PRB | Performance review body of the single european sky

Performance Review Body Monitoring Report

Spain - 2021

This report is automatically generated from: sesperformance.eu

Performance Review Body of the Single European Sky | Rue de la Fusée 96, Office 50.659, 1130 Brussels
Office Telephone: +32 (0)2 234 7824 | cathy.mannion@prb.eusinglesky.eu | prb-office@prb.eusinglesky.eu | eu-single-sky.transport.ec.europa.eu

TABLE OF CONTENTS

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:
- **≥80'K** 6
- **<80'K** 1

Exchange rate (1 EUR=)
- 2017: 1 EUR
- 2021: 1 EUR

Share of Union-wide:
- **traffic (TSUs) 2021** 11.0%
- **en route costs 2021** 11.2%

Share en route / terminal costs 2021 87% / 13%

En route charging zone(s)
- Spain Continental
- Spain Canarias

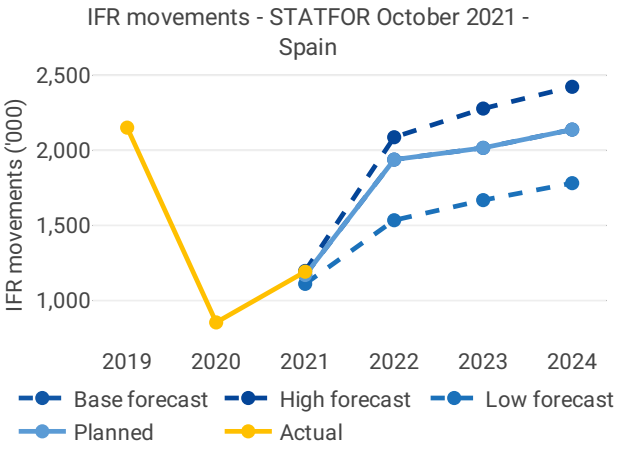
Terminal charging zone(s)
- Spain

Main ANSP
- ENAIRE

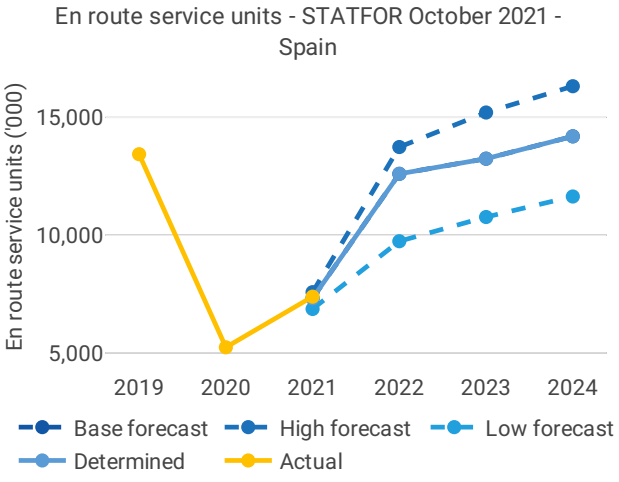
Other ANSPs
- FERRONATS
- ANSP EA

MET Providers
- AEMET

1.2 Traffic (En route traffic zone)

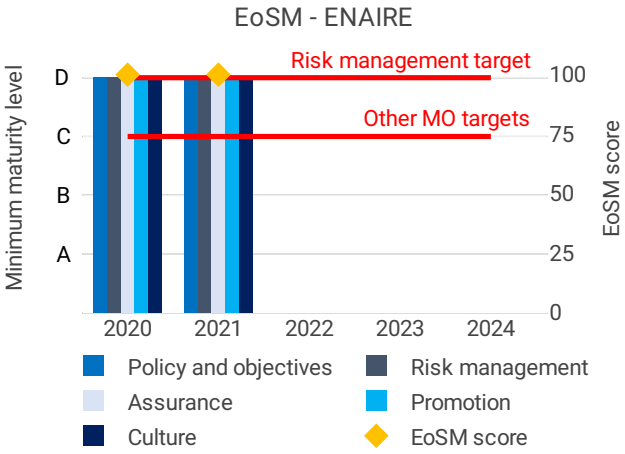


- Spain recorded 1,192K actual IFR movements in 2021, +40% compared to 2020 (854K).
- Actual 2021 IFR movements were +1.8% above the plan (1,170K).
- Actual 2021 IFR movements represent 55% of the actual 2019 level (2,152K).



- Spain recorded 7,390K actual en route service units in 2021, +41% compared to 2020 (5,240K).
- Actual 2021 service units were +1.0% above the plan (7,319K).
- Actual 2021 service units represent 55% of the actual 2019 level (13,439K).

1.3 Safety (Main ANSP)



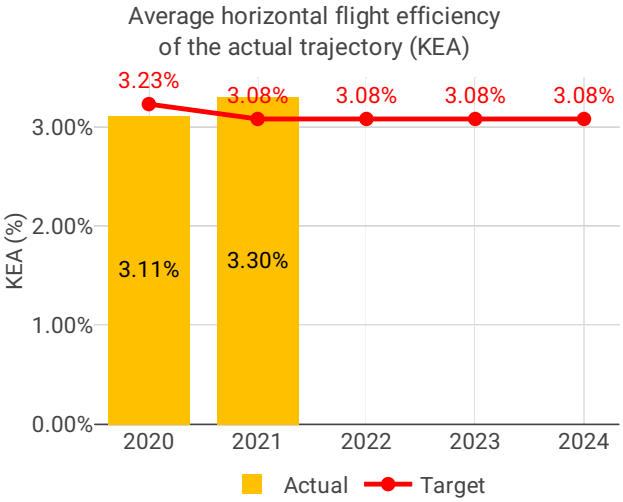
• ENAIRE continued high safety performance in 2021 and maintained the RP3 EoSM targets levels achieved in previous year. ENAIRE implemented continuous monitoring process to ensure maintaining high safety performance.

• FERRONATS achieved the RP3 EoSM target in four out of five management objectives with only safety risk management requiring further improvement. Some elements of this area have been already improved up to required level D over 2021. The NSA is confident that the targets will be achieved by the end of RP3.

• Spain recorded stable performance with respect to safety occurrences, with higher rate of separation minima infringements and marginally higher rate of runway incursions relative to 2020. The rates for both were above the Union-wide average rates in 2021. Of the airports with more than 80,000 movements, Málaga (LEMG) has the highest rate of RIs at 8.5 per 100,000 movements. ENAIRE should consider looking into the reasons contributing to this rate and take appropriate mitigating actions, if necessary.

• Spain uses specific automated safety data recording systems for ACC and TMA sectors, being one of the few ANSPs doing so.

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. KEA worsened by 0.19 p.p. compared to 2020.

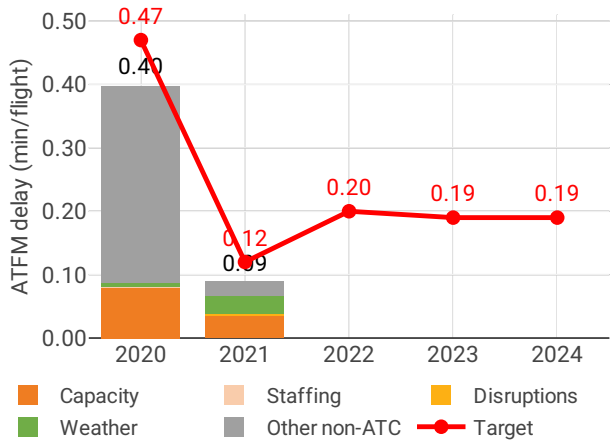
• The NSA states that the increase in KEA is due to changes in the routes to avoid the ashes caused by the eruption of the volcano in La Palma (September 2021) and new routings in the Agadir FIR (Morocco) that affected planning in the Canaries FIR. However, Spain's monthly KEA performance in September 2021 remained below that of June and similar to those of July and August of the same year.

• Both KEP and SCR slightly decreased in 2021 in comparison to 2020 and are at their lowest values in five years.

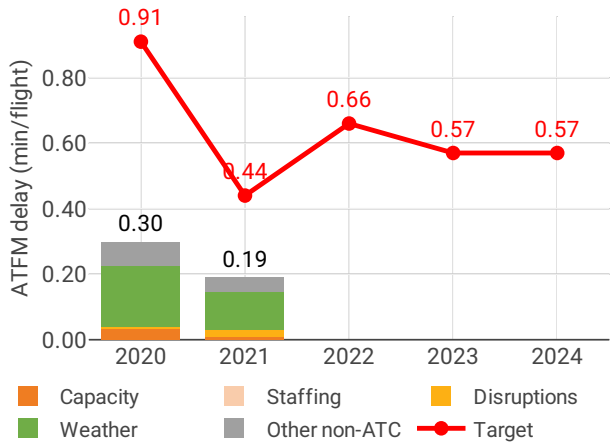
• The share of CDO flights has decreased in comparison to 2020, but is still higher than pre-pandemic situation. Additional time in terminal airspace has increased by 21% and additional taxi out time has increased by 33%.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



Average arrival ATFM delay per flight by delay groups



• Spain registered 0.09 minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.12. Following the traffic recovery from July onwards more delays were generated with ATC capacity and weather being the main causes. At the end of the year, delays with 'other' causes increased due to the volcanic eruption on La Palma.

• Delays should be considered in the context of lower traffic: in Spain, IFR movements in 2021 were 45% lower than in 2019.

• Traffic is expected to grow, with 2019 levels likely being reached in 2023 in the high growth scenario or in 2024 in the base growth scenario for both continental and Canarias ACCs. The number of ATCOs in OPS is planned to remain effectively the same in Canarias ACC, with reductions in the numbers planned in the remaining ACCs during RP3.

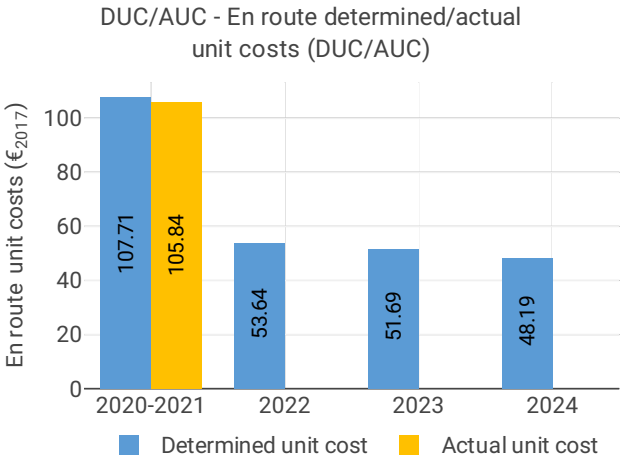
• Delays were highest between July and December, mostly due to ATC Capacity and adverse weather conditions.

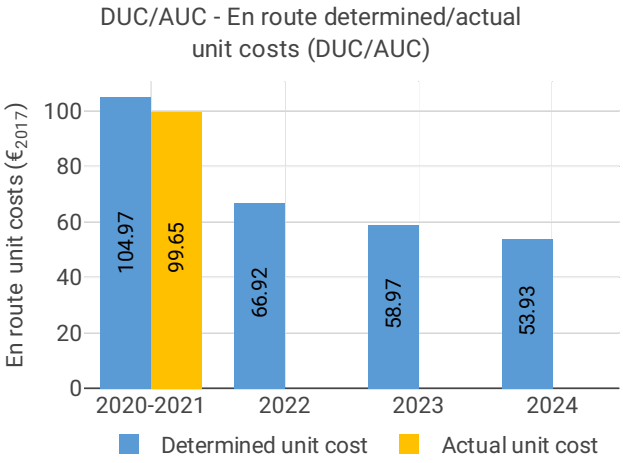
• The share of delayed flights with delays longer than 15 minutes in Spain decreased by 19.65 p.p. compared to 2020 and was lower than 2019 values.

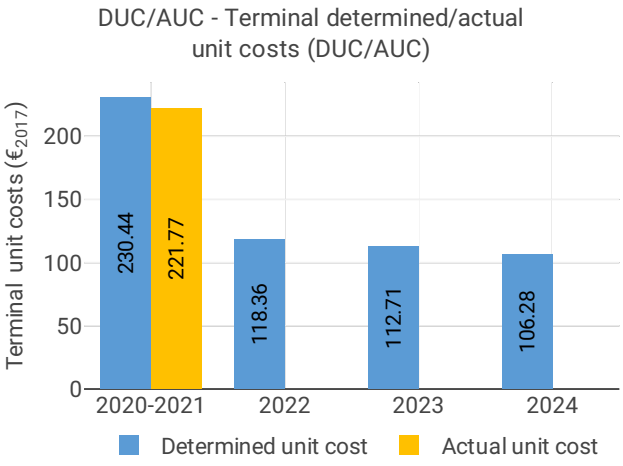
• The yearly total of sector opening hours in Canarias ACC was 22,842, showing a 3.2% increase compared to 2020. Sector opening hours are 18.4% below 2019 levels. The yearly total of sector opening hours in Barcelona ACC was 37,577, showing a 31.6% increase compared to 2020. Sector opening hours are 37.8% below 2019 levels. The yearly total of sector opening hours in Madrid ACC was 61,593, showing a 15.5% increase compared to 2020. Sector opening hours are 40.3% below 2019 levels. The yearly total of sector opening hours in Palma ACC was 31,029, showing a 47.5% increase compared to 2020. Sector opening hours are 19.8% below 2019 levels. The yearly total of sector opening hours in Sevilla ACC was 30,384, showing a 27.7% increase compared to 2020. Sector opening hours are 25.8% below 2019 levels.

