PRB | Performance review body of the single european sky

Performance Review Body Monitoring Report

Cyprus - 2022

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1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/2422 of 5 December 2022

List of ACCs 1
Nicosia ACC

No of airports in the scope of the performance plan:
- **≥80'K** 0
- **<80'K** 0

Exchange rate (1 EUR=)
2017: 1 EUR
2022: 1 EUR

Share of Union-wide:
- **traffic (TSUs) 2022** 1.6%
- **en route costs 2022** 0.9%

Share en route / terminal costs 2022 100% / 0%

En route charging zone(s)
Cyprus

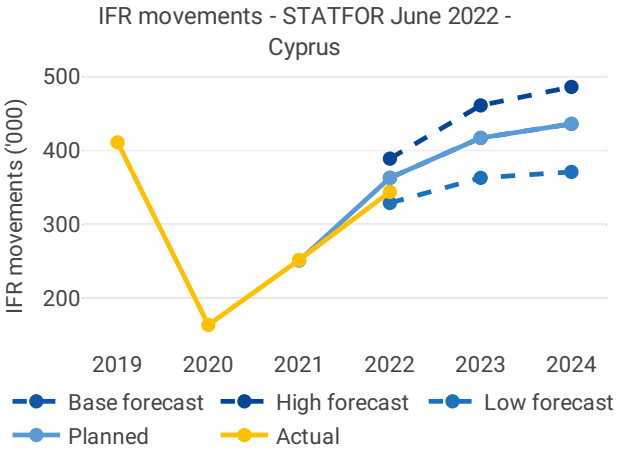
Terminal charging zone(s)
–

Main ANSP
- DCAC Cyprus

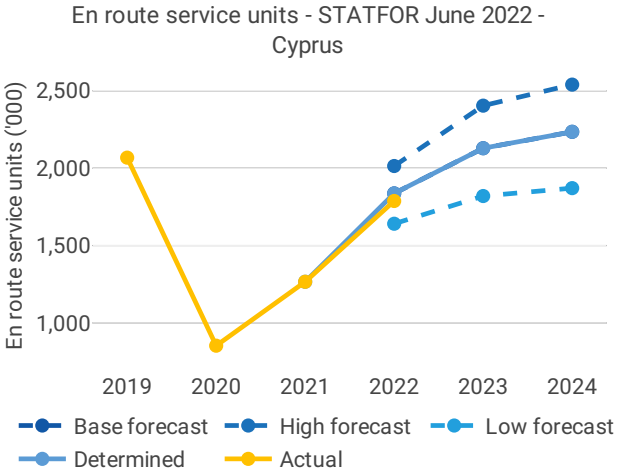
Other ANSPs
–

MET Providers
- Department of Meteorology of the Ministry of Agriculture and Natural Resources

1.2 Traffic (En route traffic zone)

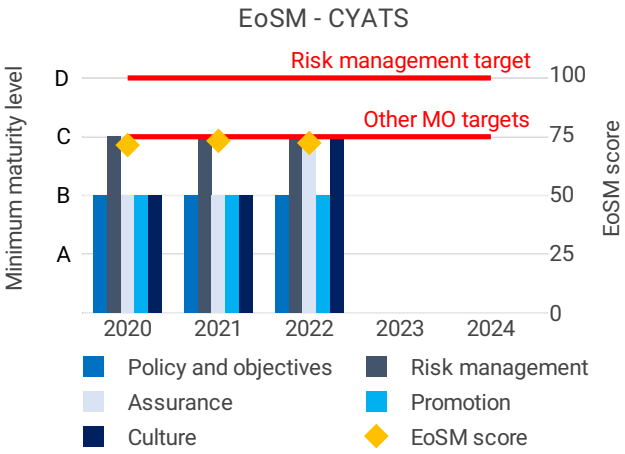


- Cyprus recorded 344K actual IFR movements in 2022, +36% compared to 2021 (252K).
- Actual 2022 IFR movements were -5.2% below the plan (363K).
- Actual 2022 IFR movements represent 84% of the actual 2019 level (411K).



- Cyprus recorded 1,788K actual en route service units in 2022, +41% compared to 2021 (1,266K).
- Actual 2022 service units were -2.7% below the plan (1,837K).
- Actual 2022 service units represent 86% of the actual 2019 level (2,068K).

1.3 Safety (Main ANSP)



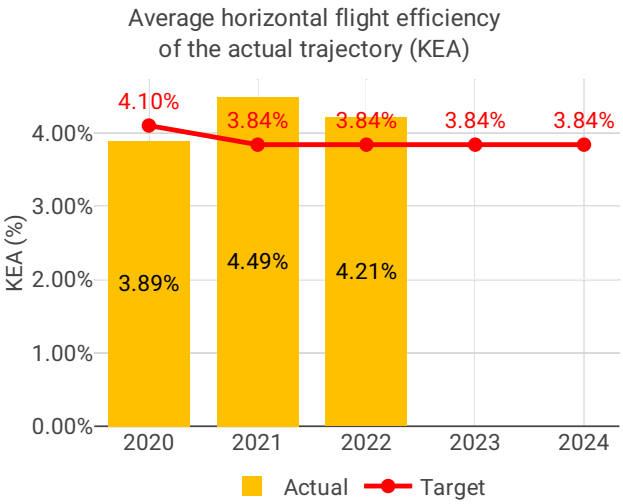
• Cyprus (DCAC Cyprus) achieved the RP3 target on safety culture and safety assurance in 2022, but three remaining management objectives required improvement. DCAC Cyprus performance lagged behind the expected improvements included in the performance plan, with some degradation compared with 2021.

• Cyprus adopted its National Safety Plan for 2022 with a clear commitment to the effective safety oversight of ANSPs including relevant KPIs and targets.

• Cyprus recorded a stable performance with respect to the safety occurrences with a slight increase in rate of separation minima infringements (SMIs) and no occurrences of runway incursions (RIs) in 2022.

• DCAC Cyprus could improve its safety management by implementing automated safety data recording systems.

