



RP4 Methodological Consultation and Issues Paper

22 January 2024

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1. Executive Summary

- 1.1 This consultation paper presents the proposed methodology of the IAA in determining the RP4 Performance Plan, considers emerging issues to be discussed with stakeholders, and provides an indication of the IAA's current thinking surrounding the RP4 methodology. The IAA will use the responses to guide its approach to the draft decision on the RP4 Performance Plan, which it intends to publish for consultation in July.
- 1.2 This paper also includes a high-level review of performance to date in RP3, highlighting any trends or experiences which can inform the development of the RP4 Performance Plan.
- 1.3 From this review, we note that unit costs for AirNav Ireland (ANI) and the IAA are below determined levels to date in RP3, whilst unit costs for Met Éireann Aviation Services Division (MET) are marginally above determined (due to discrepancies between forecast and actual staff costs based on the Public Spending Code requirements).
- 1.4 Performance on the Key Performance Indicators (KPIs) in the Capacity and Environment Key Performance Areas (KPAs) has achieved most targets to date, though performance has worsened in 2023; the reasons for performance trends worsening are varied and discussed in detail in section 3.
- 1.5 Inflation has significantly exceeded forecast levels since 2022, with a consequent knock-on effect on unit costs in real terms. Traffic is also above forecasted levels, particularly for the Terminal charging zone.
- 1.6 ANI has experienced higher-than-anticipated air traffic controller (ATCO) attrition in RP3, with ATCO staffing levels somewhat below our forecast.
- 1.7 MET has typically reported higher unit costs than determined due to forecasting costs based on salary band midpoints and reporting actual costs based on true salary band positions, following requirements within the Public Spending Code. From discussions with MET this does not appear to be an ongoing issue into RP4.
- 1.8 The National Supervisory Authority (NSA) cost allocation is based on old allocation keys in use prior to the separation of ANI and the merger of the Commission for Aviation Regulation (CAR). Therefore, we invite views as to whether there should be an update to this allocation or whether the existing allocation remains appropriate.
- 1.9 Finally, we discuss the traffic risk sharing mechanism and incentives in section 8, including the possibility of local targets/incentives for the environment and/or capacity KPAs. We welcome the views of stakeholders on these points.
- 1.10 The key consultation questions for stakeholders to consider are included in each relevant section in the paper. We encourage stakeholders to provide their responses to these questions following the instructions below.

Responding to this consultation and next steps

- 1.11 The deadline for responses to this consultation is **Friday, 23 February 2024**.
- 1.12 Responses should be marked “Response to the RP4 Issues Paper” and sent by email to: consultation@iaa.ie
- 1.13 We may correspond with interested parties who make submissions, seeking clarification or explanation of their submissions.
- 1.14 Respondents should be aware that, ordinarily, we place all submissions received on our website.¹ We may include the information contained in submissions in reports and elsewhere as required. If a submission contains confidential material, it should be clearly marked as confidential and a redacted version suitable for publication should also be provided.
- 1.15 We do not ordinarily edit submissions. Any party making a submission has sole responsibility for its contents and indemnifies us in relation to any loss or damage of whatever nature and howsoever arising suffered by us as a result of publishing or disseminating the information contained within the submission.

¹ While we endeavour to ensure that information on our website is up to date and accurate, we accept no responsibility in relation to the accuracy or completeness of our website and expressly exclude any warranty or representations as to its accuracy or completeness.

2. Background and Process for the RP4 Performance Plan

2.1 This section provides an overview of the context for the development of the RP4 Performance Plan, both at a European level and specifically in Ireland.

Single European Sky Context

2.2 The Single European Sky (SES) initiative, implemented by the European Commission, is aimed at improving air traffic management (ATM) performance and reducing airspace fragmentation across Europe.

2.3 The SES sets targets on performance across four key performance areas (KPA's):

- Capacity;
- Environmental performance;
- Cost-efficiency;
- Safety.

2.4 As part of this initiative, the SES Performance Scheme sets Union-wide performance targets on Air Navigation Service Providers (ANSPs). These targets are set by the European Commission with the advice of the Performance Review Body (PRB). Under the Scheme, National Supervisory Authorities (NSAs) must develop Performance Plans that contain local targets which contribute to the achievement of Union-wide targets.

2.5 The SES uses reference periods to set targets for performance. The current reference period (RP3) runs between 2020-2024. The upcoming reference period (RP4), which this paper discusses, will commence in 2025 and continue until the end of 2029. The IAA is the National Supervisory Authority (NSA) for Ireland under the SES Regulations. NSAs ensure the regulatory framework is upheld and are responsible for overseeing ANSPs under the provisions of the SES Regulations.

2.6 For the current reference period, an original RP3 Performance Plan was submitted in line with the provisions of Commission Implementing Regulation (EU) 2019/317 and the targets set out in Commission Implementing Decision (EU) 2019/903. However, due to the impact of COVID-19 on the aviation sector, Commission Implementing Regulation (EU) 2020/1627 was passed. This contained exceptional measures, including providing for the revision of the RP3 plans. Therefore, NSAs and ANSPs developed and submitted revised RP3 plans to the Commission. The revised RP3 Performance Plan for Ireland was submitted in October 2021, and found to be consistent with the revised EU-wide targets in April 2022.²

2.7 Under the cost-efficiency KPA, the NSA must submit a Performance Plan which outlines the Determined Costs of the ANSP, meteorological service provider,

² RP3 Performance Plan material is published here: <https://www.iaa.ie/commercial-aviation/economic-regulation/air-navigation-charges/performance-plan-with-revised-targets-for-rp3>

and the NSA, for each reference period. The NSA must also provide an inflation and traffic forecast, which, in combination with the above, allows for the calculation of a ‘determined unit cost’ in real terms, which is a binding target to achieve.

- 2.8 The losses incurred by ANSPs during the COVID-19 pandemic in 2020 and 2021 can be broadly recovered through adjustments to the future unit rates. These adjustments will carry over into RP4.
- 2.9 As RP4 approaches, NSAs now need to develop the Performance Plan for RP4. The draft Performance Plans must be submitted to the European Commission by 1 October 2024, and are due to take effect from 1 January 2025.

Institutional context for ANS provision and oversight in Ireland

- 2.10 Until 1 May 2023, air navigation services were provided by the Air Navigation Services Provider within the IAA. The Commission for Aviation Regulation (CAR) was Ireland’s independent economic aviation regulator and responsible for regulatory oversight of SES through its role as joint National Supervisory Authority alongside the IAA’s Safety Regulation Division.
- 2.11 From 1 May 2023, pursuant to the Air Navigation and Transport Act 2022, CAR was dissolved, and its regulatory functions, responsibilities, and staff were transferred to the IAA. At the same point, the Air Navigation Service Provider functions of the IAA were transferred to a new company, AirNav Ireland (ANI). Consequently, the RP4 Performance Plan will be developed by the IAA, in its role as NSA and the single and fully independent civil aviation regulator, responsible for safety, security, and economic oversight. ANI is the company which will provide air navigation services during RP4.

Approach for developing the Irish Performance Plan for RP4

Process and timeline

- 2.12 In line with the SES requirements, a new draft Performance Plan for RP4 needs to be submitted to the European Commission by 1 October 2024. Therefore, the IAA has developed a process and a timeline to develop this plan which is summarised below.

Figure 2.1: Planned Timeline for RP4 Draft Performance Plan



- 2.13 This paper begins our substantive process of engagement with stakeholders, seeking submissions on how we should develop the Performance Plan and what issues we should take into account. Parties are invited to comment on the regulatory policies we should adopt, the methodologies we should apply and the data sources we should use. We invite comments on any issues which

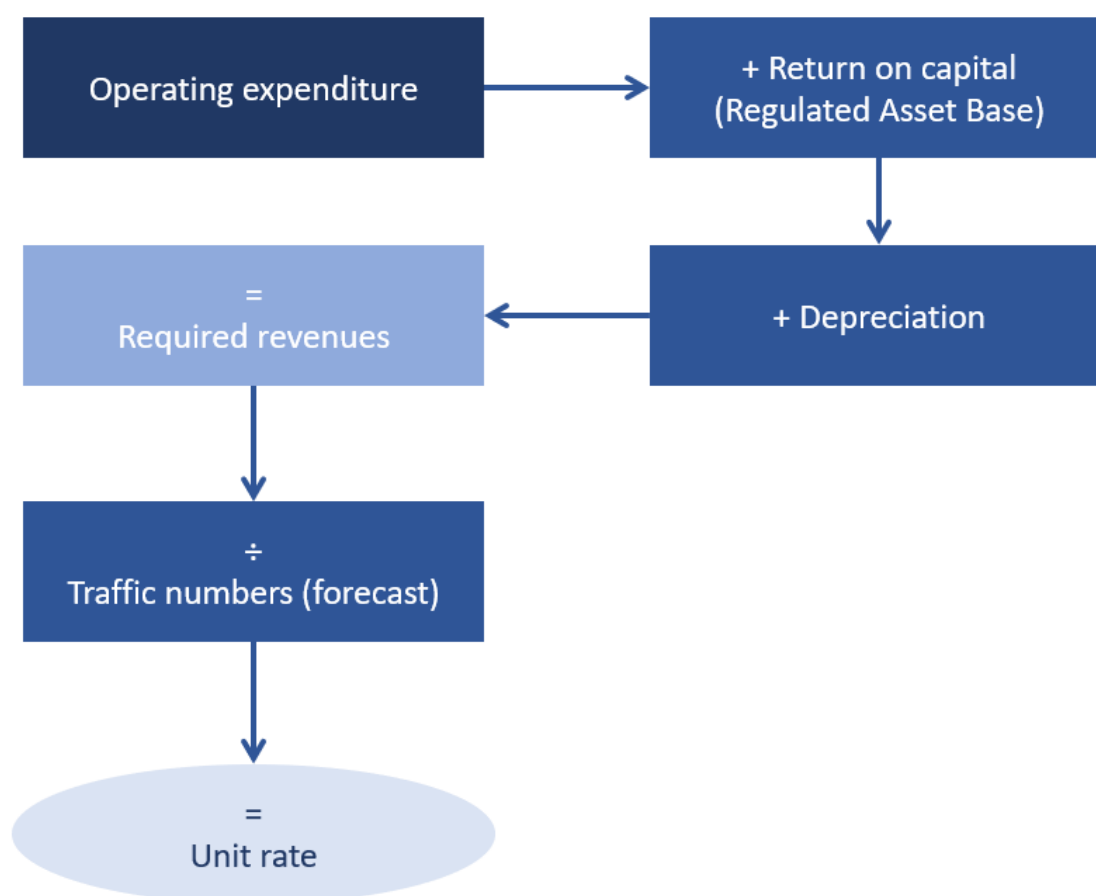
respondents would like to highlight to us as being of particular relevance for RP4. We invite views on what we should prioritise where trade-offs or interdependencies exist.

- 2.14 The IAA plans to provide final business plan guidance to AirNav Ireland in late February/early March 2024, and guidance for MET ASD in March 2024. The draft business plan will be expected in April and the final business plans provided in June. In the meantime, the IAA will develop its NSA supervision costs proposal. The final versions of each submission will be published on our website.
- 2.15 An initial draft Performance Plan will be developed by the IAA on the basis of these submissions and other supporting documents, and will be published as a consultation document in July. Stakeholders will be then given time to assess the Performance Plan document and the model it will be based on, before attending a consultation meeting with the IAA, likely in August, to give feedback on the proposals. Alongside this meeting, the IAA will seek written submissions from stakeholders that will explain their views in detail.
- 2.16 Parties should note that timelines as specified within Regulation 317/2019 are tight, and we are therefore unlikely to be unable to facilitate any requests for extensions to consultation periods.
- 2.17 A final draft Performance Plan will be issued to the European Commission by 1 October 2024, incorporating stakeholder feedback received by the IAA.
- 2.18 At this early stage of the process, we are keen to hear from all interested parties. While this will not be the final opportunity for stakeholders to comment before the final draft Performance Plan is defined, we strongly encourage parties to respond to this paper. This is because we may be unlikely or unable to adopt major changes in approach if we have not had the opportunity to understand their implications fully and afforded all interested parties an opportunity to comment.

Building blocks approach

- 2.19 In order to set the maximum Unit Rates for a given reference period, we use the building blocks approach to RAB-based regulation, as required by Regulation 317/2019. The building blocks approach requires forecasts of future operating expenditures and traffic. They also require decisions on amounts to allow for a return on capital and for depreciation. Regulation 317/2019 also provides for a number of other adjustments when calculating Unit Rates for the year, but the approach is broadly illustrated below.

Figure 2.2: The Building Blocks Approach – Deriving a unit rate



Scope of the Performance Plan

- 2.20 The RP3 Performance Plan covers En Route air navigation services in the Shannon Flight Information Region (FIR) and Shannon Upper Information Region (UIR). It also covers Terminal services provided at Dublin, Shannon and Cork airports. The latter two airports are not mandatory inclusions, given their size, but have been included in performance plans to date in a single Terminal Charging Zone.
- 2.21 Shanwick Oceanic airspace, in which ANI provides North Atlantic Communications (NAC) services, is outside the scope of the Performance Plan. Consequently, associated costs and revenues have been excluded.
- 2.22 Our initial thinking is to make no changes to the En Route or Terminal charging zones for the RP4 Performance Plan.

EU-wide target ranges

- 2.23 Last September, the PRB published draft advice on the Union-wide target ranges for RP4³ which provides the evidence considered, the analysis carried out, and the rationale related to the setting of the target ranges for each KPA.

³ https://transport.ec.europa.eu/system/files/2023-09/SES_performance_review_body_target_ranges_main-report.pdf

- 2.24 In its advice, the PRB noted that the points highlighted in its 2018 RP3 target ranges report remain pertinent. It considers that the necessary changes were not delivered in the intervening period and the traffic downturn did not enable an improvement of environmental performance. In 2018, the PRB highlighted that some area control centres (ACCs) were providing insufficient capacity to manage the growing levels of traffic, leading to high levels of delays that impaired the performance of the entire network. The PRB also noted that ANSPs need to invest in operations, staff and technology to meet the requirements of growing traffic.
- 2.25 In its latest monitoring report⁴, the PRB assesses that bottlenecks caused by some ACCs in the core of Europe continue to cause delays well in excess of the capacity targets set for RP3. This is despite, in some specific cases, deviations from the cost efficiency targets being granted to enable the investment required to achieve capacity targets.
- 2.26 Table 2.1 shows the PRB’s draft Capacity target ranges for RP4. For reference, the 2024 union-wide target was 0.5 minutes per flight.

Table 2.1: RP4 Union-wide target ranges for capacity proposed by the PRB

Average delays (mins/flight)	2025	2026	2027	2028	2029
Targets upper bound	0.50	0.50	0.50	0.40	0.40
Targets lower bound	0.41	0.38	0.35	0.33	0.31

Source: Performance Review Body

- 2.27 Safety remains paramount, and the PRB notes that it will continue to promote targets for safety management that support this. It notes that a meaningful response to climate change has now become a similarly important objective.

Table 2.2: RP4 Union-wide targets for safety proposed by the PRB

Safety target	2029 maturity level
Safety culture	C
Safety policy and objectives	C
Safety risk management	D
Safety assurance	C
Safety promotion	C

Source: Performance Review Body

- 2.28 The PRB proposes to prioritise the achievement of ambitious targets for the Environment KPA. However, the PRB considers that there are interdependencies between environment, capacity and cost performance that need to be considered in their totality when setting target ranges. The PRB’s recent study into the interdependency between the Capacity and Environment KPAs has sought to quantify the impact of capacity shortfalls and hence delays

⁴ https://transport.ec.europa.eu/system/files/2023-10/PRB_Annual_Monitoring_Report_2022.pdf

on additional flight distances.

Table 2.2: RP4 Union-wide target ranges for environment proposed by the PRB

KEA	2025	2026	2027	2028	2029
Targets upper bound	2.71%	2.70%	2.69%	2.67%	2.66%
Targets lower bound	2.49%	2.46%	2.44%	2.42%	2.39%

Source: Performance Review Body

- 2.29 The PRB states that environmental performance targets can only be achieved if investment and flexible staffing programmes are delivered to facilitate fuel-optimum routes and sufficient capacity to minimise delays and avoid re-routings. The PRB considers that associated costs need to be taken into consideration when setting the cost efficiency target range.
- 2.30 The PRB proposes EU-wide Cost Efficiency targets based on its assessment of Member States' initial cost submissions for RP4 in June 2023. It concluded that EU-wide targets on the reduction of year-on-year real terms determined unit costs (DUC) should be between -0.7% and -3.1%.

Table 2.3: RP4 Union-wide target ranges for Cost Efficiency proposed by the PRB

2024 Baseline (€2022)					
€55.61 / €7,198m					
Year-on-year change, determined unit costs	2025	2026	2027	2028	2029
Targets upper bound	-0.7%	-0.7%	-0.7%	-0.7%	-0.7%
Targets lower bound	-3.1%	-3.1%	-3.1%	-3.1%	-3.1%

Source: Performance Review Body

- 2.31 In comparison, our initial cost submission for RP4 (comprising ANI, MET, and NSA cost submissions), of June 2023, highlights an increasing determined unit cost in each year. When accounting for the updated EUROCONTROL en-route service unit forecast from October 2023, an increase in the determined unit costs year-on-year is also forecast. Thus, based on the target ranges as proposed, the ultimate RP4 Performance Plan would need to include materially less cost and/or higher traffic forecasts than the June 2023 submission, in order to align with even the upper bound of this range.
- 2.32 We note that in the initial cost submission, the 2024 unit cost forecast is €27.18 which represents a -6.7% reduction compared to the 2023 unit cost forecast of €28.93. This appears partly due to the larger increase in forecast service units (+10.0% versus 2023) than real costs (+3.3%). This does not account for the increase in determined unit costs during RP4 in the initial cost submission, however, it should be taken into account given that cost efficiency targets are based on the 2024 actual unit costs.

Table 2.4: Cost-efficiency, RP4 initial compiled submissions

Item	2025	2026	2027	2028	2029
Ireland Initial cost submission – DUC (2022 €)	28.94	29.62	30.09	30.67	31.20
Ireland initial cost submission – year-on-year change	+6.5%	+2.4%	+1.6%	+1.9%	+1.7%
Ireland Initial cost submission (with updated forecast) – DUC (2022 €)	27.98	28.62	29.01	29.53	30.01
Ireland initial cost submission (with updated forecast – year-on-year change	+6.7%	+2.3%	+1.4%	+1.8%	+1.6%

Sources: IAA, ANI, EUROCONTROL.

Key issues for this consultation

- 2.33 Internal consistency is a key element of the development of any regulatory price control and incentive regulation. We intend to develop a Performance Plan which is internally consistent with regard to the four KPAs, noting the interdependencies that exist between the KPAs.
- 2.34 We note the prioritisation of the Environment KPA by the PRB, and recognise that a sufficient provision of capacity will be required to facilitate environmental performance. A lack of capacity could lead to less efficient routes flown, and therefore the interdependency between the Environment and Capacity KPAs should be reflected in the Performance Plan. We discuss these KPAs in more detail in Section 3.
- 2.35 It is currently unknown how challenging the target ranges for the Environment and Capacity KPAs, as currently proposed, would be for ANI in RP4. This will become clearer once the reference values breakdown is provided by the Network Manager.
- 2.36 The Cost-Efficiency target ranges of -0.7% to -3.1% year-on-year reductions to the DUC is not met by the initial compiled set of cost submission of June 2023, and therefore it would likely be necessary to identify areas for cost reductions, and/or have higher traffic forecasts, if the Performance Plan were to align with these target ranges.

Consultation questions

- Should the IAA consider any changes to the en-route and terminal charging zones?
- How should we consider interdependencies, and ensure that the draft Performance Plan is internally consistent?
- Do you agree with the prioritisation of the Environment KPA, and relatedly, the Capacity KPA? If so, how should we take account of this in the Performance Plan?

Structure of this document

- 2.37 The structure of this document is as follows. Section 3 provides a high-level outturn review of performance to date in RP3. Section 4 discusses the outturn inflation and traffic compared to the forecast levels in RP3, and the IAA's proposed approach to inflation and traffic forecasts in RP4.
- 2.38 Sections 5 to 7 provide more detailed analysis of RP3 outturn costs to date of ANI, MET ASD, and NSA/State respectively. We also provide some early guidance proposed approaches to forecasting staff costs, non-staff costs, and capital costs in RP4. Section 8 discusses traffic risk sharing, incentive schemes, and local targets. Finally, Section 9 concludes the issues paper with a summary of the IAA's early guidance.

3. High level review of outturn performance

- 3.1 In this section, we provide a high-level review of Cost-Efficiency outturn performance to date in RP3 against the revised Performance Plan for RP3, and the service quality performance against the environment, capacity, and safety KPA targets.
- 3.2 At the time of writing this paper, full-year 2023 data is not yet available, and therefore 2023 actuals data refers to year-to-September data and forecasts for the remainder of the year unless otherwise stated.
- 3.3 In accordance with Regulation 2019/317, ANSP and MET operating costs are reported in real terms (2017 €), whilst NSA operating costs, and capital costs for each entity, are reported in nominal terms.

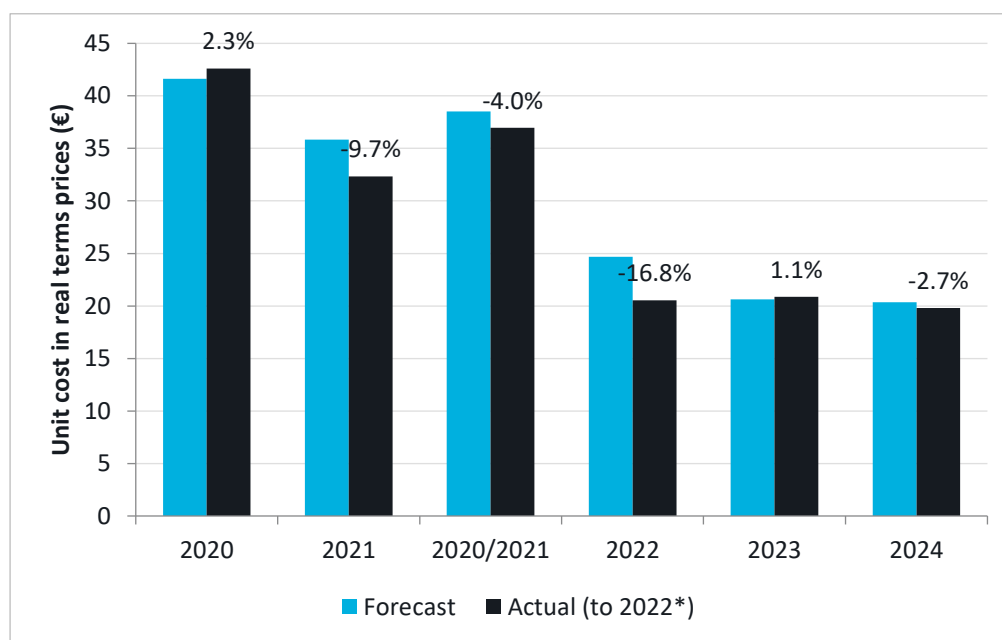
RP3 outturn cost performance

- 3.4 Below we outline the actual cost performance to date in RP3.

En-route

- 3.5 ANI's En Route unit costs have been lower than forecast in both 2021 and 2022. This was primarily driven by lower than determined other operating costs. Planned opex has been deferred in favour of service delivery due to a strong return in traffic, according to ANI.
- 3.6 Depreciation costs were 20.2% (€1.7m) lower than determined. ANI states this was due to delays in completion dates for projects caused by resource availability shortages, and consequently a focus on ongoing operations over capex. Delays were also stated to be caused by COVID-19 impacts and difficulties sourcing contractors and service providers.
- 3.7 The actual cost of capital costs were 21% (€0.6m) lower than the determined figure, also due to delays in project completions as stated above, according to ANI.
- 3.8 Other factors impacting the lower-than-determined unit cost include a significantly higher inflation rate in 2022 than forecast (8.1% actual vs. 1.9% forecast), and Service Units 6.1% higher than forecast (4.2m actual vs. 4.0m forecast).

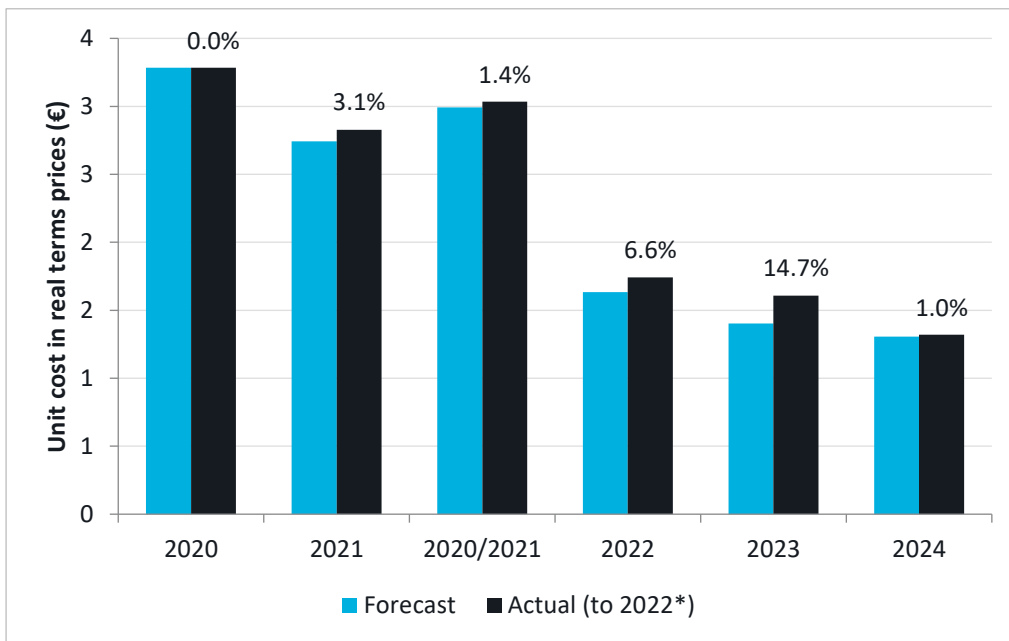
Figure 3.1: ANI RP3 En-route unit cost, RP3 forecast vs. outturn/latest forecast



Source: Ireland RP3 Performance Plan Reporting Tables. (*) 2023 and 2024 'actuals' are based on actual costs to September 2023, forecasts for the remainder of 2023/2024, and the initial RP4 cost submission from ANI in June 2023.