• Canarias ACC registered 9.62 IFR movements per one sector opening hour in 2021, being 24.7% below 2019 levels. Barcelona ACC registered 13.68 IFR movements per one sector opening hour in 2021, being 12.1% below 2019 levels. Madrid ACC registered 10.12 IFR movements per one sector opening hour in 2021, being 11.4% below 2019 levels. Palma ACC registered 7.15 IFR movements per one sector opening hour in 2021, being 14.4% below 2019 levels. Sevilla ACC registered 9.04 IFR movements per one sector opening hour in 2021, being 13.6% below 2019 levels.

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







• The en route 2020/2021 actual unit cost of Spain Continental was 105.84 €2017, -1.7% lower than the determined unit cost (107.71 €2017). The en route 2020/2021 actual unit cost of Spain Canarias was 99.65 €2017, -5.1% lower than the determined unit cost (104.97 €2017).

• The terminal 2020/2021 actual unit cost of Spain was 221.77 €2017, -3.8% lower than the determined unit cost (230.44 €2017).

• The en route 2021 actual service units of Spain Continental (6,383K) were in line with the determined (6,370K). The en route 2021 actual service units of Spain Canarias (1,008K) were +6.1% higher than the determined (950K).

• In 2021, Spain Continental decreased total costs by -19 M€2017 (-3.3%) compared to determined costs. All cost categories decreased, except depreciation costs. The decrease was mainly due to staff (-11 M€2017, or -3.0%) and other operating costs (-7.3 M€2017, or -7.7%) in ENAIRE. The NSA explained that budgetary limitations and a restrictive expenditure policy have still been applied in 2021.

• In 2021, Spain Canarias decreased total costs by -3.6 M€2017 (-3.9%) compared to determined costs. As for Spain Continental, all cost categories have decreased, except depreciation costs. The NSA provided the same explanations as for Spain Continental, since the variations are mainly attributable to ENAIRE.

• ENAIRE spent 112 M€2017 in 2021 related to costs of investments, -1.0% less than determined (113 M€2017). The difference was due to a combination of lower en route depreciation costs attributable to a delay in investments (due to the COVID-19 pandemic), and slightly lower than planned terminal cost of capital induced by a lower net book value and WACC.

• The en route Spain Continental actual unit cost incurred by users in 2020/2021 was 112.68€, while the en route Spain Canarias actual unit cost incurred by users was 87.05€. The terminal actual unit cost incurred by users was 58.80€.

2 SAFETY - SPAIN

2.1 PRB monitoring

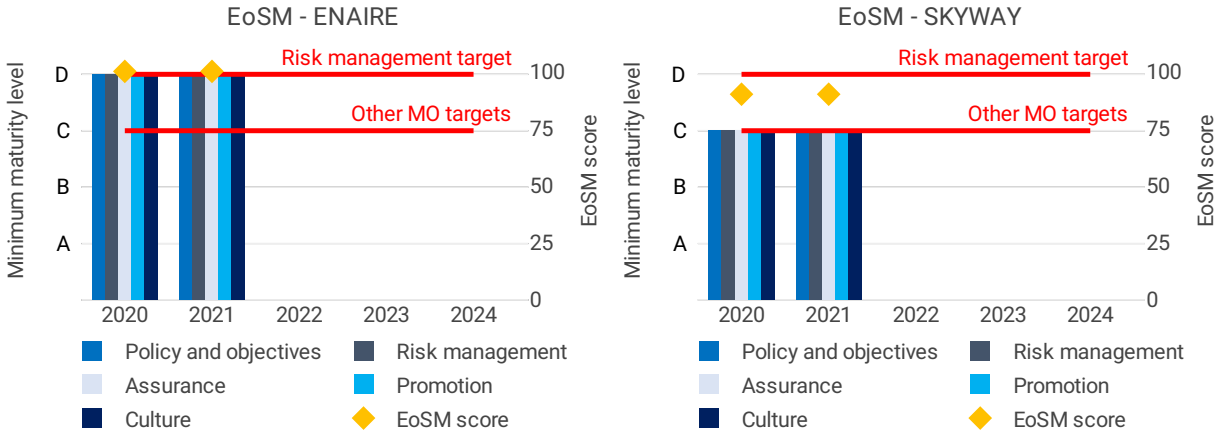
• ENAIRE continued high safety performance in 2021 and maintained the RP3 EoSM targets levels achieved in previous year. ENAIRE implemented continuous monitoring process to ensure maintaining high safety performance.

• FERRONATS achieved the RP3 EoSM target in four out of five management objectives with only safety risk management requiring further improvement. Some elements of this area have been already improved up to required level D over 2021. The NSA is confident that the targets will be achieved by the end of RP3.

• Spain recorded stable performance with respect to safety occurrences, with higher rate of separation minima infringements and marginally higher rate of runway incursions relative to 2020. The rates for both were above the Union-wide average rates in 2021. Of the airports with more than 80,000 movements, Málaga (LEMG) has the highest rate of RIs at 8.5 per 100,000 movements. ENAIRE should consider looking into the reasons contributing to this rate and take appropriate mitigating actions, if necessary.

• Spain uses specific automated safety data recording systems for ACC and TMA sectors, being one of the few ANSPs doing so.

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



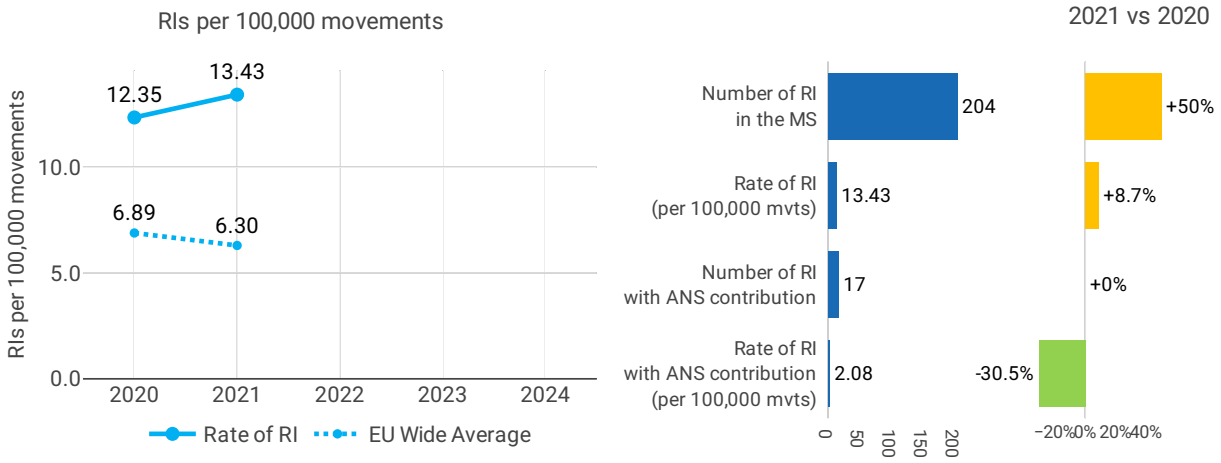
Focus on EoSM

All five EoSM components of ENAIRE meet, or exceed, already the 2024 target level. Maximum maturity level is maintained. Imporvements in maturity are observed with respect to 2020. Four out of five EoSM components of FERRONATS meet already the 2024 target level. Only the component "Safety Risk Management" is below 2024 target level, at level C. Improvements in safety risk management are still expected during RP3 to achieve 2024 targets.

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3 Safety occurrences

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



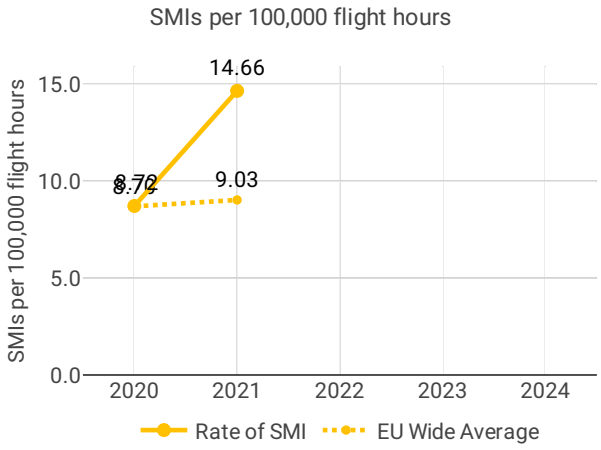
Rate of RIs per 100,000 airport movements - Spain

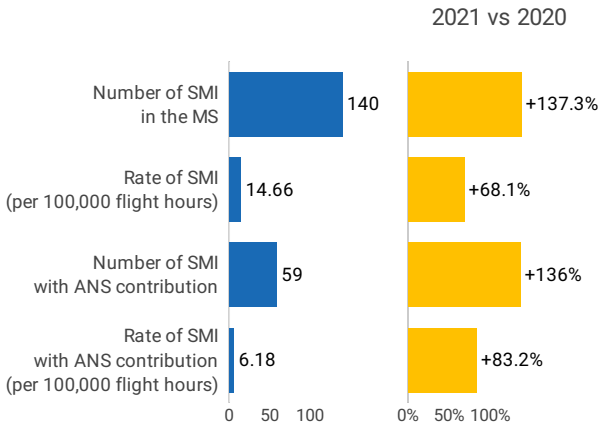
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Madrid - Barajas	217,558	1	0.46
2	Barcelona	163,733	3	1.83
3	Palma de Mallorca	141,324	3	2.12
4	Málaga	94,488	8	8.47
5	Gran Canaria	88,379	0	0.00
6	Ibiza	61,612	0	0.00
7	Alicante	51,505	2	3.88

Focus on runway incursions

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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





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

		Flight hours					Number of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	ENAIRE	664,154	954,783	NA	NA	NA	25	59	NA	NA	NA
2	SKYWAY	77,124	NA	NA	NA	NA	0	NA	NA	NA	NA

		Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	ENAIRE	3.8	14.7	NA	NA	NA	NA	+290%	NA	NA	NA
2	SKYWAY	0.0	NA	NA	NA	NA	NA	0%	NA	NA	NA

Focus on separation minima

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3.3 Quality of occurences reporting

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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

2021	
For RIs	For SMIs
✓	✓

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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. KEA worsened by 0.19 p.p. compared to 2020.

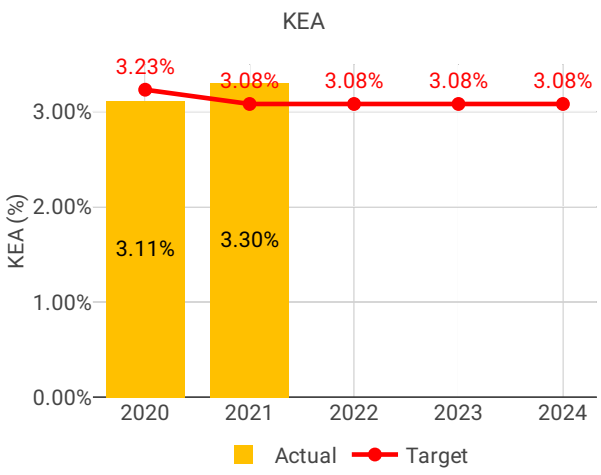
• The NSA states that the increase in KEA is due to changes in the routes to avoid the ashes caused by the eruption of the volcano in La Palma (September 2021) and new routings in the Agadir FIR (Morocco) that affected planning in the Canaries FIR. However, Spain's monthly KEA performance in September 2021 remained below that of June and similar to those of July and August of the same year.

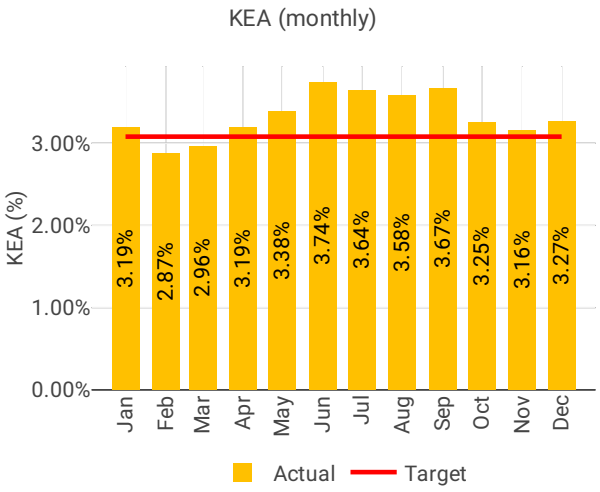
• Both KEP and SCR slightly decreased in 2021 in comparison to 2020 and are at their lowest values in five years.

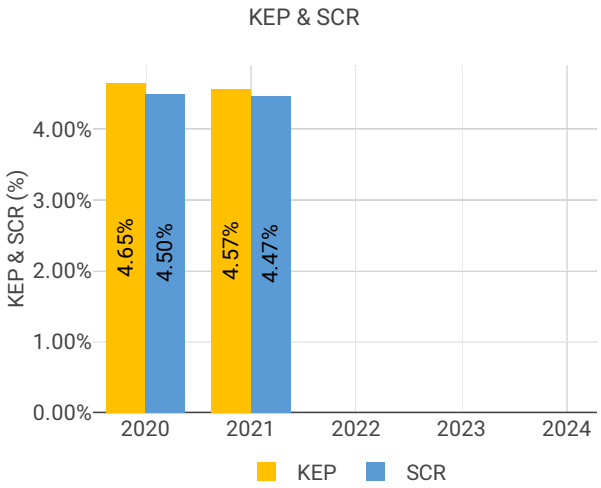
• The share of CDO flights has decreased in comparison to 2020, but is still higher than pre-pandemic situation. Additional time in terminal airspace has increased by 21% and additional taxi out time has increased by 33%.

