

# Performance Review Body Monitoring Report

Ireland - 2023

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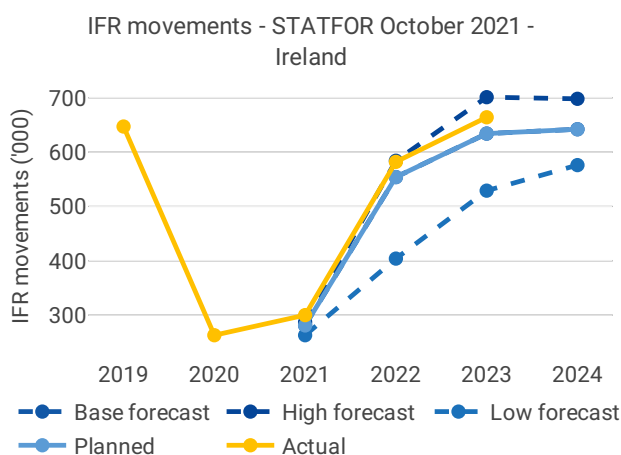
## 1 OVERVIEW

### 1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/766 of 13 April 2022

<b>List of ACCs</b> 2 Shannon ACC Dublin ACC	<b>Exchange rate (1 EUR=)</b> 2017: 1 EUR 2023: 1 EUR	<b>Main ANSP</b> • AirNav Ireland
<b>No of airports in the scope of the performance plan:</b> • ≥80'K 1 • <80'K 2	<b>Share of Union-wide:</b> • traffic (TSUs) 2023 3.9% • en route costs 2023 1.9%	<b>Other ANSPs</b> –
	<b>Share en route / terminal costs 2023</b> 81% / 19%	<b>MET Providers</b> • Met Eireann Aviation Services Division (ASD)
	<b>En route charging zone(s)</b> Ireland	
	<b>Terminal charging zone(s)</b> Ireland	

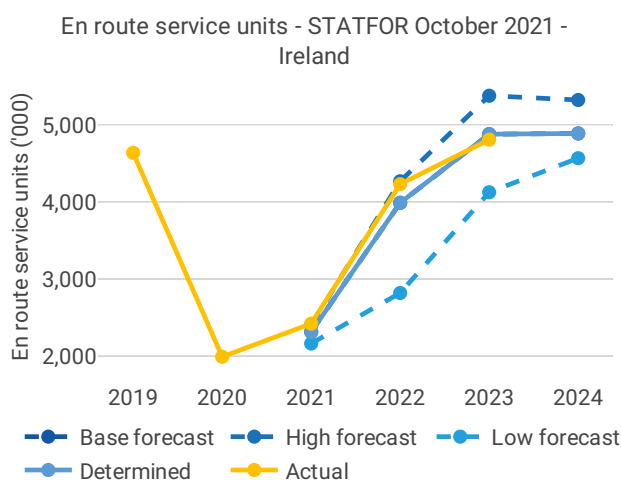
### 1.2 Traffic (En route traffic zone)



- Ireland recorded 664K actual IFR movements in 2023, +14% compared to 2022 (582K).

- Actual 2023 IFR movements were +4.9% above the plan (634K).

- Actual 2023 IFR movements are +3% above the actual 2019 level (647K).

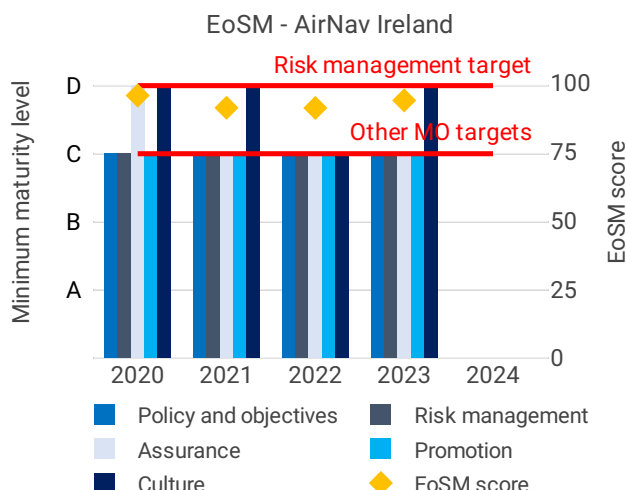


- Ireland recorded 4,812K actual en route service units in 2023, +14% compared to 2022 (4,233K).

- Actual 2023 service units were -1.5% below the plan (4,883K).

- Actual 2023 service units are +4% above the actual 2019 level (4,641K).

### 1.3 Safety (Main ANSP)



- AirNav Ireland achieved the RP3 EoSM targets in four out of five management objectives, but still needs improvements in safety risk management. In 2023, the ANSP exceeded the target achieving level D for safety culture.

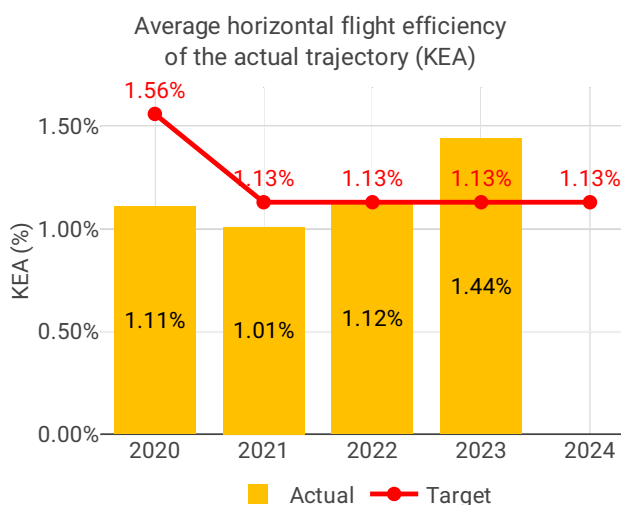
- To ensure achieving the required level D for safety risk management, the ANSP set up as specific project plan under the leadership of Safety Manager containing specific measures in this area. The NSA considers that these measures should provide for the ANSP to achieve or exceed the targets the year 2024.

- Ireland recorded marginally higher rate of separation minima infringements and runway incursions relative to 2022. The rate of runway incursions was above the Union-wide average.

- The NSA has established associated safety targets and alert thresholds to provide quantifiable measures related to the achieved level of safety as defined by an Acceptable Level of Safety Performance (ALSP) of Ireland.

- AirNav Ireland do not use automated safety data recording systems.

### 1.4 Environment (Member State)



- Ireland achieved a KEA performance of 1.44% compared to its target of 1.13% and did not contribute positively towards achieving the Union-wide target.

- The NSA states that the target was not achieved mainly due to the UK's implementation of FRA in SW UK, the NM's initiative for Summer 2023, adverse weather, the French industrial action and the increase in the proportion of flights on the "Tango" routes.

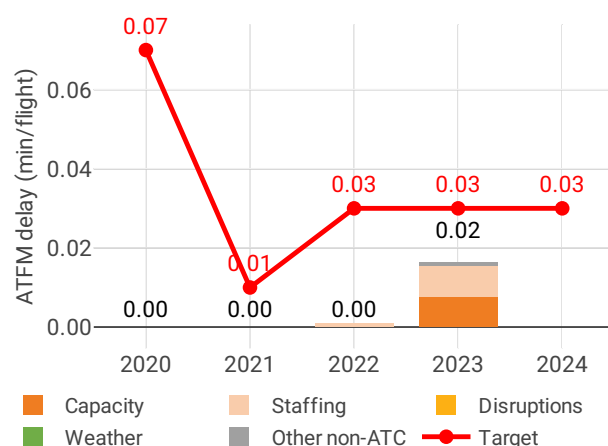
- Both KEP and SCR deteriorated in comparison with 2022.

- The share of CDO flights increased marginally from 40.05% to 40.84% in 2023.

- During 2023, additional time in terminal airspace decreased marginally from 1.88 to 1.79 min/flight, while additional taxi out time decreased from 4.66 to 4.00 min/flight.

## 1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



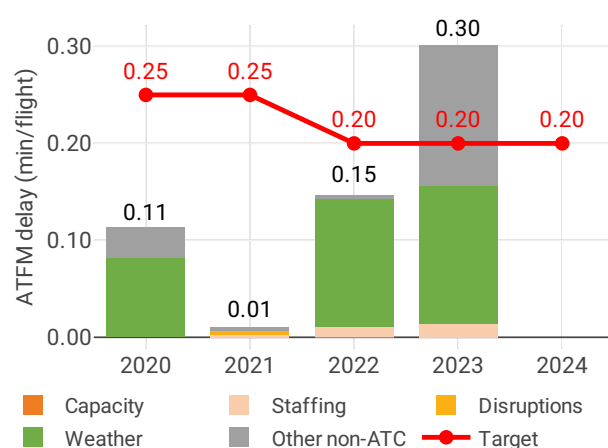
- Ireland registered 0.02 minutes of average en route ATFM delay per flight during 2023, thus achieving the local target value of 0.03. Delays in Ireland increased by 0.02 minutes per flight.

- Delays were highest between June and August, mostly due to ATC capacity and staffing.

- The share of delayed flights with delays longer than 15 minutes in Ireland increased by 15 p.p. compared to 2022 and was lower than 2019 values.

- The average number of IFR movements was 3% above 2019 levels in Ireland in 2023.