- 3.9 MET's En Route unit cost has exceeded determined costs in both 2021 and 2022. This was driven primarily by actual staff costs being higher than determined costs, which MET has stated was due to its determined costs being calculated based on mid points of salary scales (as per the Business Plan submitted to the NSA), while the actual costs are calculated based on the true points on the salary scale for each relevant staff member. MET currently has a high number of senior staff occupying advanced positions on the scales. The difference was also partly driven by increases in salaries due to Government salary adjustments.
- 3.10 Actual Other Operating costs were 25.4% (€0.5m) higher than determined in 2022; MET states this was due to inflation in Core activity areas such as ICT, business continuity, and high-performance computing, among others. Exceptional items costs were close to determined figures, with a variance of 6.2% (€0.06m) above determined costs.

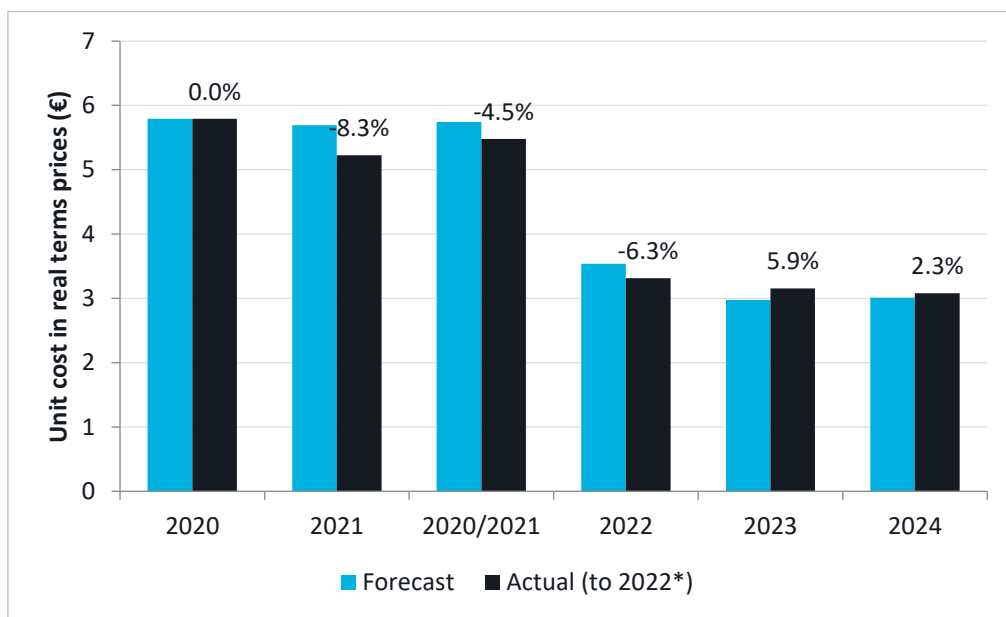
Figure 3.2: MET RP3 En Route unit cost, RP3 forecast vs. outturn/latest forecast



Source: Ireland RP3 Performance Plan Reporting Tables. (*) 2023 and 2024 'actuals' are based on the initial RP4 cost submission from MET in June 2023.

3.11 The NSA's en-route unit costs in 2021 and 2022 have been below determined costs. This was primarily driven by staff costs being 9.7% (€0.2m) lower than determined as a result of later recruitment than anticipated in 2022. Depreciation was also 97.6% (€0.2m) lower than determined in 2022 because of later-than-anticipated capitalisation process of a software program and a greater-than-anticipated focus on IT infrastructure opex rather than capex. This trend is expected to reverse in the latter two years of RP3.

Figure 3.3: NSA RP3 En Route unit cost, forecast vs. outturn

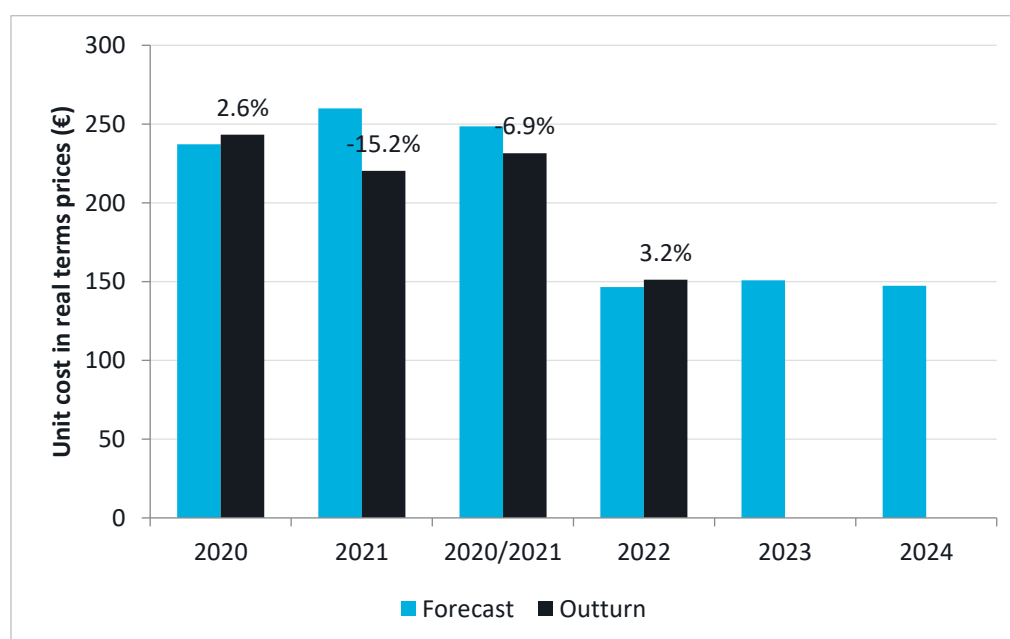


Source: Ireland RP3 Performance Plan Reporting Tables. (*) 2023 and 2024 'actuals' are based on the initial RP4 cost submission from IAA in June 2023.

Terminal

- 3.12 ANI's Terminal unit cost in 2022 exceeded the determined cost in real terms by 3.2%, having been below determined costs in 2021 due to COVID-19 related cost reductions. The increase in costs in 2022 was primarily due to higher staff costs, driven by higher costs of overtime due to higher sick leave and training for the new North runway operations, according to ANI.
- 3.13 Additionally, Other Operating costs exceeded determined costs by 45.1% in 2022. An impairment loss of €4.7 million was recognised in the year due to an asset in installations in progress not being viable due to emerging technology and a change in operational processes. When the exceptional variance resulting from this impairment (which did not feature in our opex forecast) is excluded, operating costs were €1.5 million lower than forecast, which ANI has again attributed to planned opex being deferred in favour of service delivery because of a strong return in traffic during the year.
- 3.14 The point on inflation under the en-route section of this outturn analysis also applies to the terminal charging zone performance. Total terminal service units were 2.3% higher than forecast in 2022 (170k actual vs. 166.2k forecast).

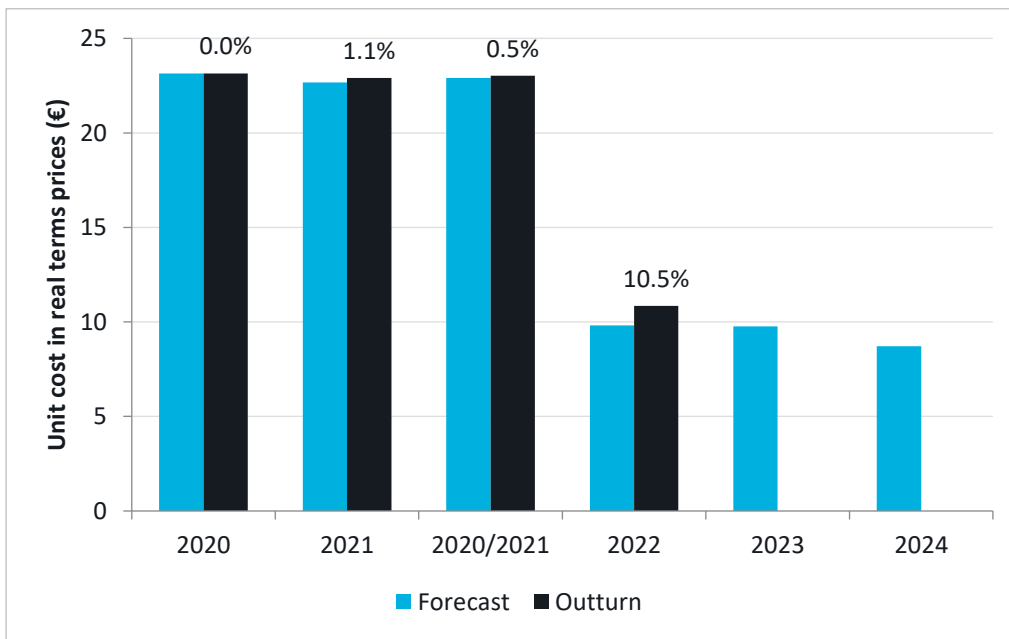
Figure 3.4: ANI RP3 Terminal unit cost, RP3 forecast vs. outturn



Source: Ireland RP3 Performance Plan, Reporting Tables

- 3.15 MET's Terminal unit cost in 2022 was 10.5% higher than determined, for the same reasons as in the En Route charging zone.

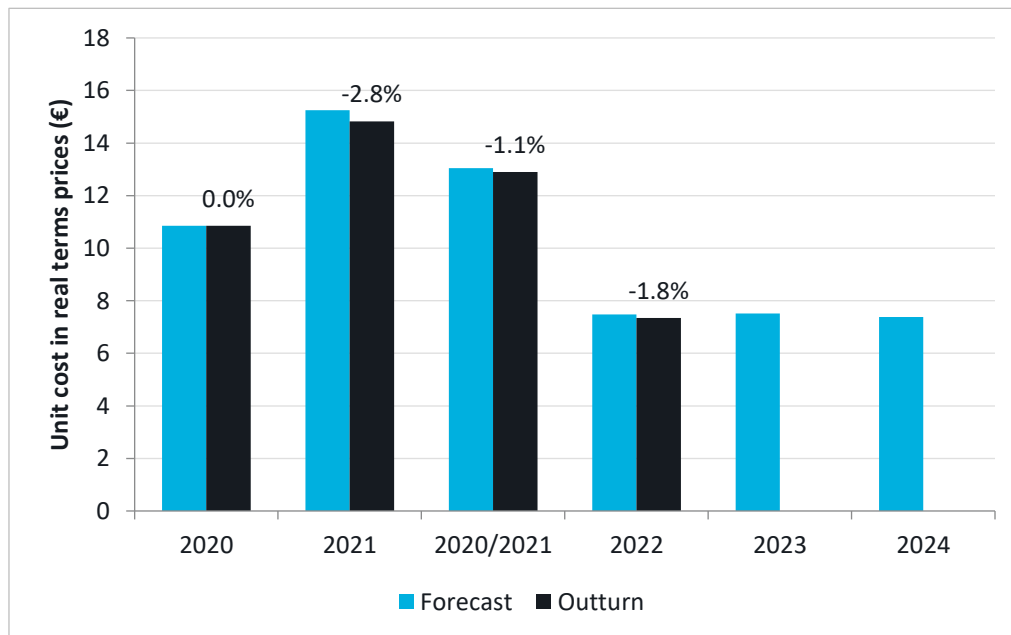
Figure 3.5: MET RP3 Terminal unit cost, RP3 forecast vs. outturn



Source: Ireland RP3 Performance Plan, Reporting Tables

3.16 The NSA’s Terminal unit cost was marginally below determined in 2021 and 2022, primarily driven by lower depreciation costs than determined following a later than estimated capitalisation process of a software platform, and because, as noted above, new IT infrastructure was more heavily weighted towards opex than capex than anticipated.

Figure 3.6: NSA RP3 Terminal unit cost, RP3 forecast vs. outturn



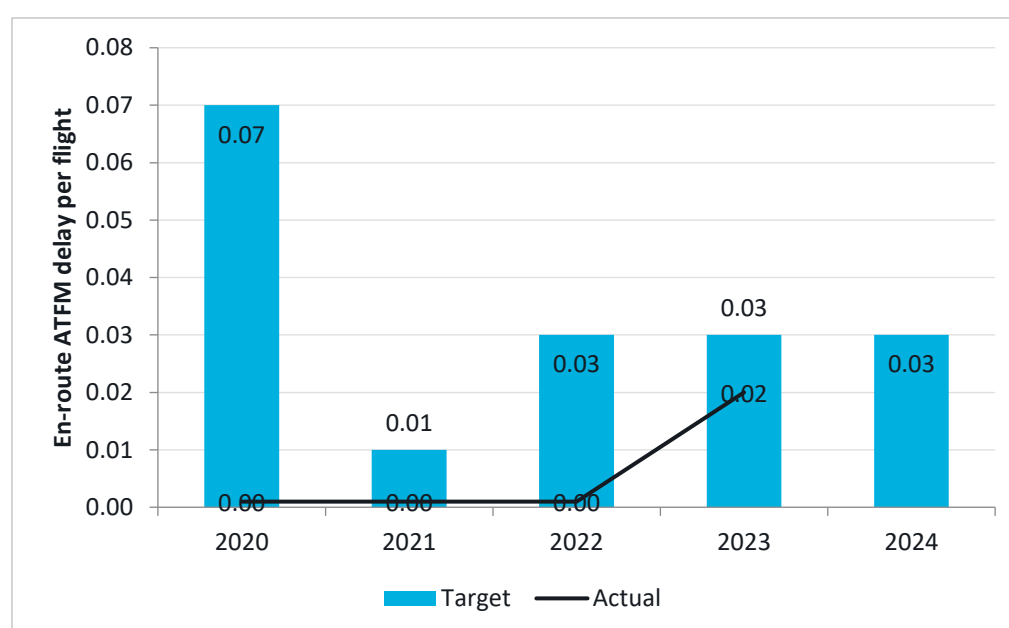
Source: Ireland RP3 Performance Plan Reporting Tables

RP3 outturn service quality performance

En-route

- 3.17 The KPI for En Route Capacity is En Route air traffic flow management (ATFM) delay per flight. This assesses the time delay, in minutes, caused by air traffic flow management measures taken for all but exceptional events. Total delays are calculated across the calendar year and divided by the number of flights in the same period to show the average delay per flight in a calendar year.
- 3.18 ANI's En Route ATFM delay per flight between 2020 and 2022 has been almost zero, outperforming the targets ranging between 0.01 minutes in 2021 and 0.07 minutes in 2020 (the latter target being derived from the original RP3 Performance Plan from 2019, rather than the revised one from 2021). In 2023 (to November), En Route ATFM delay per flight increased to 0.02 minutes per flight, which nonetheless remains below target delay (and therefore outperforming the target) in 2023, of 0.03 minutes per flight. This is shown in Figure 3.7.

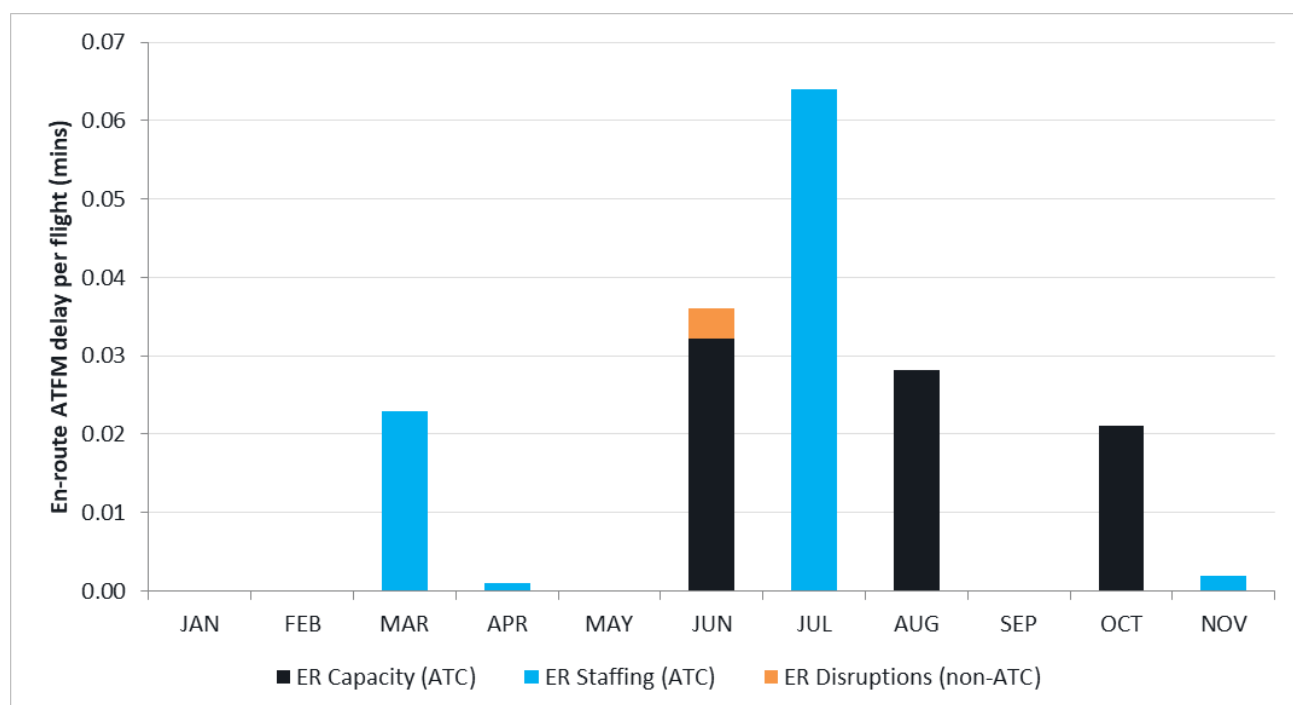
Figure 3.7: En-route ATFM delay per flight performance vs. targets



Source: PRB Monitoring Report 2022, EUROCONTROL SES RP3 Dashboard

- 3.19 According to ANI, the predominant causes behind En Route ATFM delay performance worsening in 2023 include weather conditions in the North Atlantic region, the UK LD1/West Project (the introduction of Free Route Airspace (FRA) in Western UK airspace), and circular military flights.
- 3.20 Figure 3.8 shows the allocation of En Route ATFM delay by reason code in 2023. We note that delays in March coincide with the introduction of FRA in western UK airspace. The two predominant delay causes are codes C (ATC capacity) and S (ATC staffing).

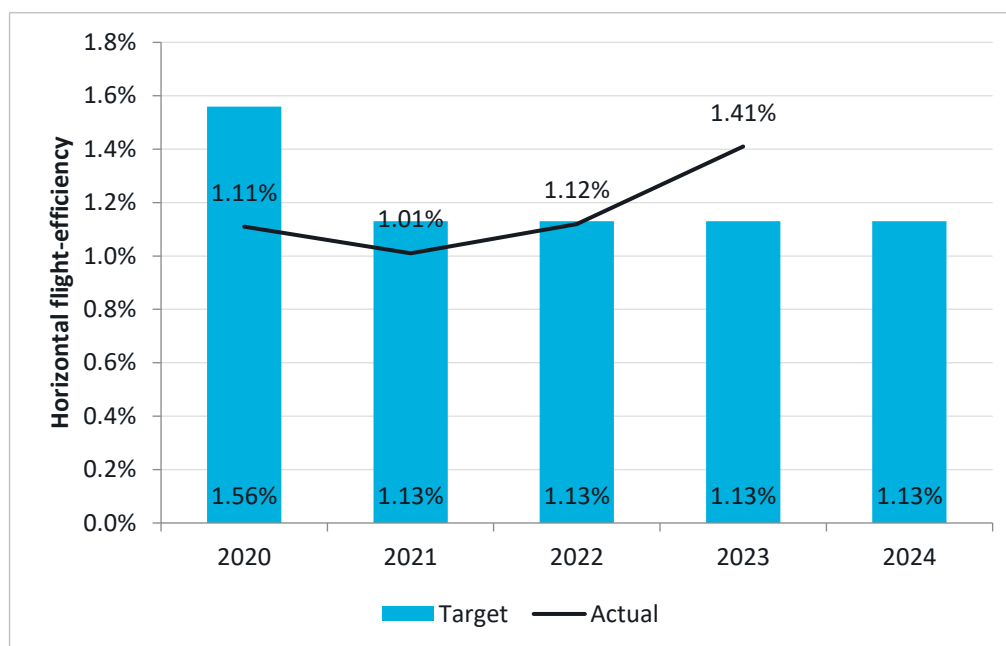
Figure 3.8: En Route ATFM delay by reason code, 2023 (to November)



Source: EUROCONTROL AIU

- 3.21 The En Route KPI for environmental performance measures horizontal flight efficiency, which compares the average En Route additional distance flown compared to the great circle distance (the 'KEA'). The KPI is expressed as a percentage of additional distance flown to the great circle distance as a calendar year average, excluding the ten highest daily values and ten lowest daily values. Consequently, a higher value indicates worse performance.
- 3.22 ANI's performance on KEA has met and outperformed targets in RP3 between 2020 and 2022, but exceeded target levels in 2023 (to November), shown in Figure 3.9. According to ANI, KEA performance has deteriorated in 2023 primarily due to the aforementioned UK LD1/West Project.

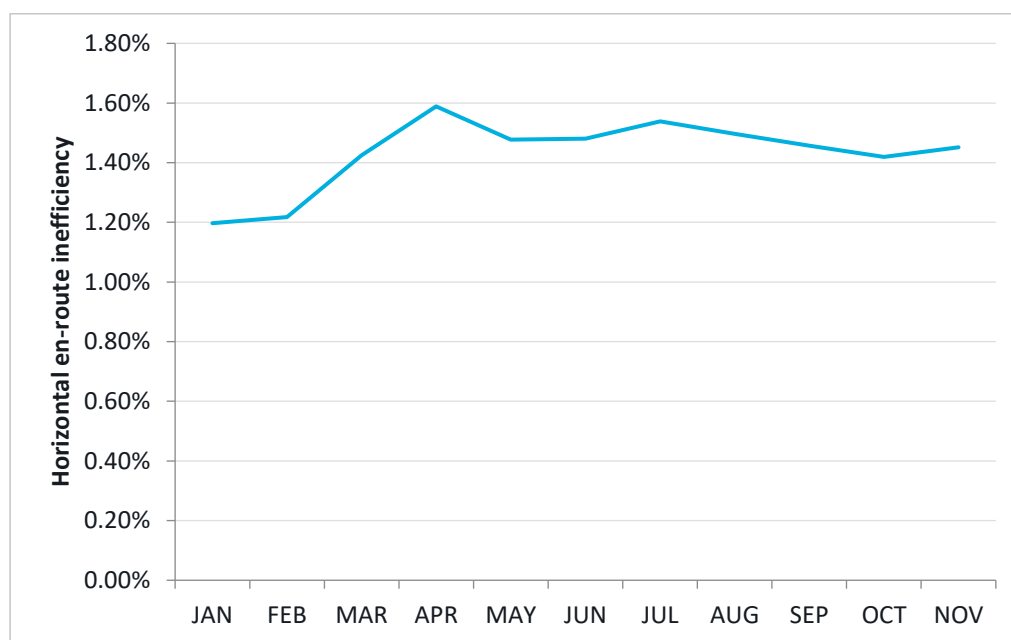
Figure 3.9: Horizontal flight-efficiency (KEA) performance vs. targets



Source: PRB Monitoring Report 2022, EUROCONTROL SES RP3 Dashboard

- 3.23 Figure 3.10 shows the monthly KEA performance in 2023. We note that prior to the introduction of FRA in western UK airspace, KEA was at its lowest level in the year at approximately 1.2%, and broadly consistent with 2022 performance. A sharp increase was observed from 23rd March, the same day as the UK airspace change was operationalised. KEA inefficiency peaked in April at 1.6% and has remained elevated since, normalising somewhat in reducing to 1.45% in November.
- 3.24 This indicates that the introduction of FRA in western UK airspace is likely a key factor behind KEA performance not reaching target levels in 2023. We note that ANI ended 2022 as the best performing ANSP in Europe for En Route horizontal flight efficiency.