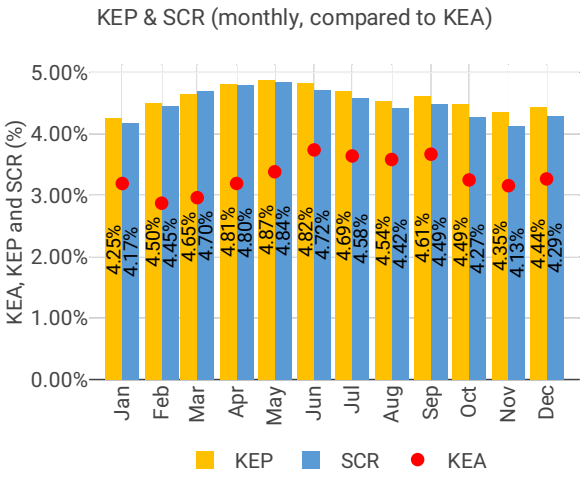
3.2 En route performance

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)



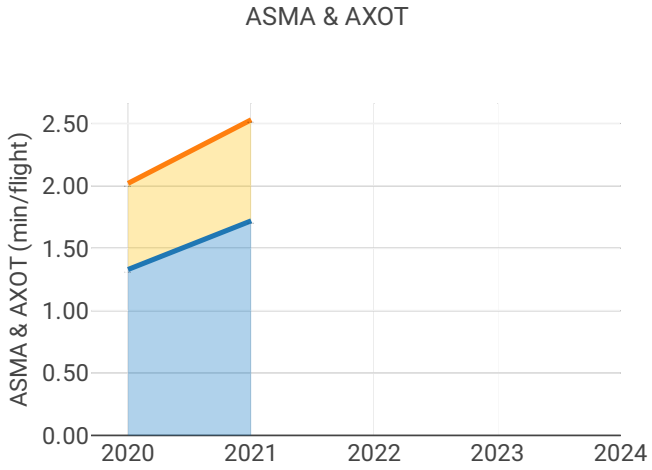


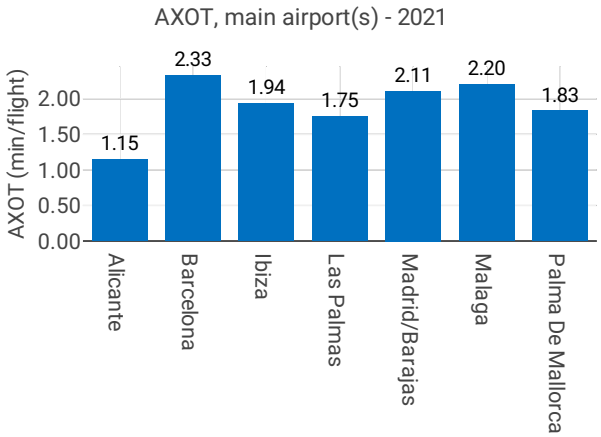


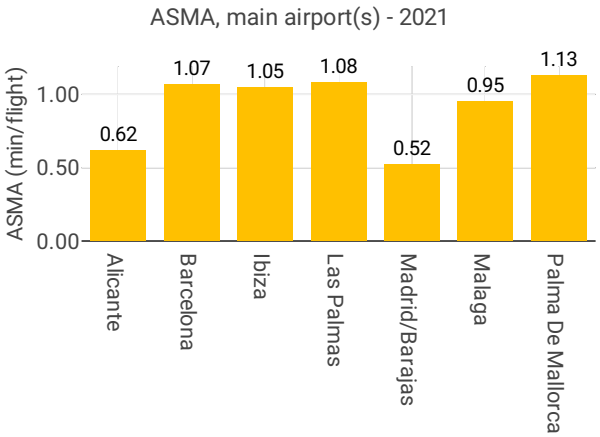


3.3 Terminal performance

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 2021 by 31% in relation to the value of 2020, mainly driven by the traffic recovery in the second part of the year. At Madrid (LEMD; 2019: 4.01 min/dep.; 2020: 2.12 min/dep.; 2021: 2.11 min/dep.) the annual average is influenced by the high additional taxi-out times values in January due to the effects of the snow storm Filomena. Additional taxi-out times at Gran Canaria (GCLP: 2019: 1.86 min/dep.; 2020: 1.09 min/dep.;

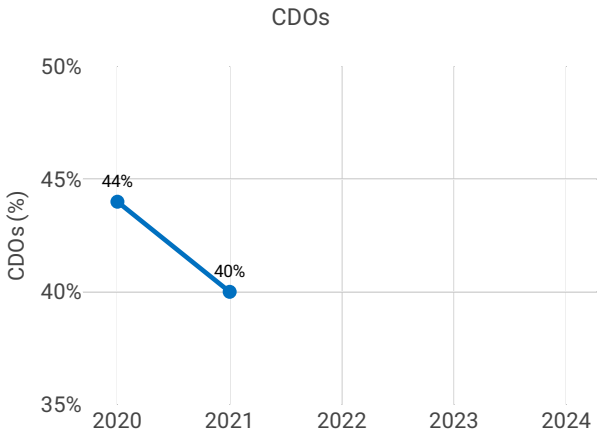
2021: 1.75 min/dep.) and Malaga (LEMG: 2019: 2.36 min/dep.; 2020: 1.39 min/dep.; 2021: 2.2 min/dep.) increased notably in the second half of the year, exceeding the values observed in 2019 with slightly higher traffic.

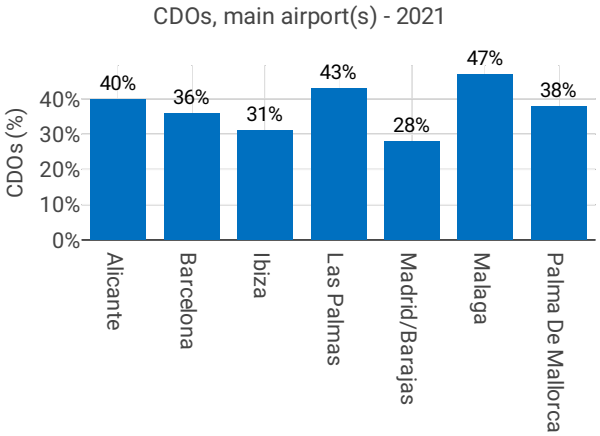
According to the Spanish monitoring report: *There is work in progress regarding the improvement of A-CDM in Madrid and Barcelona. Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2021 it reaches a value of 1.94, 64% higher than the 2020 value (1.18). The additional taxi out time (aggregated for the 7 airports monitored in RP3) has a value of 2,01 and it has increased in 2021 by 33% in relation to the value of 2020 (1,51).*

ASMA

The additional time in terminal area (aggregated for the 6 airports monitored in RP3) increased by 18% in relation to the value of 2020. This increase, like for the additional taxi-out times, was observed mainly in the second half of the year in line with the traffic recovery. With a similar trend as identified for the additional taxi-out times, the additional ASMA times at the holiday destinations (Gran Canaria, Palma and Malaga) increased in the second half of 2021 to almost the same levels as in 2019.
According to the Spanish monitoring report: *Some restructuring projects are planned for the coming years in the main TMAs in Spain:*
- PBN SIDs, STARs and ILS & RNP APCH in Madrid TMA
- PBN SIDs in Barcelona TMA
- PBN SIDs, ILS & RNP APCH in Palma TMA
- PBN STARs in Malaga
Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. In 2021 it reaches a value of 1.05, 72% higher than the 2020 value (0.61). The additional time in terminal area (aggregated for the 7 airports monitored in RP3) has a value of 0,88 and it has increased in 2021 by 21% in relation to the value of 2020 (0,73).

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





Focus CDOs

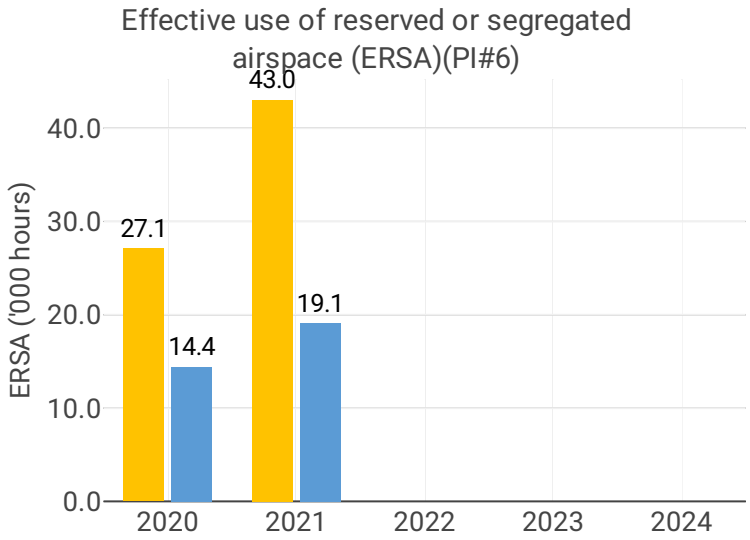
Only Madrid (LEMD: 28.1%) has its share of CDO flights below the overall RP3 value in 2021 (30.5%). All other airports have shares of CDO flights above the overall RP3 value in 2021, ranging from 30.9% (LEIB) to 46.8% (LEMG). All airports had a decrease of the share of CDO flights with respect to 2020, ranging from -3.2 percentage points (LEBL) to -10.1 percentage points (LEIB). 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 decreased around -13% in relation to the value of 2020, mainly due to the growth in traffic demand which is beginning to recover from the COVID crisis.*
The conditions of use of continuous descent procedures mean that the use of this type of procedure is not

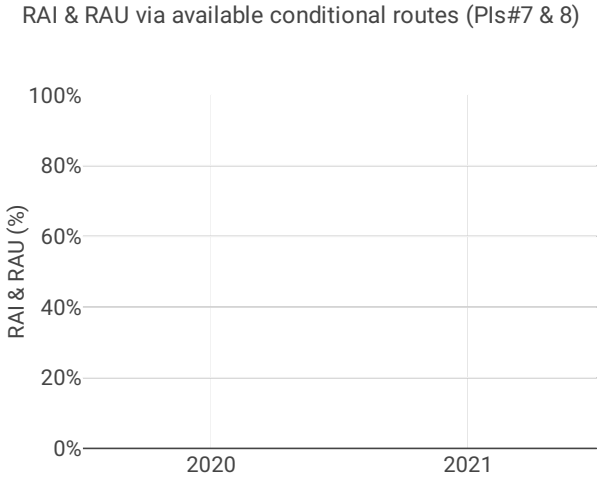
always compatible with the techniques used when it is necessary to manage medium/high traffic demands at airports/TMAs. Therefore, the authorisation of these procedures must be compatible with the airport's operations in order to meet the demand without establishing restrictions. In the long term, there 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.
No new projects were implemented during 2021. During 2022, it is planned to carry out an awareness campaign for ATCOs on the environmental aspects associated with ATC operations.

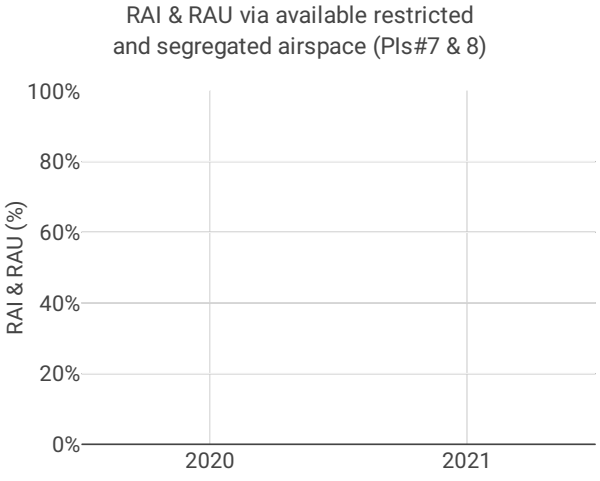
Airport level

	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
Airport Name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.70	1.15	NA	NA	NA	0.41	0.62	NA	NA	NA	45%	40%	NA	NA	NA
Barcelona	1.84	2.33	NA	NA	NA	1.13	1.07	NA	NA	NA	39%	36%	NA	NA	NA
Las Palmas	1.09	1.75	NA	NA	NA	0.84	1.08	NA	NA	NA	47%	43%	NA	NA	NA
Ibiza	1.18	1.94	NA	NA	NA	0.61	1.05	NA	NA	NA	41%	31%	NA	NA	NA
Madrid/Barajas	2.12	2.11	NA	NA	NA	0.62	0.52	NA	NA	NA	32%	28%	NA	NA	NA
Malaga	1.39	2.20	NA	NA	NA	0.81	0.95	NA	NA	NA	54%	47%	NA	NA	NA
Palma De Mallorca	0.69	1.83	NA	NA	NA	0.35	1.13	NA	NA	NA	47%	38%	NA	NA	NA
Stockholm/Arlanda	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43%	NA	NA	NA	NA
Geneva	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19%	NA	NA	NA	NA
Zurich	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21%	NA	NA	NA	NA

3.4 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

Environment: Civil-Military coordination regarding Flexible Use of Airspace is on progress at strategic level established within the specific working group called UPEA inside CIDETMA (previous CIDEFO). Dissemination of progress on FUA to civil operators is considered an enabler to achieve Flight Plans using more efficient routes through the Civil Use of Release Airspace (CURA). A new version of AMC Manual is in progress to incorporate the new agreements and procedures for FUA improvement developed by the Level 1.
Capacity: Based on the Principles of FUA, additional capacity to the planned one could be provided once the airspace used for military operations and training is released.