Average arrival ATFM delay per flight by delay groups

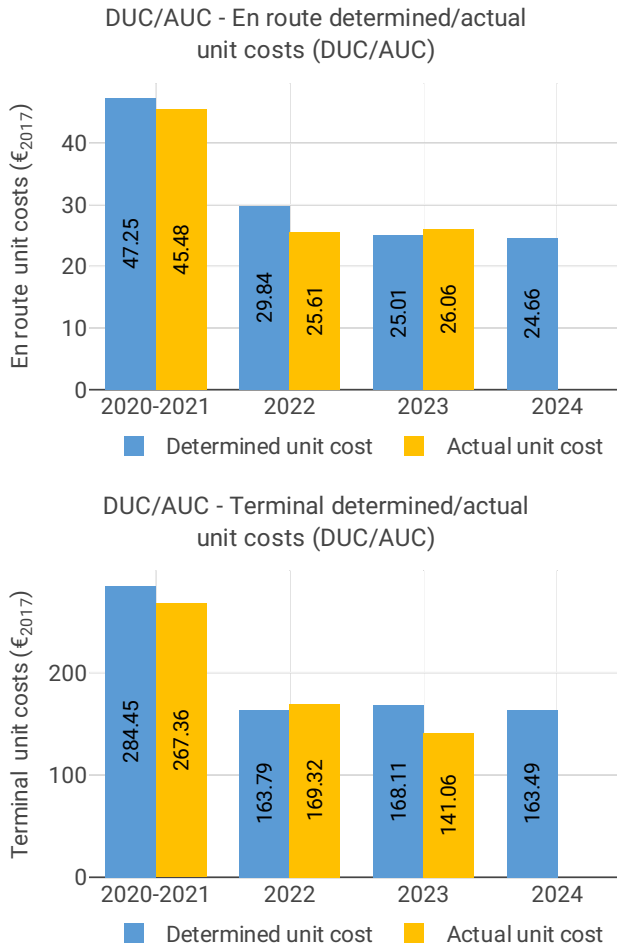


- The number of ATCOs in OPS is expected to stay the same by 2024, with the actual value being below the 2023 plan in Dublin by 4 FTEs. The number of ATCOs in OPS is expected to stay the same by 2024, with the actual value being below the 2023 plan in Shannon by 3 FTEs.

- The yearly total of sector opening hours in Dublin ACC was 18,816, showing a 1.1% increase compared to 2022. Sector opening hours are 1.1% above 2019 levels. The yearly total of sector opening hours in Shannon ACC was 42,707, showing a 7.1% decrease compared to 2022. Sector opening hours are 7.2% below 2019 levels.

- Dublin ACC registered 13.42 IFR movements per one sector opening hour in 2023, being 2.2% below 2019 levels. Shannon ACC registered 11.52 IFR movements per one sector opening hour in 2023, being 13.8% above 2019 levels.

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



- The en route 2023 actual unit cost of Ireland was 26.06 €2017, +4.2% higher than the determined unit cost (25.01 €2017). The terminal 2023 actual unit cost was 141.06 €2017, -16% lower than the determined unit cost (168.11 €2017).

- The en route 2023 actual service units (4.8M) were -1.5% lower than the determined service units (4.9M).

- The en route 2023 actual total costs were +3.8 M€2017 (+3.1%) higher than determined, driven by the NSA actual costs (16 M€2017), which were +123% above the determined costs (7.1 M€2017). The NSA has not provided an explanation for this significant increase. The PRB recommends that the NSA submit an updated Additional Information to the Reporting Tables, providing more comprehensive explanations for the differences between the actual and determined NSA costs.

- On the other hand, both AirNav and the MET provider reported underspends of -4.2% and -16%, respectively, compared to the determined costs for 2023. The underspend reported by AirNav was largely due to lower actual other operating costs compared to determined (-2.8 M€2017, or -10%), attributed to the impact of the inflation index (in

nominal terms, other operational costs were lower than determined by -1.0%). Depreciation costs also registered an underspend (-2.3 M€2017, or -27%), a reflection of delays in investment implementation. These underspends were partially offset by a difference in staff costs (+2.1 M€2017, or +3.5%), primarily due to one-off payments to employees who had experienced pay reductions in 2021.

- AirNav Ireland spent 16 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, -26% lower than determined (21 M€2017), as investments have been delayed due to shortages in resource availability and challenges with sourcing contractors and service providers.

- The en route actual unit cost incurred by users in 2023 was 29.51€ (+12% above the 2023 DUC), while the terminal actual unit cost incurred by users was 163.34€ (-7.1% below the 2023 DUC).

## 2 SAFETY - IRELAND

### 2.1 PRB monitoring

- AirNav Ireland achieved the RP3 EoSM targets in four out of five management objectives, but still needs improvements in safety risk management. In 2023, the ANSP exceed the target achieving level D for safety culture.
- To ensure achieving the required level D for safety risk management, the ANSP set up as specific project plan under the leadership of Safety Manager containing specific measures in this area. The NSA considers that these measures should provide for the ANSP to achieve or exceed the targets the year 2024.
- Ireland recorded marginally higher rate of separation minima infringements and runway incursions relative to 2022. The rate of runway incursions was above the Union-wide average.
- The NSA has established associated safety targets and alert thresholds to provide quantifiable measures related to the achieved level of safety as defined by an Acceptable Level of Safety Performance (ALSP) of Ireland.
- AirNav Ireland do not use automated safety data recording systems.

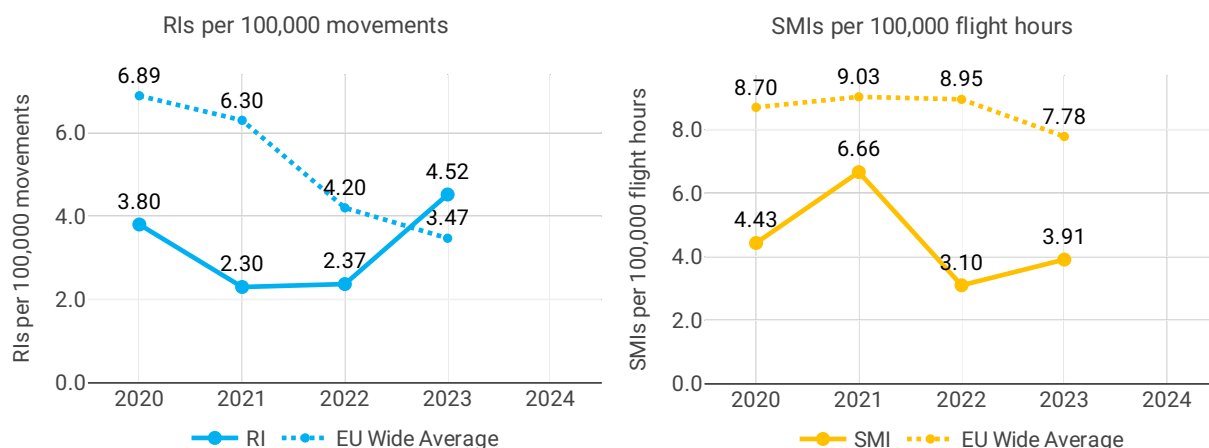
### 2.2 Effectiveness of Safety Management (EoSM) (KPI#1)



#### Focus on EoSM

Four out of five EoSM components of the ANSP meet the RP3 target level. Only “Safety Risk Management” is below RP3 target level, but the ANSP only need to improve in a single question to achieve RP3 targets. Over 2023, “Safety Culture” component was improved from level C to D.