Figure 3.10: ANI KEA performance, 2023 (to November)



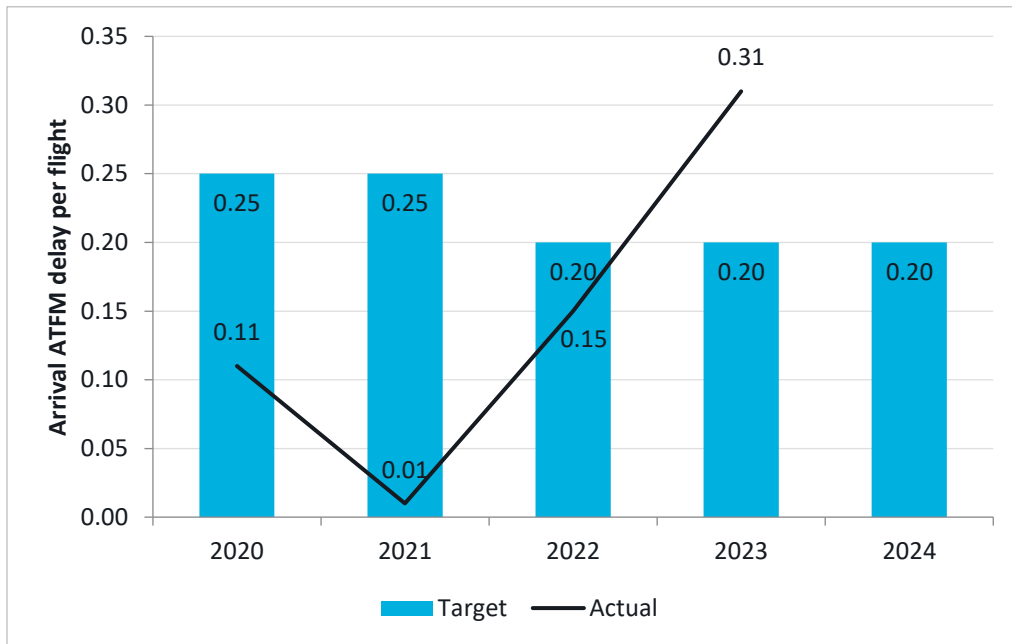
Source: EUROCONTROL SES RP3 Dashboard

- 3.25 The question of whether this change in KEA performance is temporary and reflective of the bedding in of the UK airspace change, or alternatively is likely to be a more ongoing step change in the nature of operations across UK/Irish airspace, appears likely to be a relevant consideration for target setting for RP4. Local target setting and incentive schemes are discussed further in Section 8.

Terminal

- 3.26 The KPI for Terminal capacity is arrival ATFM delay per flight. This assesses the time delay, in minutes, caused by terminal and airport air navigation services for all but exceptional events. Total delays are calculated across the calendar year and divided by the number of flights in the same period to show the average delay per flight in a calendar year.
- 3.27 ANI's arrival ATFM delay per flight has met targets between 2020 and 2022, though 2023 (to November) delays are 0.31 minutes per flight compared to a target delay per flight of 0.20 minutes. ANI has said that the reasons for delays being above target are weather and airfield works, which are outside of the control of ANI.

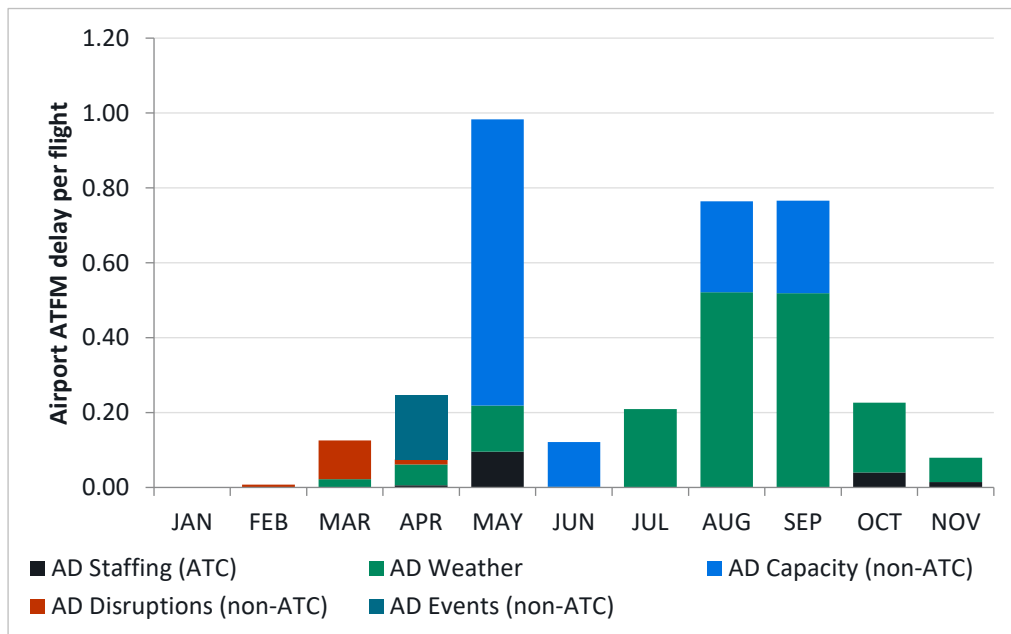
Figure 3.11: Arrival ATFM delay per flight performance vs. targets



Source: PRB Monitoring Report 2022, EUROCONTROL SES RP3 Dashboard

3.28 Figure 3.12 shows the monthly profile of ATFM arrival delay in Ireland in 2023. We note spikes in delay in May, August and September; this is driving airport arrival ATFM delay above target levels. The delay causes are predominantly non-ATC capacity and weather.

Figure 3.12: Airport ATFM arrival delay by reason, 2023 (to November)



Source: EUROCONTROL AIU

RP3 outturn safety performance

- 3.29 The KPI for Safety is the Effectiveness of Safety Management, with five components. It is assessed through a questionnaire submitted to the ANSP and reviewed/validated by the NSA, the outcomes of the previous year’s oversight cycle, and a review of safety performance. Scores range from A to E based on the level of maturity of safety management, with A the least mature level and E the most mature.
- 3.30 ANI’s Safety performance has met or exceeded the Performance Plan in each year for safety policy and objectives, safety assurance, safety promotion, and safety culture. However, safety risk management has been scored C in each year for 2020 – 2022, whilst the Performance Plan target level is D.

Table 3.1: RP3 Safety (EoSM) performance, Union-wide targets vs. outturn

Safety target		2020	2021	2022	2023	2024
Safety policy and objectives	Performance Plan	C	C	C	C	C
	Actual	C	C	C		
Safety risk management	Performance Plan	D	D	D	D	D
	Actual	C	C	C		
Safety assurance	Performance Plan	C	C	C	C	C
	Actual	D	C	C		
Safety promotion	Performance Plan	C	C	C	C	C
	Actual	C	C	C		
Safety culture	Performance Plan	C	C	C	C	C
	Actual	D	D	C		

Source: PRB Monitoring Report 2022

Summary and Emerging Issues

- 3.31 On Cost-Efficiency, ANI’s En Route unit cost has to date in RP3 been significantly lower than forecast due to a combination of cost reductions in response to COVID-19, prioritising, according to ANI, service delivery over opex/capex, delayed completion of capital investments, and traffic exceeding forecast levels.
- 3.32 ANI’s Terminal unit cost was significantly lower than determined in 2021 due to COVID-19 cost reductions, while the Terminal unit cost in 2022 exceeded determined levels by 3.2%. Reasons included an impairment loss on an unviable asset in production and higher-than-forecast overtime due to sickness and training for the new North Runway are principal drivers behind the higher-than-determined unit cost in 2022.
- 3.33 RP3 has been a period of significant disruption to aviation, making the task of setting accurate determined costs more challenging. Nonetheless, there are lessons that can be learned from RP3, including on ANI’s capex delivery and staff overtime requirements in periods of major change requiring large amounts of training.

- 3.34 MET has consistently exceeded determined costs for both En Route and Terminal services due to determined costs being calculated based on mid points of salary scales (as per its requirements under the Public Spending Code), whilst the actual costs are calculated based on the true points on the salary scale for each relevant staff member. From discussions with MET, we understand that this discrepancy will not occur for RP4, and therefore we do not consider this to be an outstanding issue to be addressed.
- 3.35 The NSA's unit costs for En Route and Terminal services have been below determined costs in 2021 and 2022, principally due to later-than-anticipated capitalisation process of a software program and a greater-than-anticipated focus on IT infrastructure opex rather than capex. The IAA will reflect on lessons learned in RP3 to guide cost projections in RP4.
- 3.36 ANI outperformed the KEA target in 2020-2022 but is below target for 2023, following the introduction of Free Route Airspace in the UK.
- 3.37 En Route ATFM delay has consistently outperformed targets, but has nonetheless materially deteriorated in 2023. Terminal ATFM delay in 2023 also significantly increased, albeit with much of the delay coded to non-ATC reasons.
- 3.38 On safety, ANI is achieving the target maturity levels of safety in all but one category (safety risk management). Safety targets are set at a Union-wide level (i.e. each ANSP in the SES must achieve the same standards).

Consultation questions

- Are there any existing issues highlighted by RP3 outturn performance to date?
- What other lessons learned from outturn performance can be taken forward in RP4?

4. Inflation and traffic

4.1 In this section, we discuss inflation and traffic forecasting for RP4. This includes a review of outturn performance against the RP3 Performance Plan assumptions, and a discussion on the approach to be taken for forecasts in RP4.

Inflation

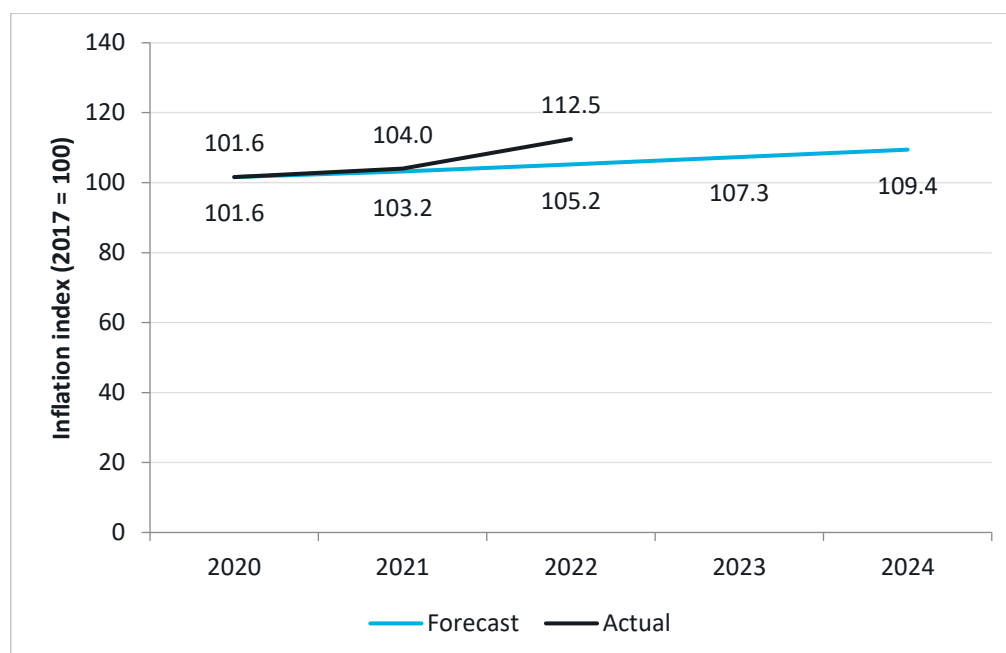
Outturn analysis

4.2 Inflation is indexed to 2017 levels to allow for inflation adjustments to be made during the reference period. The NSA submits its forecast level of inflation which informs the calculation of determined unit costs. A variation in inflation above/below these forecasted levels can therefore impact whether unit costs in real terms are above or below determined costs.

4.3 Inflation in 2020 is stated to be 0% for both determined and actual costs. This is because targets were revised following the COVID-19 pandemic in 2020; additionally, under Regulation 317/2019, negative inflation must be reported as zero inflation in the reporting tables. In 2021, actual inflation of 2.4% was 0.8 percentage points higher than forecast in the RP3 Performance Plan (1.6%). In 2022, the difference in actual inflation was much larger, with actual inflation of 8.1% being 6.2 percentage points higher than forecast (1.9%).

4.4 Overall, the inflation index (2017=100) reached 112.5 in 2022, which is 6.9% higher than the forecast inflation index for 2022 (105.2).

Figure 4.1: RP3 Inflation index (2017 = 100), forecast vs. actual



Source: Ireland RP3 Reporting Tables

Approach for forecasts

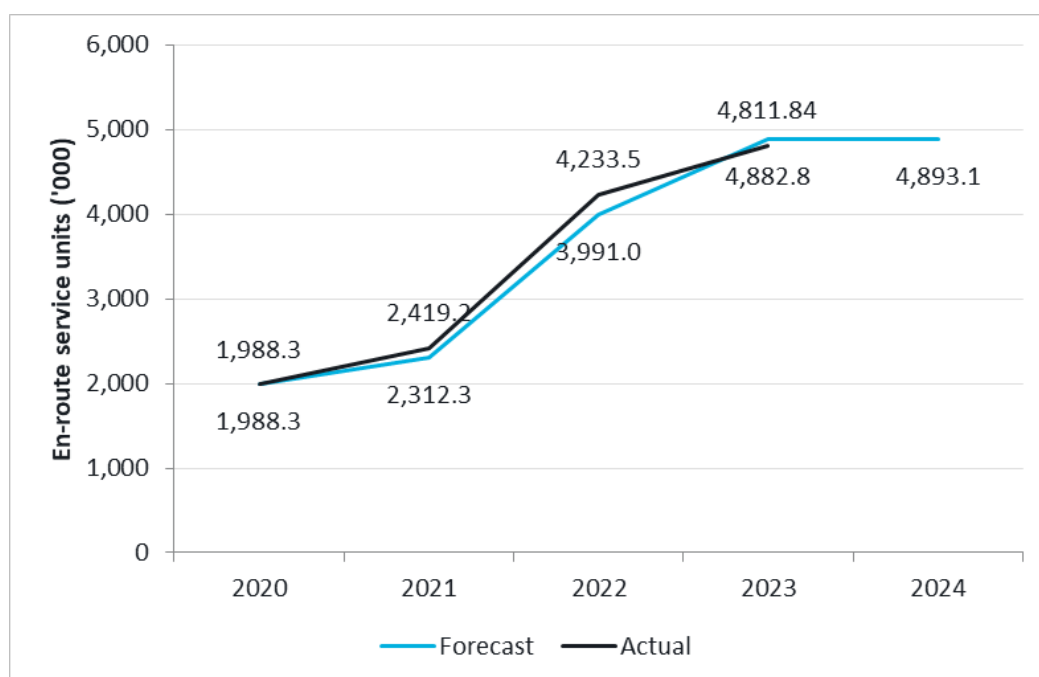
- 4.5 In line with Article 2(11) and Article 26 of Regulation 317/2019, we intend to use the latest available forecast of average Consumer Price Index (CPI) change from the International Monetary Fund (IMF) at the time of drafting the RP4 Performance Plan.

Traffic

Outturn analysis

- 4.6 Between 2020 and 2021, the total number of En Route service units (in thousands) was 4,407.5, or 4.4m, which is 2.5% higher than forecast service units (4,300.6).
- 4.7 In 2022, the total number of En Route service units (in thousands) was 4,233.5, which is 6.1% higher than forecast service units. Actual 2023 service units were not available at the time of writing, so we have used the best available year-to-date information to infer the full year data. On that basis, En Route service units in 2023 are likely to be marginally below forecast levels.

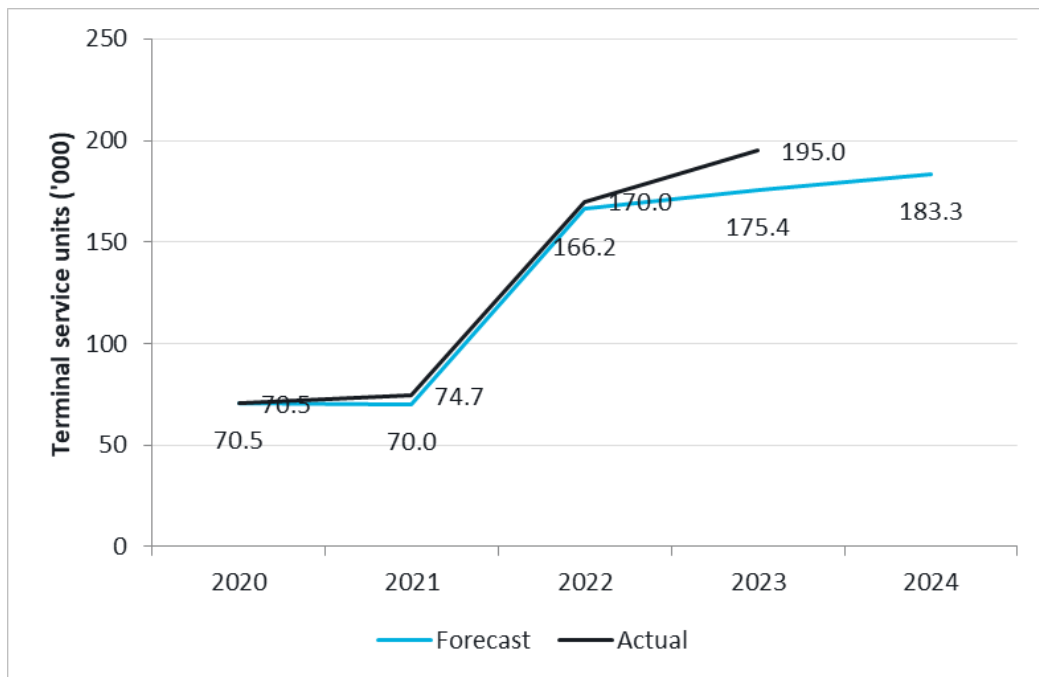
Figure 4.2: RP3 En Route service units ('000), forecast vs. actual



Source: Ireland RP3 Reporting Tables

- 4.8 Similarly, Terminal service units between 2020 and 2021 (145,200) were 3.4% higher than forecast (140,500). In 2022, Terminal service units (170,000) were 2.3% higher than forecast (166,200); this rose to approximately 195,000 service units in 2023, significantly higher than forecast levels (+11.2%).

Figure 4.3: RP3 terminal service units, forecast vs. actual

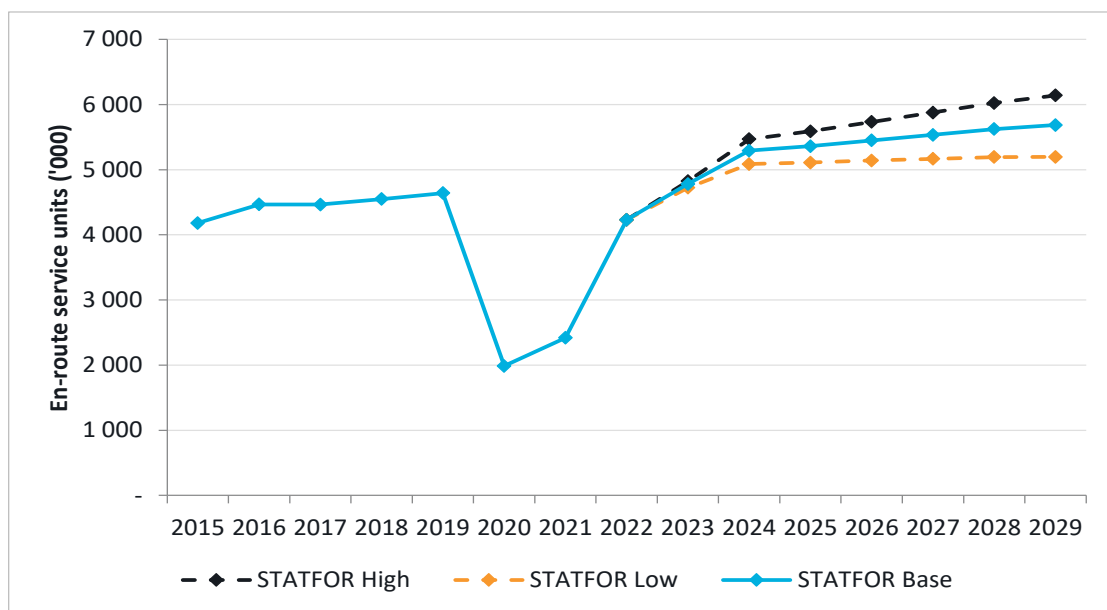


Source: Ireland RP3 Reporting Tables. NB: 2023 final actual figures not available at time of writing.

Approach for RP4 forecasts

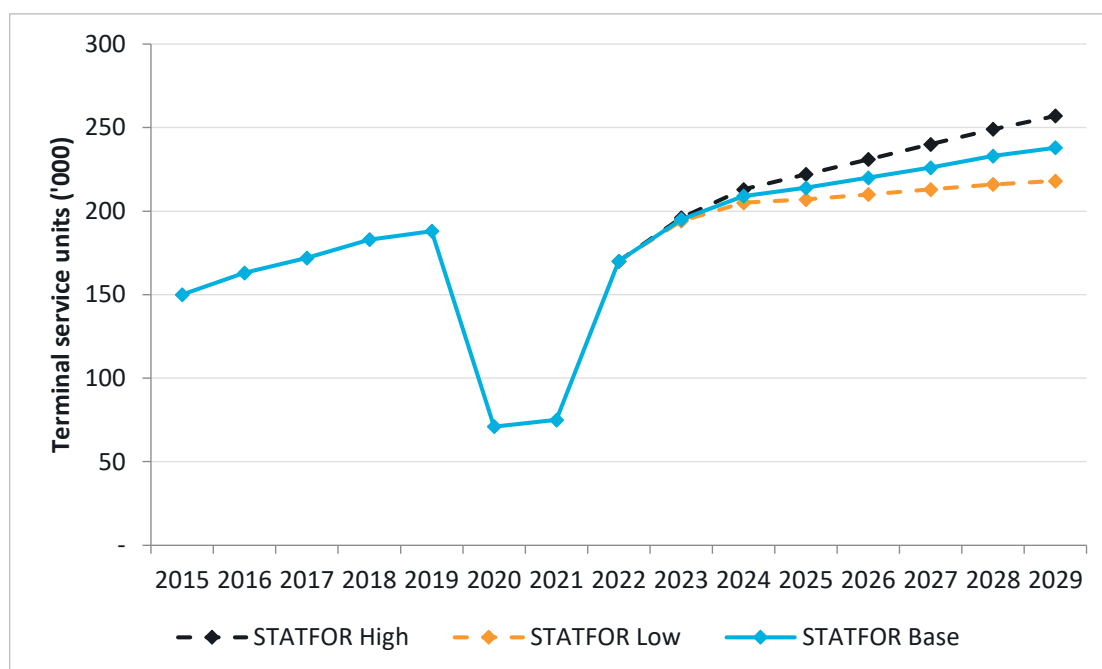
4.9 In line with Article 10(2(f)) and Article 10(2(g)) of Regulation 317/2019, we propose to use the latest available STATFOR base forecast of en-route and terminal service units, presented below. We note that Article 10(2) does allow us to use an alternative traffic forecast, if we consider that the STATFOR forecast does not sufficiently account for local factors. The most recent STATFOR forecasts currently available, from October 2023, are displayed below.

Figure 4.4: STATFOR forecast En Route service units ('000) for Ireland, October 2023



Source: EUROCONTROL

Figure 4.5: STATFOR forecast Terminal service units ('000) for Ireland, October 2023



Source: EUROCONTROL

4.10 Compared to the SES RP3 area for En Route service units, the latest STATFOR base forecast from October 2023 sees a CAGR in RP4 for Ireland of 1.4% compared to a total SES RP3 area CAGR in RP4 of 2.1%.

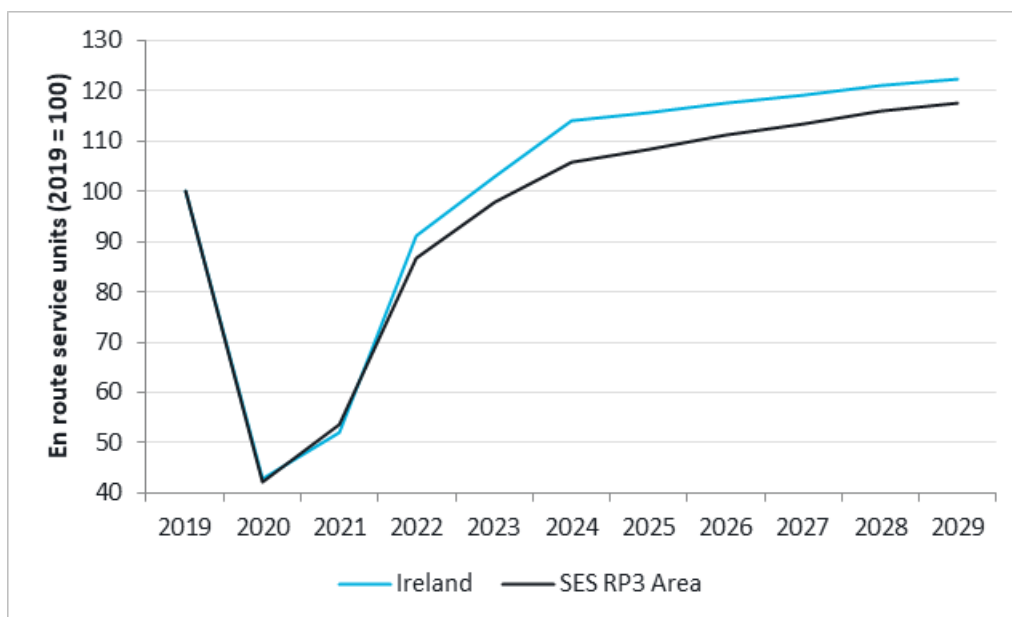
Table 4.1: STATFOR October 2023 CAGRs

Zone	CAGR RP3 (2020-2024)	CAGR RP4 (2025-2029)	Total growth 2023-2029
Ireland	2.7%	1.4%	34%
Total SES RP3 Area	1.1%	2.1%	36%

Source: EUROCONTROL

4.11 Comparing growth in En Route service units to 2019 shows that the latest STATFOR forecast from October 2023 assumes that, relative to 2019 traffic, by 2029 Ireland’s En Route service unit traffic outperforms the SES RP3 area by 5 percentage points.