Military - related measures implemented or planned to improve capacity

Environment: Spanish Air Force has been active participant in the general meetings to implement the Spanish Free Route Airspace Programme and an specific group composed by ENAIRE and Spanish Air Force was created in order to further improve the coordination for the implementation of FRA, with a spetial focuss in ASM related matters. Furthermore, a close coordination work with the Network Manager is ongoing.

Several meetings have been held and discussions are ongoing in order to implement new single CDR category and to revise airspace structures (Reserved areas and to re-align ATS routes). At national level, there are some improvements at strategic level, including the definition of a SSC transition plan. SSC (Single Category CDR) transition plan has the objective of using only one type of Conditional Route improving ASM procedures and optimazing the use of the airspace.
Capacity: Establishment of SCC and the FUA Pilot Project. SCC transition plan is explained above. Regarding the “FUA Pilot Project” is a project with civil-military coordination to improve the use of the airspace and associated procedures, from both points of view, civil and military, starting from some specific Dangerous areas and working in Collaborative Decision Making processes.

Initiatives implemented or planned to improve PI#6

In October the SCC (Single CDR Category) has been implemented (phase 1), starting the transition phase. Phase 2 expected in the first quarter of 2022.
SSC transition plan, whose objective is the use of only one type of Conditional Route in order to simplify its management while improving the civil use of the airspace without forgetting the requirements of the National Defence, has been approved and is active. A level 1 document on “Principios de aplicación del FUA” has been agreed helping to facilitate and improve the FUA implementation and the CDM process.
Planned in 2022: The process of assessing the possibility to extend the use of the procedures set out in the SCC transition plan for the management of reserved areas to new areas that currently do not have associated CDRs.
Also ongoing the definition of a Joint Civil-Military Procedure of Criteria for the creation of Airspace Structures with adjustable lateral and vertical boundaries with multiple reserve and routing options.
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. This PI is expected to be monitored by AESA twice a year from 2022 onwards to evaluate the evolution of the indicator in the appropriate organization.

Initiatives implemented or planned to improve PI#7

Spain has updated the figures for 2020.
In September 2021 the single CDR phase 1 was implemented, and the phase 2 (the last one) has been also implemented in February 2022. This PI is monitored only 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.
For the following years ENAIRE expects to improve this PI with the definition of AMC specific coordination procedures to release traffic flows from RSA with military activity. ENAIRE also expects FRA implementation to improve flight planning trough optimal route.

Initiatives implemented or planned to improve PI#8

Spain has updated the figures for 2020.
In September 2021 the single CDR phase 1 was implemented, and the phase 2 (the last one) has been also implemented in February 2022. This PI is monitored only 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. For the following years ENAIRE expects to improve this PI with the definition of AMC specific coordination procedures to release traffic flows from RSA with military activity. ENAIRE also expects FRA implementation to improve flight planning trough optimal route.

4 CAPACITY - SPAIN

4.1 PRB monitoring

• Spain registered 0.09 minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.12. Following the traffic recovery from July onwards more delays were generated with ATC capacity and weather being the main causes. At the end of the year, delays with 'other' causes increased due to the volcanic eruption on La Palma.

• Delays should be considered in the context of lower traffic: in Spain, IFR movements in 2021 were 45% lower than in 2019.

• Traffic is expected to grow, with 2019 levels likely being reached in 2023 in the high growth scenario or in 2024 in the base growth scenario for both continental and Canarias ACCs. The number of ATCOs in OPS is planned to remain effectively the same in Canarias ACC, with reductions in the numbers planned in the remaining ACCs during RP3.

• Delays were highest between July and December, mostly due to ATC Capacity and adverse weather conditions.

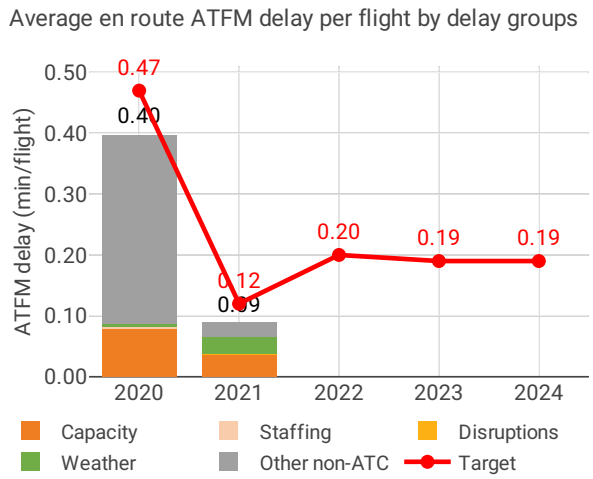
• The share of delayed flights with delays longer than 15 minutes in Spain decreased by 19.65 p.p. compared to 2020 and was lower than 2019 values.

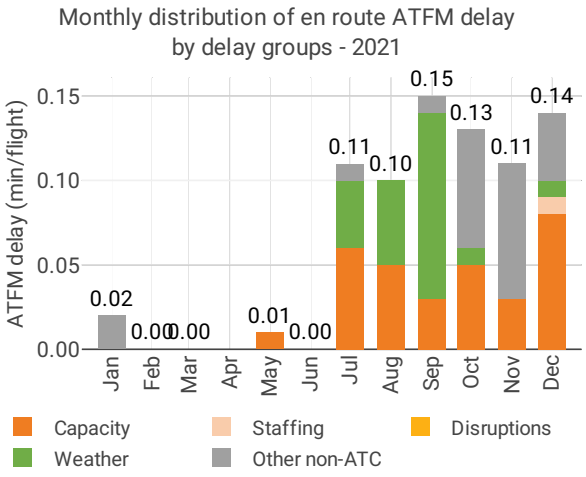
• The yearly total of sector opening hours in Canarias ACC was 22,842, showing a 3.2% increase compared to 2020. Sector opening hours are 18.4% below 2019 levels. The yearly total of sector opening hours in Barcelona ACC was 37,577, showing a 31.6% increase compared to 2020. Sector opening hours are 37.8% below 2019 levels. The yearly total of sector opening hours in Madrid ACC was 61,593, showing a 15.5% increase compared to 2020. Sector opening hours are 40.3% below 2019 levels. The yearly total of sector opening hours in Palma ACC was 31,029, showing a 47.5% increase compared to 2020. Sector opening hours are 19.8% below 2019 levels. The yearly total of sector opening hours in Sevilla ACC was 30,384, showing a 27.7% increase compared to 2020. Sector opening hours are 25.8% below 2019 levels.

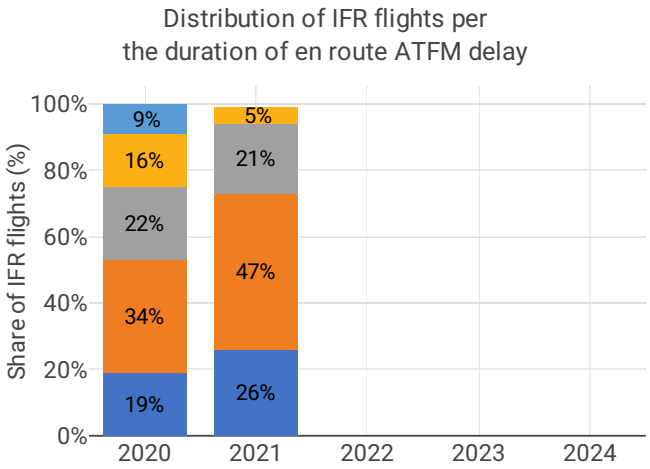
• Canarias ACC registered 9.62 IFR movements per one sector opening hour in 2021, being 24.7% below 2019 levels. Barcelona ACC registered 13.68 IFR movements per one sector opening hour in 2021, being 12.1% below 2019 levels. Madrid ACC registered 10.12 IFR movements per one sector opening hour in 2021, being 11.4% below 2019 levels. Palma ACC registered 7.15 IFR movements per one sector opening hour in 2021, being 14.4% below 2019 levels. Sevilla ACC registered 9.04 IFR movements per one sector opening hour in 2021, being 13.6% below 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Spain experienced an increase in traffic from 854k flights in 2020 to 1,192k flights in 2021. However, traffic levels were still substantially below the 2,152k flights in 2019.
In 2021, Spain had 106k minutes of ATFM delay - with the highest monthly traffic figure 162k flights occurring in August and leading to 16k minutes of delay. For comparison, the month with the closest level of traffic in 2019 was March, with157k flights, in that month there were more than three times as much delay (49k minutes).

NSA's assessment of capacity performance

The performance in the capacity KPA was below reference values in 2021 and 2020 for Spain. It should be taken into account that those figures were achieved with a substantial reduction of traffic, but also with the goal of safety, ensuring business continuity and generating the minimum delay, in exceptional circumstances. To achieve that, several measures had to be implemented and adapted to the changing evolution of the pandemic:
• protect the essential operational staff from COVID19 in all places of work to reduce the active cases and spread of the disease among the staff
• keep the level of training and expertise for operational staff, and
• design mitigation measures for the recovery of the traffic.
In the first part of the year 2021 the delays generated were very occasional, the only most significant was the one generated in January at LECM due to the Filomena storm (1.015 min of O-Other cause regulation)

that generated for a few days difficulties in the movement of both people and airplanes. From July onwards, with the reactivation of traffic and the development of the high season in most ACCs, more delay minutes were generated, but without reaching pre-pandemic levels. Delays were mainly caused by C-ATC Capacity (42% of the 2021 total) and W-Weather (31% of the 2021 total). In GCCC in the last months of the year there were also important delays on route with O-Other cause regulation due to the eruption of the Cumbre Vieja volcano on the island of La Palma, which caused some redistribution of traffic flows and the congestion of some sectors that usually present overloads on certain days. The minutes due to O-Other cause regulations (because of the volcanic eruption, Filomena and other aspects) have accounted for 25% of the total delay in 2021.
Additionally there have been 2 cases of the POST-OPS process that were initially not accepted, case 2021-13 (regulation on 26/07/2021 at LECB with 1019 min) and case 2021-17 (regulation on 07/09/2021 at LECB with 251 min). It was specified that the CDM process was inconclusive and that, even if those minutes could not ultimately be reassigned to the third party, NM suggested that the NSA could omit them. These conclusions were finally included in the Post-OPS Performance Adjustment Process Status Report 2021. Therefore AESA has finally considered it so and the minutes of those 2 regulations will not be taken into account in this report and in the results of the various monitoring that are performed periodically.

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.
The alert mechanism continues to be active to warn, months before the end of the year, of possible non-compliance.

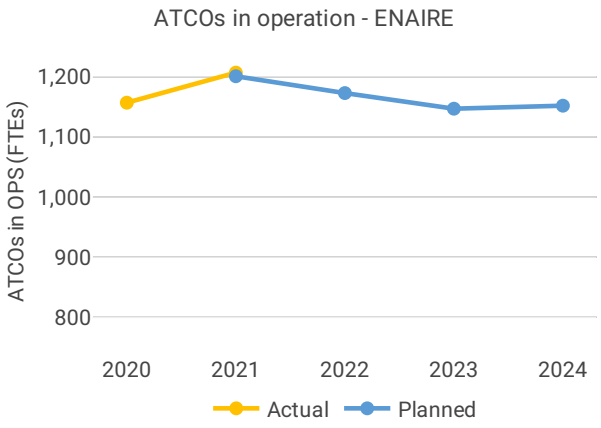
Capacity planning

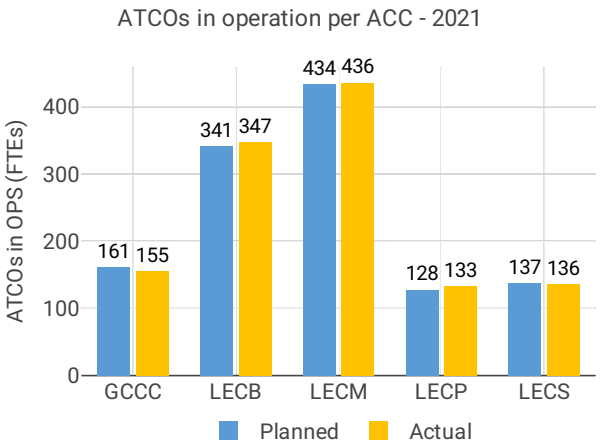
The NOP 2020 Recovery Plan was the NOP structured plan adapted to the COVID-19 crisis, updated every week, initially covering an outlook of four weeks and later reconverted into the NOP Rolling Seasonal Plan covering an outlook of six weeks.
Every week Enaire updated data to the plan (planned sector 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). The plan was 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 2021 for Summer was elaborated. The main projects planned for 2021 in the NOP for Spain were:
• ALL ACCs: improved ATFCM, in line with AF4 of PCP; optimized sector configurations and sector capacities, net increase of ATCOs -at a lower rate than planned due to COVID19-.
• PALMA ACC: Palma Final Approach Improvements (Ongoing).
• CANARIAS ACC: Improvements of NW and Split NE Sector, 11th sector (sector cluster) (postponed).
The scenario was focused on service recovery and to facilitate users the return to normality, always prioritizing safety and the minimum delay.