## 2.3 Occurrences - Rate of runway incursions (RIs) (PI#1) & Rate of separation minima infringements (SMIs) (PI#2)



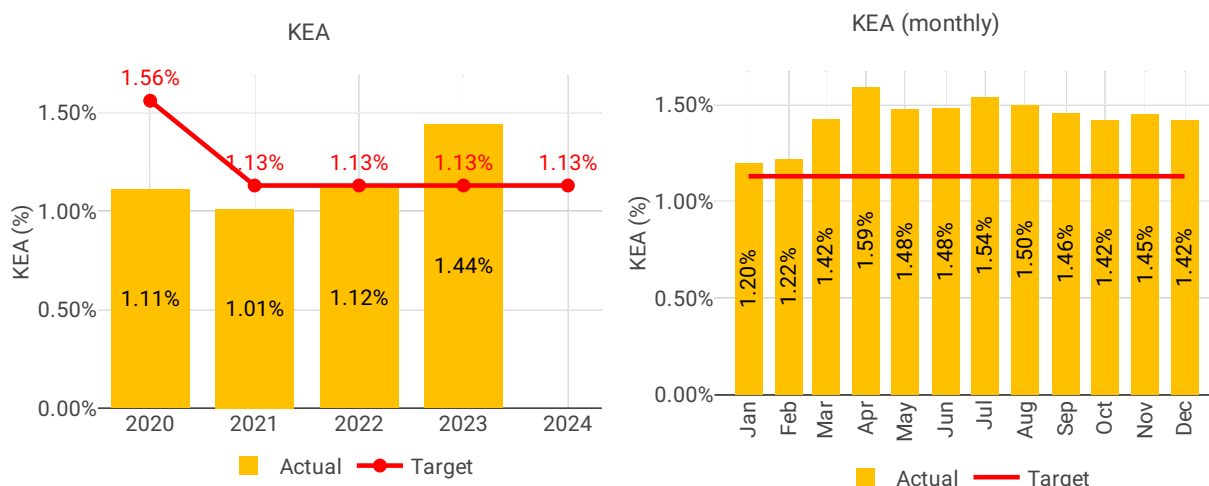
## 3 ENVIRONMENT - IRELAND

### 3.1 PRB monitoring

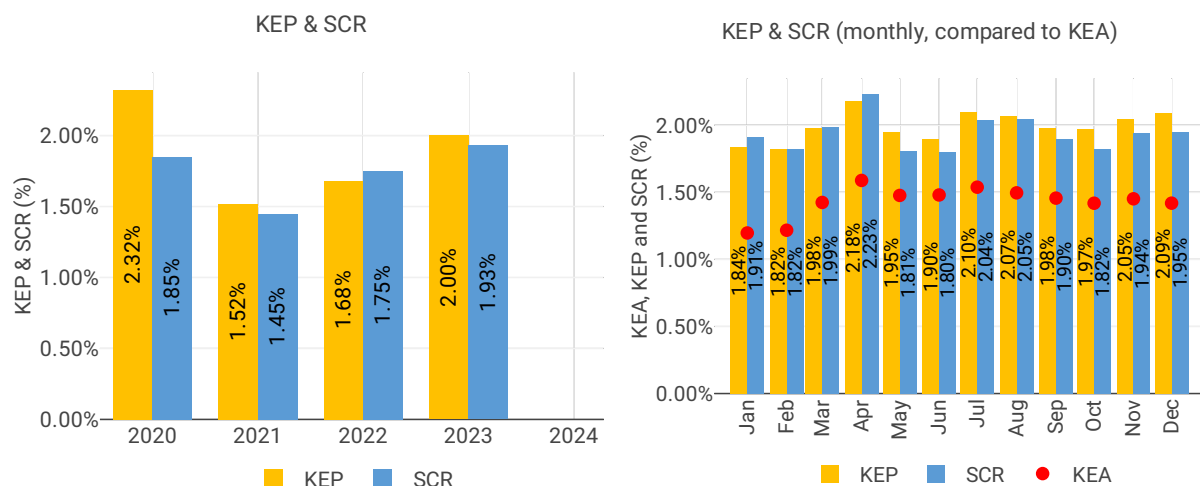
- Ireland achieved a KEA performance of 1.44% compared to its target of 1.13% and did not contribute positively towards achieving the Union-wide target.
- The NSA states that the target was not achieved mainly due to the UK's implementation of FRA in SW UK, the NM's initiative for Summer 2023, adverse weather, the French industrial action and the increase in the proportion of flights on the "Tango" routes.
- Both KEP and SCR deteriorated in comparison with 2022.
- The share of CDO flights increased marginally from 40.05% to 40.84% in 2023.
- During 2023, additional time in terminal airspace decreased marginally from 1.88 to 1.79 min/flight, while additional taxi out time decreased from 4.66 to 4.00 min/flight.

### 3.2 En route performance

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







### 3.3 Terminal performance

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



#### Focus on ASMA & AXOT

##### AXOT

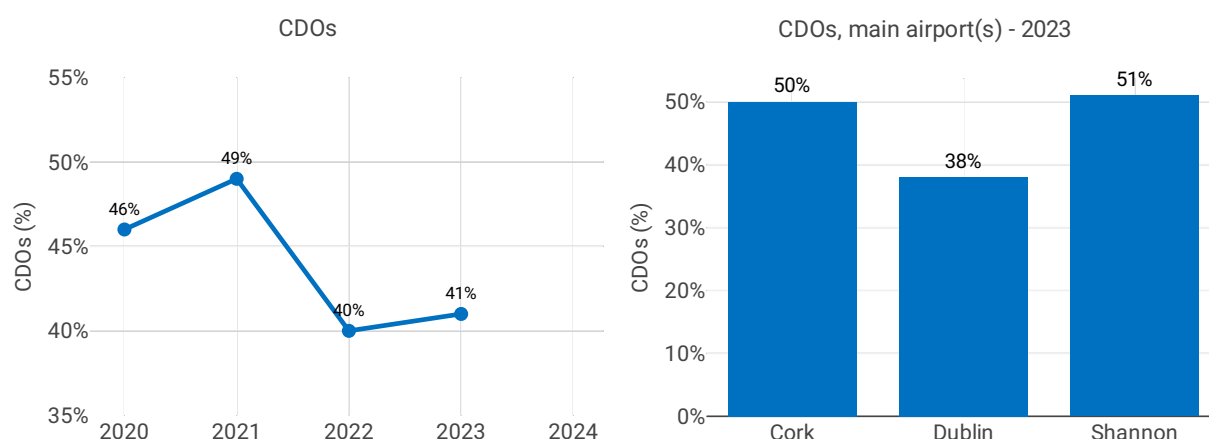
Additional taxi-out times at Dublin decreased in 2023 (after the drastic increase in 2022) (EIDW; 2019: 7.1 min/dep.; 2020: 2.67 min/dep.; 2021: 1.43 min/dep.; 2022: 5.27 min/dep.; 2023: 4.43 min/dep.) and remained lower than in 2019, even if traffic has fully recovered.

However, it is still the second highest additional taxi-out value observed in 2023 amongst the SES monitored airports. According to the Irish monitoring report: *Dublin Airport's new runway 28R/10L with associated taxiway infrastructure became operational in August 2022, with a phased increase to the operational hours until mid-2023, from when it has been operating to the full currently permitted hours. This has contributed to improving this PI, notwithstanding a significant year-on-year increase in traffic levels.*

### ASMA

Additional ASMA times at Dublin, slightly decreased in 2023 (EIDW; 2019: 3.29 min/arr.; 2020: 1.24 min/arr. 2021: 0.58 min/arr.; 2022: 2.02 min/arr.; 2023: 1.91 min/arr.). This performance, although better than in 2019, resulted in the 5th highest additional ASMA value observed in 2023 in the SES monitored airports and well above the SES average of 1.16 min/arr. According to the Irish monitoring report: *Dublin Airspace review is due to be completed in 2023. The ANSP and NSA meet regularly to discuss performance. The ANSP was actively involved in the PRC, ASMA and Additional Taxi Time Working Group, the ANSP is currently reviewing the revised results.*

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

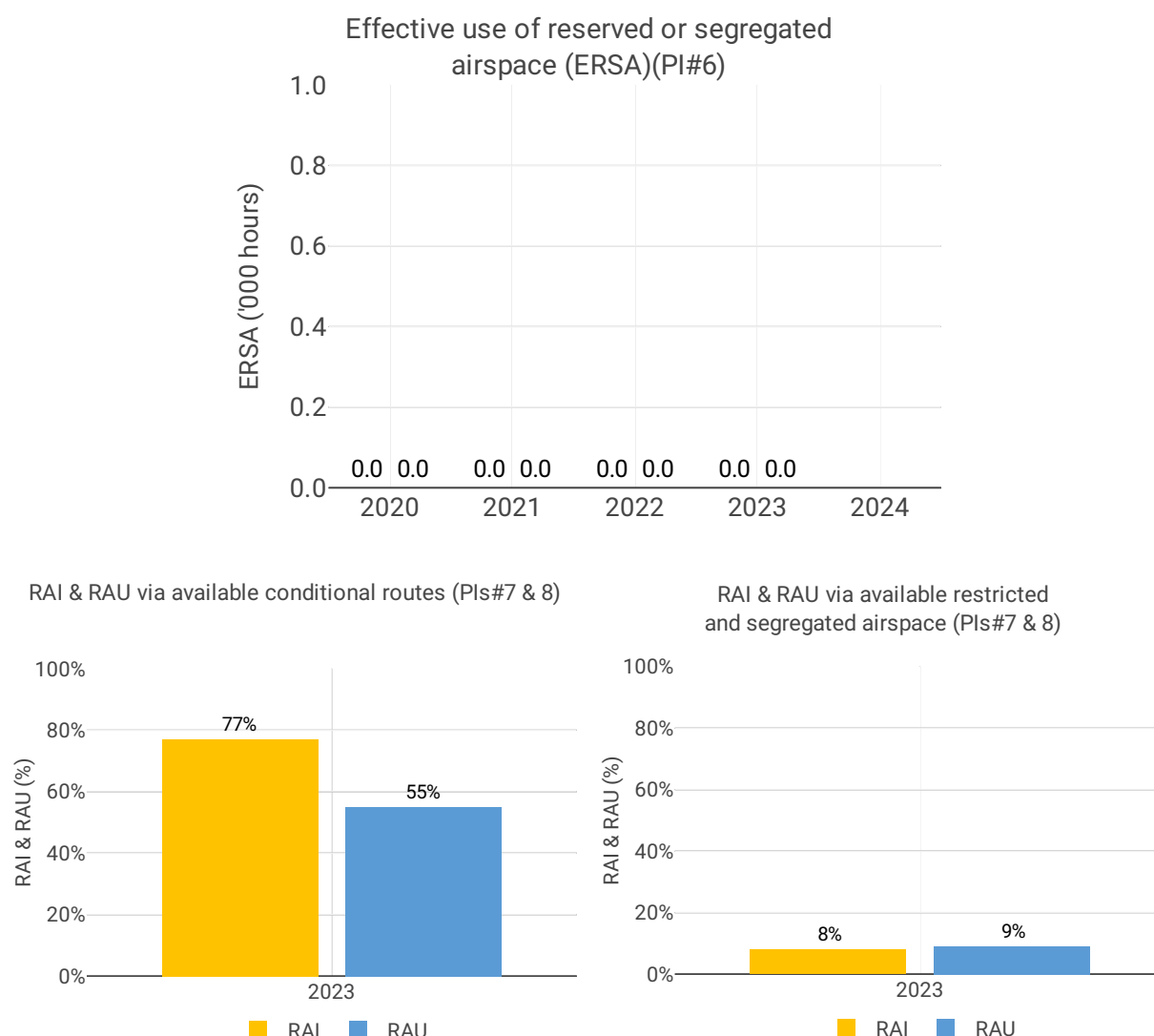


### Focus CDOs

The share of CDO flights increased at Dublin (EIDW) by 0.8 percentage points to 37.9% and at Shannon (EINN) by 3.8 percentage points to 50.6%. Cork (EICK) had a decrease of 0.9 percentage points to 50.2%. Nevertheless, the share of CDO flights at all airports is well above the overall RP3 value in 2023 (28.8%). The monthly values are generally lower during the summer months, especially for Dublin and Cork. According to the Irish monitoring report: *Low level airspace review to incorporate EICK (Cork) and EINN (Shannon) now due in 2024. Dublin Airspace review is due to be completed in the latter part of 2024 (CDO for Dublin operations restricted by neighbouring airspace structures).*

Airport Name	Airport level														
	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
Cork	0.73	0.85	0.66	0.98	NA	0.37	0.26	0.17	0.40	NA	52%	41%	51%	50%	NA
Dublin	2.67	1.43	5.27	4.43	NA	1.24	0.58	2.02	1.91	NA	46%	50%	37%	38%	NA
Shannon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	42%	46%	47%	51%	NA