Figure 4.6: En Route service unit growth index (2019 = 100), Ireland vs. SES RP3 Area



Source: EUROCONTROL, IAA calculations

Consultation questions

- Our initial thinking is that we should again rely on STATFOR for the RP4 Performance Plan traffic forecasts. Should a different traffic forecast be considered/developed as part of the RP4 Performance Plan, and if so, why, and based on what methodology?

5. AirNav Ireland costs

5.1 In this section, we consider in more detail the proposed methodological approach for cost allocation and cost forecasting for AirNav Ireland. This is complemented by a review of outturn performance to date of ANI in RP3.

Cost allocation

Regulated and non-regulated costs

5.2 ANI, in addition to its regulated activities in the En Route and Terminal charging zones, also provides North Atlantic Communications (NAC) services in Shanwick oceanic airspace. These services are outside the scope of SES. These costs consist of radio officers and all other costs related to NAC, and a consequent apportionment of engineering, other operational, and corporate services staff. All costs apportioned to NAC will be excluded from the En Route and Terminal cost bases for RP4.

5.3 In terms of cross-border service provision, ANI provides certain delegated ATM/ANS services in UK airspace; similarly, NATS, the UK ANSP, provides certain services in Irish airspace. The ANSPs in Ireland and the UK have worked closely over decades to jointly manage airspace. ANI also provides delegated ATM/ANS services in a small sector of Brest FIR/France UIR.

5.4 While such arrangements may be necessary or beneficial in certain circumstances from the perspective of service provision, they can also pose a challenge from the perspective of costs being appropriately allocated to charging zones. We understand that further detail on these arrangements is likely to be required as part of the draft RP4 Performance Plan submission to the European Commission.

5.5 For RP4, we propose to review the scope of these arrangements to consider, firstly, the rationale for the cross-border service provision and associated costs/benefits, and secondly, whether there is any material cross subsidisation arising from it. The latter will depend on two questions:

- Whether there is any material cost for the service provider which is driven by the cross border service provision.
- If there is, whether these costs already approximately balance out due to the reciprocal nature of the cross border arrangements.

5.6 If we were to conclude that there were beneficial cross-border arrangements which would nonetheless lead to a degree of cross-subsidisation, the balance, whether positive or negative, could then be accounted for within the Performance Plan.

En-route and terminal allocations

5.7 For RP3, the allocation of forecast ATCO costs to En Route and Terminal charging zones was based on forecast Terminal and En Route ATCO

requirements, which were modelled separately. As a result, there is no cross subsidisation of ATCO staff costs.

- 5.8 Other staff costs were allocated broadly in line with ANI’s allocation keys, which ultimately led to a similar allocation as was applied to ATCOs. The ANI cost allocation methodology first separates costs into cost centres, based on the geographical location which the cost relates to. Following this, the costs are split into activities which may then be further divided into sub sections. Each of the activities and sub sections are assigned cost allocation keys based on the extent to which the activity is related to En Route or Terminal services.
- 5.9 The cost allocation keys for an activity are based on a number of factors, including traffic, the number of staff working and in which role, the use of assets, and the “20km rule”. The 20km rule is a practice that allocates all costs related to the first 20km from the airport to terminal cost base, with charges to En Route beginning from the 20km point. For some direct operating costs, such as rent, the costs are first divided into particular activities using a key before being assigned to a location and then allocated based on this.
- 5.10 In our decision on the RP3 Performance Plan, we noted that we did not see any evidence that this allocation methodology involves material cross-subsidisation in operating costs, either between the Terminal and En Route cost bases or with unregulated activities such as services provided in Shanwick oceanic airspace.
- 5.11 On the Terminal charging zone, while we do not propose to change the single charging zone as noted above, there may be merit in developing an enhanced methodology of splitting terminal costs between each of the three airports in the charging zone. The IAA has previously been asked by EUROCONTROL to allocate terminal costs to Dublin separately to Cork and Shannon airports; we expect that such requests may continue into RP4 and therefore would consider how costs could be split more accurately between the airports, including the reporting requirements from ANI.
- 5.12 Costs for the provision of approach control services also require an allocation between En Route and Terminal charging zones. We note that Art. 22(5)(b) of Regulation 2019/317 states that terminal cost bases shall include a share of costs related to approach services, which has to be calculated on the basis of “a certain distance” from the relevant airports “defined on the basis of operational requirements”. As noted above, for RP3, this “certain distance” was effectively defined as 20km.

Consultation questions

- Is the IAA’s approach for RP3 still appropriate for RP4? Are there any other specific issues that the IAA should be mindful of in the cost allocation for RP4?
- Should the IAA consider a different approach to cost allocation than its proposed approaches? If so, which approach(es) should it consider and why?

- Should a more granular methodology be developed for splitting Terminal costs between the three airports (Dublin, Cork, Shannon) in the Terminal charging zone? If so, what should the methodology be?
- How should the IAA address the cost allocation for approach services between the En Route and Terminal charging zones?

Staff costs

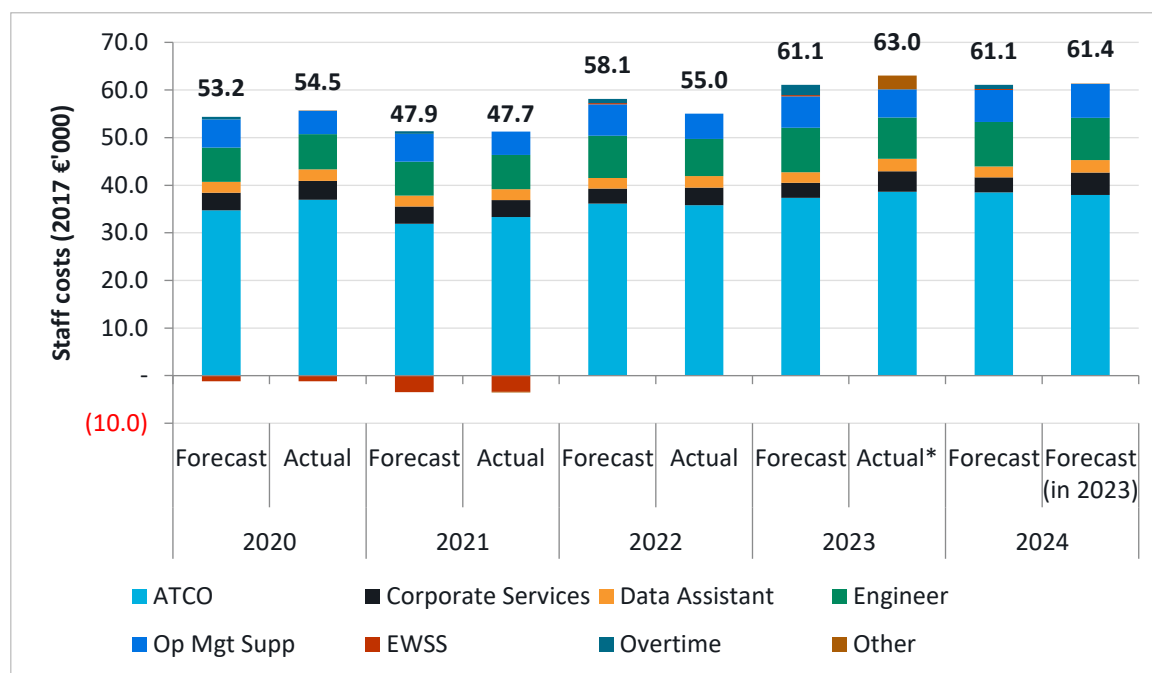
5.13 In this section we consider each of the key drivers of staff costs in turn, looking at actual total staff costs, staff numbers and pension costs. Staff costs are made up of the following:

- wages and salaries;
- other staff costs (including overtime);
- pension costs;
- social contributions; and
- Employment Wage Subsidy Scheme (EWSS), a subsidy provided by the Irish government to businesses during the pandemic. EWSS is not a cost *per se*, but is included in this section as it provided financial support for staff costs and so was a component of the RP3 Performance Plan.

RP3 Outturn (En-route)

5.14 ANI's outturn staff costs were lower than determined staff costs in 2021 and 2022, but higher than determined in 2020 and 2023; staff costs are now forecast by ANI to be above determined costs in real terms in 2024 also. In circumstances where traffic has exceeded the forecast, ATCO costs in real terms have been slightly higher than expected in each year of RP3 to date, except in 2022. ANI forecasts them to be slightly below determined in 2024. In 2023, ANI staff costs includes significant costs associated ANI's Internal Dispute Resolution Board (IDRB), related to payment associated with payroll reduction measures from 2021 during the pandemic.

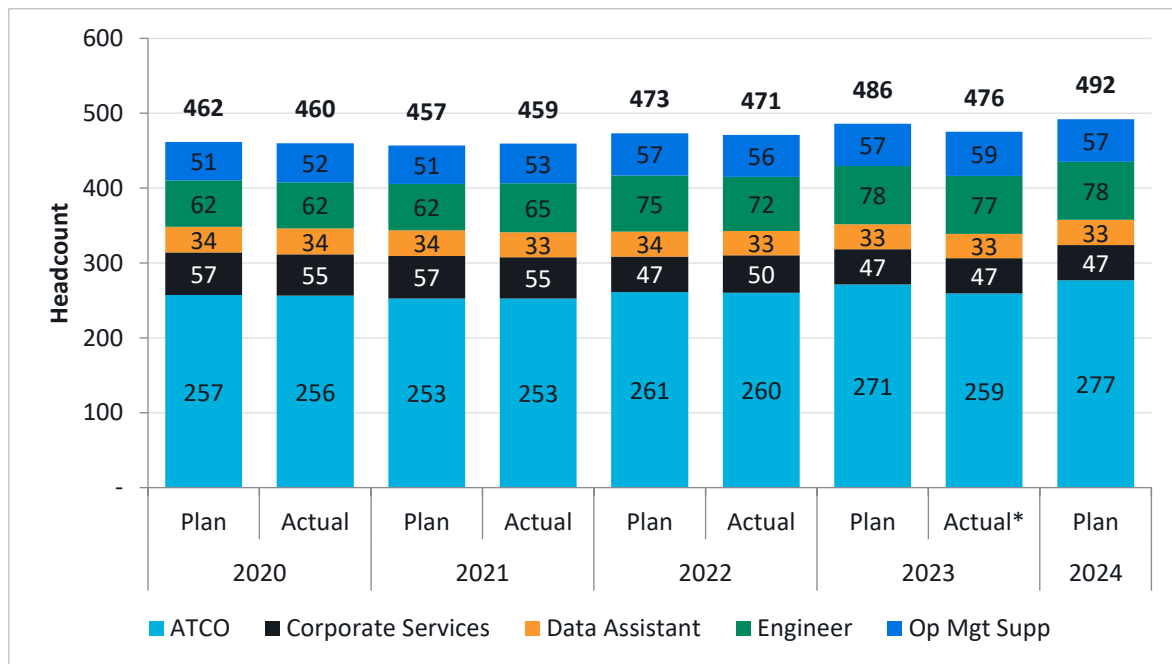
Figure 5.1: ANI RP3 En Route staff costs, forecast vs. actual, millions



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year.

- 5.15 Other than 2021, during RP3 to date ANI's, outturn headcount was slightly lower than our forecast headcount requirements. In 2023, ANI's headcount was 476, which is 10 fewer than we forecast. The main differences compared to forecast values were in ATCOs, which we understand relates to ANI experiencing higher than expected attrition.
- 5.16 We note that the growth in difference between forecast ATCOs and actual ATCOs in 2023 corresponds with a worsening of ATFM delay in 2023, which is discussed in more detail in section 3 above.

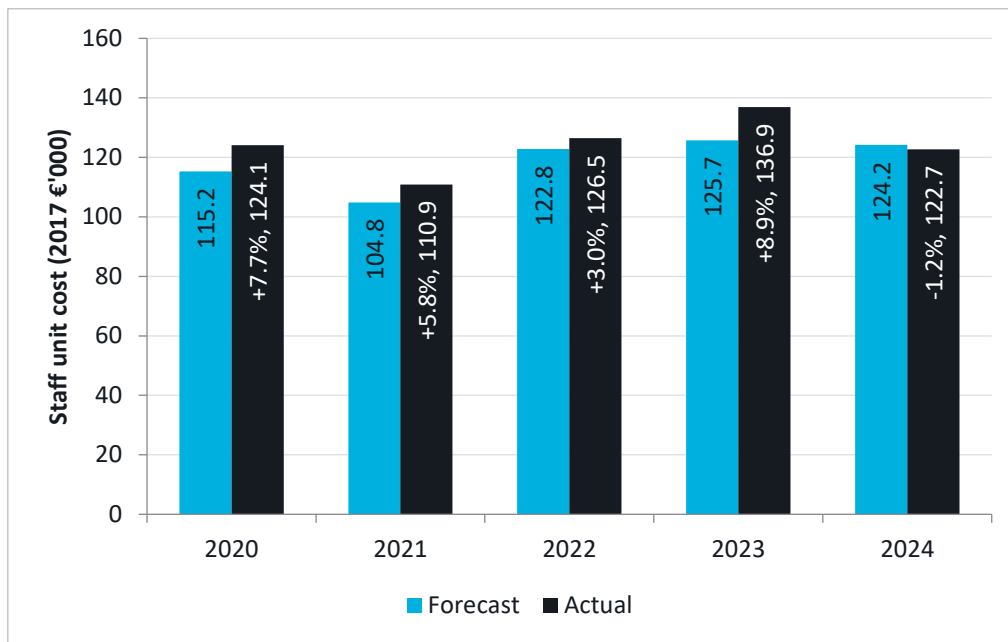
Figure 5.2: ANI RP3 En Route headcount, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actuals represent outturn headcount to the latest data available plus forecasted changes for the remainder of the year.

- 5.17 By comparing headcount with staff costs by category, it is possible to understand the forecast staff unit cost versus actual staff unit cost. The benefit of this is that it isolates the impact that headcount may have on forecast vs. staff costs; a lower than forecast headcount would also lead to a lower than forecast staff cost. Removing this factor enables us to understand which changes (if any) exist in staff costs beyond headcount changes.
- 5.18 ANI’s staff unit costs for RP3 are shown in Figure 5.3 below. This shows that ANI’s staff cost per employee has remained above forecast levels throughout RP3.

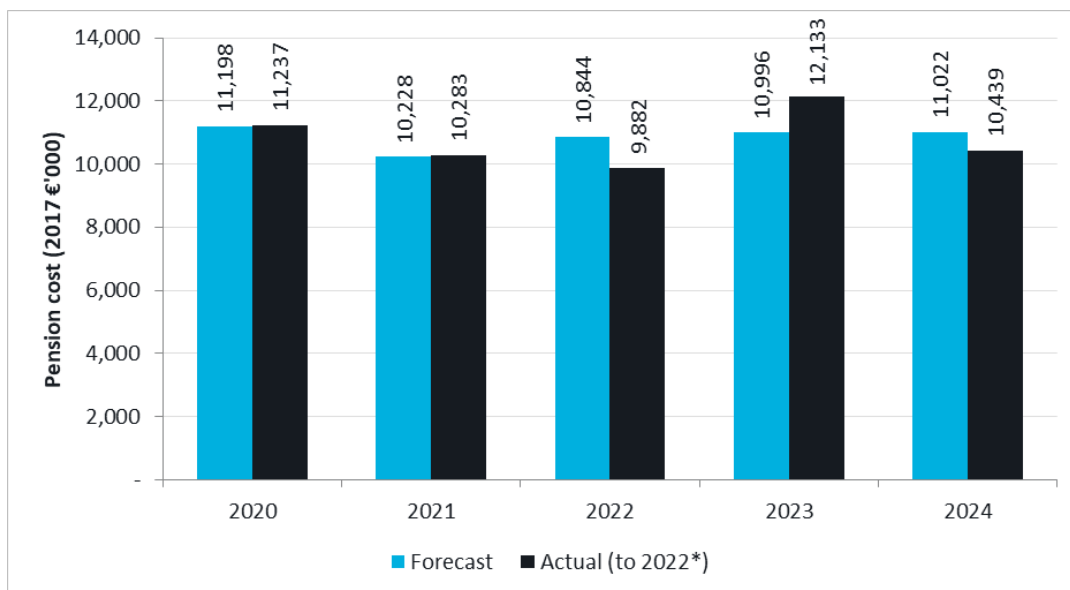
Figure 5.3: ANI RP3 en-route staff cost per employee, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model, IAA calculations. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. 2024 actuals are forecasts made in 2023.

- 5.19 ANI’s outturn pension costs were similar to determined costs between 2020-2021, lower than determined costs in 2022, and higher than determined in 2023. This follows a similar pattern to total ANI En Route staff costs.
- 5.20 The 2023 pension costs specifically include costs associated with higher than forecast inflation since the RP3 Performance Plan was developed, hence the temporary spike observed in Figure 5.4.

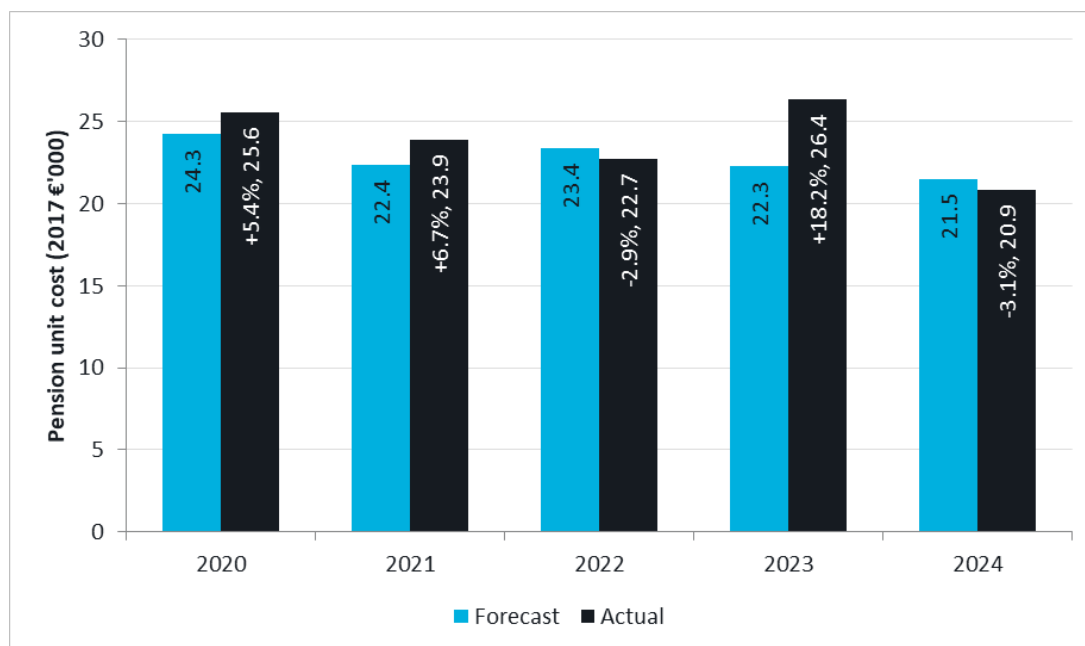
Figure 5.4: ANI RP3 En Route pension costs, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. 2024 actuals are forecasts made in 2023.

5.21 Similar to the above on staff costs, it is possible to isolate the pension cost per employee, shown in Figure 5.5. ANI's real pension cost per employee decreased in 2022; this is likely reflective of the high inflation environment in 2022. The pension cost per employee in 2023 was 16.5% higher than the determined staff costs and forecast headcount, owing to the increased pension cost explained above.

Figure 5.5: ANI RP3 En Route pension cost per employee, NSA forecast vs. actual

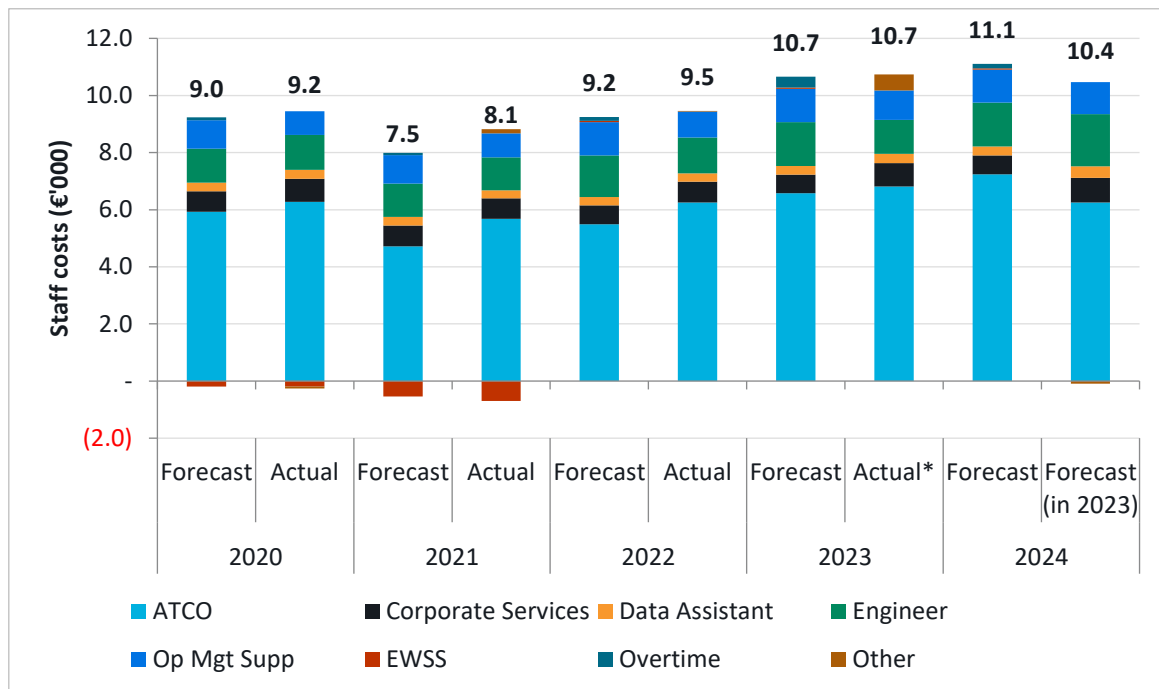


Source: ANI, IAA RP3 Financial Model, IAA calculations. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. 2024 actuals are forecasts made in 2023.

RP3 Outturn (Terminal)

5.22 ANI's outturn staff costs were slightly higher than forecast staff costs between 2020 – 2022 and equal to determined costs in 2023. The main differences compared to forecasts were in ATCOs, engineers and operational management support staff.

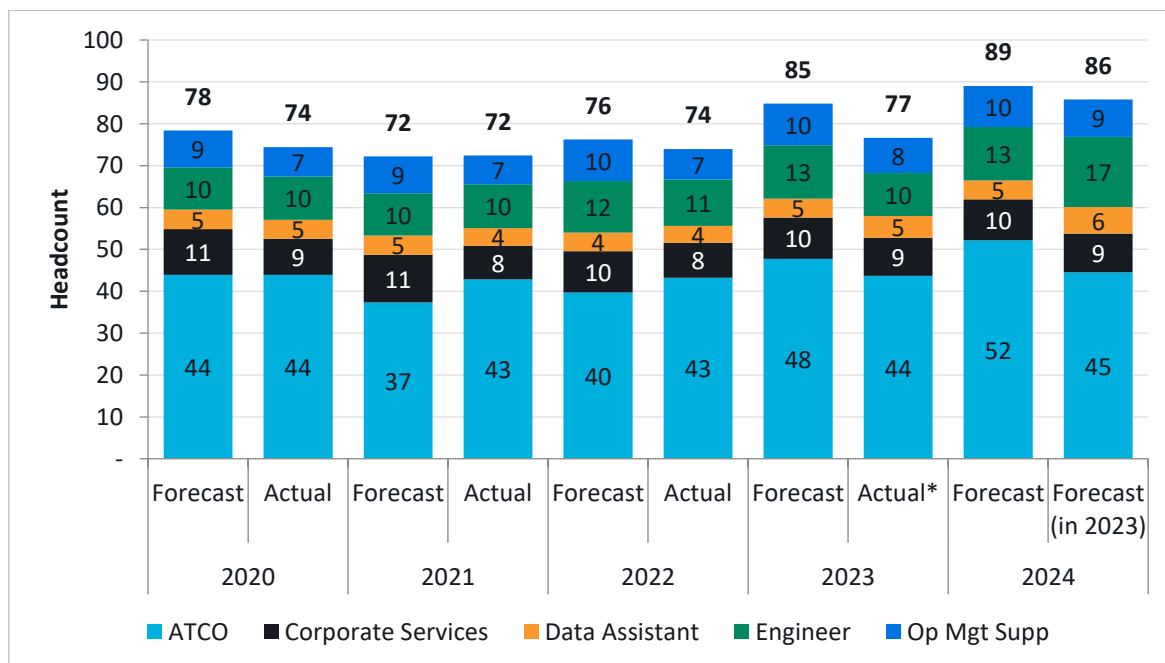
Figure 5.6: ANI RP3 Terminal staff costs, NSA forecast vs. actual, millions



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year.

5.23 ANI’s Terminal headcount was slightly lower than forecast headcount. In 2023, ANI’s headcount was 77, which is 8 fewer than forecast. The main differences compared to forecast values were in ATCOs (4 fewer than forecast). ANI notes that the reasons for these differences were higher than expected attrition.