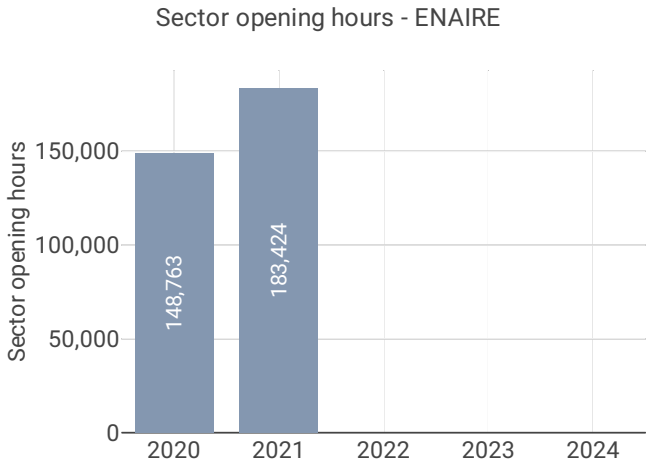
Application of Corrective Measures for Capacity (if applicable)

No particular risk of non-compliance with the KPI is expected, but given the degree of seasonality that exists in some units, the various monitoring activities will continue, monthly and annual monitoring, as well as periodic monitoring of the assignment of delay causes in order to know the evolution of the KPIs and the specific characteristics of each unit. This results in a better knowledge of the behavior of the indicators and a fluid communication and coordination with the ANSP. Additionally, AESA is monitoring the cases reported by our ANSP through the Post-OPS performance adjustment process, collaborating with both ANSPs and other stakeholders with the aim of deepening the analysis of the cases.
As the year progresses and especially as the summer season unfolds, with the existing follow-up mechanisms thanks to various monitoring and alert system in force, if this risk of non-compliance materializes, it will be notified to the Commission as established in the Regulation (EU) 2019/317.

4.2.2 Other indicators





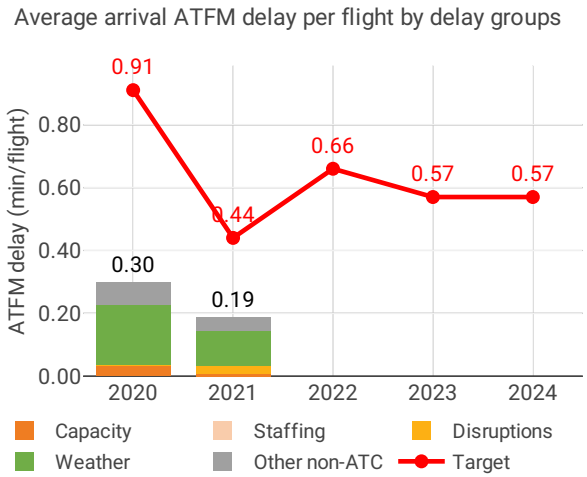


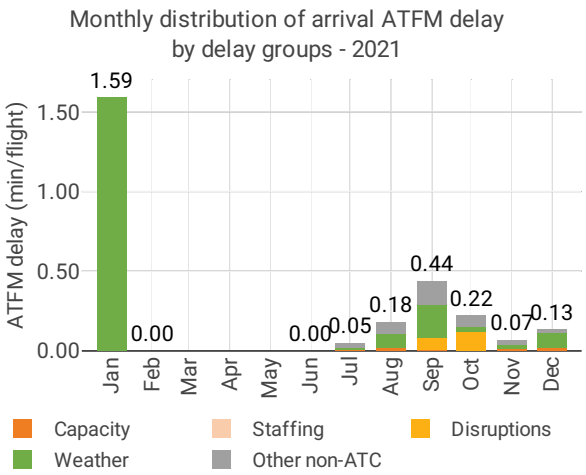
Focus on ATCOs in operations

Number of additional ATCOs in OPS who have started working in the OPS room (FTEs): New CTAs in ENAIRE and CTAs that have moved to the ACCs by CMCD during the year. Incorporated CTAs are considered.
Number of ATCOs in OPS who have stopped working in the OPS room (FTEs): For operative CTAs, retirements, dismissals (permanent disabilities, deaths, voluntary leaves, etc.) and RA concessions are considered.

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 all 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 2021 is still 44% lower than in 2019, with the best recovery observed at the holiday destinations.
Average arrival ATFM delays in 2021 was 0.19 min/arr, compared to 0.30 min/arr in 2020. ATFM slot adherence has improved (2021: 97.2%; 2020: 95.3%).

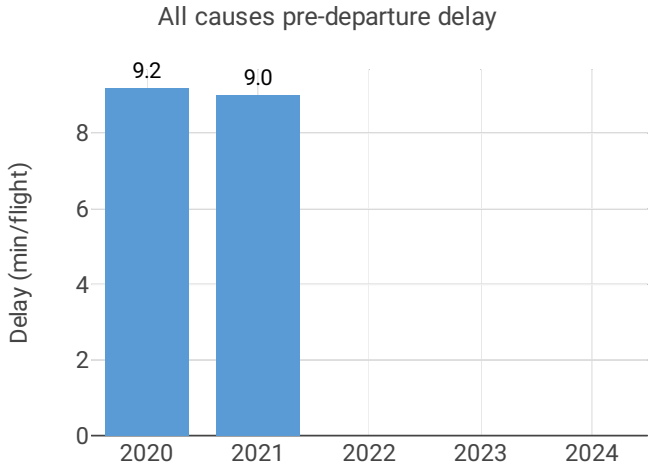
The national average arrival ATFM delay at Spanish airports in 2021 was 0.19 min/arr, lower than the 0.30 min/arr in 2020 and the 1.02 min/arr in 2019. The performance in the capacity KPA was below reference values in 2021 and 2020 for Spain. All actual values obtained in 2021 were lower than PP values except in Gran Canaria (GCLP).
In the first part of the year 2021, the only delay generated was at LEMD in January due to the Filomena storm (22.581 min of W-Weather cause regulation) which generated difficulties for the movement of both people and airplanes for a few days. From July onwards, with the reactivation of traffic and the development of the high season in most airports, more delay minutes were generated, but without reaching pre-pandemic levels. Delays were mainly caused by W-Weather (60% of the 2021 total) considering that half of those minutes were due to delays at LEMD due to Filomena in January. 22% of the delay minutes were attributed to aerodrome capacity regulations, most of which were concentrated at GCLP due to airside work from August to October.
According to the Spanish monitoring report: *Regarding the particularity of the LEAL and LEIB airports, in which different ANSPs are involved, for 2021 as for 2020, it is not necessary to make a breakdown between ENAIRE and FerroNATS delays, since the incentive scheme is not applicable to these two years. However, we consider that from 2022 onwards, it will be necessary to differentiate this value for both aerodromes for incentive purposes. For 2021, the part of the delay that would correspond to ENAIRE or FerroNATS for these two airports would be as follows:*

- *Alicante: 0,00 min/flight (ENAIRE and FerroNATS)*
- *Ibiza: 0,03 min/flight (ENAIRE) and 0,06 min/flight (FerroNATS). The minutes of ATFM arrival delay at LEIB were not due to ATC reasons, were therefore not attributable delay causes.*

No particular risk of non-compliance with the KPI is expected, but given the degree of seasonality that exists in some units, the various monitoring activities will continue, monthly and annual monitoring, as well as periodic monitoring of the assignment of delay causes in order to know the evolution of the KPIs and the specific characteristics of each unit. This results in a better knowledge of the behaviour of the indicators and a fluid communication and coordination with the ANSP. Additionally, AESA is monitoring the cases reported by our ANSP through the Post-OPS performance adjustment process, collaborating with both ANSPs and other stakeholders with the aim of deepening the analysis of the cases.
As the year progresses and especially as the summer season unfolds, with the existing follow-up mechanisms thanks to various monitoring and alert system in force, if this risk of non-compliance materializes, it will be notified to the Commission as established in the Regulation (EU) 2019/317.

The provisional national target on arrival ATFM delay in 2021 was met.
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.

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



Airport level

	Avg arrival ATFM delay (KPI#2)					Slot adherence (PI#1)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.02	0.00	NA	NA	NA	98.8%	99.7%	NA%	NA%	NA%
Barcelona	0.12	0.06	NA	NA	NA	94.9%	98.7%	NA%	NA%	NA%
Ibiza	NA	0.09	NA	NA	NA	99.0%	98.6%	NA%	NA%	NA%
Las Palmas	0.97	0.44	NA	NA	NA	96.4%	95.5%	NA%	NA%	NA%
Madrid/Barajas	0.49	0.27	NA	NA	NA	94.2%	96.6%	NA%	NA%	NA%
Malaga	0.01	0.02	NA	NA	NA	93.4%	95.0%	NA%	NA%	NA%
Palma De Mallorca	0.05	0.29	NA	NA	NA	97.3%	96.8%	NA%	NA%	NA%

	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
Airport name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Alicante	0.23	0.23	NA	NA	NA	9.0	8.1	NA	NA	NA
Barcelona	0.00	0.04	NA	NA	NA	8.7	8.3	NA	NA	NA
Ibiza	NA	NA	NA	NA	NA	6.3	9.1	NA	NA	NA
Las Palmas	0.08	0.05	NA	NA	NA	11.3	9.4	NA	NA	NA
Madrid/Barajas	NA	NA	NA	NA	NA	9.5	9.7	NA	NA	NA
Malaga	0.18	NA	NA	NA	NA	11.3	10.9	NA	NA	NA
Palma De Mallorca	NA	NA	NA	NA	NA	5.4	8.2	NA	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

With the drastic drop in traffic, the share of regulated departures from Spanish airports virtually disappeared until July 2021. All Spanish airports showed adherence above 95% and the national average was 97.2%, an improvement with respect to 2020's performance (95.3%). With regard to the 2.8% of flights that did not adhere, 1.3% was early and 1.5% was late.

The Spanish monitoring reports adds: T*he result for 2021 (aggregate of the 7 airports subject to monitoring) improves by 2% the result of the previous year, being both 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 twice a year 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 of these airports is a long standing issue, only worsened by the special traffic composition since April 2020. Gran Canaria and Alicante had a proper reporting prior to the pandemic.
The Spanish monitoring report includes some analysis on the monthly values that could be calculated:
-GCLP only has monthly data for 2 months (January and October), with a resulting value of 0,33, similar than in previous year. Until 2019, all monthly data were available.
-LEAL has data for 9 months, with a resultant value of 0,25, slightly lower than in previous year. The lack of data started in 2019.
-LEBL only has data for one month (November), its value is 0.35, higher than in previous year (in which only March data was available). The availability of monthly data has been getting worse every year since 2017.
-LEMD does not have data available for any month in 2021. The lack of data started in 2017 and from 2020 there is not data available for any month.
-LEMG does not have data available for any month in 2021. The lack of data started in 2019 and has increased in 2020 and 2021.
-LEPA does not have data available for any month in 2021. The lack of data started in 2017 and has increased from 2019 onwards.
-Although LEIB does not yet reach >80k movements, it is monitored together with these 6 airports since it is one of the airports considered in the Spanish performance plan (ESPP3) for RP3. LEIB does not have data available for any month in 2021. The lack of data started in 2017 and from 2020 there is not data available for any month.
This PI is being monitored by AESA twice a year to evaluate the evolution of the indicators. If significant deviations are found, the possible causes will be analysed by contacting the relevant stakeholder but at the moment it is focused on investigating the origin of the lack of data. The lack of some data is due to the fact that the reporting by Spanish airports does not meet the required data quality, when more than 40% of the reported delays are not assigned to any cause. 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.
ANSPs has been contacted but no further information is available at this time.
AESA plans to further investigate to identify the origin of the lack of data by contacting the airport operator or other relevant stakeholders if possible to obtain more information in order to establish an effective measure.

All causes pre-departure delay

Contrary to most airports in RP3, the total (all causes) delay in the actual off block time at most Spanish airports (with the exception of Palma and Madrid) decreased in 2021 with figures between 8.06 min/dep for Alicante (LEAL) and 10.86 min/dep. for Malaga (LEMG). At most airports the delays increased in the second half of the year, and the annual figure at Madrid is strongly driven by the high delays observed in January (more than 21 min/dep) due to the Filomena snow storm.
According to the Spanish monitoring report: *the aggregated result for 2021 (of the 6 airports subject to monitoring) is 9,09 min/dep, which improves the result for 2020 by -0,3% (9,12 min/dep). This PI is being monitored by AESA twice a year 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 2020/2021 actual unit cost of Spain Continental was 105.84 €2017, -1.7% lower than the determined unit cost (107.71 €2017). The en route 2020/2021 actual unit cost of Spain Canarias was 99.65 €2017, -5.1% lower than the determined unit cost (104.97 €2017).

• The terminal 2020/2021 actual unit cost of Spain was 221.77 €2017, -3.8% lower than the determined unit cost (230.44 €2017).

• The en route 2021 actual service units of Spain Continental (6,383K) were in line with the determined (6,370K). The en route 2021 actual service units of Spain Canarias (1,008K) were +6.1% higher than the determined (950K).

• In 2021, Spain Continental decreased total costs by -19 M€2017 (-3.3%) compared to determined costs. All cost categories decreased, except depreciation costs. The decrease was mainly due to staff (-11 M€2017, or -3.0%) and other operating costs (-7.3 M€2017, or -7.7%) in ENAIRE. The NSA explained that budgetary limitations and a restrictive expenditure policy have still been applied in 2021.

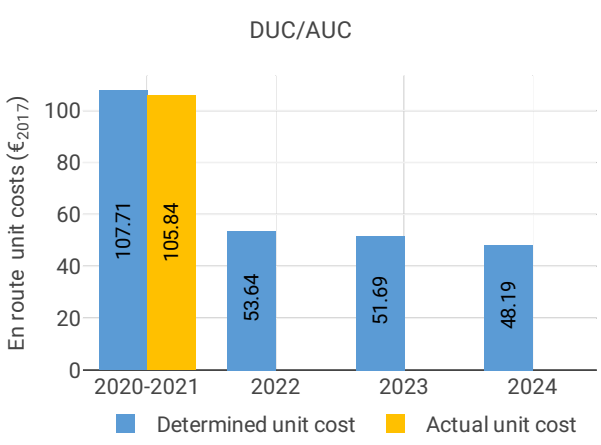
• In 2021, Spain Canarias decreased total costs by -3.6 M€2017 (-3.9%) compared to determined costs. As for Spain Continental, all cost categories have decreased, except depreciation costs. The NSA provided the same explanations as for Spain Continental, since the variations are mainly attributable to ENAIRE.