### 3.4 Civil-Military dimension



#### Focus on Civil-Military dimension

##### Update on Military dimension of the plan

*All military airspace is flight plannable and direct routes are given through activated military airspace as routine.*

*The implementation of Point Merge at Dublin Airport was effected in a manner to ensure there was No impact on capacity at Dublin resulting from the military activity. Likewise the FRA project in 2009 also required no filing differences for military activity.*

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

*As noted above, all military airspace is flight plannable and direct routes are given through activated military airspace as routine.*

*In addition the Military airspace even though proximate to Dublin Airport has No impact on the capacity of Dublin airport and this was confirmed in 2008 when differential flow rates were no longer required for military airspace activity.*

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

*All military airspace is flight plannable and direct routes are given through activated military airspace as routine.*

*The implementation of Point Merge at Dublin Airport was effected in a manner to ensure there was No impact on Environment at Dublin airport resulting from the military activity. Likewise the FRA project in 2009 also required no filing differences for military activity.*

*In addition the Military airspace even though proximate to Dublin Airport has No impact on the capacity of Dublin airport and this was confirmed in 2008 when differential flow rates were no longer required for military airspace activity.*

*Full ASM management is reliant upon the rollout of LARA. Ireland reports c.75% complete pending full LARA application.*

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

*All military airspace is flight plannable and direct routes are given through activated military airspace as routine. The implementation of FRA in 2009 required no filing differences for military activity.*

*A full record is available via NM.*

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

*All military airspace is flight plannable and direct routes are given through activated military airspace as routine.*

*The implementation of Point Merge at Dublin Airport was effected in a manner to ensure there was No impact on Environment at Dublin airport resulting from the military activity. Likewise the FRA project in 2009 also required no filing differences for military activity*

*In addition the Military airspace even though proximate to Dublin Airport has No impact on the capacity of Dublin airport and this was confirmed in 2008 when differential flow rates were no longer required for military airspace activity.*

*Full ASM management is reliant upon the rollout of LARA. Ireland is carrying out operational evaluation of LARA via NATS web-based client.*

## **4 CAPACITY - IRELAND**

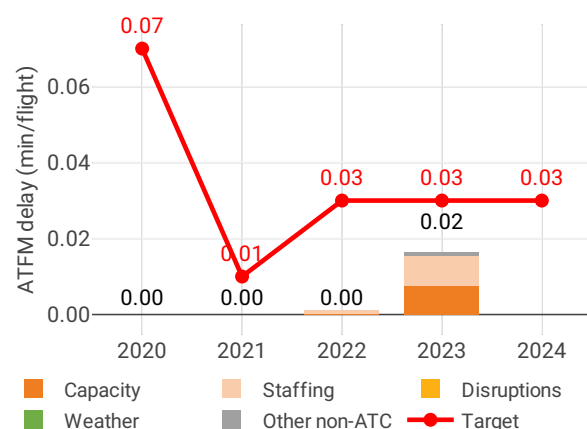
### **4.1 PRB monitoring**

- Ireland registered 0.02 minutes of average en route ATFM delay per flight during 2023, thus achieving the local target value of 0.03. Delays in Ireland increased by 0.02 minutes per flight.
- Delays were highest between June and August, mostly due to ATC capacity and staffing.
- The share of delayed flights with delays longer than 15 minutes in Ireland increased by 15 p.p. compared to 2022 and was lower than 2019 values.
- The average number of IFR movements was 3% above 2019 levels in Ireland in 2023.
- The number of ATCOs in OPS is expected to stay the same by 2024, with the actual value being below the 2023 plan in Dublin by 4 FTEs. The number of ATCOs in OPS is expected to stay the same by 2024, with the actual value being below the 2023 plan in Shannon by 3 FTEs.
- The yearly total of sector opening hours in Dublin ACC was 18,816, showing a 1.1% increase compared to 2022. Sector opening hours are 1.1% above 2019 levels. The yearly total of sector opening hours in Shannon ACC was 42,707, showing a 7.1% decrease compared to 2022. Sector opening hours are 7.2% below 2019 levels.
- Dublin ACC registered 13.42 IFR movements per one sector opening hour in 2023, being 2.2% below 2019 levels. Shannon ACC registered 11.52 IFR movements per one sector opening hour in 2023, being 13.8% above 2019 levels.
- Ireland registered an average airport arrival ATFM delay of 0.30 minutes per flight in 2023, thus not achieving the local target of 0.20 minutes
- Compared to 2022, average arrival ATFM delays in Ireland were 106% higher in 2023, while the number of IFR arrivals increased by 14%.
- The main reasons for delays were other, non-ATC related causes, accounting for 48% of delays and weather, responsible for 47%.

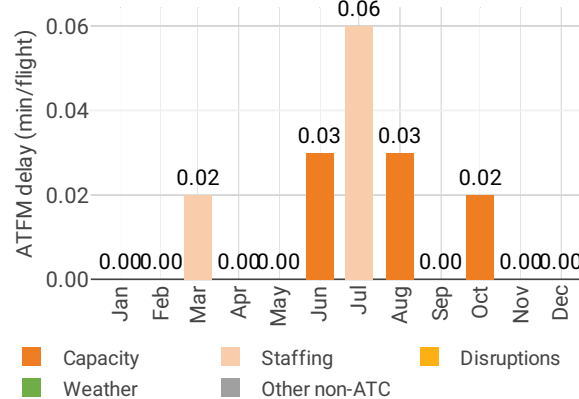
## 4.2 En route performance

### 4.2.1 En route ATFM delay (KPI#1)

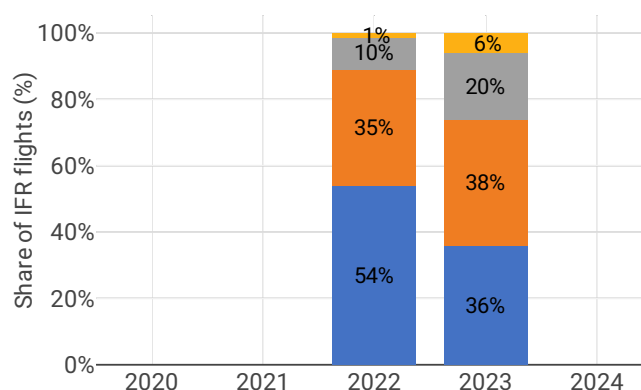
Average en route ATFM delay per flight by delay groups



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



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



### Focus on en route ATFM delay

#### Summary of capacity performance

Ireland experienced an increase in traffic, from 582k flights in 2022, to 664k flights in 2023. Delays increased to almost 11k minutes. For reference there were 647k flights in 2019 and 4k minutes of ATFM delay.

#### NSA's assessment of capacity performance

En route traffic also grew strongly year-on-year, although was slightly below the stronger growth which had been forecast in the Performance Plan.

En route ATFM delay increased year-on-year. The En Route target was still met.

#### Monitoring process for capacity performance

The ANSP monitors on a daily basis any ATFM delay ensuring causes are identified, the results of which are reported weekly to Senior Management. The ANSP and NSA meet regularly to discuss the performance indicators.

## Capacity planning

The ANSP provides input to the Network Operations Report. The ANSP sends the capacity plan to NM for the outlook period on a weekly basis. The Network Manager in conjunction with the ANSP provides a traffic expectation at network and ACC level for the outlook period. The NM assesses the capacity plans which are then published on the Weekly NOP. The plan is as follows:

October 2024: 2024 Capacity baselines confirmed. November 2024: Capacity requirements and reference values. November to January: Preparation of Capacity Plans for 2025-2029, this will also involve teleconferences with NM. January 2025: NM Assessment forecast of expected operational performance for the period 2025-2029. January 2025: preparation of migration measures if required. Q1 2025: plan complete.

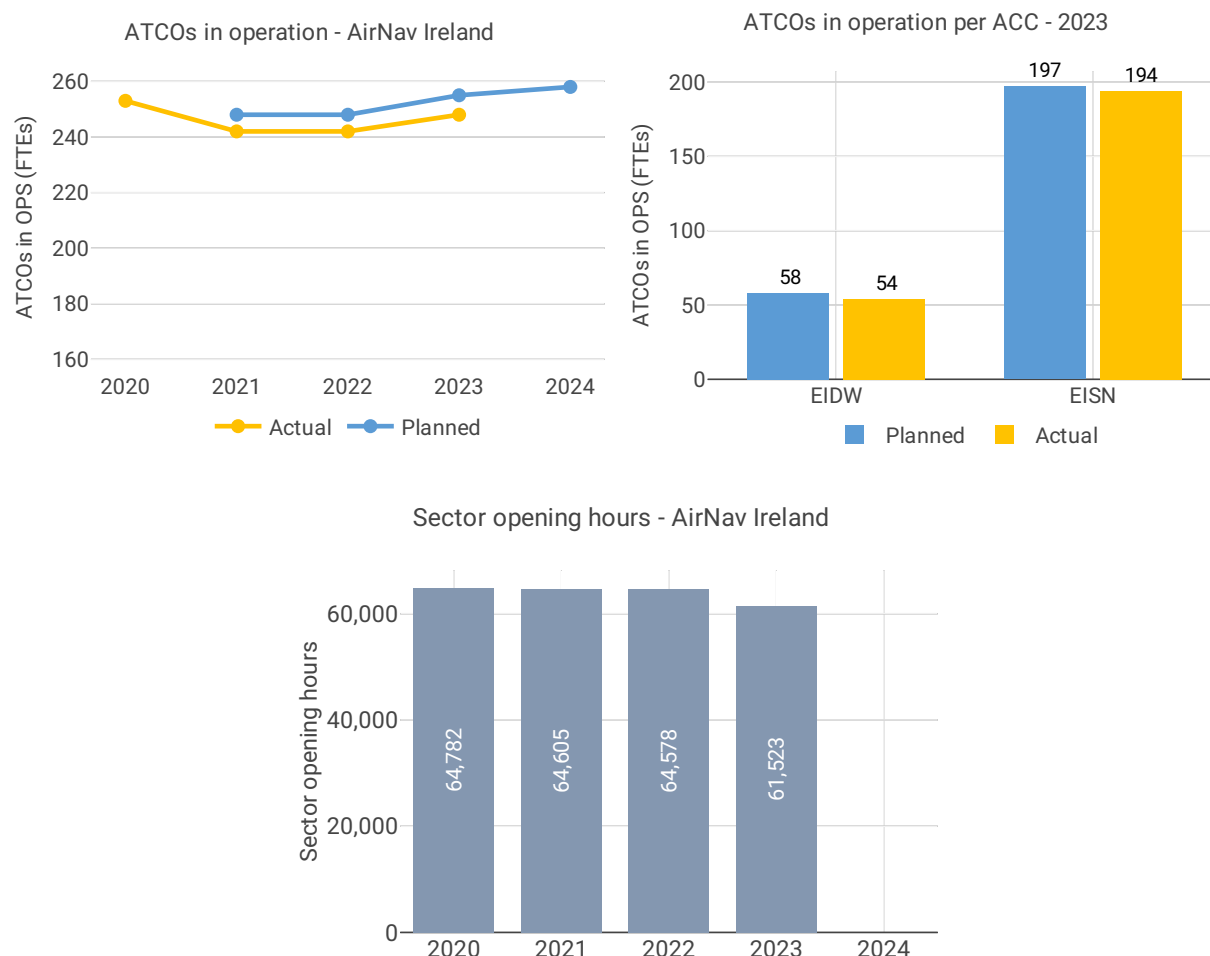
### Application of Corrective Measures for Capacity (if applicable)