1.4 Environment (Member State)



• Cyprus achieved a KEA performance of 4.21% compared to its target of 3.84% and did not contribute positively towards achieving the Union-wide target.

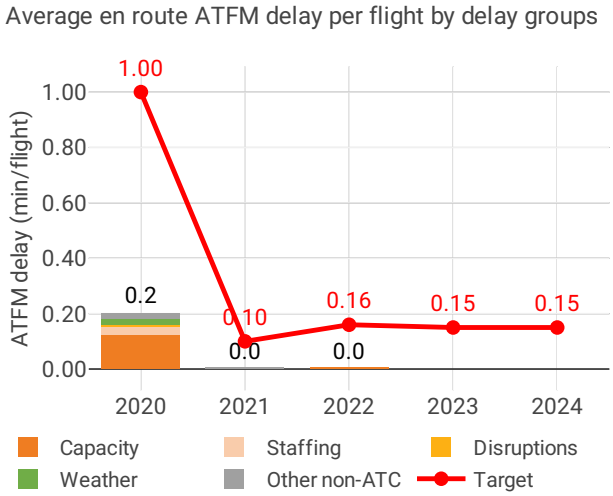
• KEA performance in 2022 improved in comparison to 2021, though by 0.28 p.p..

• The NSA states that the target was not met due to the inability to optimise traffic flows in the entire of Nicosia FIR.

• Both KEP and SCR improved in comparison to 2021.

• Cyprus has no airports that are regulated under the RP3 performance and charging scheme.

1.5 Capacity (Member State)



• Cyprus registered zero minutes of average en route ATFM delay per flight during 2022, thus achieving the local target value of 0.16.

• The average number of IFR movements was 16% below 2019 levels in Cyprus in 2022.

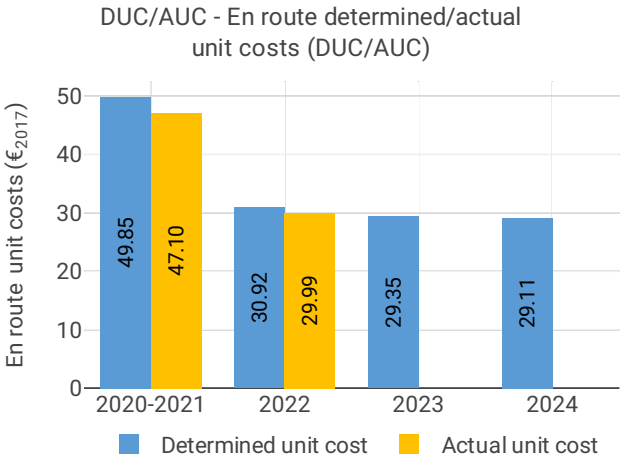
• The number of ATCOs in OPS is planned to increase by 2% by the end of RP3 with the value being above the 2022 plan in Nicosia ACC.

• The share of delayed flights with delays longer than 15 minutes in Cyprus increased by 1.42 p.p. compared to 2021 and was lower than 2019 values.

• The yearly total of sector opening hours in Nicosia ACC was 24,020 in 2022, showing a 39.6% increase compared to 2021. Sector opening hours are 18.7% below 2019 levels.

• Nicosia ACC registered 14.31 IFR movements per one sector opening hour in 2022, being 2.8% above 2019 levels.

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



• The en route 2022 actual unit cost of Cyprus was 29.97 €2017, -3.1% lower than the determined unit cost (30.92 €2017). Cyprus does not have a terminal charging zone.

• The en route 2022 actual service units (1,788K) were -2.7% lower than the determined service units (1,837K).

• The en route 2022 actual total costs were 3.2 M€2017 (-5.7%) lower than determined, as all cost categories decreased. It was mainly attributable to lower other operating costs (-1.8 M€2017, or -6.3%) largely due to a delay of a new building.

• DCAC Cyprus spent 3.7 M€2017 in 2022 related to costs of investments, -12% less than determined (4.2 M€2017), due to the postponement of payment for investments that have been delayed.

• As for the previous monitoring year, the discrepancies regarding costs of investments were significant. The PRB invites the NSA to analyse the discrepancies, identify their reasons, and the Member State to take immediate, adequate, and proportionate action to ensure the implementation of the investment plans to avoid future capacity gaps.

• The en route actual unit cost incurred by users in 2022 was 33.36€.

2 SAFETY - CYPRUS

2.1 PRB monitoring

• Cyprus (DCAC Cyprus) achieved the RP3 target on safety culture and safety assurance in 2022, but three remaining management objectives required improvement. DCAC Cyprus performance lagged be-

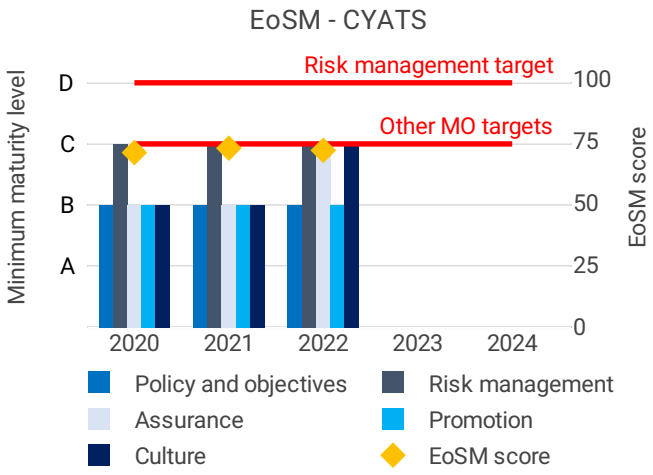
hind the expected improvements included in the performance plan, with some degradation compared with 2021.

• Cyprus adopted its National Safety Plan for 2022 with a clear commitment to the effective safety oversight of ANSPs including relevant KPIs and targets.

• Cyprus recorded a stable performance with respect to the safety occurrences with a slight increase in rate of separation minima infringements (SMIs) and no occurrences of runway incursions (RIs) in 2022.

• DCAC Cyprus could improve its safety management by implementing automated safety data recording systems.