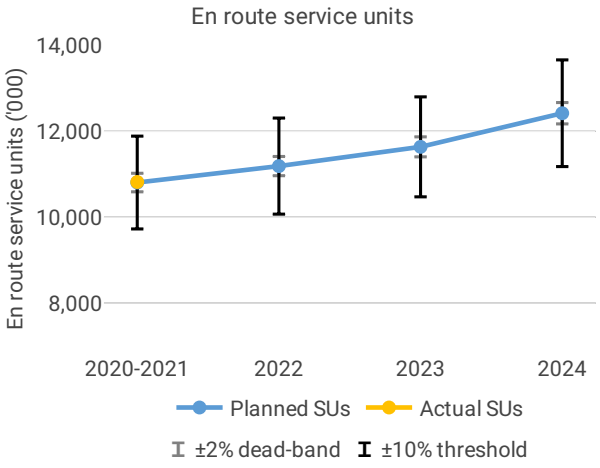
• ENAIRE spent 112 M€2017 in 2021 related to costs of investments, -1.0% less than determined (113 M€2017). The difference was due to a combination of lower en route depreciation costs attributable to a delay in investments (due to the COVID-19 pandemic), and slightly lower than planned terminal cost of capital induced by a lower net book value and WACC.

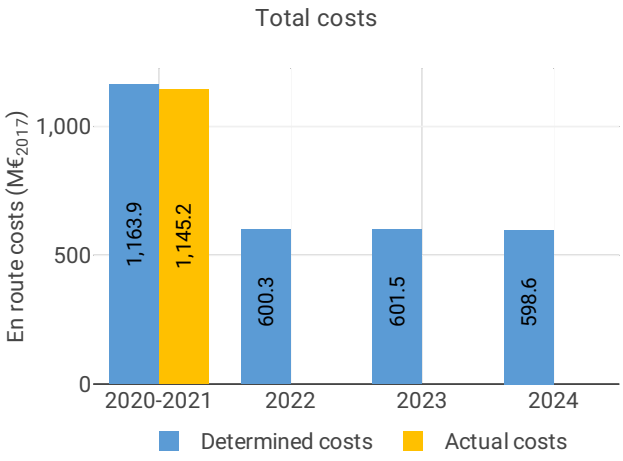
• The en route Spain Continental actual unit cost incurred by users in 2020/2021 was 112.68€, while the en route Spain Canarias actual unit cost incurred by users was 87.05€. The terminal actual unit cost incurred by users was 58.80€.

5.2 En route charging zone - Spain Continental

5.2.1 Unit cost (KPI#1)

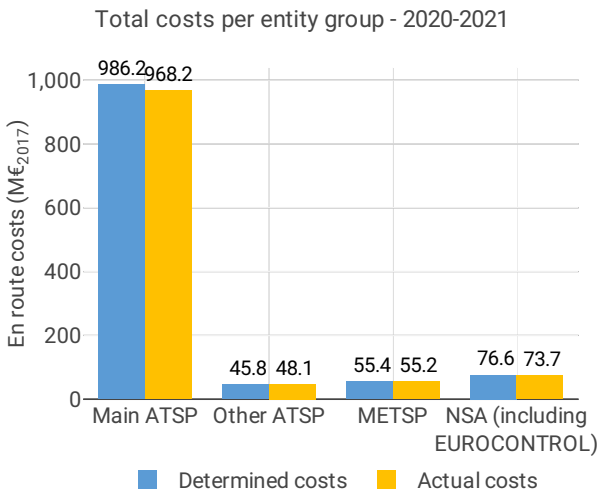


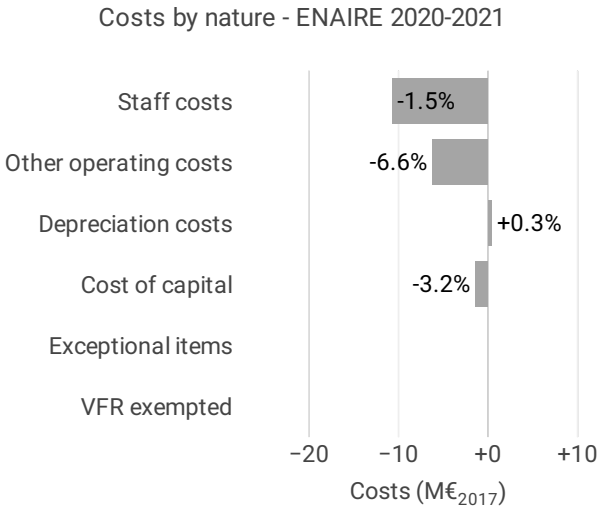




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	1,180	NA	NA	NA
Determined costs	1,191	622	630	634
Difference costs	-11	NA	NA	NA
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	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the AUC was lower than the planned DUC (by -1.7%, or -1.87€2017). This results from the combination of slightly higher than planned TSUs (+0.1%) and lower than planned en route costs in real terms (by -1.6%, or -18.8 M€2017).

En route service units

The difference between actual and planned TSUs (+0.1) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs.

En route costs by entity

Actual real en route costs for 2020-2021 are -1.6% (-18.8 M€2017) lower than planned. This result is driven by the main ANSP, ENAIRE (-1.8%, or -17.9 M€2017), the MET service provider (-0.4% or -0.2 M€2017) and the NSA/EUROCONTROL costs (-3.8%, or -2.9 M€2017), whereas other ANSPs cost are higher than planed (+4.9% or +2.2 M€2017).

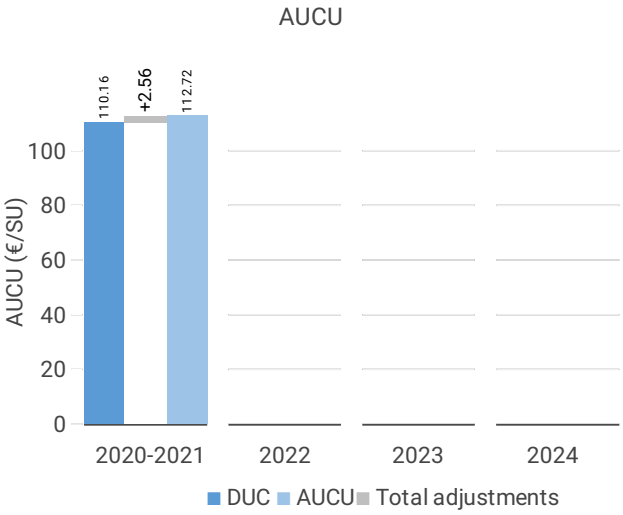
En route costs for the main ANSP at charging zone level

Lower then planned en route costs in real terms for ENAIRE in 2020-2021 (-1.8%, or -17.9 M€2017 lower) results from:

- lower staff costs (-1.5%), although the additional information to the en route reporting tables clarify that "*two provisional rulings unfavourable to ENAIRE, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRE, with a total amount of 32.2M€ higher salaries. This mentioned total amount, although included as higher staff expenses in the 2021 ENAIRE Accounts, has not been considered in the costs submitted by ENAIRE pending national Supreme Court final rulings*";

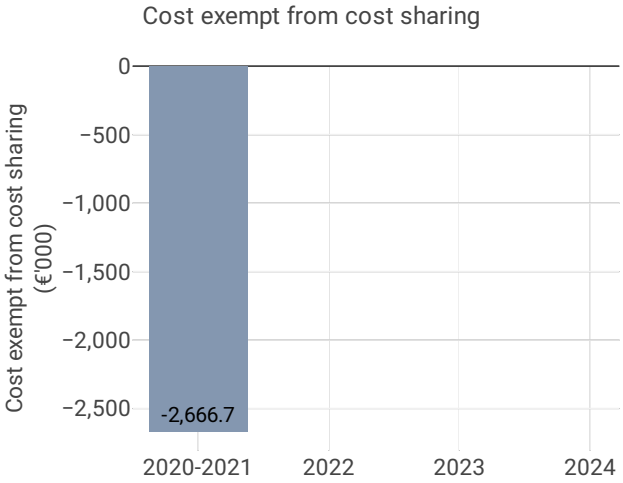
- lower other operating costs (-6.6%), as result of restrictive expenditure policy;
- slightly higher depreciation (+0.3%);
- lower cost of capital (-3.2%), due to lower asset base (-1.6%) and WACC.

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



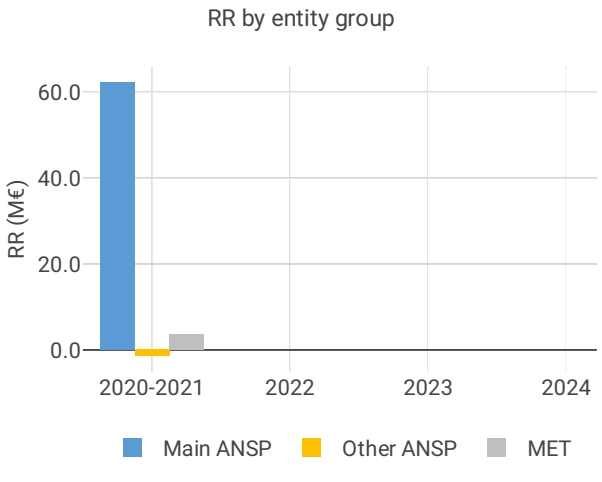
AUCU components (€/SU) – 2020-2021

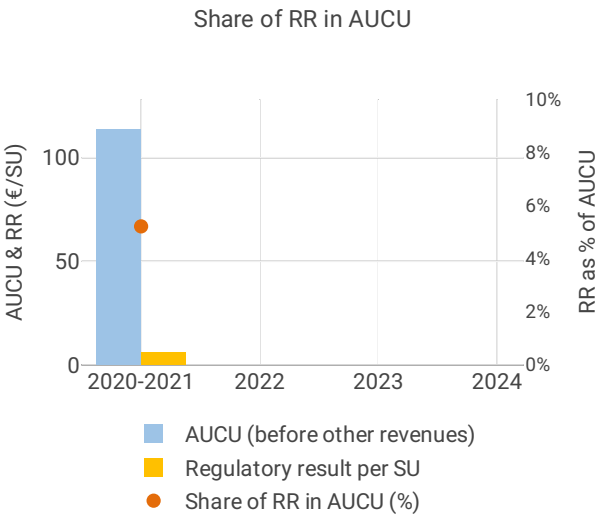
Components of the AUCU in 2020-2021	€/SU
DUC	**110.16**
Inflation adjustment	0.81
Cost exempt from cost-sharing	-0.25
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.02
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	3.15
Other revenues	-1.13
Application of lower unit rate	0.00
Total adjustments	2.56
AUCU	**112.72**
AUCU vs. DUC	**+2.3%**

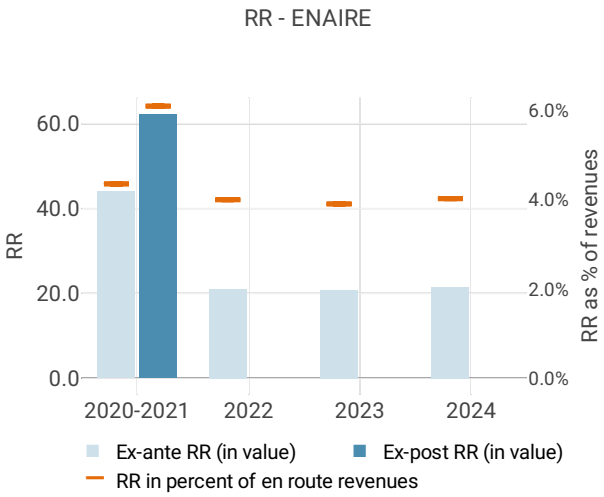


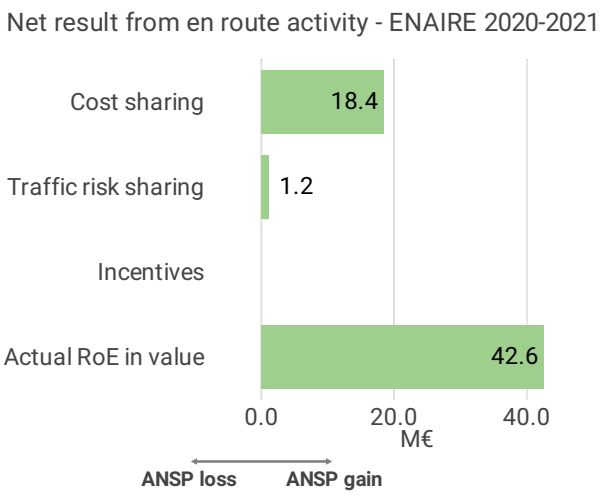
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	218.2	0.02
Competent authorities and qualified entities costs	-391.9	-0.04
Eurocontrol costs	-2,492.9	-0.23
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-2,666.7**	**-0.25**

5.2.3 Regulatory result (RR)









Focus on regulatory result

ENAIRE net gain on en route activity in the Spain Continental charging zone in the combined year 2020-2021

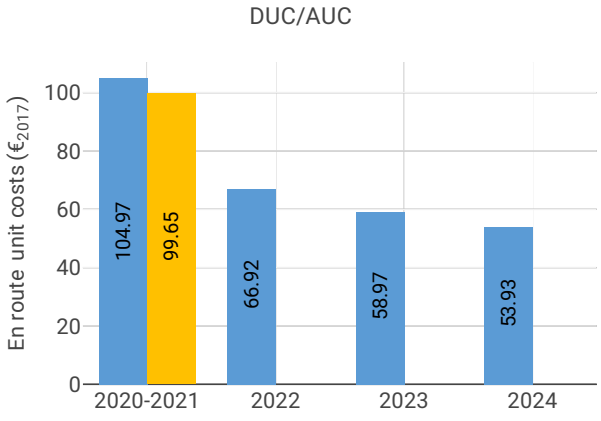
ENAIRE's net gain amounts to +19.6 M€, as a combination of a gain of +18.4 M€ arising from the cost sharing mechanism and a gain of +1.2 M€ arising from the traffic risk sharing mechanism.