Figure 5.7: ANI RP3 terminal headcount, NSA forecast vs. actual

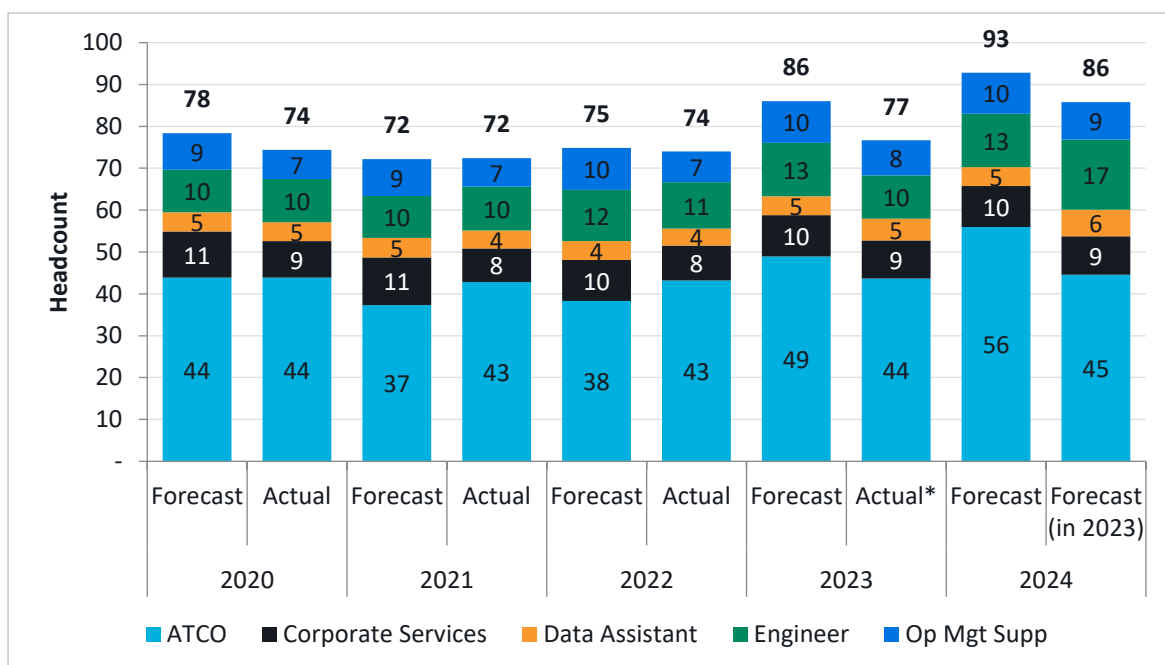


Source: ANI, IAA RP3 Financial Model. (*) 2023 actual headcount represent outturn headcount to the latest data available plus forecasted changes for the remainder of the year.

5.24 We note that the shortfall in Terminal ATCOs versus forecast requirements would be greater if outturn traffic levels were to be taken into account, given that in 2023 terminal traffic has been materially higher than forecast (195k terminal service units vs. forecast of 175k terminal service units; thus an 11% increase). ANI will benefit financially from this additional traffic through the traffic risk sharing mechanism.

5.25 We have thus used the Opex model from 2021 to estimate the optimal level of ATCOs, given outturn traffic to 2022 and the most recent traffic forecast for the rest of RP3. By back-casting optimal terminal ATCOs using outturn traffic to 2022 and EUROCONTROL forecasts from October 2023 for the remainder of RP3, we find that, for 2023 and 2024, the gap in ATCOs would indeed have been higher had the traffic forecast used in 2021 to estimate ATCO requirements, matched the outturn traffic.

Figure 5.8: ANI RP3 terminal headcount, back-casted using outturn traffic and updated forecasts vs. actual

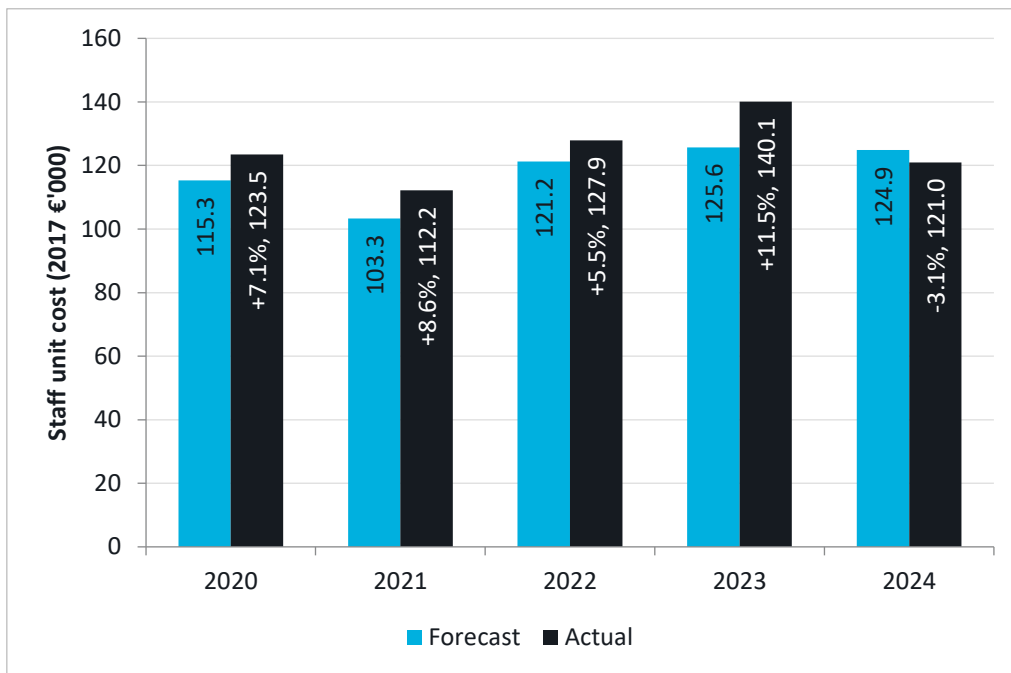


Source: IAA RP3 Operating Cost Model, ANI, EUROCONTROL. Note that the ATCO estimate shows only our estimate of the optimal number for each at the given traffic level, and does not take account of other factors such as profiling recruitment due to training capacity constraints.

5.26 By comparing headcount with staff costs by category, it is possible to understand the forecast staff unit cost versus actual staff unit cost. The benefit of this is that it isolates the impact that headcount may have on forecast vs. staff costs; a lower than forecast headcount would also lead to a lower than forecast staff cost. Removing this factor enables us to understand which changes (if any) exist in staff costs beyond headcount changes.

5.27 ANI’s terminal staff unit costs for RP3 are shown in Figure 5.3 below. This shows that ANI’s staff cost per employee has been above forecast levels to date in RP3, though the cost per employee is forecasted to reduce to -3.1% below forecast levels in 2024.

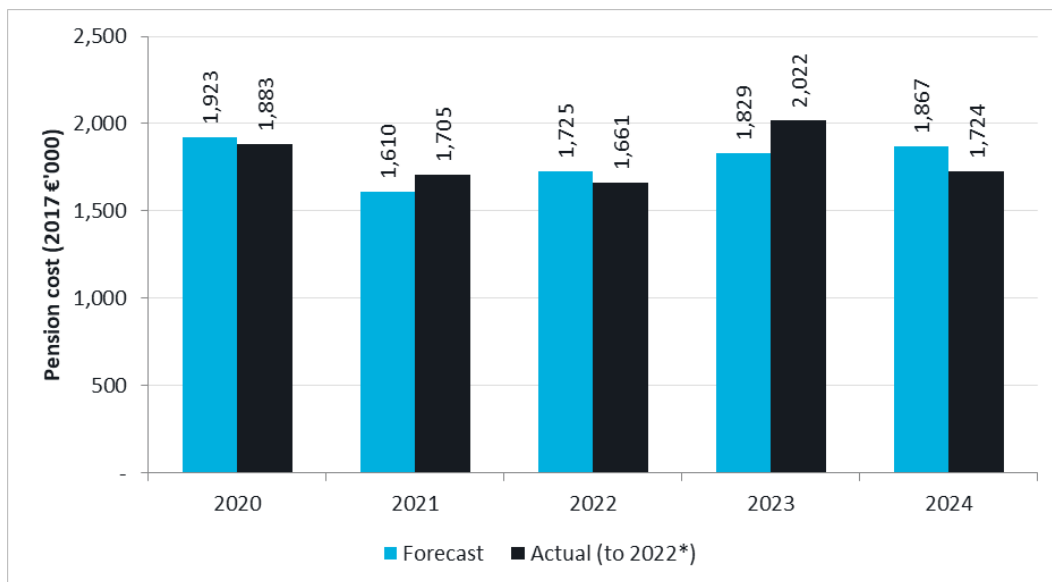
Figure 5.9: ANI RP3 terminal staff cost per employee, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model, IAA calculations. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. 2024 actuals are forecasts made in 2023.

5.28 ANI’s out-turn pension costs have fluctuated around determined costs in RP3 to date. The increase in pension costs in 2023 is due to the same reasons as for En Route pension costs explained above.

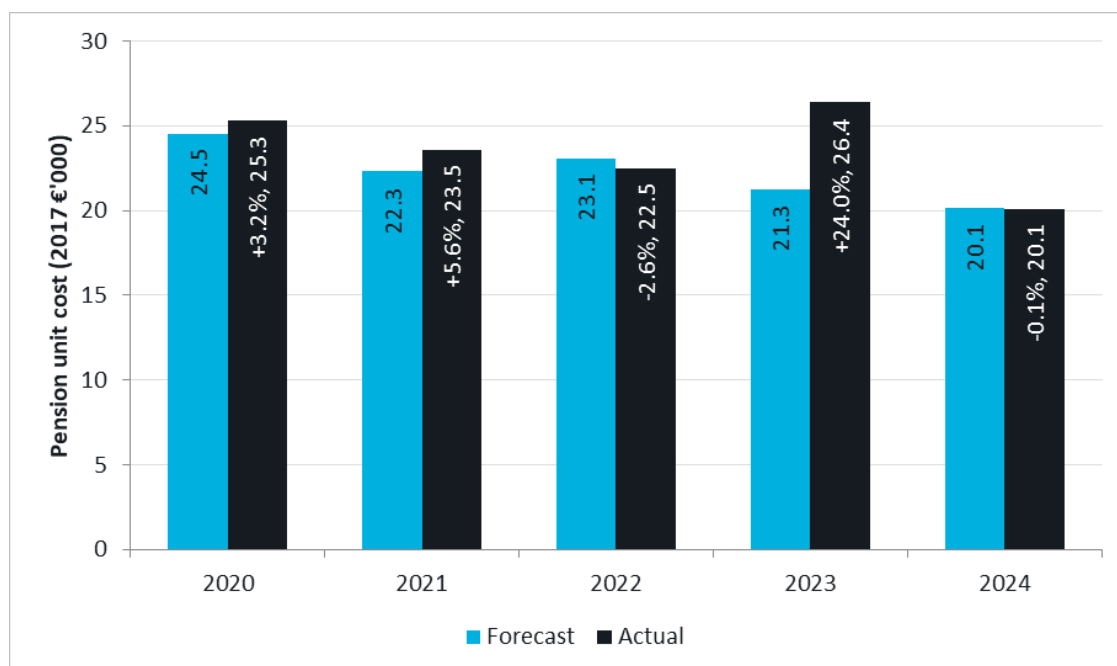
Figure 5.10: ANI RP3 Terminal pension costs, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year.

5.29 Similar to the above on staff costs, it is possible to isolate the pension cost per employee, shown in Figure 5.5. ANI’s pension cost per employee has fluctuated to date in RP3. Again, the increase in 2023 is due to the same reasons as explained for ANI En Route above.

Figure 5.11: ANI RP3 Terminal pension cost per employee, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model, IAA calculations. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. 2024 actuals are forecasts made in 2023.

Approach for RP4 forecasts

- 5.30 We propose a similar approach to the revised RP3 Performance Plan. This would involve the development of a bottom-up model forecasting an efficient headcount for ANI, and consequent staff costs, at a granular level.
- 5.31 This will likely involve assessing the efficient levels of staff costs at a granular level and building a forecasting model that includes individual level forecasts for each line of staff costs and the required numbers at each staff level, in each year of the period. It will also include reviewing the staffing numbers and costs proposed by ANI as part of its RP4 Business Plan, for robustness and efficiency.
- 5.32 Our approach may include assessing ANI's historic staff numbers, staff costs, and ATCO productivity, compared to traffic level trends, as well as benchmarking ANI's performance against ANSPs in comparable countries and/or other entities to estimate an optimal level of staffing across each staffing category.
- 5.33 This will allow the IAA to independently assess ANI's Business Plan against our own forecast for ANI staff numbers and staff costs and identify areas with variances in assumptions between staff cost forecasts.
- 5.34 From the IAA's experience in RP3, the bottom-up forecasting approach was effective for assessing an efficient headcount and staff cost level. The bottom-up approach is consistent with the IAA's preferred approach to forecasting operating costs for regulated entities, including in determining the price cap for Dublin Airport.

- 5.35 We consider that the headcount forecast conducted in 2021 for the revised RP3 Performance Plan appears to have been broadly borne out, in the sense that it suggests that a higher number of ATCOs than the number deployed by ANI would have been optimal particularly in 2023, both for En Route and Terminal (the latter in particular, given the higher traffic levels).
- 5.36 Given the higher than anticipated ATCO attrition and the significant lead times required to train and deploy new ATCOs, this has led to ANI deploying fewer ATCOs than assumed in the Performance Plan. Combined with higher than forecast traffic levels, as well as increasing ATCO requirements associated with extending the operating hours of the North Runway at Dublin Airport, we consider that these factors appear to have contributed to a material deterioration in Capacity performance in 2023, though noting that performance has deteriorated from a base of near-zero ATFM delay. The lower-than-planned ATCOs could also be a factor in the underdelivery of investments, given that ANI has said that service delivery has been prioritised over capex.
- 5.37 It is possible that such a scenario could arise again in RP4. Therefore, considering the interdependencies that exist between capacity and cost forecasts, we are considering whether forecasts should assume additional resilience being maintained by ANI, such that it would be able to maintain capacity performance even in a scenario of reasonable unforeseen headwinds, such as sharp increases in traffic or higher than expected attrition.
- 5.38 This could be achieved in several ways: for example, by forecasting ATCO requirements based on the STATFOR 'high' scenario, rather than the 'base' scenario, or by including a specific forecasting increment associated with resilience. However, the downside of this is the increased cost associated with additional resilience.
- 5.39 We would also anticipate greater stability in traffic forecasts for RP4 compared to RP3, and greater certainty in terminal operations given that the North Runway is fully operational at Dublin Airport, both of which may reduce the need for additional resilience in ATCO forecasts.
- 5.40 We also note that, of course, the inclusion of such an assumption does not guarantee that additional resilience would actually be maintained by ANI, as shown by RP3 outturns being below the forecast. We thus add that if additional resilience were to be provided for within the forecasts, we would expect to balance this against more challenging capacity targets and/or more challenging and/or impactful capacity incentive schemes.

Consultation questions

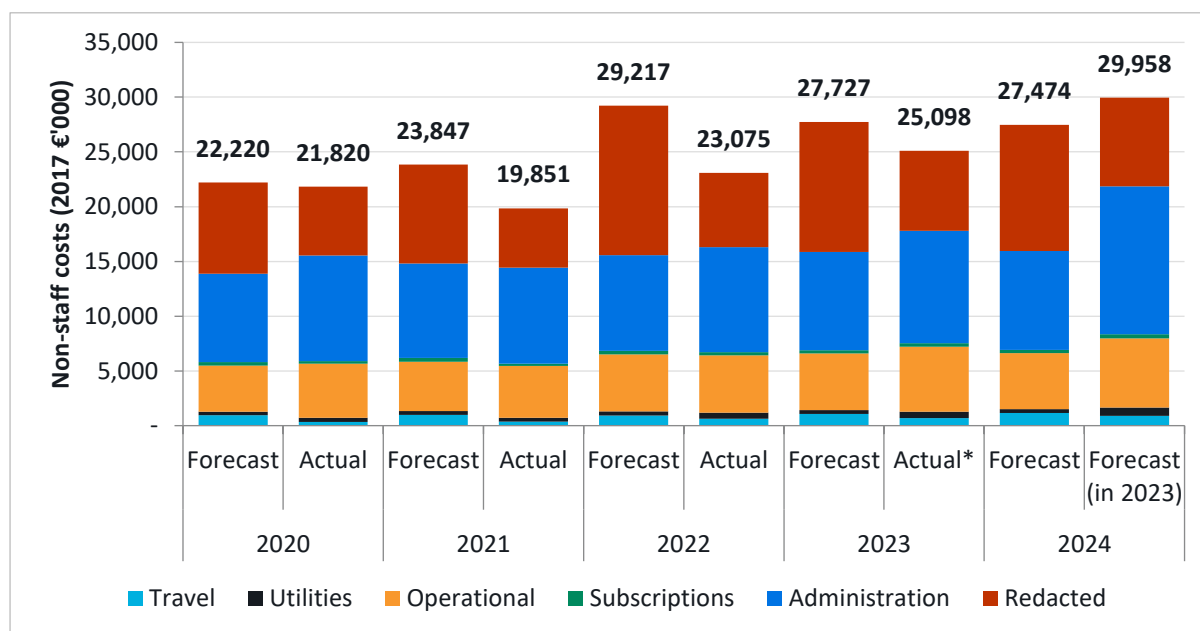
- Should the IAA consider an alternative approach to forecasting staff costs for RP4? What factors or changes are relevant for RP4 which should be taken into account?
- Do you have any comments on the inclusion of additional resilience in the headcount forecasts for RP4 based on the experiences of RP3?

Non-staff costs

En Route

5.41 ANI's outturn Other Operating costs were lower than forecast. We note that, particularly in 2021 and 2022, non-staff costs were significantly lower than forecast. ANI states that the reasons are due to COVID-19 cost reductions in 2021, and favouring service delivery over 'planned opex'.

Figure 5.12: ANI RP3 En Route non-staff costs, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. Redacted category consists of training, telecommunications, insurance, security, cleaning, and restructuring, which are not displayed individually at the request of ANI.

5.42 By comparing line items between the RP3 forecast and actual costs provided by ANI, we identify that restructuring costs included in the RP3 forecast were not reported in actual costs. It is yet unclear the extent to which such costs did not materialise, as opposed to being reported under other more specific line items in the actual costs. In either case, this would explain the difference between forecast and actual restructuring costs (captured in the redacted category).

5.43 Administrative costs overall were slightly higher than forecast in 2022 and 2023. The primary drivers of higher administrative costs were rent and rates, computing, and 'other administrative costs'. It should be noted that the forecast from 2022 to 2024 was based on bottom-up analysis, whereas the 2020/2021 was based on a benchmarking analysis.

5.44 From the above, we consider that ANI has significantly outperformed our non-staff cost forecast in RP3 to date. Understanding the reasons for this variation will be important when developing the RP4 Performance Plan. In particular, it is important to understand whether the variance in RP3 is due to:

- ANI responding effectively to the framework of incentive regulation as

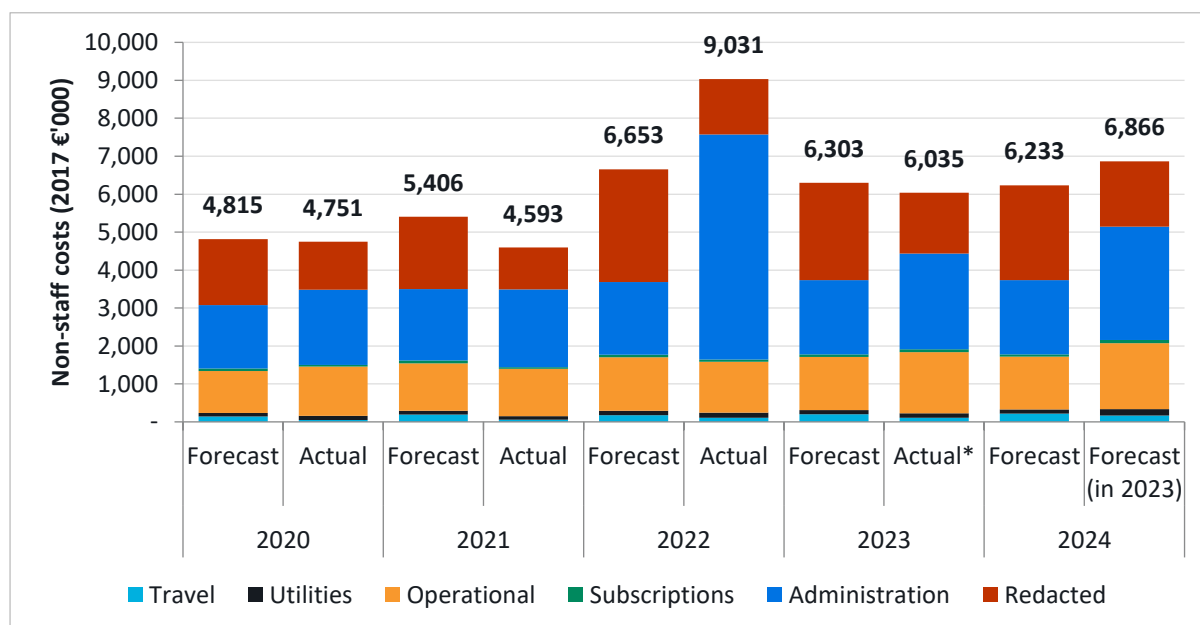
provided for by Regulation 317/2019, and achieving efficiencies beyond those which could have been reasonably expected;

- The forecast methodology, or certain elements of it, being generous;
- ANI spending less than it might optimally have done, with possible current and/or future impacts on the delivery of service, or on the delivery of investments;
- Any other reason not covered above; or
- A combination of the above.

Terminal

- 5.45 At a total level, ANI's outturn Other Operating costs for Terminal services were more in line with the forecast, except for 2022, where other operating costs were much higher than determined due to an impairment loss of €4.7 million being recognised in the year. This was due to an asset in installation, which was in progress, not being viable due to emerging technology and a change in operational processes. When the impairment is excluded, operating costs were €1.5 million lower than expected, which ANI has attributed to planned opex being deferred in favour of service delivery because of a strong return in traffic during the year.
- 5.46 However, within the total level of costs, there were some significant differences within the individual categories. In particular, administration costs were significantly higher than forecast in 2022 predominantly due to a large increase in 'other administration costs', according to ANI. The difference in redacted cost lines appears to be for the same reasons as noted in the En Route section above; it is not clear whether restructuring costs were reported under different cost lines compared to the forecast, or whether they did not materialise as forecast.

Figure 5.13: ANI RP3 Terminal non-staff costs, NSA forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. Redacted category consists of training, telecommunications, insurance, security, cleaning, and restructuring.

Approach for forecasts

- 5.47 As noted above for staff costs, for RP3 we developed a bottom-up forecasting model for each non-staff cost line item, assessing the efficient level of costs for each item, and forecasting costs for each year, as shown in Figure 5.13 above.
- 5.48 Non-staff costs are less sensitive to traffic, and historically have often not varied significantly from year to year. For RP3, where we assessed that there was no compelling reason for non-staff cost lines to change significantly, we forecast that costs would grow in line with forecast inflation.
- 5.49 We took a different approach where we considered there to be specific reasons for step changes in non-staff costs. One example would be that the capitalisation of new assets typically leads to lower maintenance costs at the start of an asset's useful life. In this case, the forecast maintenance costs can reflect known changes expected to be capitalised during RP3. Additionally, the capitalisation of new projects may be associated with greater operating cost efficiency; this can also be included as part of the non-staff cost forecasting where appropriate.
- 5.50 Our approach for RP4 can further include reviewing ANIs other opex forecasts for RP4 for need, robustness, and efficiency. It may include benchmarking ANIs costs against ANSPs in comparable countries and/or other comparators to estimate an efficient level of opex.
- 5.51 We may also assess how capital expenditure should feed into the Opex assessment, for example any changes in Opex due to new capital projects, and how an efficient ANSP should allocate between Capex and Opex.

Consultation questions

- Is the methodology used for forecasting Opex in RP3 still appropriate?
- What, if anything, should be different with regard to the methodological approach to forecasting Opex for RP4?

Capital Costs

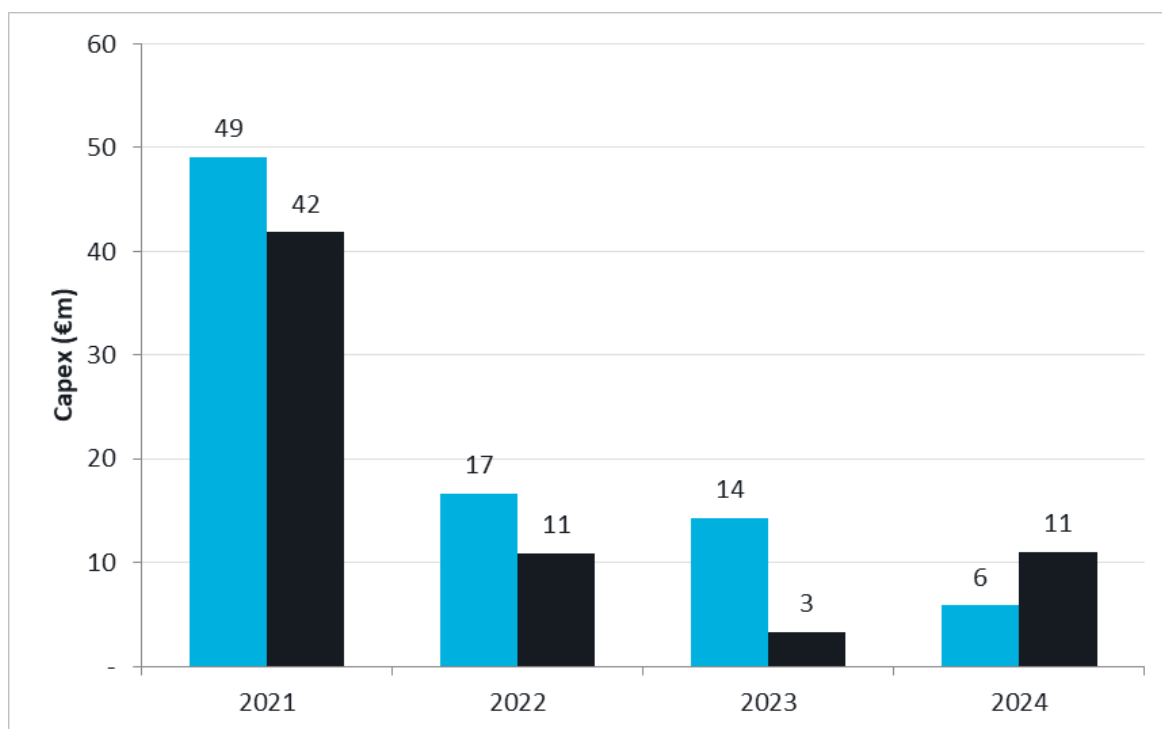
Monitoring and reporting of capex

- 5.52 At present, capex reporting is conducted biannually to provide frequent updates on the progress of outturn capex delivery against planned delivery. We consider that a biannual approach would be appropriate to continue using in RP4.
- 5.53 We note that, while this includes projects for the delivery of Common Project 1 (CP1) functionalities, it does not include monitoring the delivery of the functionalities themselves against the timelines. In brief, CP1 is a collection of technological and operational ATM solutions to help deliver on the goals of the European ATM Masterplan, with the deployment of functionalities across the EU ANSPs mandated by Implementing Regulation (EU) 2021/116.
- 5.54 It may be useful to add a reporting requirement of the expected delivery of functionalities relative to their required timelines, so that this is embedded and tracked within the general monitoring of Capex delivery. Each ATM functionality has an implementation target date within the regulation; we consider it would be appropriate to include reporting on progress towards these dates.