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



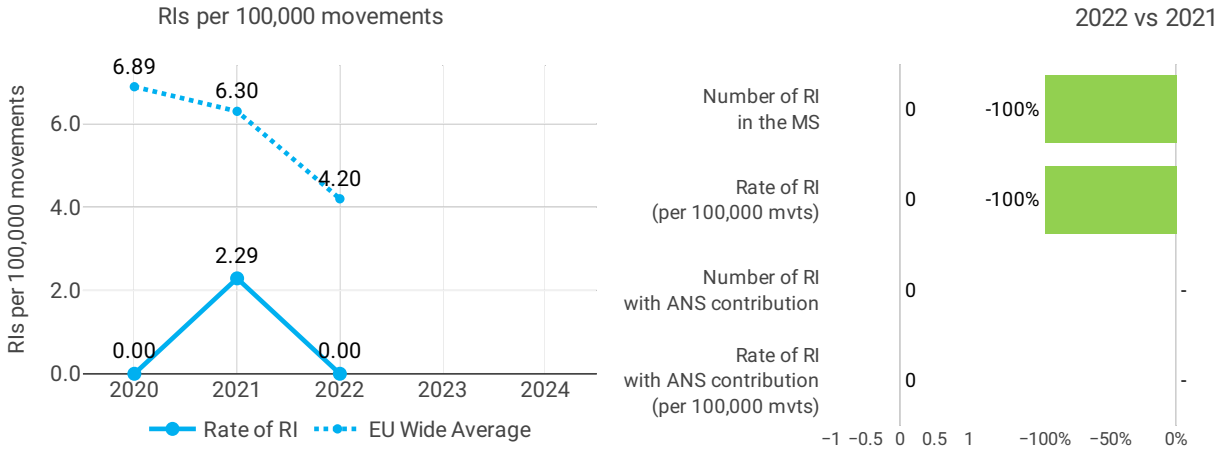
Focus on EoSM

Three EoSM components are still below RP3 EoSM target levels. Over 2022, "Safety Culture" and "Safety Promotion" were improved and reached the target levels. However, some degradation was observed for "Safety Policy and Objectives" component. In total, nine questions are expected to be improved for remaining components during RP3 to achieve 2024 targets.

Detailed information on Safety performance monitoring for the year 2022 are included in Performance Review Body Monitoring Report 2022, Annex III – Safety report

2.3 Safety occurrences

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



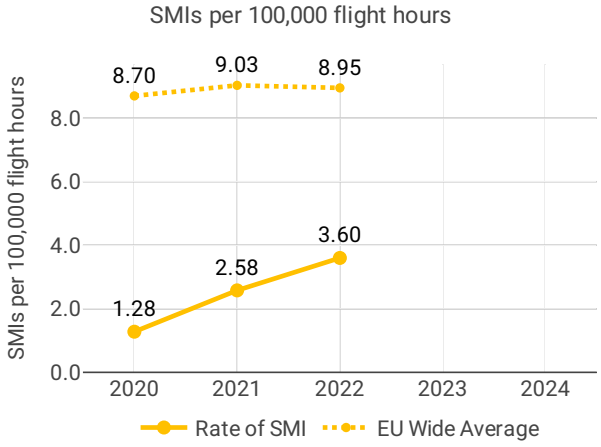
Rate of RIs per 100,000 airport movements - Cyprus

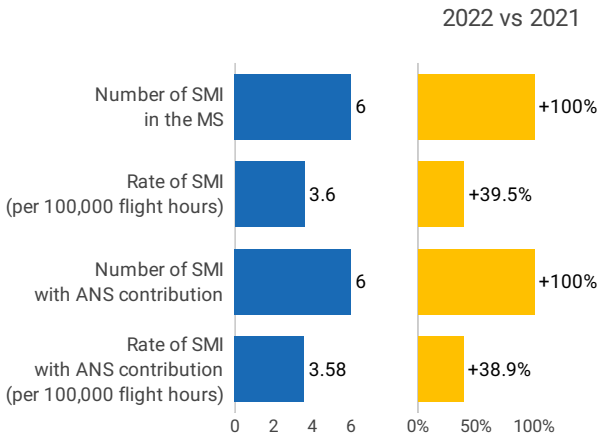
#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Larnaca	NA	NA	NA
2	Papho	NA	NA	NA

Focus on runway incursions

Detailed information on Safety performance monitoring for the year 2022 are included in Performance Review Body Monitoring Report 2022, Annex III – Safety report

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





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

		Flight hours					Number of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	CYATS	78,614	116,453	167,670	NA	NA	0	3	6	NA	NA

		Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
#	ANSP	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	CYATS	0.0	2.6	3.6	NA	NA	NA	0%	+39%	NA	NA

Focus on separation minima

Detailed information on Safety performance monitoring for the year 2022 are included in Performance Review Body Monitoring Report 2022, Annex III – Safety report

2.3.3 Quality of occurences reporting

Detailed information on Safety performance monitoring for the year 2022 are included in Performance Review Body Monitoring Report 2022, Annex III – Safety report

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

2022	
For RIs	For SMIs
✗	✗

Detailed information on Safety performance monitoring for the year 2022 are included in Performance Review Body Monitoring Report 2022, Annex III – Safety report

3 ENVIRONMENT - CYPRUS

3.1 PRB monitoring

• Cyprus achieved a KEA performance of 4.21% compared to its target of 3.84% and did not contribute positively towards achieving the Union-wide target.

• KEA performance in 2022 improved in comparison to 2021, though by 0.28 p.p..