Not applicable since targets were met.

### En route Capacity Incentive Scheme

**Airnav Ireland:** Since actual performance falls within the deadband range neither bonus nor malus is due. 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



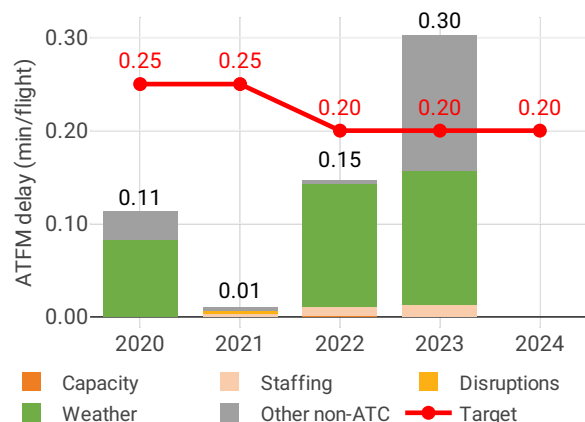
### Focus on ATCOs in operations

N/A

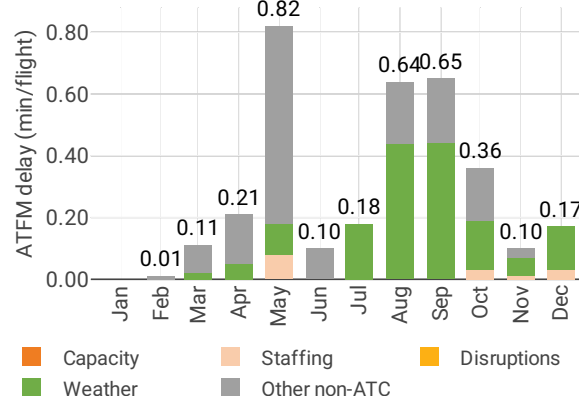
## 4.3 Terminal performance

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

Average arrival ATFM delay per flight by delay groups



Monthly distribution of arrival ATFM delay by delay groups - 2023



### Focus on arrival ATFM delay

Ireland includes 3 airports under RP3 monitoring. However, in accordance with IR (EU) 2019/317 and the traffic figures, only Dublin must be monitored for pre-departure delays.

The Airport Operator Data Flow is fully established at Dublin and the monitoring of pre-departure delays can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay.

Traffic at these Irish airports in 2023, with a 14% increase compared to 2022, showed full recovery with the same traffic levels as in 2019.

Average arrival ATFM delays in 2023 was 0.30 min/arr, compared to 0.15 min/arr in 2022. National target on arrival ATFM delay was not met.

ATFM slot adherence at national level slightly improved (2023: 96.5%; 2022: 96.2%; 2021: 97.6%).

The national average arrival ATFM delay at Irish airports in 2023 was 0.30 min/arr.

No delays were observed in 2023 at Cork (EICK). At Dublin (EIDW: 2019: 0.17 min/arr.; 2020: 0.14 min/arr.; 2021: 0.01 min/arr.; 2022: 0.17 min/arr.; 2023: 0.34 min/arr.) the delays were attributed mainly to weather (50%) followed by Aerodrome Capacity (38%) and ATC staffing (5%). According to the Irish monitoring report:

*For Terminal Operations in Ireland, there was a total of 150,195 arrivals with ATFM delay of 43,164, giving average ATFM arrival delay of 0.29, at all Irish Airports. At airports within the scope of the Performance Plan, average ATFM arrival delay per flight was 0.3 minutes, which was 0.1 minutes above the target.*

*This can be categorised for Dublin Airport as 1,099 Equipment (Non-ATC), 15,295 Aerodrome Capacity, 56 minutes other; 1,728 Special Event - State visit of US President Biden; 1956 ATC Staffing, and 20,433 Weather. Shannon had 2,597 minutes, due to ground infrastructure works (Taxiway A). Cork had zero minutes.*

*The NSA notes that ATFM delay minutes were largely caused by weather and aerodrome related issues. Consistent with historic patterns, only a small proportion of ATFM arrival delay was ANSP attributable, with 0.01 minutes per flight relating to ATC staffing. This delay was likely linked to staffing levels being lower than forecast by the NSA, in circumstances where the traffic was considerably ahead of the forecast. The NSA recommends the ANSP to: Aim to increase ATCO staffing levels at least in line with the Performance Plan forecast as soon as possible, to enable ANSP attributable delay to be improved/maintained.*

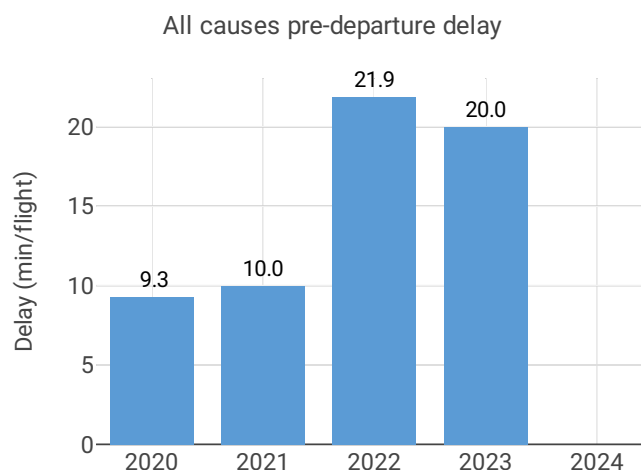
*The monitoring report adds: The main risk to the achievement of the target in 2024 appears to be weather or other non-ANSP attributable delay.*

The Irish performance plan sets a national target on arrival ATFM delay for 2023 of 0.20 min/arr. This target was not met with an actual performance of 0.30 min/arr.

According to the Irish monitoring report, this performance falls within the deadband, and therefore no penalty applies. The monitoring report mentions: *We note that the formulae in this tab include the precise*

actual value achieved (0.30 mins) both within the deadband range, and also the penalty range. The NSA has reviewed Regulation 2019/317 and notes that Article 11(3)(f) provides that the financial disadvantage is to be applied only 'beyond' the deadband range, meaning that the deadband is inclusive of the top of the range (i.e. it encompasses values up to and including 0.30 mins). On that basis, the correct financial incentive is zero, as opposed to the negative incentive automatically computed below.

#### 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	2020	2021	2022	2023
Cork	NA	0.01	NA	NA	97.9%	96.9%	96.5%	96.5%
Dublin	0.14	0.01	0.17	0.34	96.6%	97.7%	96.2%	96.5%
Shannon	NA	0.02	NA	0.23	98.3%	95.7%	96.0%	95.6%

Airport name	ATC pre departure delay (PI#2)				All causes pre departure delay (PI#3)			
	2020	2021	2022	2023	2020	2021	2022	2023
Cork	NA	NA	NA	NA	15.6	19.5	15.6	16.5
Dublin	0.26	NA	0.47	0.15	7.1	6.9	23.1	20.5
Shannon	NA	NA	NA	NA	NA	NA	NA	NA

### Focus on performance indicators at airport level

#### ATFM slot adherence

All three airports showed adherence above 95% and the national average was 96.5%. With regard to the 3.5% of flights that did not adhere, 2.2% was early and 1.3% was late.

According to the Irish monitoring report:

*ATFM slot adherence is continuously monitored, and the ANSP reports to unit management on a weekly basis. ATFM Compliance is discussed regularly with the NSA, all units above 90%.*

#### 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 Dublin (the only Irish airport 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 share of unidentified delay reported by Dublin was above 40% for most months since April 2020, preventing the calculation of this indicator since then. Dublin had proper reporting before April 2020. In 2022 the reporting slightly improved, but since summer 2023 has deteriorated again and the calculation of the indicator was not possible as of May.

The Irish monitoring report mentions: *Dublin Airport's new runway 28R/10L with associated taxiway became operational in August 2022, it continues to show benefits. There appears to be inconsistency in the application of IATA Code 89.*

### All causes pre-departure delay

The total (all causes) delay in the actual off block time at Dublin slightly decreased in 2023 (EIDW: 2020: 7.08 min/dep.; 2021: 6.88 min/dep.; 2022: 23.07 min/dep.; 2023: 20.54 min/dep.)