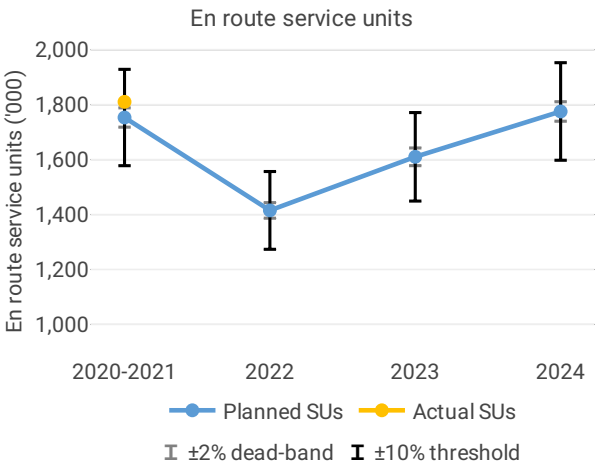
ENAIRE overall regulatory results (RR) for the en route activity

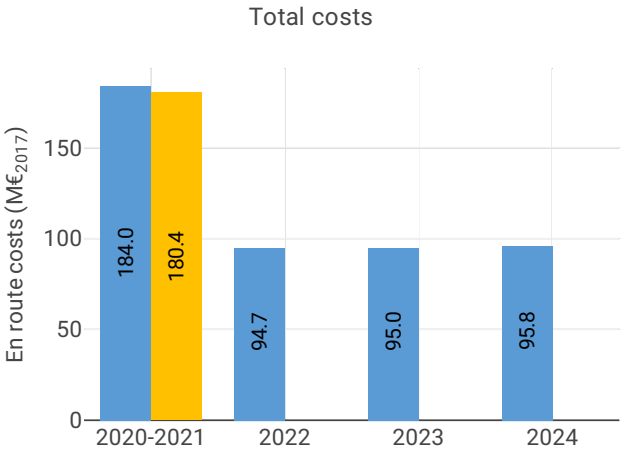
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+19.6 M€) and the actual RoE (+42.6 M€) amounts to +62.2 M€ (6.1% of the en route revenues). The resulting ex-post rate of return on equity is 9.8%, which is higher than the 6.7% planned in the PP.

5.3 En route charging zone - Spain Canarias

5.3.1 Unit cost (KPI#1)

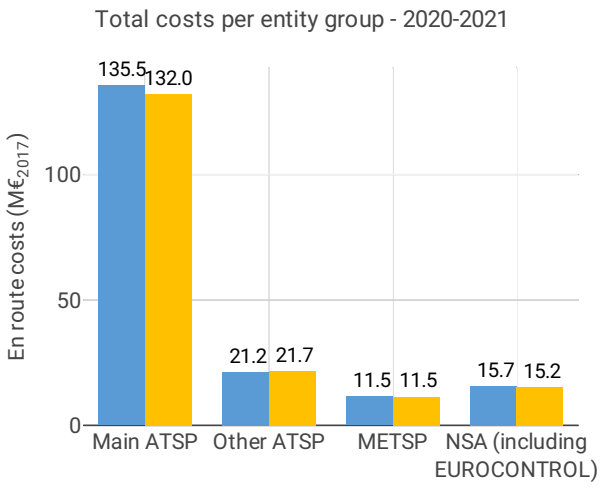


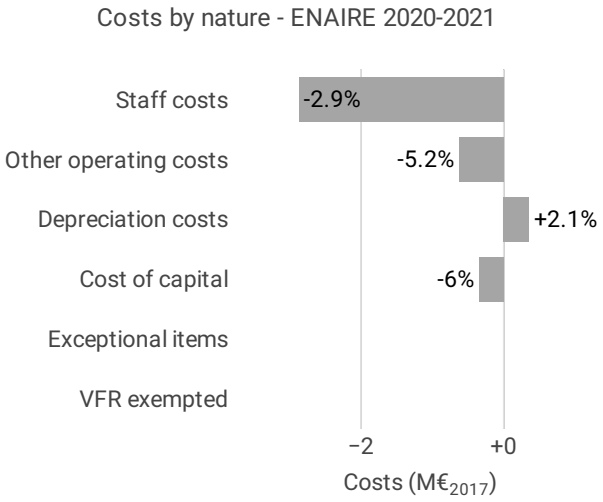




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	186	NA	NA	NA
Determined costs	188	98	100	102
Difference costs	-2	NA	NA	NA
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	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the AUC was lower than the planned DUC (by -5.1%, or -5.32€2017). This results from the combination of higher than planned TSUs (+3.3%) and lower than planned en route costs in real terms (by -1.9%, or -3.6 M€2017).

En route service units

The difference between actual and planned TSUs (+3.3%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en routel revenues is therefore shared between the ATSP and the airspace users, with the ATSP (ENAIRE) retaining an amount of +3.3 M€2017.

En route costs by entity

Actual real en route costs for 2020-2021 are -1.9% (-3.6 M€2017) lower than planned. This result is driven by the main ANSP, ENAIRE (-2.6%, or -3.5 M€2017), the MET service provider (-0.4% or -0.1 M€2017) and the NSA/EUROCONTROL costs (-3.4%, or -0.5 M€2017), whereas other ANSPs cost are higher than planed (+2.5% or +0.5 M€2017).

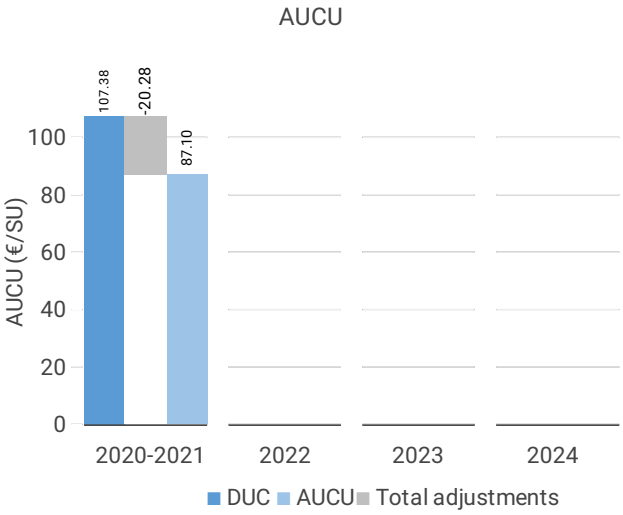
En route costs for the main ANSP at charging zone level

Lower then planned en route costs in real terms for ENAIRE in 2020-2021 (-2.6%, or -3.5 M€2017 lower) results from:

- lower staff costs (-2.9%), although the additional information to the en route reporting tables clarify that "*two provisional rulings unfavourable to ENAIRE, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRE, with a total amount of 32.2M€ higher salaries. This mentioned total*

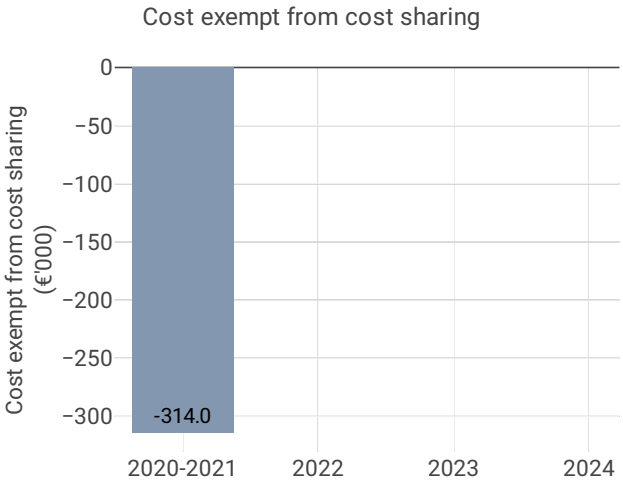
amount, although included as higher staff expenses in the 2021 ENAIRE accounts, has not been considered in the costs submitted by ENAIRE pending national Supreme Court final rulings";
- lower other operating costs (-5.2%), as result of restrictive expenditure policy;
- higher depreciation (+2.1%);
- lower cost of capital (-6.0%), due to lower asset base (-4.5%) and WACC.

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



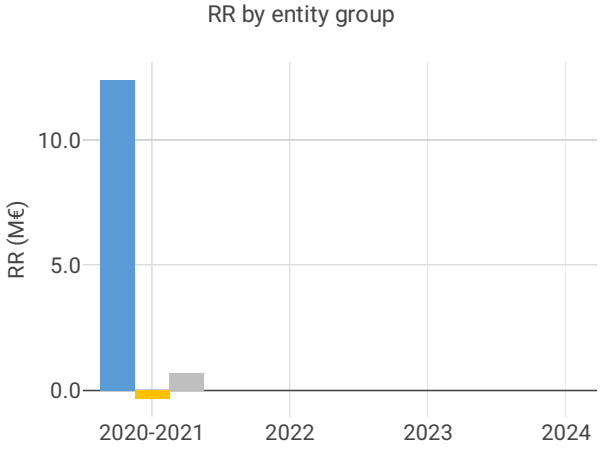
AUCU components (€/SU) – 2020-2021

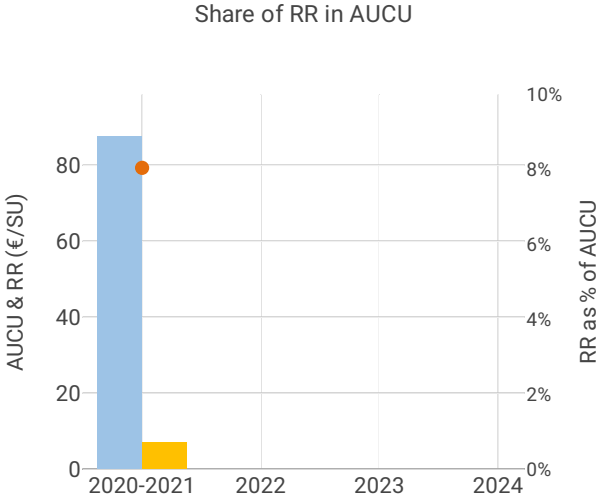
Components of the AUCU in 2020-2021	€/SU
DUC	**107.38**
Inflation adjustment	0.78
Cost exempt from cost-sharing	-0.17
Traffic risk sharing adjustment	-0.70
Traffic adj. (costs not TRS)	-0.90
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	-18.81
Other revenues	-0.48
Application of lower unit rate	0.00
Total adjustments	-20.28
AUCU	**87.10**
AUCU vs. DUC	**-18.9%**

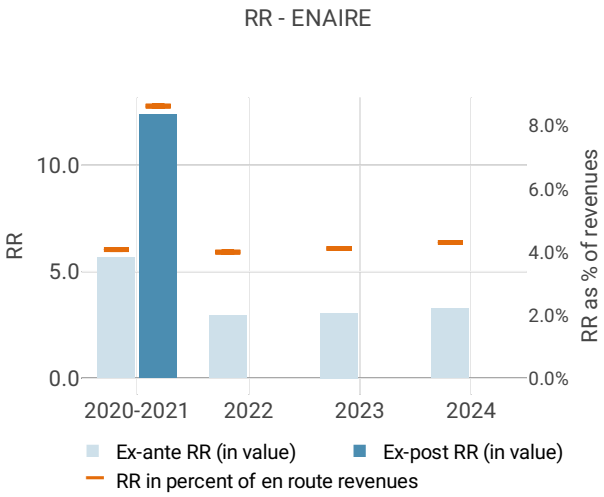


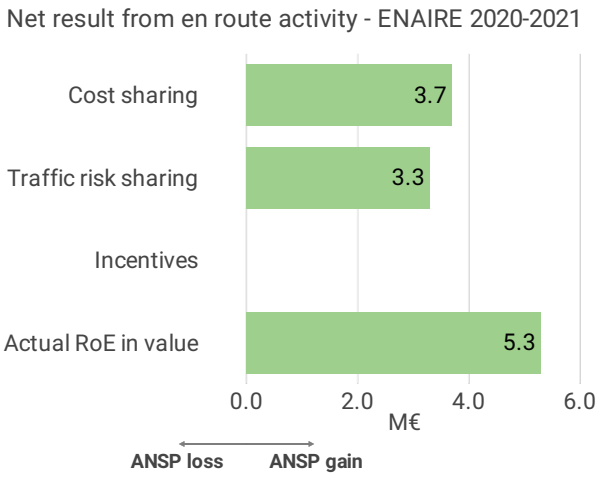
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	218.3	0.12
Competent authorities and qualified entities costs	-69.6	-0.04
Eurocontrol costs	-462.6	-0.26
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-314.0**	**-0.17**

5.3.3 Regulatory result (RR)









Focus on regulatory result

ENAIRE net gain on en route activity in the Spain Canarias charging zone in the combined year 2020-2021

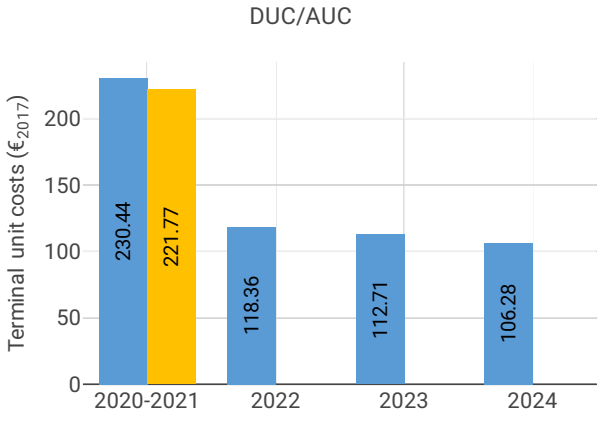
ENAIRE's net gain amounts to +7.1 M€, as a combination of a gain of +3.7 M€ arising from the cost sharing mechanism and a gain of +3.3 M€ arising from the traffic risk sharing mechanism.