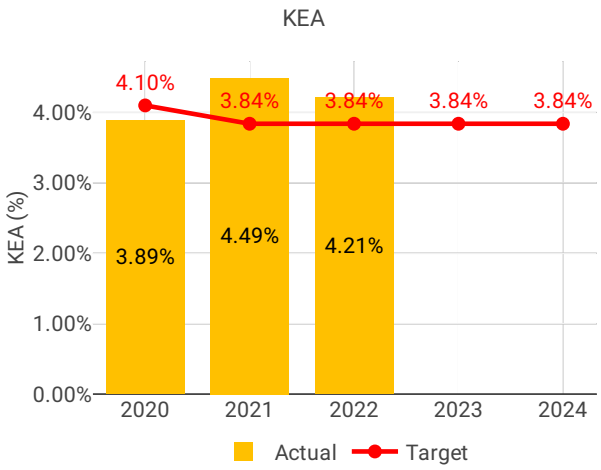
• The NSA states that the target was not met due to the inability to optimise traffic flows in the entire of Nicosia FIR.

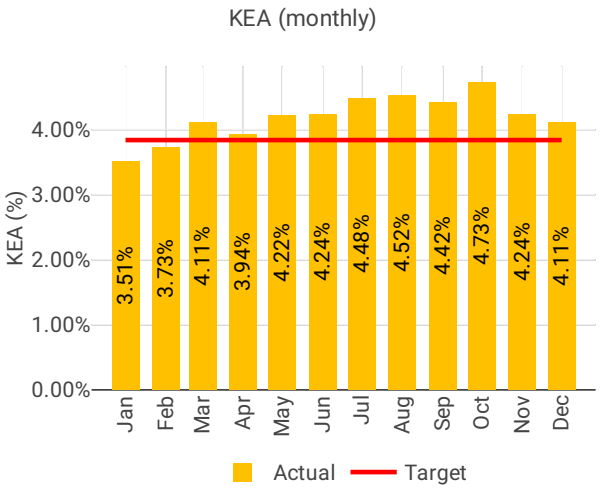
• Both KEP and SCR improved in comparison to 2021.

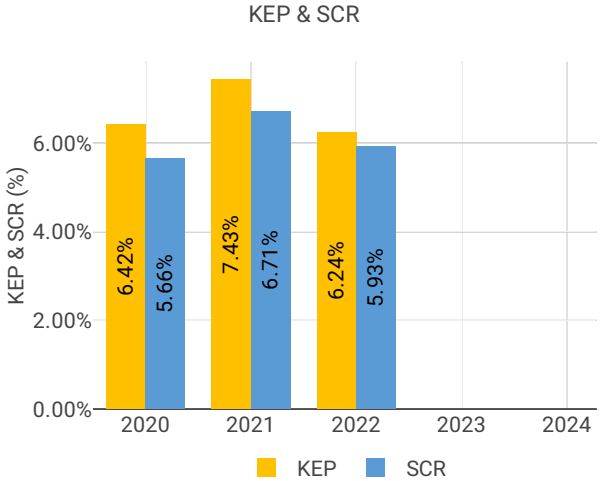
• Cyprus has no airports that are regulated under the RP3 performance and charging scheme.

