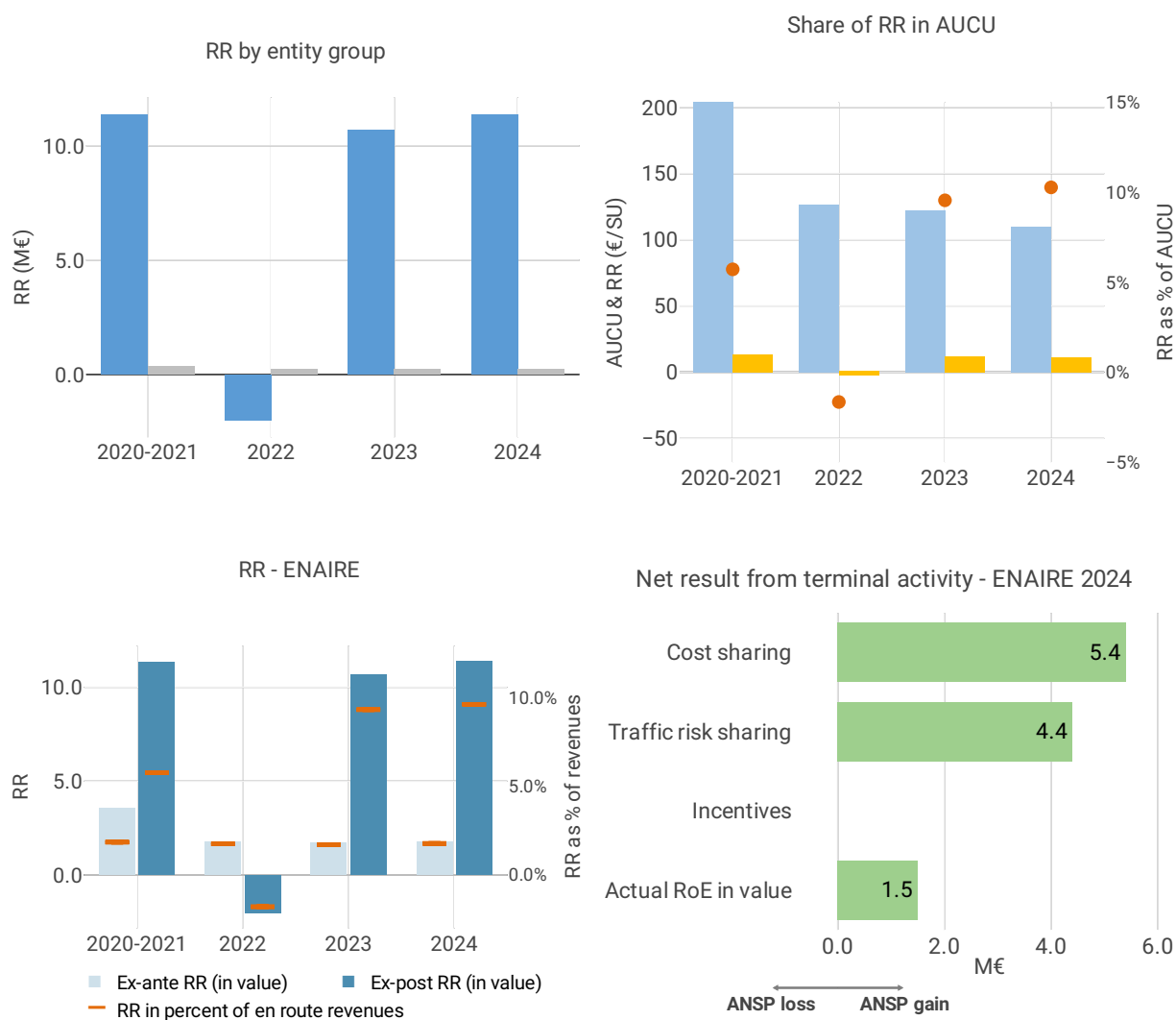


AUCU components (€/SU) - 2024	
<b>Components of the AUCU in 2024</b>	<b>€/SU</b>
<b>DUC</b>	<b>113.87</b>
Inflation adjustment	11.30
Cost exempt from cost-sharing	2.12
Traffic risk sharing adjustment	-6.14
Traffic adj. (costs not TRS)	-0.50
Financial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-79.61
Application of lower unit rate	-10.42
Total adjustments	-83.26
<b>AUCU</b>	<b>30.61</b>
<b>AUCU vs. DUC</b>	<b>-73.1%</b>



Cost exempt from cost sharing – 2024		
Cost exempt from cost sharing by item - 2024	€'000	€/SU
New and existing investments	217.1	0.21
Competent authorities and qualified entities costs	520.9	0.51
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	1,428.5	1.40
<b>Total cost exempt from cost risk sharing</b>	<b>2,166.5</b>	<b>2.12</b>

### 5.4.3 Regulatory result (RR)



## Focus on regulatory result

### ENAIRE net gain on activity in the Spain terminal charging zone in the year 2024

ENAIRE reported a net gain of +9.8 M€, as a combination of a gain of +5.4 M€ arising from the cost sharing mechanism, with a gain of +4.4 M€ arising from the traffic risk sharing mechanism. See also Notes 1 and 2 in Box 10 above.



### **ENAIRE 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 (+9.8 M€) and the actual RoE (+1.5 M€) amounts to +11.4 M€ (9.6% of the terminal revenues). The resulting ex-post rate of return on equity is 63.8%, which is much higher than the 8.6% planned in the PP. These results, however, should be seen in the light of specific financing arrangements for activities in Spain TCZ as detailed in Notes 1 and 2 in Box 10 above.

### **RP3 summary**

When considering the whole of RP3 (2020-2024), ENAIRE generated a cumulative gain in respect of cost sharing of +14.9 M€, as actual total costs for RP3 were lower than planned. The traffic risk sharing mechanism generated a gain of +9.0 M€. Adding the actual RoE (+7.6 M€ over RP3) leads to an overall regulatory result of +31.4 M€, which corresponds to an average ex-post rate of return on equity of 30.7% (compared to 7.4% initially planned in the PP). These results, however, should be seen in the light of specific financing arrangements for activities in Spain TCZ as detailed in Notes 1 and 2 in Box 10 above.

**Note 1:** only a portion of terminal determined costs ( $\approx 23\%$  in 2024) is charged to airspace users through terminal charges, while the rest is financed through the income relating to the service agreement with the airport operator (see also Box 9), which is “*for somewhat fixed amount independent from the traffic levels*”. This should be taken into consideration when interpreting the RR for Spain TCZ.

**Note 2:** Ex-post RR does not take into account the application of the lower unit rate as per Art. 29.6 (loss in revenues corresponds to -9.9 M€ for 2022, -5.4 M€ for 2023 and -10.1 M€ for 2024).