According to the Irish monitoring report: *Dublin Airport's new runway 28R/10L became operational in August 2022, it continues to show benefits, as noted above. Additionally, On Time Performance significantly improved year-on-year from 2022 to 2023, with the largest contributor to delay being aircraft rotational delay.*

## 5 COST-EFFICIENCY - IRELAND

### 5.1 PRB monitoring

- The en route 2023 actual unit cost of Ireland was 26.06 €2017, +4.2% higher than the determined unit cost (25.01 €2017). The terminal 2023 actual unit cost was 141.06 €2017, -16% lower than the determined unit cost (168.11 €2017).

- The en route 2023 actual service units (4.8M) were -1.5% lower than the determined service units (4.9M).

- The en route 2023 actual total costs were +3.8 M€2017 (+3.1%) higher than determined, driven by the NSA actual costs (16 M€2017), which were +123% above the determined costs (7.1 M€2017). The NSA has not provided an explanation for this significant increase. The PRB recommends that the NSA submit an updated Additional Information to the Reporting Tables, providing more comprehensive explanations for the differences between the actual and determined NSA costs.

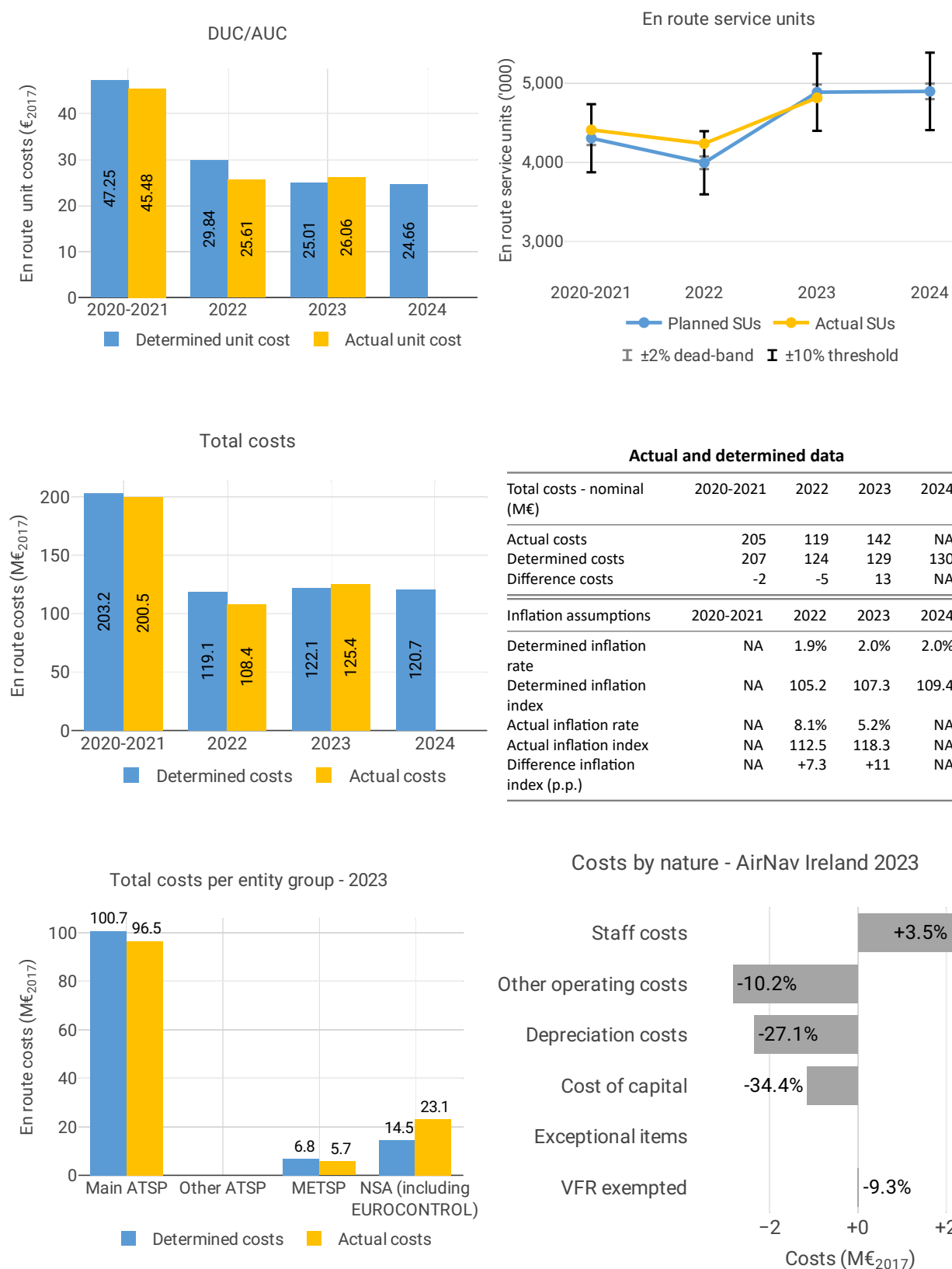
- On the other hand, both AirNav and the MET provider reported underspends of -4.2% and -16%, respectively, compared to the determined costs for 2023. The underspend reported by AirNav was largely due to lower actual other operating costs compared to determined (-2.8 M€2017, or -10%), attributed to the impact of the inflation index (in nominal terms, other operational costs were lower than determined by -1.0%). Depreciation costs also registered an underspend (-2.3 M€2017, or -27%), a reflection of delays in investment implementation. These underspends were partially offset by a difference in staff costs (+2.1 M€2017, or +3.5%), primarily due to one-off payments to employees who had experienced pay reductions in 2021.

- AirNav Ireland spent 16 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, -26% lower than determined (21 M€2017), as investments have been delayed due to shortages in resource availability and challenges with sourcing contractors and service providers.

- The en route actual unit cost incurred by users in 2023 was 29.51€ (+12% above the 2023 DUC), while the terminal actual unit cost incurred by users was 163.34€ (-7.1% below the 2023 DUC).

## 5.2 En route charging zone

### 5.2.1 Unit cost (KPI#1)



### Focus on unit cost

#### AUC vs. DUC

In 2023, the en route AUC was +4.7% (or +1.17 €2017) higher than the planned DUC. This results from the combination of higher than planned en route costs in real terms (+3.1%, or +3.8 M€2017) and lower than

planned TSUs (-1.5%). It should be noted that actual inflation index in 2023 was +11.0 p.p. higher than planned.

### En route service units

The difference between actual and planned TSUs (-1.5%) falls inside the  $\pm 2\%$  dead band. Hence loss of en route revenues is borne by the ANSPs.

### En route costs by entity

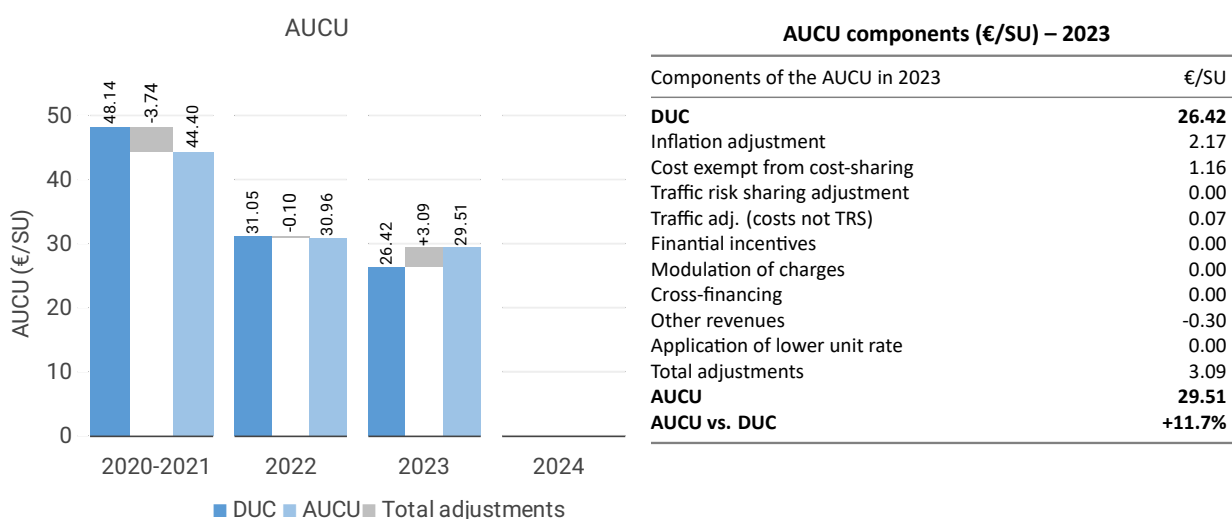
Actual real en route costs are +3.1% (+3.8 M€2017) higher than planned. This is the result of higher costs for the NSA/EUROCONTROL (+62.9%, or +9.1 M€2017) and lower costs for the MET service provider (-16.4%, or -1.1 M€2017) and the main ANSP, AirNav Ireland (-4.2%, or -4.2 M€2017).