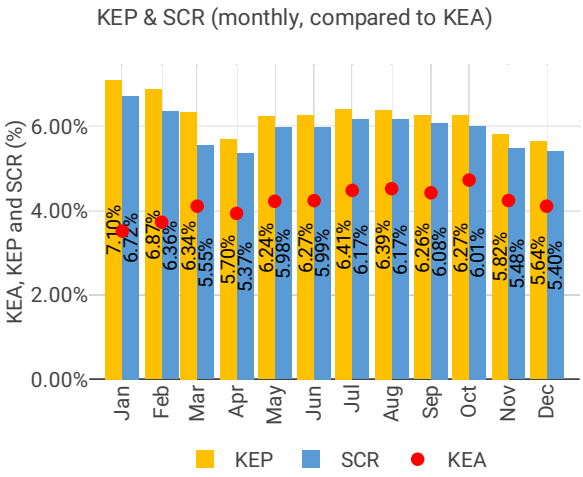
3.2 En route performance

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

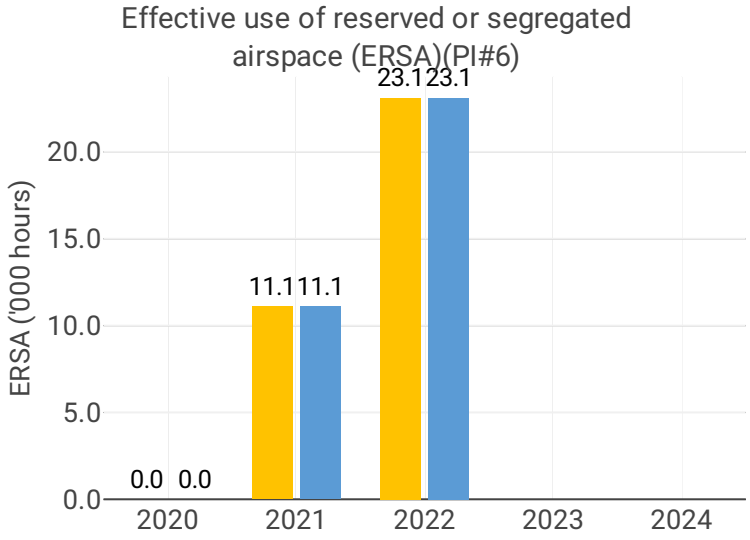


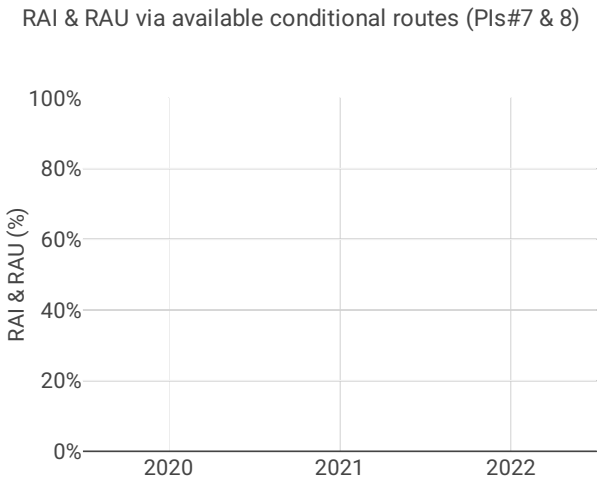


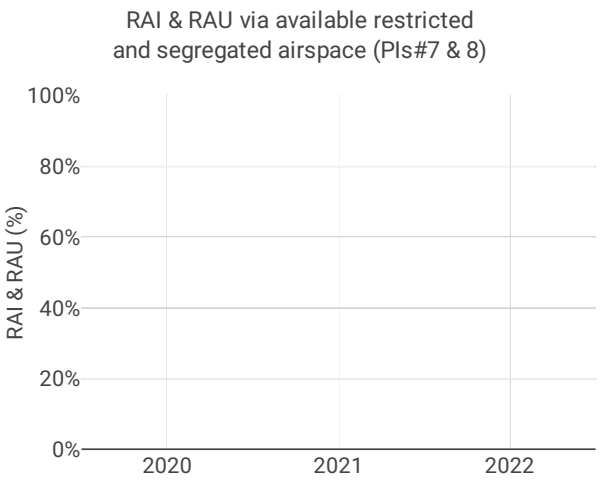




3.3 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

The air navigation services in Nicosia FIR are provided with reference to the arrangements which have been established through the implementation of regulation (EC) 2150/2005 “laying down common rules for the flexible use of airspace”. (see section 5, Application of FUA).
The implementation of the said Regulation has been achieved through the adoption of the “National Plan for the Implementation of FUA”, signed on the 2nd of July 2009. The implementation of the National FUA plan ensures to the maximum possible extent, the most efficient use of airspace, both by civil and military users.
The activities of the National Military Authorities are predominately executed over the National airspace. The cooperation between the national Civil and Military Authorities is excellent and the effect on civil aviation is minimal.
Over the high seas however, which constitute the majority of the Nicosia FIR, a number of foreign Military authorities, most commonly the Russian Navy, USA Navy, French Navy, Israeli Air Force, British Air Force and Turkish military forces, regularly performed operational flights and exercises throughout 2022. Additionally, air carrier operations in Nicosia FIR combined with the different military authorities made it necessary to implement and upgrade the coordination among the willing authorities.
The activities of the British and Israeli forces were coordinated fairly well with the national authorities (AMC) keeping the adverse effect on ATS to minimal effect.
The most significant impact on ATS is caused by the refusal of the Turkish authorities to coordinate or cooperate with Cyprus on the conduct of any military activities in Nicosia FIR. Turkish activity NOTAMS

are issued by non-authorised entities relevant to these activities thus imposing a significant level of uncertainty on ATM management in Nicosia FIR adversely affecting capacity. A regular phenomenon is the penetration of Nicosia FIR or Cyprus National airspace in violation to ICAO procedures thus increasing the workload on ATC staff and hence having a detrimental effect on airspace capacity.
The political unrest in the South East Mediterranean region gave rise to the number of USA and Russian operational flights (OAT). These flights were rarely coordinated with the ATS authorities thus causing additional workload to ACC staff. Nevertheless, the situation in 2022 was better than previous years, as a consequence of the COVID-19 pandemic, better coordination with British and Israeli military authorities, enhanced cooperation among AMC/ATC units and aircraft carriers operating in the area and fewer operations of aircraft carriers south of Cyprus.
The designation, by EASA, of the Syrian airspace as "conflict zone" has significantly affected the traffic flows in the north east part of Nicosia FIR.

Military - related measures implemented or planned to improve capacity

There will be continuous efforts to improve further the coordination with third country military authorities using the Nicosia FIR.

Initiatives implemented or planned to improve PI#6

The NSA verifies through audits and inspections that the entity responsible for the tactical management of the airspace (AMC), monitors the planned Vs the actual times of airspace reservations so as to promote the most effective use of reserved or segregated airspace. In the context of its oversight inspections it has raised findings in order to drive positive change and to optimise the application of FUA and, as a result, improvements have been noted. For example, real time activation / de-activation of reserved areas is now implemented through the establishment of real time communications between the ATC Units and Military authorities.

Initiatives implemented or planned to improve PI#7

PRISMIL CURA has been implemented by Cyprus AMC in early 2023. All the data provided are according to the data available on PRISMIL.

Initiatives implemented or planned to improve PI#8

PRISMIL CURA has been implemented by Cyprus AMC in early 2023. All the data provided are according to the data available on PRISMIL.

4 CAPACITY - CYPRUS

4.1 PRB monitoring

• Cyprus registered zero minutes of average en route ATFM delay per flight during 2022, thus achieving the local target value of 0.16.

• The average number of IFR movements was 16% below 2019 levels in Cyprus in 2022.

• The number of ATCOs in OPS is planned to increase by 2% by the end of RP3 with the value being above the 2022 plan in Nicosia ACC.

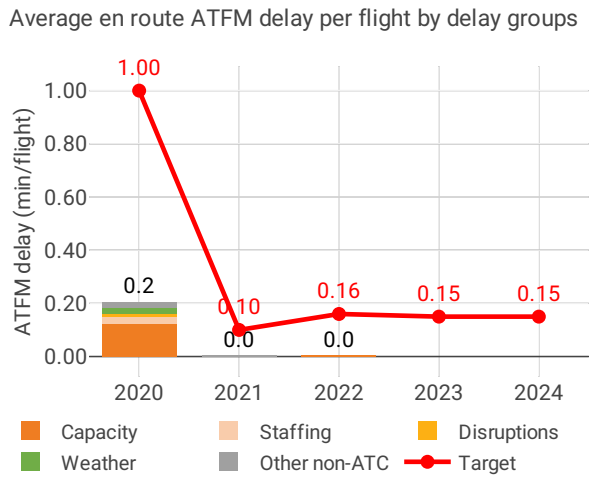
• The share of delayed flights with delays longer than 15 minutes in Cyprus increased by 1.42 p.p. compared to 2021 and was lower than 2019 values.