Outturn capital costs

- 5.55 ANI's capital expenditure in RP3 has not met its planned levels to date. The principal reasons for lower than forecast capex, according to ANI, include shortages in resource availability in engineering and operations departments, leading to the prioritisation of ongoing operations over capital expenditure projects. Additionally, ANI has pointed to knock on impacts from COVID-19 and challenges with sourcing contractors/service providers. In this subsection, we provide an overview of expenditure on Major Projects, as defined in Regulation 317/2019, relating to both Terminal and/or En Route.

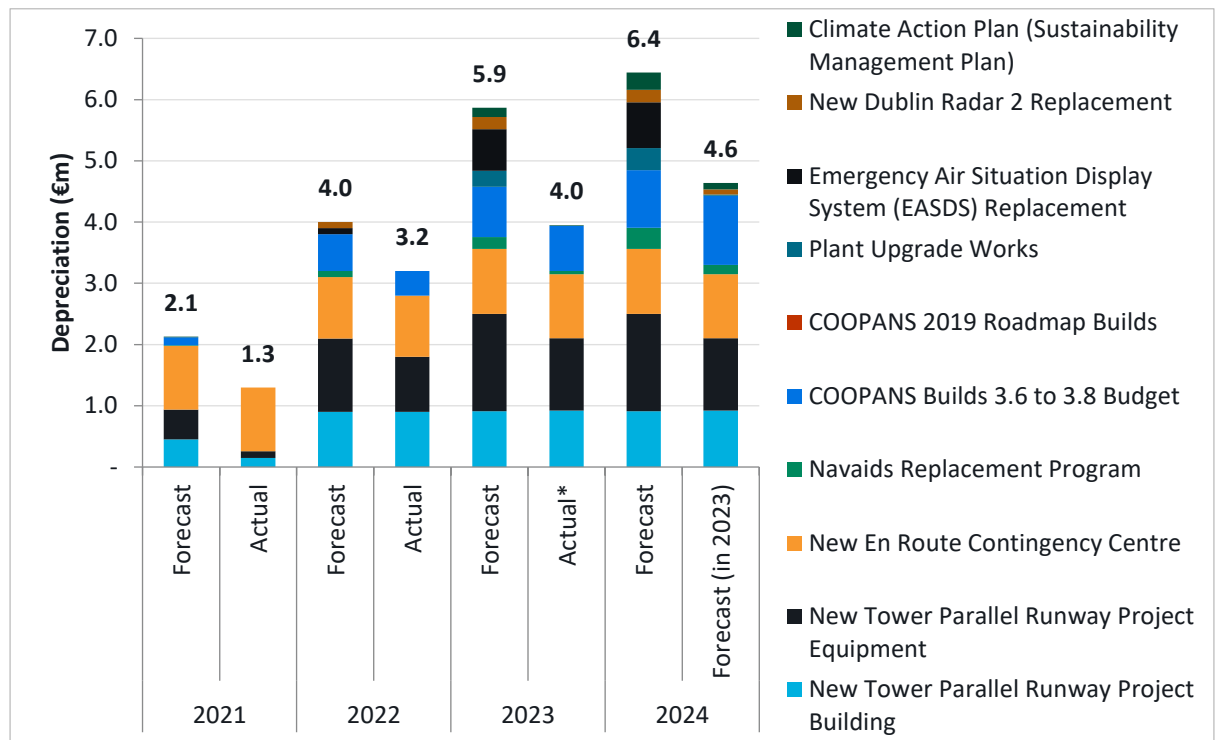
Figure 5.14: ANI RP3 capital expenditure, RP3 forecast vs. actual/latest forecast



Source: ANI, IAA RP3 Financial Model. () 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year. Nominal.*

- 5.56 Depreciation was below forecast levels throughout RP3 to date. This is primarily due to capex underdelivery and later capitalisation of new assets than forecast. As mentioned previously in this paper, ANI has stated that it has prioritised service delivery in RP3 over capital programmes.
- 5.57 In 2023, three projects recorded no depreciation cost: Plant Upgrade Works, EASDS Replacement, and New Dublin Radar 2 Replacement. The former two projects were planned to commence capital expenditure in 2022, though no capital expenditure has been reported in 2023 to date. The new Dublin Radar 2 Replacement project was planned to commence in 2023 but no capital expenditure has been reported in 2023 to date, though capital expenditure for this project is planned for 2024. No depreciation is forecast for the EASDS Replacement in 2024, as per the latest information available from ANI in late 2023.

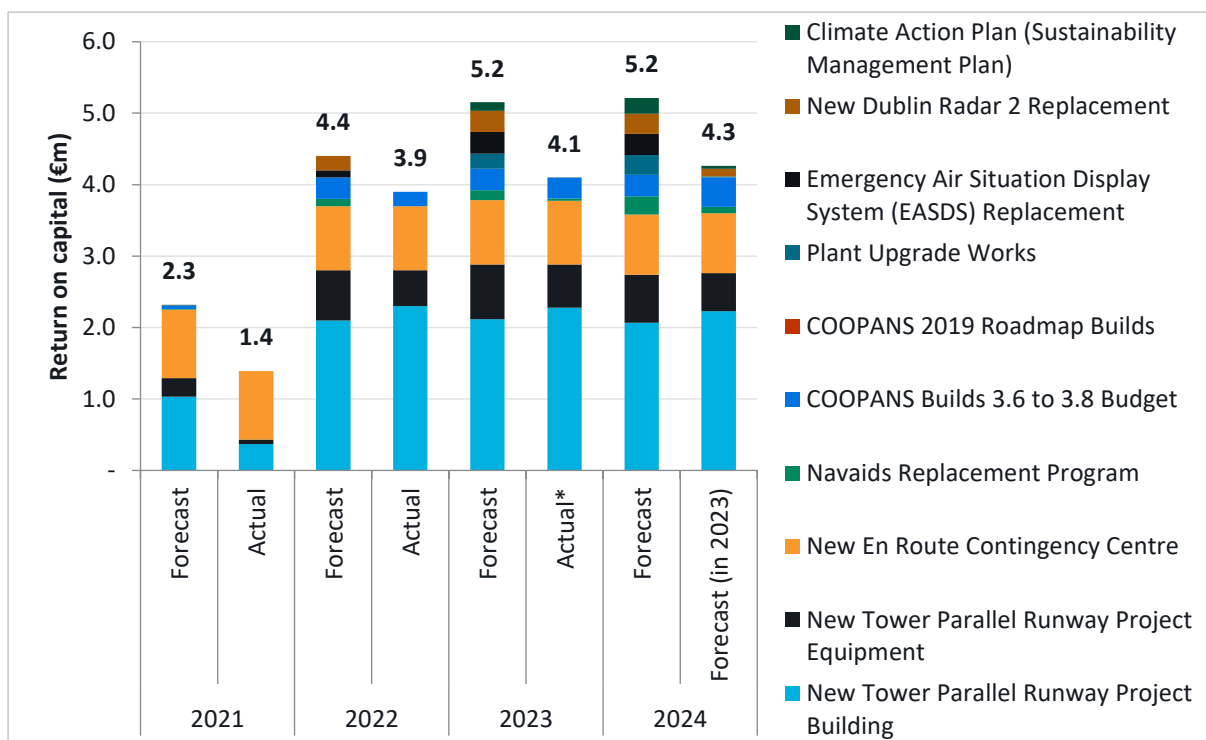
Figure 5.15: ANI RP3 Depreciation, forecast vs. actual



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecasted costs for the remainder of the year.

5.58 ANI’s return on capital was also below forecast levels in RP3 to date, related to the points made above on delayed capex delivery and depreciation.

Figure 5.16: ANI RP3 return on capital, RP3 forecast vs. actual/latest forecast



Source: ANI, IAA RP3 Financial Model. (*) 2023 actual costs represent outturn costs to the latest data available plus forecast

costs for the remainder of the year.

Approach for Forecasts

- 5.59 The IAA's proposed approach is to review the investment programme, both at a project level and in totality, submitted to us in ANI's Business Plan for achievability, cost efficiency and need.
- 5.60 The IAA will ensure that there is no double counting of projects financed during RP2 and RP3. Given that RP2 underspend is being voluntarily returned and RP3 underspend will be returned, this is unlikely to arise as an issue given the grouped allowances approach (where allowances are reconciled at a programme level rather than a group level, to allow more flexibility to adjust the overall programme and its priorities).
- 5.61 The IAA will also assess the timing and deliverability of all projects proposed for RP4. This should account for the findings of the existing RP3 under-delivery of capex. As in RP3, we will consider the proposed asset lives for reasonability, relative to our benchmarks. Finally, the IAA will assess the appropriate remuneration for depreciation and the cost of capital (WACC), discussed in more detail below.
- 5.62 As noted above, in RP3, ANI's capital expenditure under-delivered compared to the Performance Plan. This was notwithstanding that the IAA judged that the initial programme was overly ambitious and implemented a reduction of 20% in the programme. Nonetheless, under-delivery against the revised plan has occurred in RP3 to date. The key questions for this consultation when determining the forecasting approach for ANI capex are:
- Whether RP3 has shown that ANI is not currently in the position to deliver a programme of that scale, and so an assumption of a smaller baseline programme is appropriate for the RP4 Performance Plan, noting that Regulation 317/2019 is somewhat inflexible in how the IAA can allocate delivery timing risk, as the 5% cap for overspends limits the ability to assign this risk to the ANSP rather than airspace users; and
 - Of the specific issues ANI faced in RP3 leading to under-delivery, which of these issues have been addressed, which of these issues is ANI currently addressing, and/or which of these issues will be addressed in time for RP4.

Consultation questions

- Should we continue the current capex delivery reporting framework, adding a reporting requirement on CP1 functionality delivery against target dates?
- Do you agree with the proposed approach to assessing projects in ANI's capex plan for RP4? Should the IAA consider any alternative approach to assessing ANI's capex plan for RP4?
- How should the deliverability of the proposed investment programme and the planned timelines be assessed (staff requirements, availability of

contractors, deliverability of multiple investments simultaneously, historic evidence of deliverability of investment programmes)?

Cost of capital

5.63 The cost of capital should be estimated such that it would enable ANI to remunerate equity shareholders and holders of debt, for the required capital to enable the development of efficient infrastructure. It should balance rewarding existing investors appropriately, enabling the delivery of required infrastructure, and protecting the interests of airspace users from excessive charges.

5.64 The formula for the pre-tax WACC calculation is expressed as:

$$\text{WACC} = g \times R_d + \frac{1}{(1 - t)} (R_e)(1 - g)$$

- Gearing = $g = \frac{\text{Total Debt}}{\text{Total Debt} + \text{Total Equity}}$
- R_d = Pre-tax Cost of Debt
- R_e = Post-tax Cost of Equity
- R_m = Corporate Tax Rate

5.65 The real weighted average cost of capital (WACC) for ANI for RP3 was set at 3.5%. Each component of the WACC calculation is outlined and expanded upon below.

Gearing

5.66 The gearing component reflects the proportion of a company's operation that is financed by debt, as opposed to equity. That is, it determines the weightings assigned to the cost of debt, and the cost of equity, within the WACC calculation. It can be estimated based on the actual proportion of debt and equity in the financial structure of the entity, or alternatively, based on a notional structure. A notional capital structure can be seen as an optimal level of gearing, reflecting an efficient allocation of funding as between debt and equity.

5.67 In its RP3 Business Plan, ANI proposed a notional gearing estimate of 50%. This aligned with our regulatory precedent in respect of setting the WACC for Dublin Airport. We noted that the PRB believed that an efficient WACC would be based on gearing of approximately 60%, i.e. be slightly more heavily weighted towards debt. We also reviewed a range of other regulatory precedent, noting that the UK Competition and Markets Authority used a lower gearing when calculating the WACC for NERL, and that this was more comparable to similar actors in the aviation industry, such as airports and other ANSPs.

5.68 Hence, we determined a gearing point estimate of 50%, which was line with ANI's proposals.

Cost of Equity

5.69 The cost of equity in this context is a theoretical regulatory construct which can be conceptualised as a profit allowance for the regulated entity. We estimated

the cost of equity using the Capital Asset Pricing Model (CAPM). The CAPM formula is defined as follows:

$$R_e = R_f + \beta_e \times (R_m - R_f)$$

- R_e = Post-Tax Cost of Equity
- R_f = Risk-Free Rate
- β_e = Equity Beta
- R_m = Total Market Return
- $(R_m - R_f)$ = Equity Risk Premium

Risk-Free Rate

5.70 The risk-free rate is the theoretical rate of return on an investment with zero risk. For RP3, our estimate was based on the yield from ten-year Irish and German bond yields, an approach that is both in line with regulatory precedent and industry standards. Such bonds are considered close to risk-free in terms of default risk. At the time of estimating the WACC for RP3, nominal bond yields were at a historic low, and have materially increased since then.

5.71 We then used the Fisher equation to convert nominal yield averages over one-year, two-year, and five-year averages into real yields that could then be fed into the WACC. We note that inflation has also materially increased since 2021, which would offset increased nominal bond yields when converting these to real yields.

Table 5.1: Real 10-Year Bond Yields

Country	5-Year Average	2-Year Average	1-Year Average	Mid-Point
Ireland	(1.2%)	(1.6%)	(1.7%)	(1.5%)
Germany	(1.7%)	(2.1%)	(2.2%)	(1.9%)

Source: IAA, RP3 Performance Plan

5.72 Being backward looking, the above rates did not take account of potential changes in yields or rates in future years throughout the remainder of RP3. Forward rates, which reflect market expectations on future yields, are not directly observable, but can be estimated using spot rates on bonds with shorter maturities. We also estimated forward rates using the ECB's Euro area yield curve, using both all-Euro-area government bonds and AAA rated government bonds.

5.73 Based on the mid-point of historic real yields and average forward rates for RP3, our range for the risk-free rate estimate was from -1.5% to -1.0%. The upper bound of this range is in line with the -1.0% risk-free rate proposed by ANI. We set a point estimate of -1.23%.

Table 5.2: Risk-free Rate Estimate

	Data Point	Lower Bound	Upper Bound
	Current yields	(1.9%)	(1.5%)
+	Forward rates	0.5%	0.5%
=	Risk-free rate	(1.5%)	(1.0%)

Source: IAA Calculations. Differences in totals due to rounding.

Beta

- 5.74 The equity beta measures the sensitivity of an entity to systematic risk, relative to the overall market. A beta of one will mean that the entity moves perfectly in line with the market. A beta lower than one will mean that it is less sensitive to market volatility, whereas a beta of higher than one will logically mean that the entity will move beyond the movements in the market.
- 5.75 There are two variations of beta that can be calculated, equity (levered) beta or asset (unlevered) beta. The unlevered asset beta isolates the risk solely due to an entity’s assets and removes the impact of debt, which is then re-levered based on gearing and tax rates to calculate the equity beta within the cost of equity.
- 5.76 As there is no way to directly calculate ANI’s asset beta, remembering that ANI is not a listed company, we conducted a review of a selection of asset betas used by several comparable european ANSPs and airports, entities facing similar operating challenges in the same overall market under the same European rules and regulations.
- 5.77 A table of our reviewed airports and ANSPs is outlined below.

Table 5.3: European Aviation Sector Asset Betas considered for RP3 Performance Plan

Estimate Type	Name	Entity Type	Year(s)	Asset beta
Based on Market Data	ADP	Airport, France	2016-2020	0.5-0.6
	Fraport	Airport, Germany	2016-2020	0.45-0.55
	AENA	Airport(s), Spain	2018-2020	0.55-0.65
	ENAV	ANSP, Italy	2019-2020	0.45-0.55
Regulatory Decision	Heathrow	Airport, UK	2019	0.5
	daa	Airport, Ireland	2019	0.5
	NERL	ANSP, UK	2019	0.46
	NERL	ANSP, UK	2020	0.5-0.6

Source: IAA Draft Decision on RP3 Performance Plan, Table 5.5.

- 5.78 ANI had proposed an asset beta range between 0.65 and 0.70, which we considered to be too high relative to the evidence. We considered the effect of COVID-19, and although the impact of the pandemic was considerable, we did not have any compelling evidence to suggest that these ANSPs and airports had become more, or less, sensitive to systematic risk since the pandemic.
- 5.79 The IAA considered that 0.45 and 0.55 was an appropriate range for the asset beta, based on the above, and set a midrange point estimate of 0.5. With a notional gearing of 50% and tax rate of 12.5%, re-levering this asset beta range using the Hamada formula translated to an equity beta of between 0.84 and 1.03, with a point estimate of 0.94.

Equity Risk Premium

- 5.80 The equity risk premium is the excess return earned by investors over the risk-free rate, and in its estimation, we decided to look towards total market returns, which was consistent with our regulatory precedent. Total market returns include the risk-free rate and the equity risk premium. The former can be subtracted from the total to isolate the premium. The total market approach is considered more stable over time, rather than estimating the premium in isolation.
- 5.81 When first estimating the risk premium, we used the Damodaran datasets based on a 10-year holding period (Blume's method). We determined a range of 4.9% and 6.2% for total returns in the Irish market. Remembering that the range of risk-free rates lay between -1% and -1.5%, therefore the risk premium was estimated to sit between 3.4% and 5.2%. We noted that this source of financial market data was recommended by the PRB.
- 5.82 We noted that this total market return range appeared low relative to regulatory precedent, including our own, and given that it provides an estimate of the equity risk premium, it is unlikely to be the most appropriate method for estimating the total market return as it is based on assumptions of the equity risk premium in a mature market. Using a separate dataset, from Dimson, Marsh, and Staunton, we estimated total market returns to be between 7.5% and 8%, implying a risk premium of between 6% and 7%. This range was more in line with regulatory precedent, and also with the evidence provided by ANI. It therefore formed the basis of our estimated equity risk premium.

Cost of Debt

- 5.83 When estimating the cost of debt, our preferred approach is to use an estimate of embedded debt, based on the costs of currently held debt, combined with the cost of any new debt, which can be estimated based on comparable companies operating under similar market conditions. Given that ANI did not hold any embedded debt, this implied a weighting of 100% on new debt.
- 5.84 While ANI did not have any debt, it did have undrawn Revolving Credit Facilities (RCFs) in place. We decided to use these arrangements to estimate the cost of new debt. We thus calculated the cost of debt using a range of fees and rates in ANI's RCF arrangements and found a nominal cost of debt to be 1.52%.

Adjusting this for inflation using the Fisher equation provided a real cost of debt estimate of 0.12%.

Aiming Up

- 5.85 Setting the WACC is not an exact science, and requires significant judgement, meaning that the true WACC can only be estimated within a range. An “*aiming up*” allowance is designed to mitigate estimation error and the possibility of the WACC estimate being set too low. A WACC estimate that is set too low is sometimes considered to have a greater adverse effect on economic welfare than an overestimate. Setting the WACC too high would result in somewhat higher than necessary charges for airspace users, however underestimating it could disincentivise or preclude investment, the latter believed to have a larger negative effect on economic welfare. In our recent decisions on the WACC for Dublin Airport, we have included an aiming up allowance of 0.5 percentage points on the WACC.
- 5.86 After careful consideration, we decided not to include an aiming up allowance in the WACC for ANI for RP3, as described from paragraph 5.77 of the October 2021 decision document. This was for the following primary reasons:
- Given the specific circumstances of ANI, we were not convinced that the inclusion of an aiming up allowance in the WACC would, in practice, be a material driver of the extent to which ANI could or would deliver its investment programme.
 - We noted that ANI would not need to raise any further new debt during RP3 even if it were to deliver its investment programme in full.
 - We noted that the unrecovered revenues from 2020/2021, which would start to be recovered from 2023, already provided a significant financial buffer against potential financial underperformance (much larger than any reasonable aiming up allowance).

WACC Summary

- 5.87 The range of values for the WACC, calculated based on the parameters above, is shown in the table below compared against the values proposed by ANI. We also used the applicable corporate tax rate of 12.5%.
- 5.88 Our estimated range was significantly below the point estimate for the real WACC included in ANI’s Business Plan of 5.0%. As is apparent from the below, the difference was driven by the cost of equity, which difference was in turn driven primarily by the asset beta.

Table 5.4: ANI and NSA WACC Comparison

Parameter	ANI BP Estimate		NSA Estimate		
	Low	High	Low	High	Point Estimate
Gearing	0.5	0.5	0.5	0.5	0.5
Risk-free rate	(1.0%)	(1.0%)	(1.5%)	(1.0%)	(1.2%)
Total market returns	6.4%	6.8%	6.0%	7.0%	6.5%
Equity risk premium	7.4%	7.8%	7.5%	8.0%	7.8%
Asset beta	0.65	0.70	0.45	0.55	0.50
Equity beta	1.22	1.31	0.84	1.03	0.94
Post-tax cost of equity	7.3%	9.1%	4.9%	7.2%	6.0%
Tax rate	12.5%	12.5%	12.5%	12.5%	12.5%
Pre-tax cost of equity	8.4%	10.5%	5.6%	8.3%	6.9%
Cost of debt	0.1%	0.1%	0.1%	0.1%	0.1%
Pre-tax real WACC	4.6%	5.3%	2.8%	4.2%	3.5%

Source: IAA Calculations, AirNav Ireland

5.89 The nominal WACC in each year of RP3 is shown in the table below. The point estimate of the real WACC from the table above was converted to a nominal WACC, using the inflation rate for each year, using the Fisher equation. ANI's RAB is at historical cost (i.e. in nominal prices), and thus a nominal WACC must be applied to derive the return on capital.

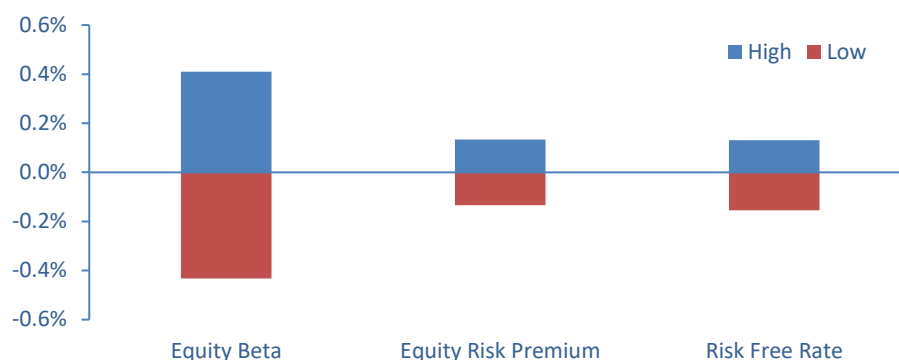
Table 5.5: Nominal WACC used for RP3 Performance Plan

Figure	2020	2021	2022	2023	2024
Inflation	(0.5%)	1.6%	1.9%	2.0%	2.0%
Nominal WACC	3.0%	5.2%	5.5%	5.6%	5.6%

Source: IAA

5.90 In the below chart, we demonstrate the sensitivity of the RP3 WACC to changes to the components across their estimated range (if any), as described above. We test this by assessing, for each component, the impact on the WACC if that component is instead set at the top or the bottom of its range. Chart 5.17 thus shows the percentage change in the WACC when each component moves from the point estimate to either the top or the bottom of the range.

Figure 5.17: The impact on the WACC of setting a parameter across its range estimated for RP3



Source: IAA calculations

5.91 As shown in the chart, the most impactful point estimate was the beta. For example, if we had set the asset beta at 0.55 rather than 0.5, increasing the equity beta to 1.03, this would have increased the WACC by almost 0.5%.

Approach for RP4

5.92 For RP4, we will, at a minimum, review recent data on the WACC parameters with a view to updating them relative to our RP3 estimates. We would also take account of any changes required for internal consistency. For example any changes to the traffic or cost risk allocation may have implications for exposure to systematic risk, and consequently the asset beta.

5.93 We welcome any comments on whether we should make any broader changes to the methodology, or consider any other data sources or comparators. We welcome comments and critiques across the board, from our methodology to the data employed, along with your reasoning outlining why you propose any such changes.

Consultation Questions

- Do you think the methodologies, data sources, and comparators used for RP3 remain appropriate for RP4? If not, what changes should we make, and why?
- Are there any broader issues which you think are relevant to estimating the WACC for ANI for RP4?