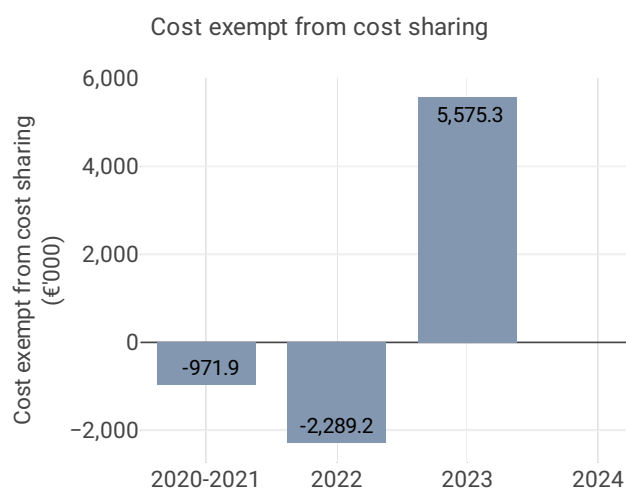
### En route costs for the main ANSP at charging zone level

Lower than planned en route costs in real terms for AirNav Ireland in 2023 (-4.2%, or -4.2 M€2017) resulting mainly from inflation index impact (+11.0 p.p.) since in nominal terms en route costs are higher than planned by +5.1%. Other drivers are:

- Higher staff costs (+3.5%), mainly due to “one-off payment to employees who were the subject of a pay reduction, implemented as a cost containment measure in 2021 during the COVID pandemic and 2% discretionary pension increase applied to pensions in payment and deferred pensions. There were also higher costs of overtime and higher general pay increases compared to the revised RP3 forecasts, which was partially offset by planned headcount being delayed by several months”;
- Significantly lower other operating costs (-10.2%), as mentioned above, due to inflation index impact since in nominal terms operational costs are lower than planned by -1.0%;
- Significantly lower depreciation (-27.1%), reflecting delays in the implementation of the investment programme due to shortages in resource availability in engineering and operations departments, as in 2022;
- Significantly lower cost of capital (-34.4%), resulting from the delays in investments; and
- Significantly lower deduction for VFR exempted flights (-9.3%).

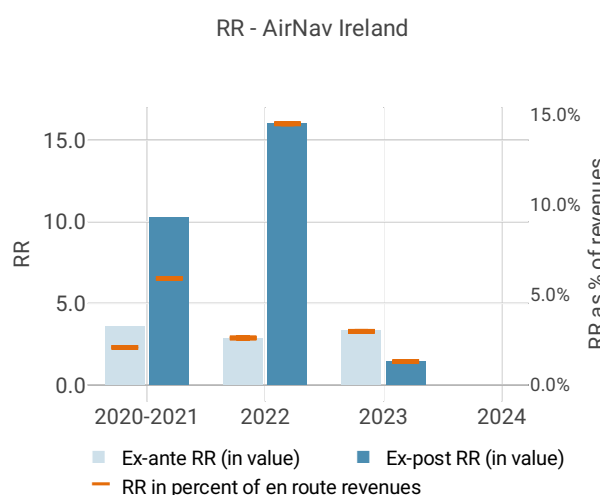
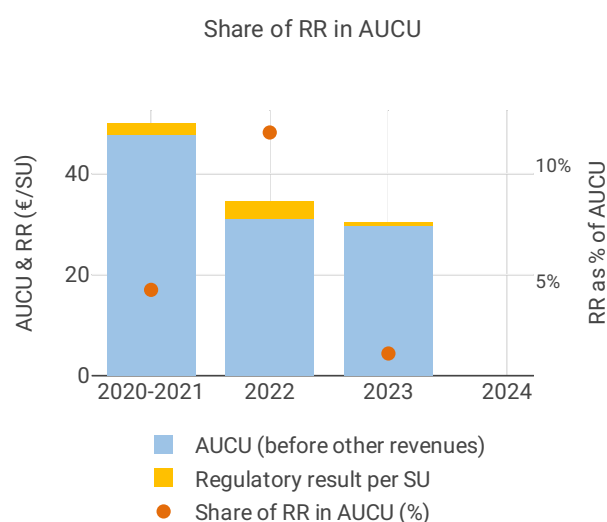
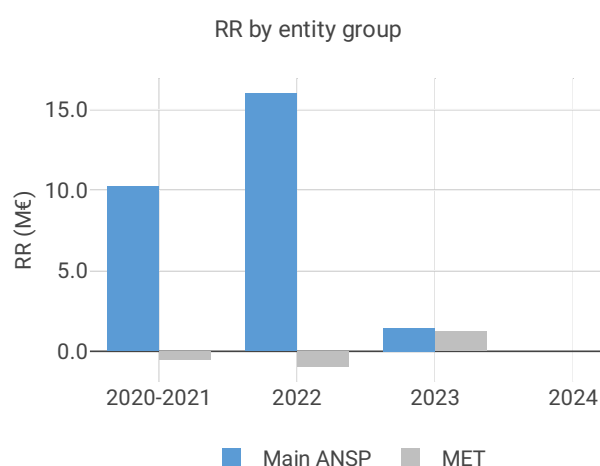
## 5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)



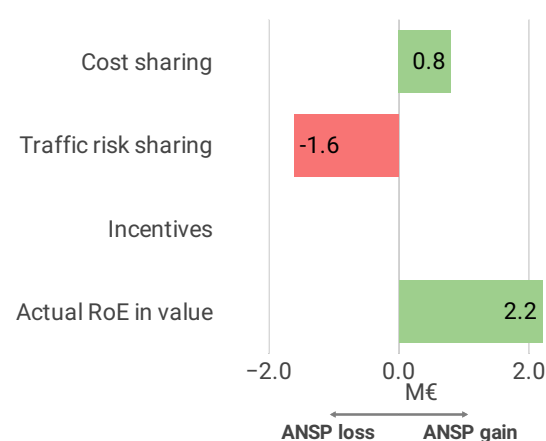


Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	-3,574.0	-0.74
Competent authorities and qualified entities costs	8,659.8	1.80
Eurocontrol costs	489.5	0.10
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
<b>Total cost exempt from cost risk sharing</b>	<b>5,575.3</b>	<b>1.16</b>

### 5.2.3 Regulatory result (RR)



#### Net result from en route activity - AirNav Ireland 2023



### Focus on regulatory result

#### AirNav Ireland net gain on activity in the Ireland en route charging zone in the year 2023

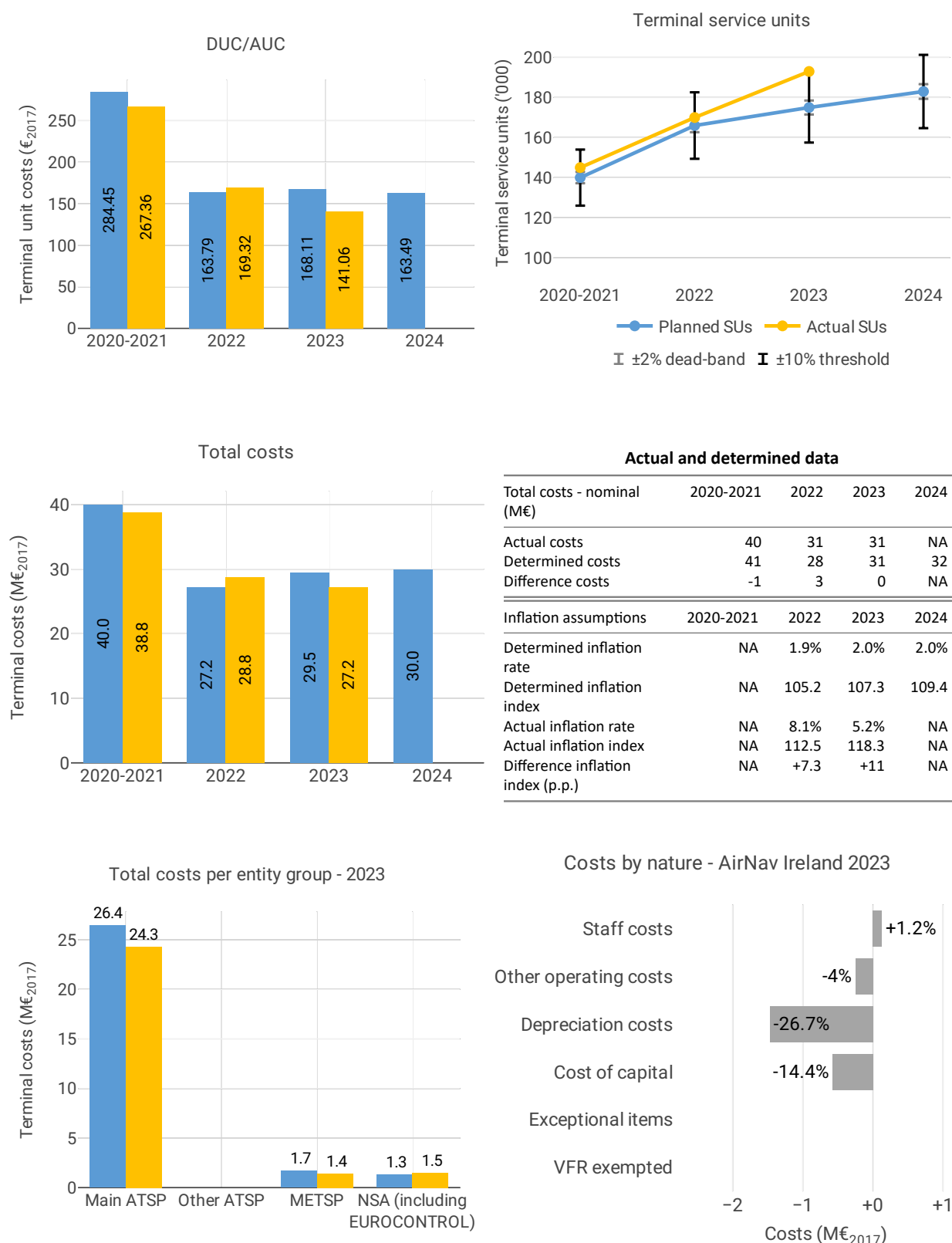
AirNav Ireland reported a net loss of -0.7 M€, as a combination of a gain of +0.8 M€ arising from the cost sharing mechanism, with a loss of -1.6 M€ arising from the traffic risk sharing mechanism.

## AirNav Ireland overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net loss from the en route activity mentioned above (-0.7 M€) and the actual RoE (+2.2 M€) amounts to +1.5 M€ (1.3% of the en route revenues). The resulting ex-post rate of return on equity is 3.7%, which is lower than the 5.6% planned in the PP.