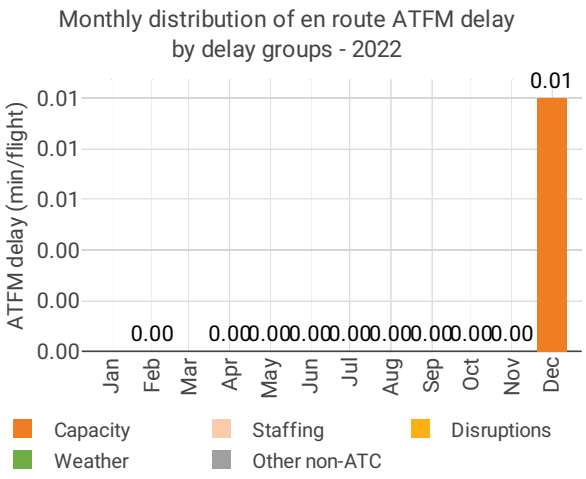
• The yearly total of sector opening hours in Nicosia ACC was 24,020 in 2022, showing a 39.6% increase compared to 2021. Sector opening hours are 18.7% below 2019 levels.

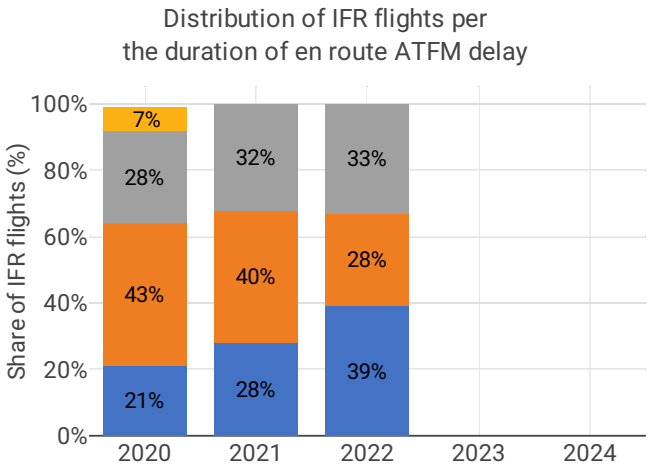
• Nicosia ACC registered 14.31 IFR movements per one sector opening hour in 2022, being 2.8% above 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Cyprus experienced an increase in traffic from 252k flights in 2021, to 344k flights in 2022, with practically zero ATFM delay. However, traffic levels were still substantially below the 411k flights in 2019.

NSA's assessment of capacity performance

Cyprus is in a turbulent region of the world, where geopolitical changes are frequent and, often, dramatic. For this reason, air traffic volatility is very high and traffic demand estimates (hence, ATM performance) can vary as a result of external factors. These factors are beyond the control of the ANSP and the State in general.

Furthermore, geopolitical changes can significantly alter the air traffic flows, creating new hotspots and signigificant capacity constraints. As an example, the Russia - Ukraine conflict has removed a significant traffic flow (and associated revenue) to and from Cyprus. As another example, the categorisation, by EASA, of the Syrian airspace as "conflict zone" has eliminated traffic flows in the north-eastern part of Nicosia FIR. These flows were diverted to the south, saturating the west and south sectors of Nicosia ACC.

Capacity performance improved significantly in 2022. However, air traffic demand in 2022 was still lower than the 2019 levels. In this respect, the 2022 results cannot be considered as an accurate indication of future trends.

Monitoring process for capacity performance

The NSA has in place the “NSA procedure for the monitoring of ANS Performance”. According to this procedure, the NSA monitors at quarterly intervals the average minutes of enroute ATFM (Air Traffic Flow Management) delay per flight. Based on this, the NSA analyzes the trends and takes the necessary measures, if needed.

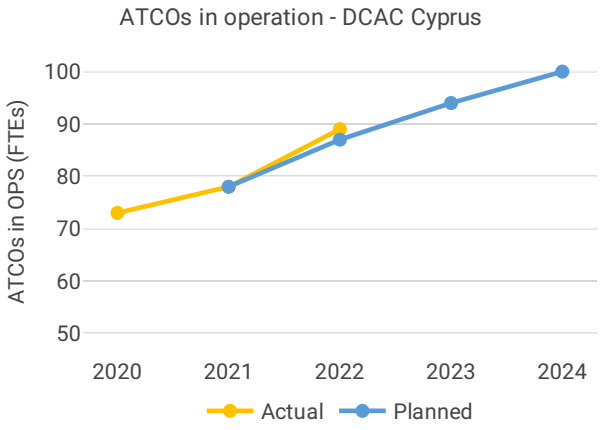
Capacity planning

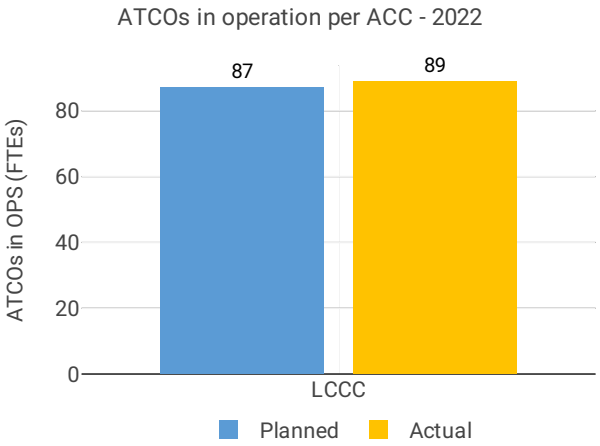
Capacity planning is done with the Network Manager and is consistent with the required performance. The transfer to the new ACC, which is delayed and planned in late 2023 to mid 2024, is expected to be the source of air traffic delays, which however will be of temporary nature. As the transfer will be done during a low traffic period the effect on the European Network is not expected to be significant. Efforts will be made so that any operation related to the transfer i.e. shadowing operations will be kept to the absolute minimum level so not to absorb HR from the actual ops at the new ACC.