6. MET Eireann ASD Costs

6.1 In this section, we explain in more detail the proposed approach for cost allocations and cost forecasting for Met Éireann Aviation Services Division (MET). This is complemented by a review of outturn performance to date of MET in RP3.

Cost Allocation

Regulated and non-regulated

6.2 The Aviation Services Division (ASD) is part of Met Éireann, the Irish Meteorological Service. Therefore, only the activities in scope of ASD are regulated under the Single European Sky performance and charging framework.

6.3 Met Éireann's accounts system calculates charges to aviation. For RP3, we reviewed the cost allocation methodology used and considered it to be aligned with World Meteorology Organisation (WMO) and International Civil Aviation Organisation (ICAO) charging guidelines. Prior to the calculation of En Route and Terminal costs, the system strips out the costs of service to general aviation, the military and other non-applicable costs.

En-route and terminal

6.4 MET follows a cost recovery approach, allied with a methodology used in establishing the determined costs based on a cost allocation algorithm agreed with the IAA and the Department of Transport.

6.5 Since a recommendation by CAR in 2002, these charges have been split 80:20 between En Route and Terminal air navigation services, respectively. We consider that any deviation from this would require an assessment of the use of various MET services by organisations operating or providing services within the different charging zones.

6.6 It should be noted that the 2002 decision was intended to be time-limited and consequently there may be merit in reviewing these allocation keys ahead of the RP4 Performance Plan to assess whether they remain fit-for-purpose. The IAA would likely need to assist MET or adjust the existing allocation keys itself to change the cost allocation.

Consultation questions

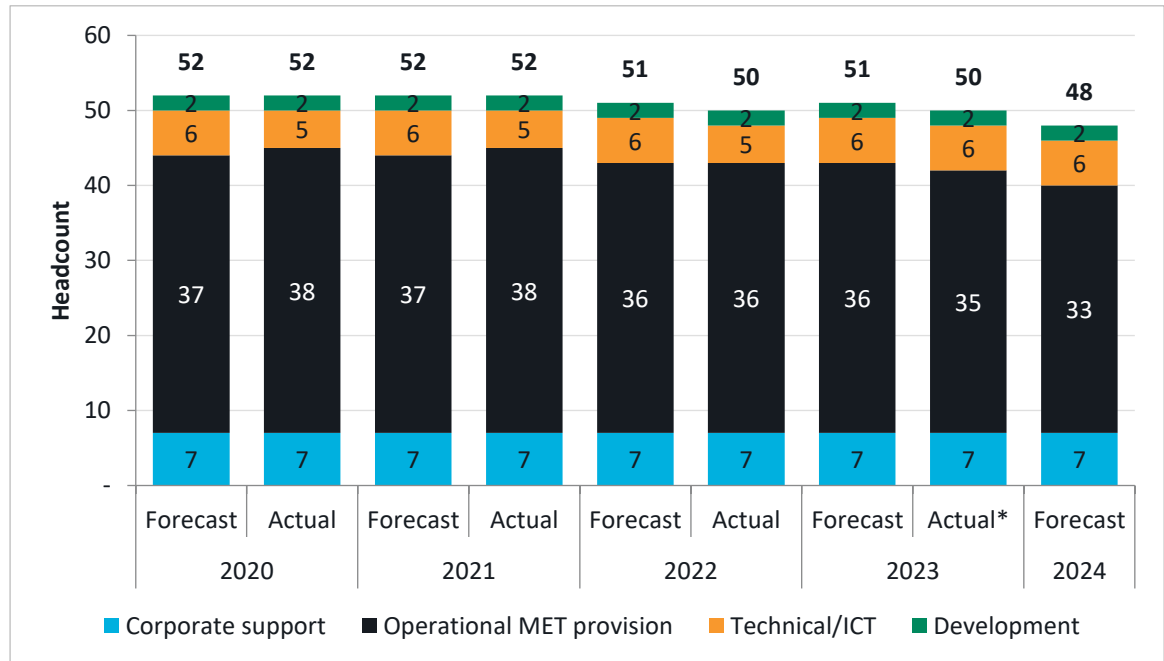
- Should the cost allocation for Met Éireann ASD regulated services be updated for RP4? If so, for what reasons, and in what way?
- Should we reassess the allocation key of En Route and Terminal costs for MET?

MET Costs

Headcount

6.7 MET’s headcount is in broadly in line with forecast levels in RP3 to date, with one fewer operational MET provision member of staff than forecast for 2023. MET notes that overtime payments are used where required to ensure a full service provision.

Figure 6.1: RP3 MET headcount, forecast vs. actual

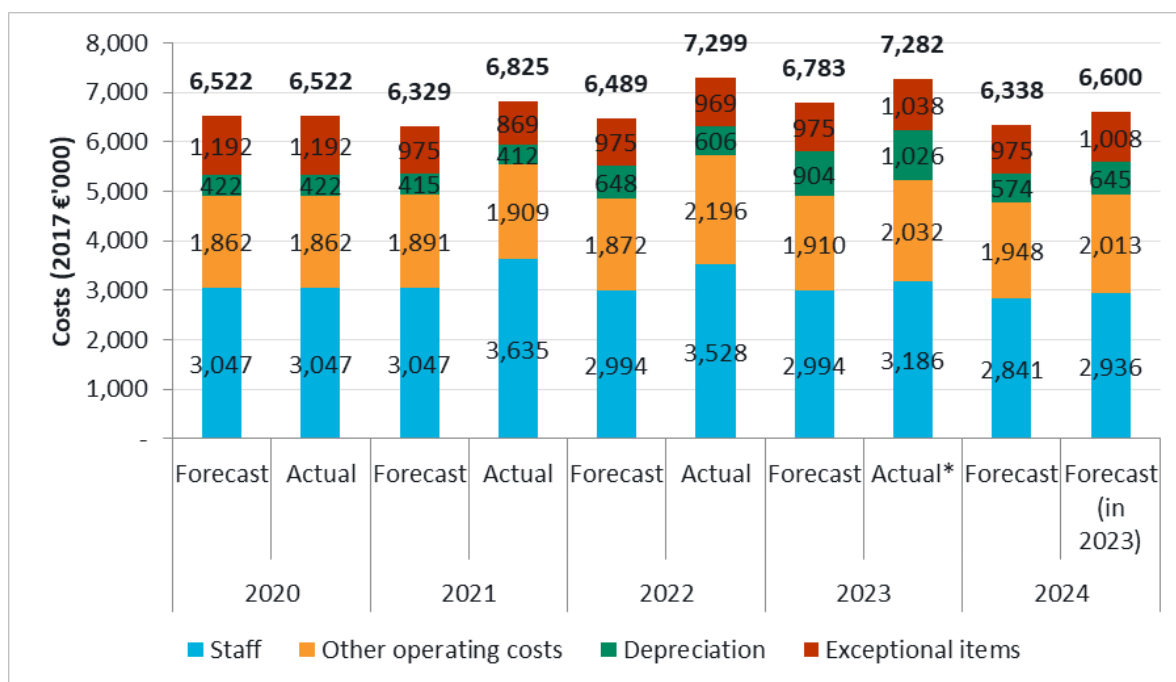


Source: MET, IAA RP3 Financial Model. (*) 2023 actuals represent outturn headcount to the latest data available plus forecasted changes for the remainder of the year.

RP3 Outturn (En-route)

6.8 MET costs exceeded the Performance Plan forecasts in 2021, 2022 and 2023, primarily driven by higher-than-forecast staff costs. As discussed in section 3, this is due to MET’s staff costs for the Performance Plan being based on the mid points of salary scales for its employees, whilst its actual performance has been based on the actual position of employees on the salary scales.

Figure 6.2: MET RP3 En-route costs, forecast vs. actual

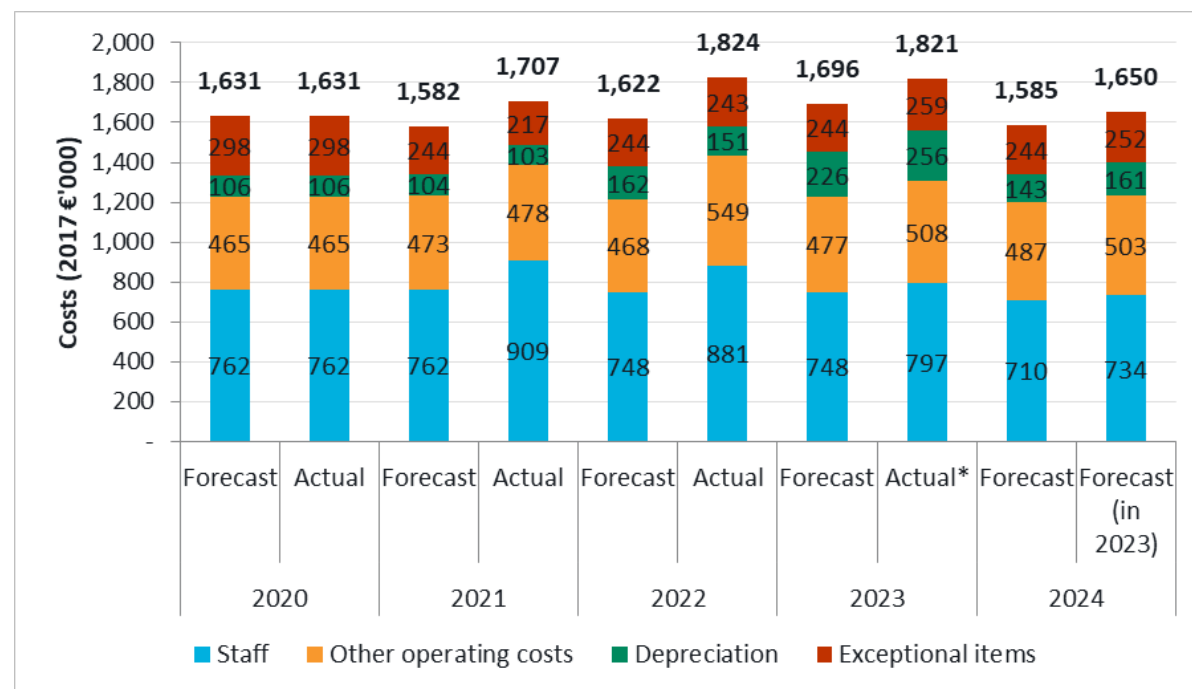


Source: Ireland RP3 Reporting Tables. (*) 2023 and 2024 data from initial cost submission for RP4.

RP3 Outturn (Terminal)

6.9 As is the case for En Route MET costs, MET terminal costs also exceeded forecast levels for the same reasons as above.

Figure 6.3: MET RP3 Terminal costs, forecast vs. actual



Source: Ireland RP3 Reporting Tables. (*) 2023 and 2024 data from initial cost submission for RP4.

Approach for forecasts

- 6.10 MET’s staff costs are driven by the Public Spending Code, and as such staffing numbers are the main avenue within the control of MET through which changes to staff costs can be achieved.
- 6.11 We note that in RP3, MET’s forecast staff costs did not directly align with actual expected staff costs due to a prescription in the Public Spending Code that salaries used in calculating Determined Costs refer to the midpoint of salary bands, and not the actual position on the salary scale that staff are on. We understand that forecast costs for RP4 provided by MET may now relate to the actual position on the salary scale that staff are on, and hence this will not be an issue for RP4.
- 6.12 We note that MET costs tend to be less sensitive to traffic and to move more in line with changes to service provision. Indirect costs also evolve with reference to the scope of non-aviation services being provided by Met Eireann. We propose to consider any such changes which might be foreseen in RP4, as well as carrying out trend analysis and comparing MET’s RP4 Business Plan against suitable comparators for operating cost savings, potentially including comparing against PRB targets at a Union-wide level.

Consultation questions

- Should the IAA consider any different approaches to forecasting/assessing MET costs?
- Should the IAA benchmark MET costs, and if so which comparators should be considered?

Capital Costs

RP3 Outturn (En-route)

- 6.13 The allocation of MET’s capital costs to aviation is via the application of a cost allocation methodology which allocates the cost of these projects between aviation and other MET activities. The allocation key used is the direct cost of aviation forecasting divided by the direct cost of all forecasting activity.
- 6.14 MET’s current capital expenditure in 2023 to date is detailed below.

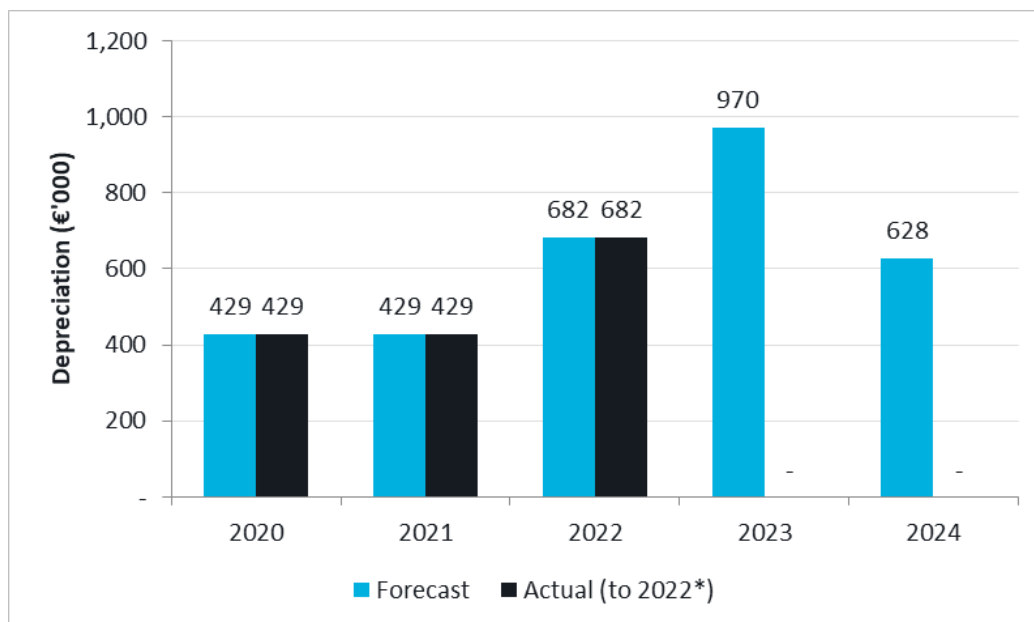
Table 6.1: MET capital expenditure, 2023

Project name	Capital	Current
AMAP	€238,463	€78,380
IMMaMS	€358,924	€708,451
HPC	€20,291	-
RADAR	€570,000	€154,000
Research	n/a	n/a
METCOMM*	0	0

Source: MET. (*) Expected spend of €450,000 by end of 2023.

6.15 Depreciation in RP3 to date has been in line with determined levels. The 2023 data is not yet available.

Figure 6.4: MET RP3 En Route depreciation, forecast vs. actual



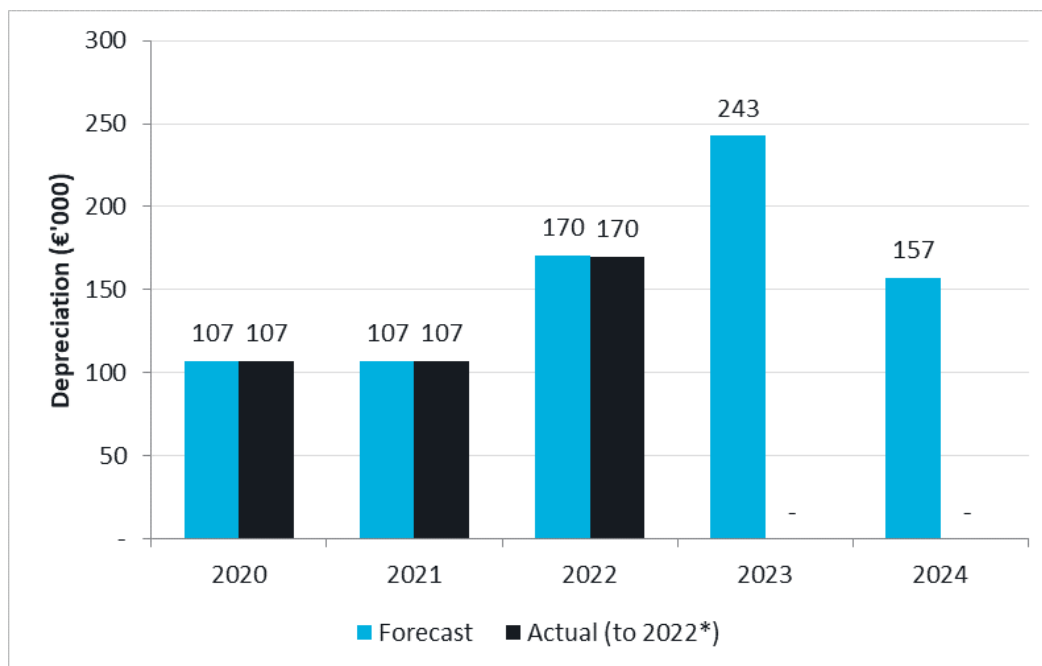
Source: Ireland RP3 Reporting Tables

6.16 In RP3, MET did not seek a cost of capital. The IAA did not include a cost of capital in its forecasts and we do not expect this to change for RP4.

RP3 Outturn (Terminal)

6.17 Depreciation in RP3 to date has been in line with determined levels. The 2023 data is not yet available.

Figure 6.5: MET RP3 terminal depreciation, forecast vs. actual



Source: Ireland RP3 Reporting Tables

Approach for forecasts

- 6.18 We propose to assess the capital expenditure forecast in MET’s RP4 Business Plan for cost-efficiency and need, in a similar approach to that used for ANI, proportionate to the value/scope of the respective programmes. This will include ensuring that there is no double counting of projects financed during RP2 and RP3.
- 6.19 The IAA will also assess the timing and deliverability of all projects proposed for RP4, to verify that projects can be delivered in the reference period, in particular if there are existing delays to projects financed in RP3 and the subsequent knock-on impact on the capital programme in RP4.

Consultation questions

- Should the IAA consider anything else in its approach to assessing/forecasting MET’s capital expenditure?

7. NSA/State costs

- 7.1 In this section, we explain in more detail the proposed approach for cost allocations and cost forecasting for the IAA's costs in its role as National Supervisory Authority (NSA). This is complemented by a review of outturn performance to date of the NSA in RP3. This cost category also includes Eurocontrol costs, which comprise about half of the category, and State costs of the Department of Transport associated with ANS.
- 7.2 Under the regulation, this category of costs operates on the basis of full cost recovery rather than incentive regulation, i.e. the outturn costs are fully passed through to the Unit Rates paid by airspace users.

Cost Allocation

- 7.3 In RP3, the NSA costs are distributed between En Route (73%), Terminal (15%), and North Atlantic Communications (12%). Thus, 12% of the NSA costs are allocated outside the scope of the Performance Plan and collected separately. These allocation keys were used previously within the IAA, prior to the separation of ANI and the merger of CAR.
- 7.4 The IAA categorises costs as 'direct' or 'central'. Direct costs are the operational costs which are directly associated with the regulatory activity for each product. Central costs are the costs incurred by the IAA not directly related to regulatory operations (for example, HR, finance, facilities, etc.). Central costs are allocated to each product proportionate to the level of direct costs incurred.
- 7.5 For RP3, 100% of IAA Air Navigation Services Division (ANSD) staff costs were assigned to the NSA as these staff roles are wholly related to air navigation oversight. 30% of the economic regulation staff costs were assigned to the NSA, as ANS oversight is only one of the three main functions of the economics section. Corporate services and central staff costs were apportioned to the NSA based on the forecast FTEs directly allocated to the NSA divided by total operational FTEs in the new regulator. Costs associated with staff carrying out other operational functions such as licencing, aerodrome safety and security, airworthiness, and air passenger rights, have not been included.

Consultation questions

- Should the IAA seek to change its cost allocation approach for NSA in RP4?
- What methodologies should the IAA consider to develop allocation keys for NSA costs?

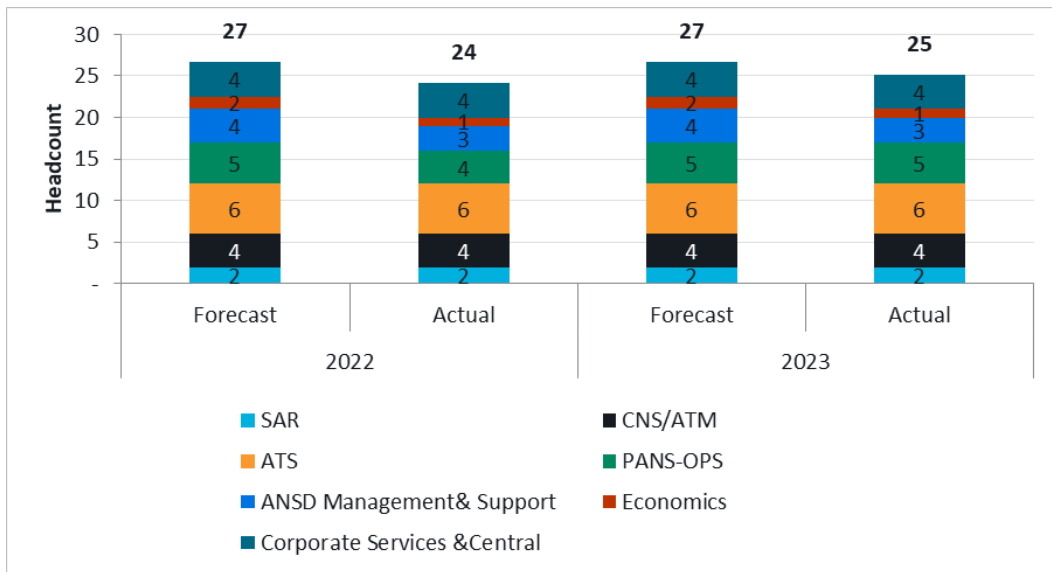
NSA/State Costs

Headcount

- 7.6 The NSA headcount in RP3 to date has been similar to, slightly below, the assumptions in the Performance Plan. The main reasons for differences against

the Performance Plan were related to changes in functions and responsibilities relating to the separation and merger process between CAR/IAA/ANI.

Figure 7.1: RP3 NSA Headcount, forecast vs. actual

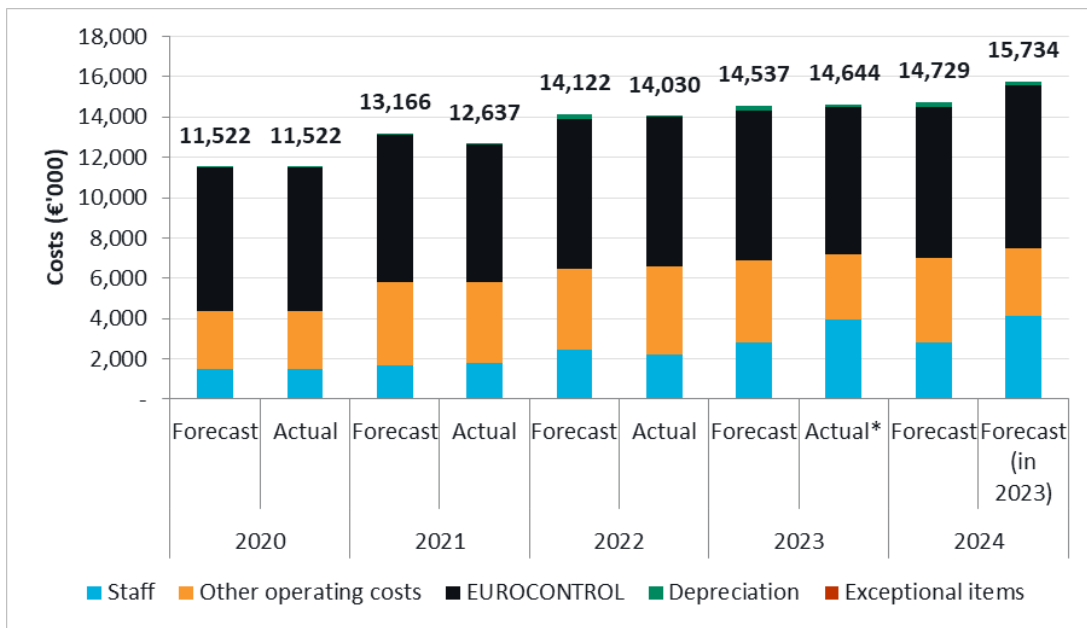


Source: IAA, IAA RP3 Financial Model

RP3 Outturn (En-route)

- 7.7 NSA/State En Route costs in 2021 and 2022 were below determined levels. The main reasons for this were staff hires completed later than anticipated, a later than planned capitalisation of a software programme, and a greater than anticipated focus on IT infrastructure opex rather than capex.
- 7.8 As per the regulation, NSA/State costs are displayed in nominal terms, meaning that the reversal of that trend in 2023 and anticipated for 2024 is inclusive of the higher than forecast inflation, as well as, in 2024, costs associated with the development of the RP4 Performance Plan.