### 5.3 Terminal charging zone

#### 5.3.1 Unit cost (KPI#1)



## Focus on unit cost

### AUC vs. DUC

In 2023, the terminal AUC was -16.1% (or -27.05 €2017) lower than the planned DUC. This results from the combination of significantly higher than planned TNSUs (+10.0%) and significantly lower than planned terminal costs in real terms (-7.7%, or -2.3 M€2017). It should be noted that actual inflation index in 2023 was +11.0 p.p. higher than planned.

### Terminal service units

The difference between actual and planned TNSUs (+10.0%) falls outside the  $\pm 2\%$  dead band, but does not exceed the  $\pm 10\%$  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.

### Terminal costs by entity

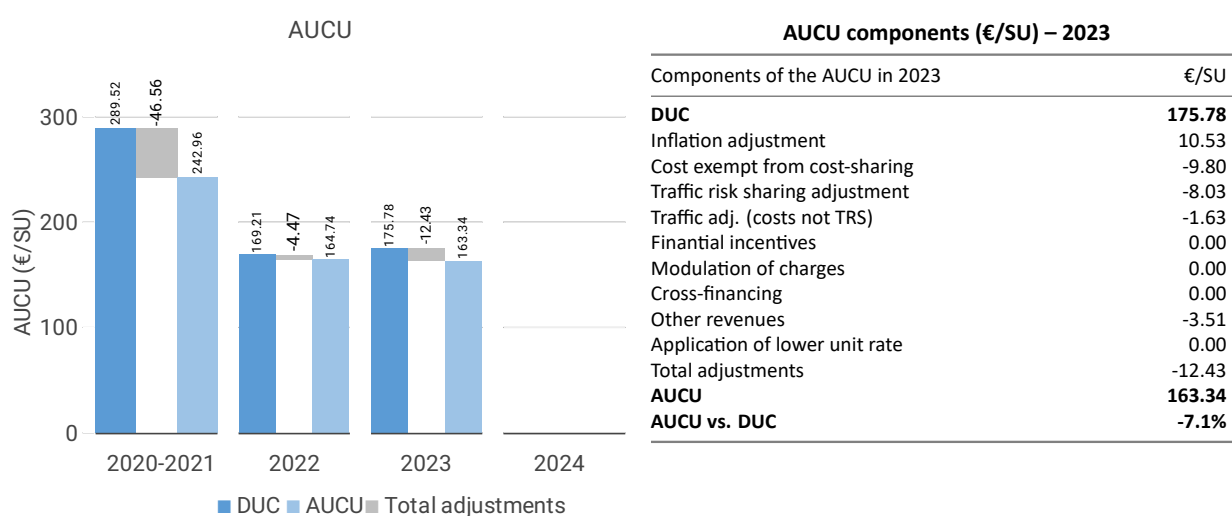
Actual real terminal costs are -7.7% (-2.3 M€2017) lower than planned. This is the result of lower costs for the main ANSP, AirNav Ireland (-8.2%, or -2.2 M€2017) and the MET service provider (-16.3%, or -0.3 M€2017), while the NSA costs are higher (+13.1%, or +0.2 M€2017) than planned.

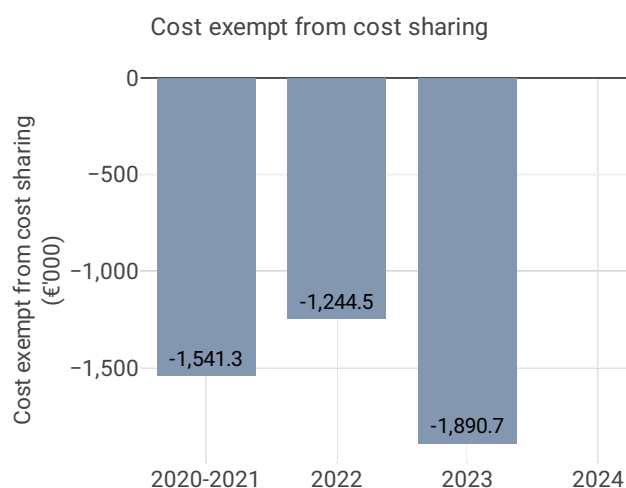
### Terminal costs for the main ANSP at charging zone level

Significantly lower than planned terminal costs in real terms for AirNav Ireland in 2023 (-8.2%, or -2.2 M€2017) resulting mainly from inflation index impact (+11.0 p.p.) since in nominal terms terminal costs are lower than planned by -1.1%. Other drivers are:

- Slightly higher staff costs (+1.2%) or +11.6% in nominal terms, due to the same drivers described in the en route staff costs;
- Lower other operating costs (-4.0%) or +5.9% in nominal terms, due to higher costs than planned costs of training, systems and equipment maintenances;
- Significantly lower depreciation (-26.7%), reflecting delays in the implementation of the investment programme due to staff shortages as well as knock on impacts from COVID-19 and challenges with sourcing contractors; and
- Significantly lower cost of capital (-14.4%) mainly due to delays in project completions as outlined above.

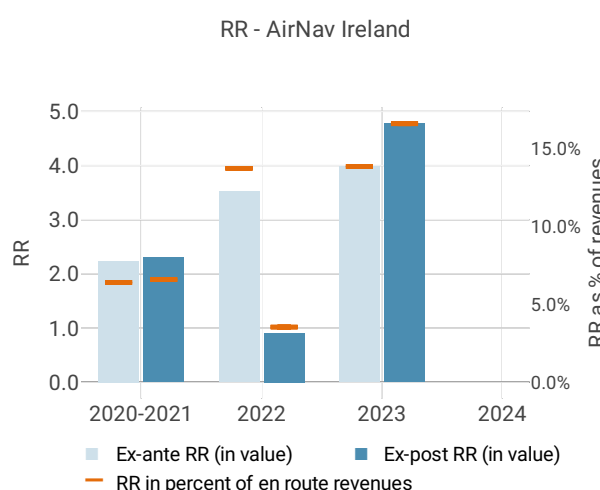
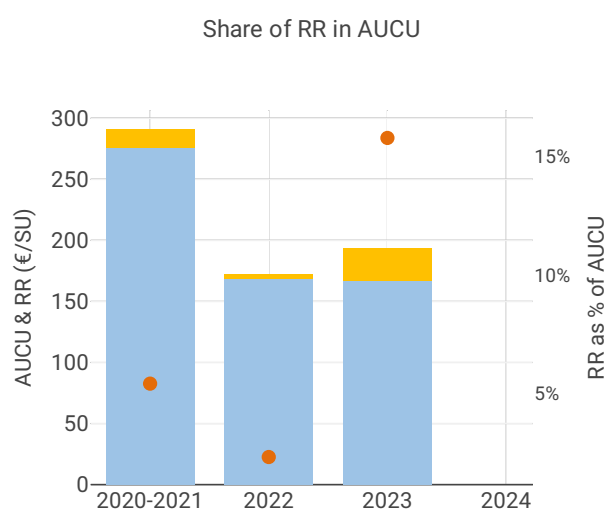
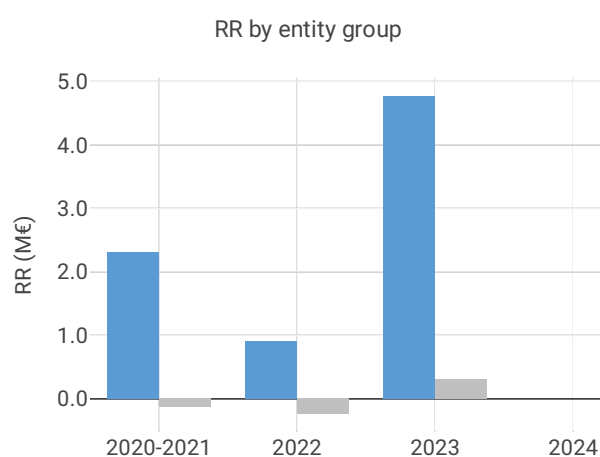
### 5.3.2 Actual unit cost incurred by the users (AUCU) (PI#1)



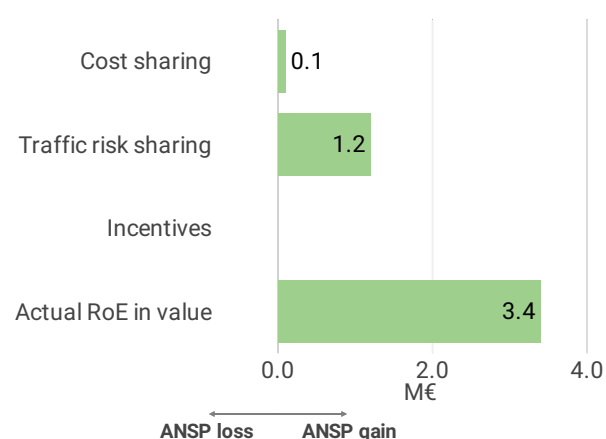


Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	-2,063.3	-10.70
Competent authorities and qualified entities costs	172.6	0.89
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
<b>Total cost exempt from cost risk sharing</b>	<b>-1,890.7</b>	<b>-9.80</b>

### 5.3.3 Regulatory result (RR)



#### Net result from terminal activity - AirNav Ireland 2023



### Focus on regulatory result

#### AirNav Ireland net gain on activity in the Ireland terminal charging zone in the year 2023

AirNav Ireland reported a net gain of +1.4 M€, as a combination of a gain of +0.1 M€ arising from the cost sharing mechanism, with a gain of +1.2 M€ arising from the traffic risk sharing mechanism.

**AirNav Ireland overall regulatory results (RR) for the terminal activity**

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+1.4 M€) and the actual RoE (+3.4 M€) amounts to +4.8 M€ (16.6% of the terminal revenues). The resulting ex-post rate of return on equity is 7.9%, which is higher than the 5.6% planned in the PP.