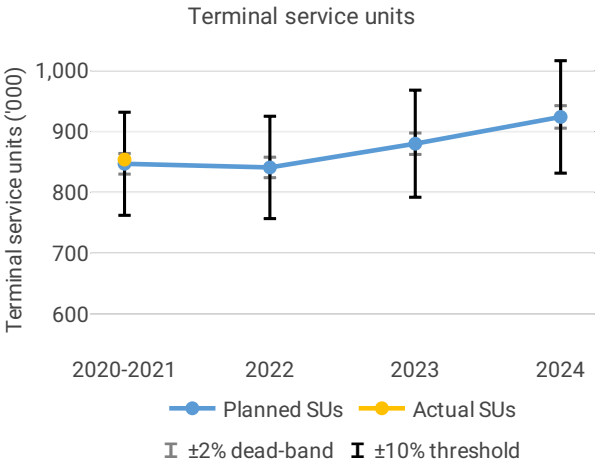
ENAIRE overall regulatory results (RR) for the en route activity

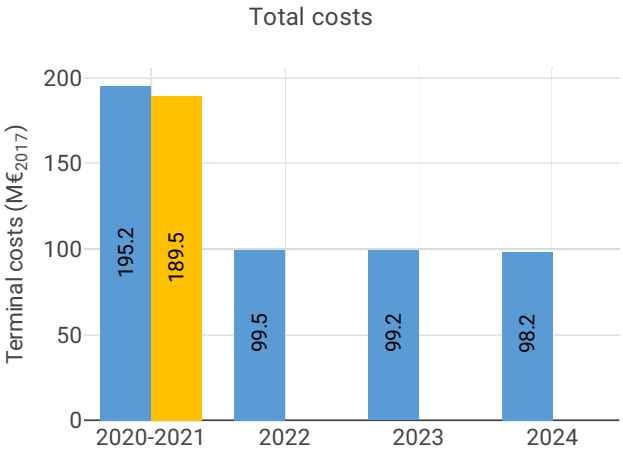
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+7.1 M€) and the actual RoE (+5.3 M€) amounts to +12.4 M€ (8.6% of the en route revenues). The resulting ex-post rate of return on equity is 15.6%, which is higher than the 6.7% planned in the PP.

5.4 Terminal charging zone

5.4.1 Unit cost (KPI#1)

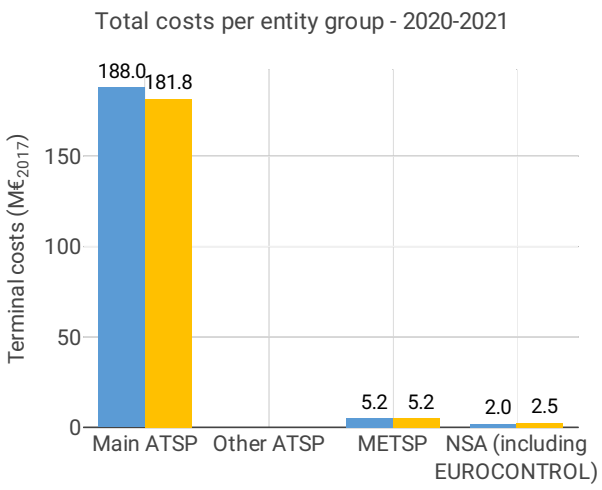


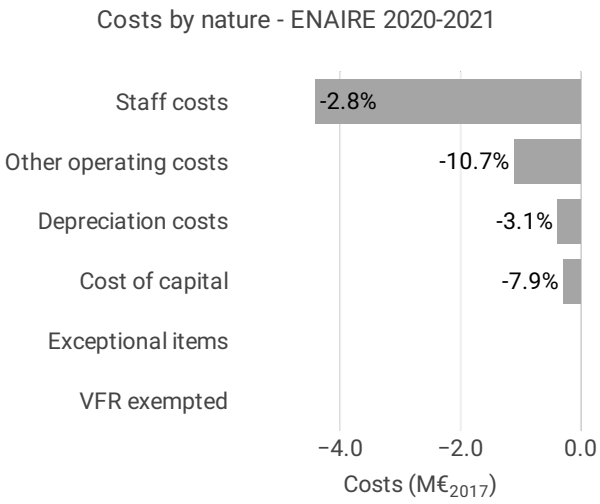




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	196	NA	NA	NA
Determined costs	201	104	105	105
Difference costs	-4	NA	NA	NA
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	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the terminal AUC was -3.8% (or -8.67€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+0.9%) and lower than planned terminal costs in real terms (-2.9%, or -5.7 M€2017).

Terminal service units

The difference between actual and planned TNSUs (+0.9) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs.

Terminal costs by entity

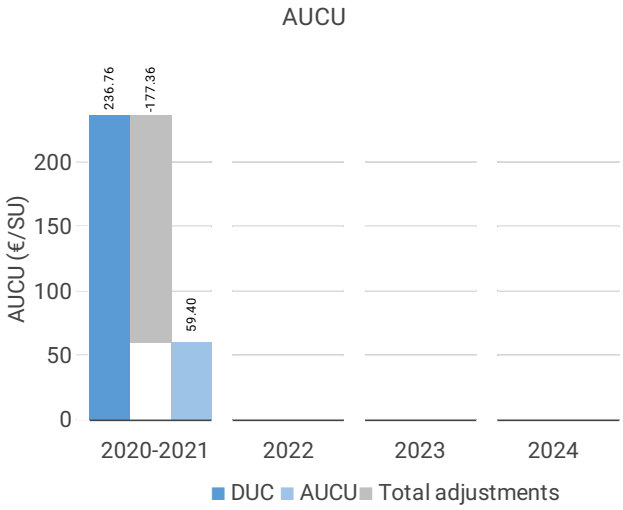
Actual real terminal costs are -2.9% (-5.7 M€2017) lower than planned. This is driven by the main ANSP, ENAIRE (-3.3%, or -6.2 M€2017) and the MET service provider (-1.3%, or -0.1 M€2017), whereas NSA cost are higher than planed (+27.6% or +0.5 M€2017).

Terminal costs for the main ANSP at charging zone level

The lower than planned terminal costs in real terms for ENAIRE (-3.3%, or -6.2 M€2017) result from:
- lower staff costs (-2.8%), although the additional information to the terminal reporting tables clarify that "*two provisional rulings unfavourable to ENAIRE, as a consequence of claims of control staff, have impacted in 2021 Annual Accounts for ENAIRE, with a total amount of 32.2M€ higher salaries. This mentioned total amount, although included as higher staff expenses in the 2021 ENAIRE Accounts, has not been considered in the costs submitted by ENAIRE pending national Supreme Court final rulings*";
- lower other operating costs (-10.7%), as result of restrictive expenditure policy;

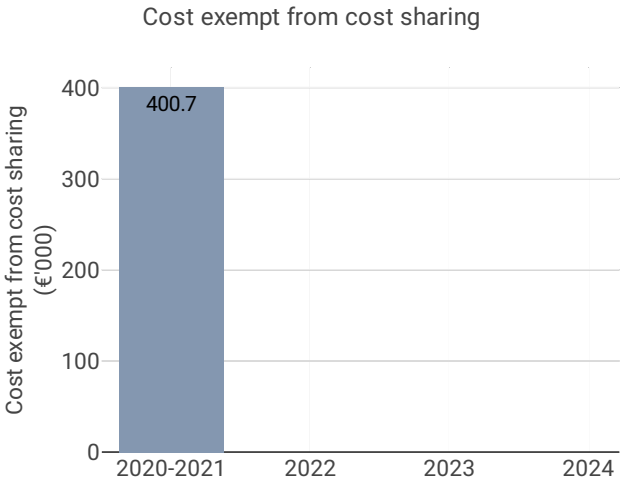
- lower depreciation (-3.1%);
- lower cost of capital (-7.9%), due to lower asset base (-6.5%) and WACC.

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



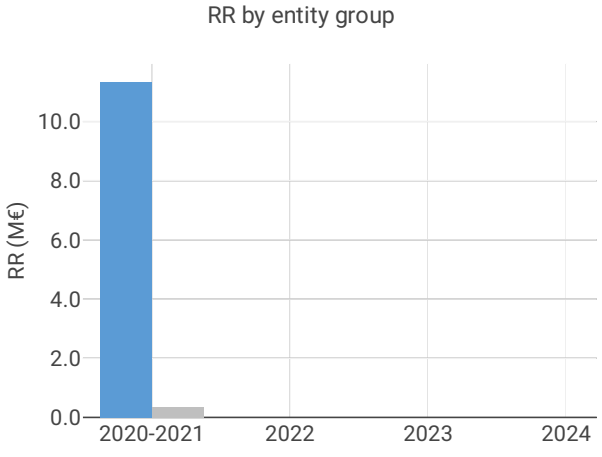
AUCU components (€/SU) – 2020-2021

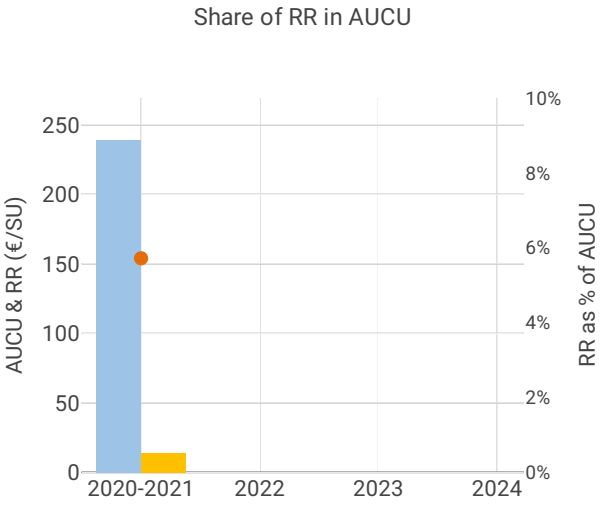
Components of the AUCU in 2020-2021	€/SU
DUC	**236.76**
Inflation adjustment	2.16
Cost exempt from cost-sharing	0.47
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.07
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-179.92
Application of lower unit rate	0.00
Total adjustments	-177.36
AUCU	**59.40**
AUCU vs. DUC	**-74.9%**

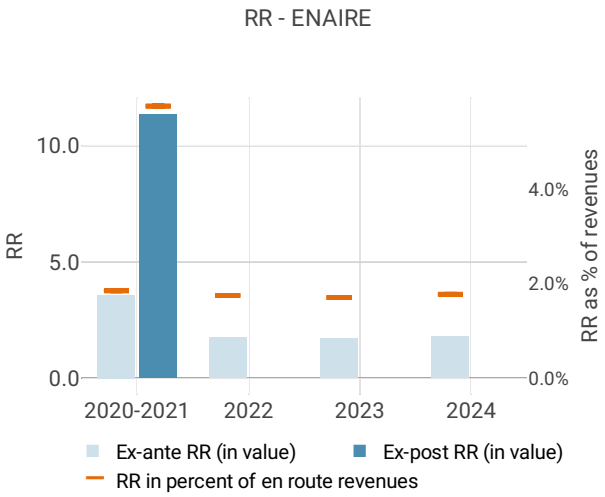


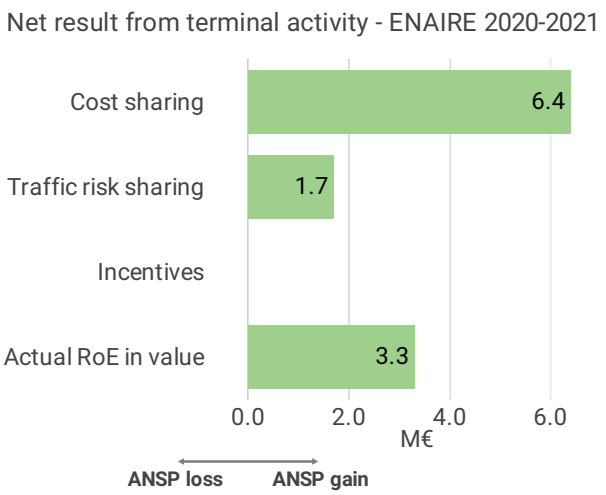
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	-142.9	-0.17
Competent authorities and qualified entities costs	543.6	0.64
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**400.7**	**0.47**

5.4.3 Regulatory result (RR)









Focus on regulatory result

ENAIRE net gain on activity in the Spain terminal charging zone in the combined year 2020-2021
ENAIRE's net gain amounts to +7.5 M€ due to gains of +5.9 M€ from the cost sharing mechanism and of +1.7 M€ from the traffic risk sharing mechanism.

ENAIRE overall regulatory results (RR) for the terminal charging zone activity
Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+7.5 M€) and the actual RoE (+3.3 M€) amounts to +10.8 M€ (5.5% of the terminal revenues). The resulting ex-post rate of return on equity is 22.0%, which is higher than the 6.7% planned in the PP.