Figure 7.2: NSA RP3 En-route costs, forecast vs. actual

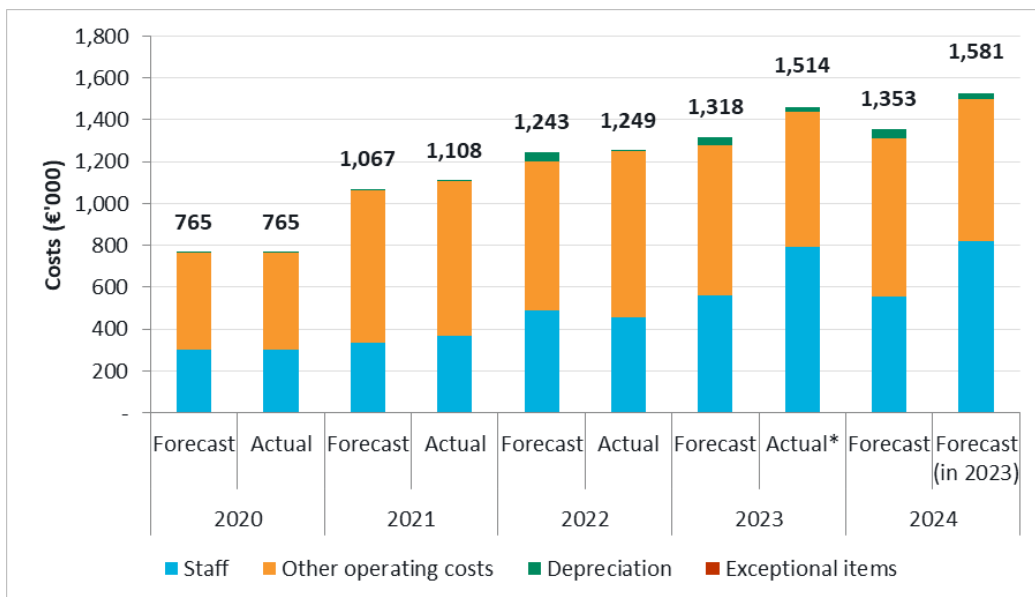


Source: Ireland RP3 Reporting Tables, IAA.

RP3 Outturn (Terminal)

7.9 NSA Terminal costs in 2022 were broadly in line with determined levels. Costs are anticipated to increase above determined levels in 2023 and 2024, as per the En Route costs outlined above.

Figure 7.3: NSA RP3 Terminal costs, forecast vs. actual



Source: Ireland RP3 Reporting Tables

Approach for forecasts

7.10 In RP3, NSA staff cost forecasts were based on individual staff level payroll

costs, following an allocation of staff working in ANI oversight to the NSA as noted in the cost allocation subsection above. These costs factor in estimated staffing levels over the reference period as submitted by the IAA in its published Business Plan.

- 7.11 For the other operating costs, we forecast regulatory software opex, economic consultancy costs, and ICT opex based on specific forecast needs for the reference period.
- 7.12 For the remaining Other Operating costs (e.g. travel, training, corporate services), we forecast that costs would be equal to 2019 costs but adjusted for forecast inflation.

Consultation questions

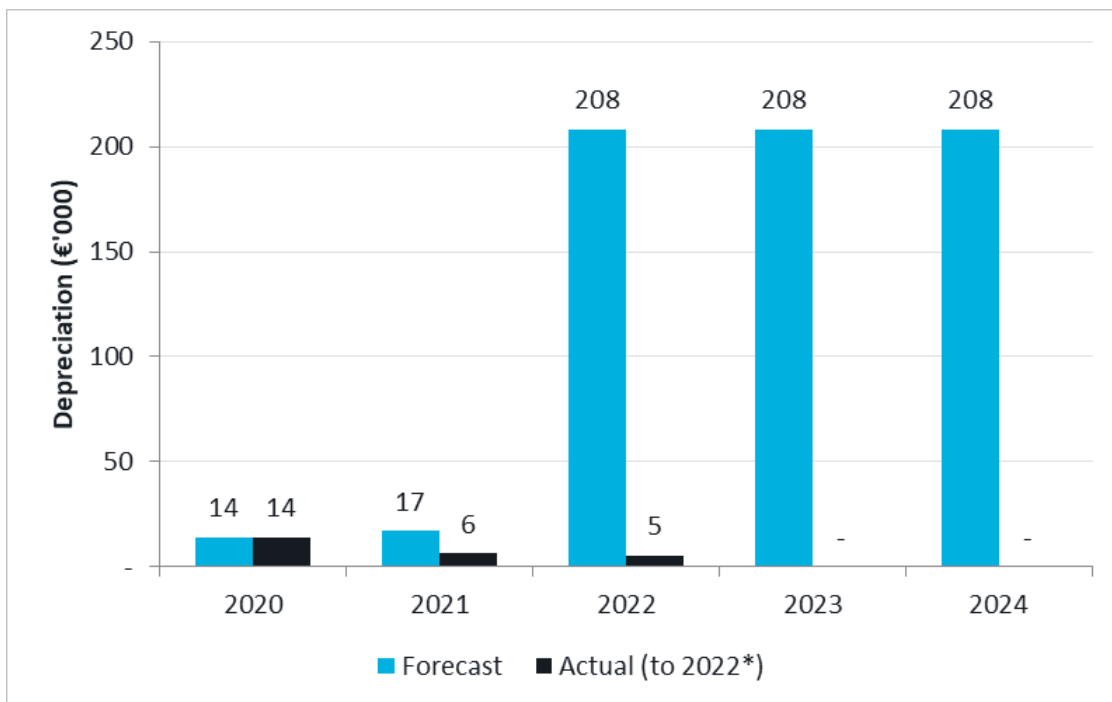
- Should the IAA consider a different approach to forecasting NSA costs as taken in RP3?

Capital Costs

RP3 Outturn (En-route)

- 7.13 Depreciation costs of the NSA are low, but varied in 2022 significantly from the forecast level of 200k, being close to zero due to a later than estimated delivery of a digitalisation platform, and because new IT infrastructure was more heavily weighted towards opex than capex than anticipated.

Figure 7.4: IAA RP3 en-route depreciation, forecast vs. actual

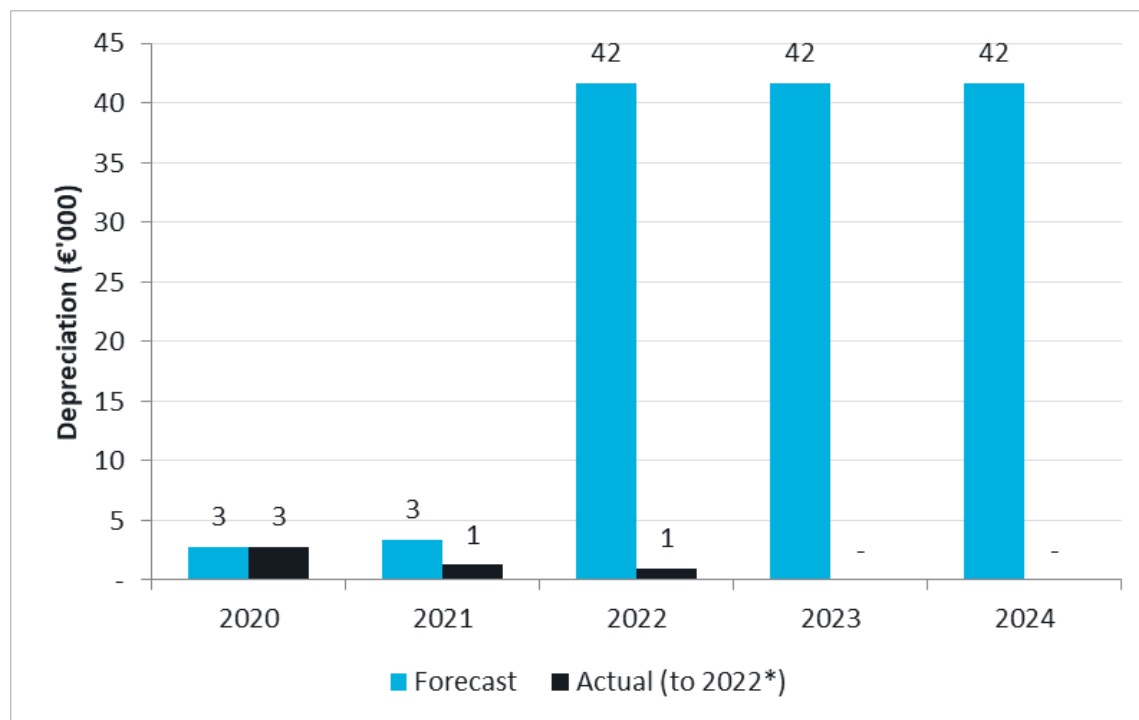


Source: Ireland RP3 Reporting Tables

RP3 Outturn (Terminal)

7.14 As for En Route, depreciation in 2022 was significantly lower than forecast for the same reasons as outlined above.

Figure 7.5: IAA RP3 terminal depreciation, forecast vs. actual



Source: Ireland RP3 Reporting Tables

Approach for forecasts

7.15 We propose that any NSA related capital expenditure would be assessed from the perspective of cost allocation, cost-efficiency and need.

Consultation questions

- Should the IAA consider a different approach to forecasting NSA capital costs?

Other State Costs

7.16 Other State costs include the costs resulting from the policies of aviation organisations. For Ireland, this includes payments made to the Department of Transport, ICAO, ECAC, and EUROCONTROL.

7.17 The legal basis for including these costs is set out in Article 22(1) of Regulation 317/2019. Like NSA costs, they are not subject to cost risk sharing. The state bodies' actual costs are thus adjusted for in the unit rates on n+2 basis. These costs are thus not separately adjusted for inflation.

7.18 Cost estimates are provided by each of the organisations. We propose that, as in RP3, 100% of these other State costs be allocated to the En Route cost base.

Consultation questions

- Should the IAA consider altering the allocation of Other State costs?

8. Traffic Risk Sharing, Incentive Schemes, and Local Targets

Traffic Risk Sharing

- 8.1 The performance and charging scheme provides for a traffic risk sharing (TRS) mechanism, which specifies how traffic risk will be shared between the ANSP and the airspace users. The TRS applies to the ANSP's determined costs, based on the difference between the Performance Plan forecast and actual service units.
- 8.2 The standard TRS parameters provide that a variance of:
- +/-2% of the Performance Plan forecast service units results in no adjustments, i.e. the risk is fully borne by the ANSP;
 - Between +/-2% and +/-10% around the forecast results in 70% of the difference passed onto airspace users and 30% of the risk being borne by the ANSP; and
 - More than +/-10% around the forecast results in all of the difference being passed onto airspace users, so the ANSP bears no traffic risk in relation to variance of more than 10%.
- 8.3 The ANSP's maximum traffic risk exposure (aside from cash flow/liquidity) is therefore +/- 4.4% of determined costs ($2\%+(30\%*8\%)$). The adjustments are made to the unit rate in year n+2.
- 8.4 In normal circumstances, a +/-10% variation is considered a large variation and at this point a revision of the Performance Plan may be appropriate.
- 8.5 The default parameters for the TRS are set out in Regulation 2019/317, however, the NSA can decide to alter these in order to increase (though not decrease) the ANSP's traffic risk exposure above the 4.4%. Our initial thinking is that we do not see any compelling reason to alter the TRS parameters for ANI above the default level in RP4.
- 8.6 If we were to adjust these parameters, we would need to consider consequent changes elsewhere within the Performance Plan. In particular, increased exposure to traffic risk implies increased exposure to systematic risk, and consequently, all else equal, a higher asset beta component within the cost of equity and thus a higher WACC.

Financial Incentive Schemes

- 8.7 The scheme sets out that performance targets should be subject to incentives with a view to encouraging better performance. Incentive schemes should be effective and should set parameters in a non-discriminatory and transparent manner for the purpose of rewarding or penalising actual performance in relation to the adopted performance targets.
- 8.8 The safety KPA is not to be subject to any incentives due to its overriding nature, while incentives are inherent in the Cost Efficiency KPA through the

application of the determined cost method and the traffic risk sharing mechanism.

- 8.9 Thus, the question of incentive schemes arises in relation to the Capacity and Environment KPAs. Regulation 317/2019 requires Performance Plans to set out incentives of a financial nature for the achievement of the performance targets in the Capacity KPA. In RP3, NSAs could elect to implement an incentive scheme in the Environment KPA, but this was not required.
- 8.10 The European Commission is currently developing its approach for RP4, but we understand that this will not include changes to the provisions of Regulation 317/2019. We thus anticipate that for RP4, incentives will continue to be required for the Capacity KPA in the same manner as for RP3, and will be elective for the Environment KPA.

Overview of incentives

- 8.11 The capacity incentive scheme parameters are set out in Regulation 2019/317, and were supplemented for RP3 by the “*supporting material on incentives*”,⁵ which provided additional guidance. Key elements were the following:
- **Pivot value:** As a default position, pivot values for the incentive schemes were set based on national targets, but could be modulated by the NSA (including in each year over the period) in response to either significant changes to the level of traffic or in the level of delay attributable to the ANSP, based on the applicable Network Manager codes.
 - **Threshold:** The threshold around the pivot value corresponds to the values at and beyond which the maximum penalty or bonus payments were paid. Where the NOP reference value was below 0.2, which applied in Ireland in RP3, the threshold was set at +/-0.05 average minutes of delay per flight. The thresholds for the terminal capacity incentive scheme were -50% and +150% (equivalent to +/-50%) of the pivot value.
 - **Deadband:** The deadband around the pivot value is the point at which the minimum bonus and/or penalty payments were paid, with bonus and/or penalty payments increasing up to the maximum level at the threshold value. The deadband had to be symmetrical around the pivot value and could be set at the level of the threshold value.
 - **Bonus and penalty:** Bonus payments were capped at 2% of determined costs. Penalties had to be equal to or greater than bonus payments and were capped at 4% of determined costs. In cases where the target and pivot value were close to zero, penalty-only schemes were considered as there was limited scope for improved performance.
- 8.12 For RP4, as noted above, we understand that the mechanics of the implementation of incentive schemes will remain unchanged.

⁵ Supporting Material on Incentive Schemes for the 3rd Reference Period of the SES Performance Scheme

En Route capacity incentive scheme

- 8.13 The En Route incentive scheme parameters for RP3 were set in the context of ANI having very low levels of delay and it not being possible to incentivise materially improved performance. However, it was possible to disincentive higher levels of delay given that, historically, a material amount of delay has been ANSP-attributable. Delay above the target level (0.03 mins per flight) was considered a reasonable point for the ANSP to start paying penalties; the pivot value was therefore set at the level required to achieve this, given the requirement for the deadband and threshold to remain constant.
- 8.14 In summary, the ANSP would begin to incur financial penalties if performance were to deteriorate beyond the annual target. If this did not occur, no penalties would be applicable. We did not consider it appropriate to provide for bonus payments, so set the scheme to be penalty-only.
- 8.15 For RP4, we expect the methodological approach for the financial En Route capacity incentive scheme to remain largely unchanged, subject to guidance on the relevant parameters from the European Commission, which we would consider. The aim of the En Route incentive scheme, i.e. what the ANI would be incentivised to do or avoid doing, would be expected to remain the same as in RP3, with the parameters of the scheme set accordingly. Interdependencies with other aspects of the Performance Plan should also be considered. For example, if we were to prioritise a degree of resilience in capacity performance when setting the determined costs, we would expect to more strongly incentivise the delivery of that capacity performance through the incentive scheme.
- 8.16 We note that the UK CAA has previously applied more granular incentive schemes under the SES that relied on additional indicators aimed at incentivising reductions in delays in peak periods and in long delays exceeding predetermined thresholds.

Terminal capacity incentive scheme

- 8.17 The Terminal incentive scheme parameters for RP3 were set in the context of the ANSP having little control of the vast majority (c.98%) of arrival ATFM delay. Consequently, the payments were minimised order to avoid, as much as possible, ANI being rewarded or penalised for things that are largely not within its control. While the pivot value could be modulated based on ANSP-attributable delay, the deadband and threshold are based on all delay causes; it was therefore not possible to implement an ANSP-attributable delay incentive scheme.
- 8.18 For RP4, we again expect the methodological approach for the financial Terminal capacity incentive scheme to remain largely unchanged, subject to guidance on the relevant parameters from the European Commission, which we would consider. As with En Route, the aim of the terminal incentive scheme, i.e. what the ANI would be incentivised to do or avoid doing, would be expected to remain the same as in RP3, with the parameters of the scheme set accordingly. Interdependencies with other aspects of the Performance Plan will

be considered accordingly.

Environment incentive scheme

- 8.19 In RP3, NSAs could elect to implement an incentive scheme for the Environment KPA, however such an incentive scheme was not put in place in the Performance Plan for Ireland. As noted above, the key performance indicator in the environment KPA is horizontal route extension (KEA). ANI's KEA performance throughout RP2 was relatively strong and outperformed the target level.
- 8.20 In our RP3 decision, we noted that, while there might have been some scope to improve the KEA score further, unlike ATFM delay, it is unclear what proportion of KEA is ANSP-attributable. The ANSP should only be financially incentivised to reduce KEA that is within its control, and without this information, it would have been difficult to implement a fair and effective incentive scheme. Furthermore, we noted that the ANSP had been assigned a challenging KEA target based on a challenging national reference value, which should in itself be sufficient to ensure a focus on improving this indicator to the extent possible.
- 8.21 The EASA European Aviation Environmental report (2022) further noted that “following the dramatic reduction of traffic beginning in 2020, it was expected that the environmental performance of the ATM system would improve significantly due to reductions in capacity constraints. However, while the KEA target was met in 2020, the magnitude of improvement from 2.95% to 2.51% was limited in view of the significant traffic reduction. Furthermore, the PRB observed that several Member States did not achieve their environment targets despite experiencing very low traffic, suggesting that the KPI reflecting the relationship between flight routing and environmental impact may need to be re-evaluated”.
- 8.22 We note that the UK CAA is the only NSA to have opted to put in place an incentive scheme for the environment KPA (since 2012), but that it has done so on an alternative indicator, “3-Dimensional Inefficiency/Insight”, or 3Di. This is a metric that calculates the score for the efficiency of a flight based on comparing the actual path flown to an optimal profile, which it developed with its ANSP.
- 8.23 On the other hand, we note that, at paragraph 86 of its advice report on the RP4 target ranges, the PRB “strongly recommends the Member States to define an environmental financial incentive scheme and additional environment targets based on the most appropriate KPI as specified in articles 10(3) and 11(4) of the Regulation.”
- 8.24 In light of the European Green Deal and associated airspace user and societal priorities, improved environmental performance and flight efficiency are recognised as key. However, it is clear that more work is needed to establish the key drivers of KEA performance attributable to the ANSP, and consequently whether an incentive scheme would be likely to produce better performance. For example, as described above, it initially appears that the introduction of FRA in Western UK airspace has been associated with a material deterioration

in ANI's KEA performance in 2023. If there had been an incentive scheme in place for the KEA for RP3, it may have led to the perverse scenario that an overall positive network development, implemented by a different ANSP and occurring in a different FIR, would have resulted in a financial penalty for ANI and/or a disincentive for ANI to cooperate with this initiative.

- 8.25 As it is limited to horizontal efficiency, KEA does not take account of other aspects of the flown trajectory, most notably vertical efficiency, and furthermore does not take account of weather conditions which may mean that the fuel-optimal horizontal trajectory is different from the KEA-optimal trajectory.
- 8.26 Subject to the publication of the European Commission's approach for RP4, we consider that any incentive scheme for the Environment KPA based on KEA would have to follow careful consideration of the limitations of the indicator and associated risk of arbitrary or perverse outcomes, the specific circumstances of the ANSP, and also account for the level of ambition of the local KEA target set and how challenging or otherwise it is relative to historic performance.

Local Targets

- 8.27 As noted above, it will be necessary to set local Capacity targets in respect of ATFM delay minutes per flight, and local Environment targets (but not necessarily financial incentive schemes) in respect of the KEA.
- 8.28 As reflected in the PRB advice report, articles 10 and 11 of Regulation 317/2019 provide that the NSA can also define additional local targets, with or without incentive schemes, in respect of the 'Indicators for Monitoring' as set out in Section 2 of Annex 1 of that regulation. For the Environment KPA, these Performance Indicators, or PIs, are related to both En Route and terminal services, and include the following:
- The average horizontal En Route flight efficiency of the last filed flight plan trajectory (KEP), which is similar to the KEA but based on planned rather than actual flight trajectories.
 - The average horizontal En Route flight efficiency of the shortest constrained trajectory (KES), i.e. the shortest constrained route which could have been planned by airspace users.
 - Additional taxi-out time (AXOT), which compares actual taxi-out times with estimated unimpeded taxi-out times.
 - Additional arrival sequencing and metering time (ASMA), which compares actual times spent in terminal airspace (here defined as the final 40 nautical miles before the airport), with estimated unimpeded times.
 - The share of approaches applying continuous descent operations (CDO), which indicates the efficiency of the vertical trajectory flown in terminal airspace.
- 8.29 We note that the European Commission has commissioned Steer to carry out a study on potential new PIs for RP4, which is currently ongoing. This study may provide further analysis of the suitability of these PIs as reliable indicators

of the environmental performance of ANSPs, and/or lead to new PIs being included for RP4, in respect of which we could consider setting local targets.

- 8.30 We note that there is also the possibility to define, as part of the performance planning process, targets based on other metrics or factors which are not currently part of Regulation 317/2019. While such targets would not form part of the official state Performance Plan, they could still be measured and monitored by the NSA in the same way as, for example, we considered all investments proposed for RP3 rather than just Major Investments as per the Regulation.
- 8.31 Given the acknowledged importance of the Environment KPA, but also the limitations of the KEA as a measure of ANSP-attributable environmental performance, we are considering whether any of the above metrics, or any other metrics, might be suitable for the setting of local targets more appropriate to the specific circumstances of ANI. We would welcome any views or suggestions from stakeholders on this topic. In the event that we were satisfied of the merit and reliability of a particular metric, we would also consider introducing an associated incentive scheme (whether penalty and/or bonus).
- 8.32 On the other hand, we note the interdependency between the Environment and Capacity KPIs. As set out from paragraph 72 of the PRB RP4 target ranges advice report, the PRB study on this topic estimated that an increase of 1 minute of En Route ATFM delay per flight causes an increase of 0.14 percentage points in the KEA. Thus, given that we will set an incentive scheme in respect of the En Route ATFM delay target, we will implicitly also be incentivising KEA performance, but based on an indicator which can more easily be distinguished in terms of ANSP contribution to that performance.

Consultation questions

- Does the IAA's proposed approach for the traffic risk sharing mechanism in RP4, which follows the approach taken for RP3, remain appropriate?
- Does the IAA's proposed approach for the En Route and Terminal capacity financial incentive schemes in RP4, which is to broadly follow the methodological approach taken for RP3, remain appropriate?
- Should a financial incentive scheme be introduced for the KEA for RP4, and why or why not? What factors should we take into account in relation to this decision?
- Are there alternative environmental indicators relevant to ANI's environment (or capacity) performance which might be suitable for local target setting for RP4? If so, which indicators, and on the basis of what methodology? Should a financial incentive scheme be included in relation to any such targets?

9. Early guidance summary

- 9.1 In this section, we summarise the above discussion on the IAA's proposed approach to the RP4 Performance Plan.

EU-wide targets

- 9.2 The initial cost submission for RP4 in June 2023 does not currently fall within the PRB's target range for year-on-year reductions to the DUC.
- 9.3 The level of ambition implied for ANI in the areas of Capacity and Environment is not yet known, as a breakdown of the PRB's EU-wide target ranges to local reference values has not yet been provided by the Network Manager.

Incentive schemes

- 9.4 For RP4, the IAA anticipates that the requirement and methodological approach to setting financial incentives for the capacity KPA will remain largely unchanged from that used in RP3.
- 9.5 In light of the European Green Deal and associated societal and airspace user priorities, improved environmental performance and flight efficiency are recognised as key. Subject to the publication of the European Commission's approach for RP4, the IAA considers, however, that any specification of an incentive scheme for the environment KPA based on KEA should acknowledge the limitations of the indicator and account for the level of ambition of the reference value assigned by the Network Manager and how challenging or otherwise that is relative to historic performance.
- 9.6 The IAA is open to considering any other environmental performance indicators which might be appropriate for target setting, given the specific circumstances of ANI.

Traffic

- 9.7 The IAA proposes to use the latest available STATFOR base forecast for IFR movements in En Route and Terminal charging zones as its traffic forecast in RP4, in line with RP3 and with Regulation 317/2019.

Inflation

- 9.8 The IAA intends to use the latest available IMF inflation forecast (Consumer Price Index) as its inflation forecast in RP4, in line with RP3 and with Regulation 317/2019.

Cost allocation

- 9.9 For ANI, the services provided in Shanwick oceanic airspace (North Atlantic Communications) are outside of the scope of SES and therefore all costs related to these services will be excluded from the Performance Plan.

- 9.10 In RP3, En Route and Terminal ATCO costs were estimated based on the modelled ATCO requirements of each charging zone, whilst non-staff costs were allocated based on an assessment of the geographical location that costs refer to, split by activities, and assigned cost allocation keys based on the extent to which activities are related to En Route or Terminal services. The allocation keys are based on factors such as traffic, the number of staff in each role, the use of assets, and the 20km traffic rule (where the costs from the first 20km from the airport are allocated to terminal services). The IAA will consider whether any changes are appropriate for RP4.
- 9.11 For MET, previous cost allocations are based on both Met Éireann's internal cost allocation to its aviation services division, and split 80:20 between En Route and Terminal based on a previous CAR determination. The latter cost allocation was intended to be time-limited and the IAA seeks views whether this should be reconsidered for RP4.
- 9.12 For the NSA, we propose that the cost allocation would be based on cost centres with activity directly related to the roles of the NSA, as well as an allocation of central costs proportional to the level of direct cost incurred.
- 9.13 Other State costs are based on submitted costs from each of the organisations. We propose to allocate 100% of these costs to the en-route cost base, as in RP3.

Business Plan guidance to regulated entities

- 9.14 Alongside this document, we have published the Business Plan guidance which was previously provided to ANI and MET in 2021, to assist them in developing their revised RP3 Business Plans. Our initial view is that this guidance, and the resulting content and level of detail in the published Business Plans from both entities, remain broadly appropriate for RP4.
- 9.15 We would welcome the views of respondents on whether there is anything that should be added, removed, or amended from this guidance, before we finalise it and provide it to both entities for their RP4 Business Plans.