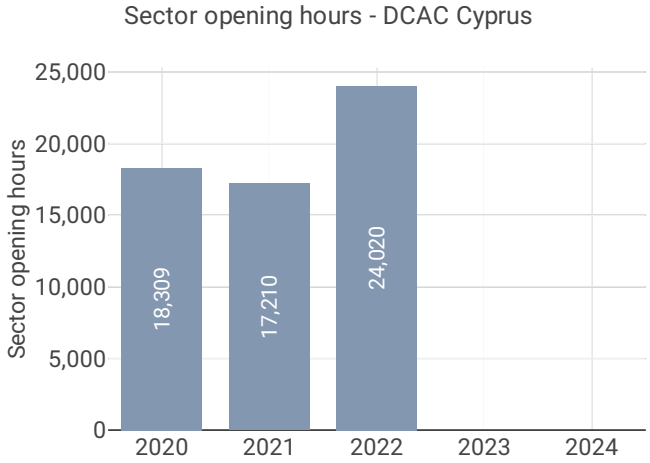
Application of Corrective Measures for Capacity (if applicable)

N/A

4.2.2 Other indicators







Focus on ATCOs in operations

The ATSP has implemented (in mid 2022) a new ATC sector at Larnaca Airport (an extension of the ACC main ATM system) to provide Approach Control Service with surveillance (APS). This new ATC sector will absorb some human resources from the “core” en-route services, which will average between 5-8 FTE towards the end of RP3.
To mitigate this, the ATSp has (in December 2021) agreed with the Unions some new working arrangements which will allow current ATC Tower ATCOs to continue their career by staying at Larnaca Airport and

operating this new service. An effort to modify the ATCO employment contract (the, so called, “scheme of services”) is ongoing. The aim of the modification will be to significantly reduce the period between recruitment and assuming operational duties. In any case, the recruitment plan for new ATCOs will continue to be implemented so that the en-route service will continue to be provided without significant capacity constraints.
In conclusion, some air traffic delays may be attributed to these restructuring developments and the operation of the new ATC sector. The precise impact cannot be estimated at the moment since the service has just began. Nevertheless, the NM has confirmed that this new service will have significant net capacity benefits in the longer term.

5 COST-EFFICIENCY - CYPRUS

5.1 PRB monitoring

• The en route 2022 actual unit cost of Cyprus was 29.97 €2017, -3.1% lower than the determined unit cost (30.92 €2017). Cyprus does not have a terminal charging zone.

• The en route 2022 actual service units (1,788K) were -2.7% lower than the determined service units (1,837K).

• The en route 2022 actual total costs were 3.2 M€2017 (-5.7%) lower than determined, as all cost categories decreased. It was mainly attributable to lower other operating costs (-1.8 M€2017, or -6.3%) largely due to a delay of a new building.

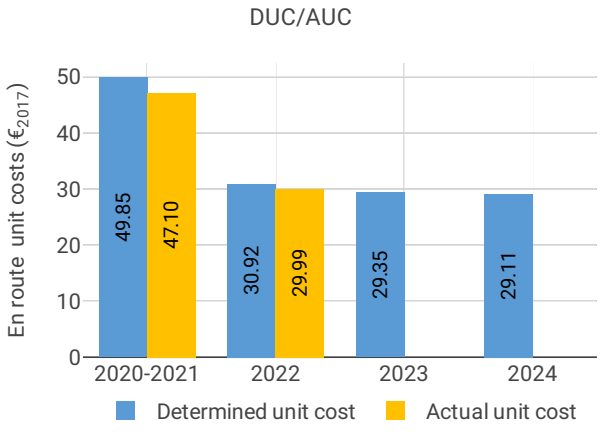
• DCAC Cyprus spent 3.7 M€2017 in 2022 related to costs of investments, -12% less than determined (4.2 M€2017), due to the postponement of payment for investments that have been delayed.

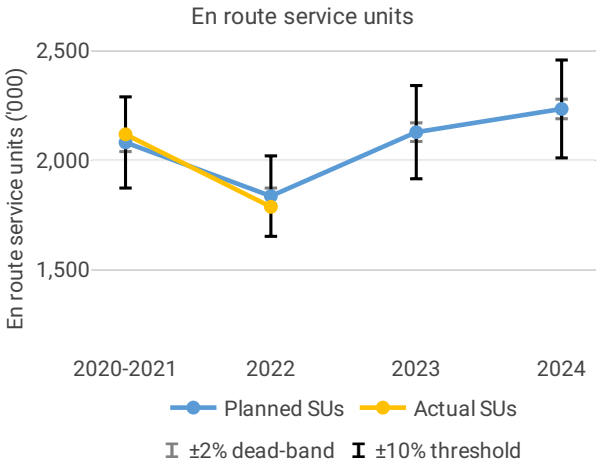
• As for the previous monitoring year, the discrepancies regarding costs of investments were significant. The PRB invites the NSA to analyse the discrepancies, identify their reasons, and the Member State to take immediate, adequate, and proportionate action to ensure the implementation of the investment plans to avoid future capacity gaps.

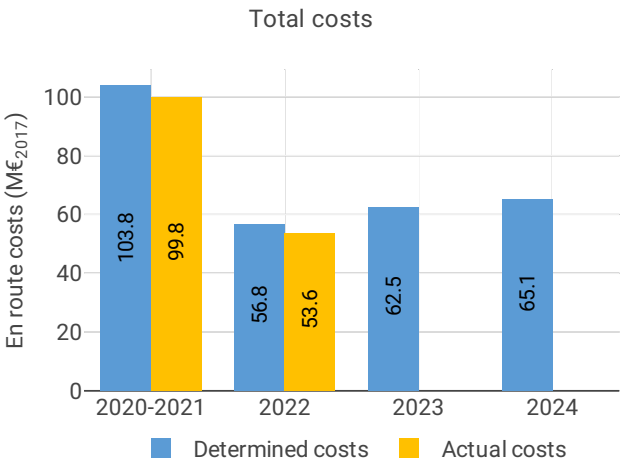
• The en route actual unit cost incurred by users in 2022 was 33.36€.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)

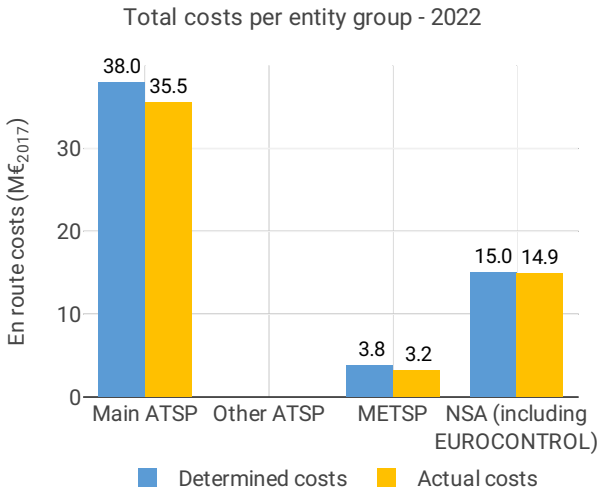


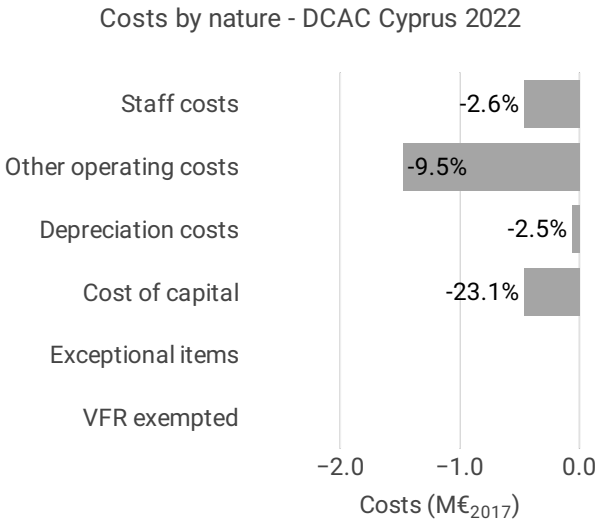




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	101	58	NA	NA
Determined costs	105	60	67	71
Difference costs	-3	-2	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	5.3%	2.3%	2.0%
Determined inflation index	NA	109.1	111.6	113.9
Actual inflation rate	NA	8.1%	NA	NA
Actual inflation index	NA	112	NA	NA
Difference inflation index (p.p.)	NA	+2.9	NA	NA





Focus on unit cost

AUC vs. DUC

In 2022, the en route AUC was -3.1% (or -0.95 €2017) lower than the planned DUC. This results from the combination of significantly lower than planned en route costs in real terms (-5.7%, or -3.2 M€2017) and lower than planned TSUs (-2.7%). It should be noted that actual inflation index in 2022 was +2.9 p.p. higher than planned.

En route service units

The difference between actual and planned TSUs (-2.7%) falls outside the ±2% dead band, but does not exceed the ±10% threshold foreseen in the traffic risk sharing mechanism. The resulting loss of en route revenues is therefore shared between the ANSP and the airspace users, with the ANSP (DCAC Cyprus) bearing a loss of -0.8 M€2017).

En route costs by entity

Actual real en route costs are -5.7% (-3.2 M€2017) lower than planned. This is the result of lower costs for the main ANSP, DCAC Cyprus (-6.5%, or -2.5 M€2017), the MET service provider (-15.5%, or -0.6 M€2017) and the NSA/EUROCONTROL (-1.0%, or -0.2 M€2017).

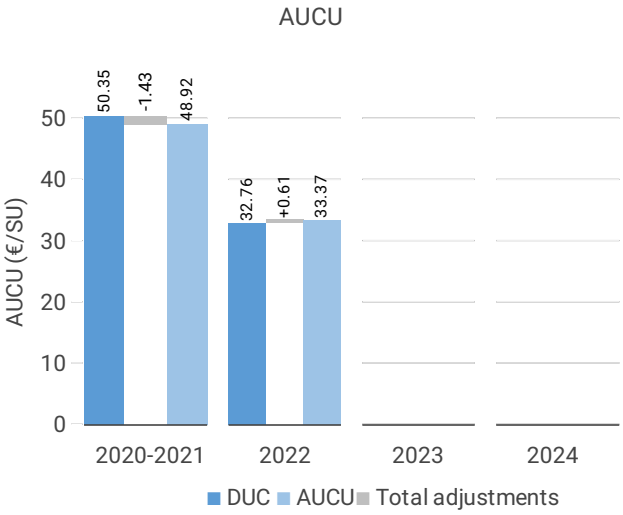
En route costs for the main ANSP at charging zone level

Significantly lower than planned en route costs in real terms for DCAC Cyprus in 2022 (-6.5%, or -2.5 M€2017) result from:

- Lower staff costs (-2.6%) although in nominal terms there is no difference,
- Significantly lower other operating costs (-9.5%) due to a delay in the operation of the new ACC building

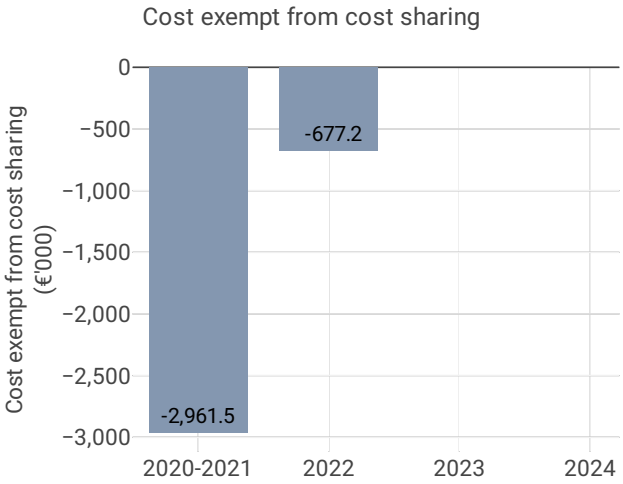
in Kokkinotrimithia,
- Lower depreciation (-2.5%) resulting from lower than foreseen actual cost of two investments,
- Significantly lower cost of capital (-23.1%) due to the postponement of pre-payments for investments planned to be implemented later than originally foreseen in the Performance Plan.

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



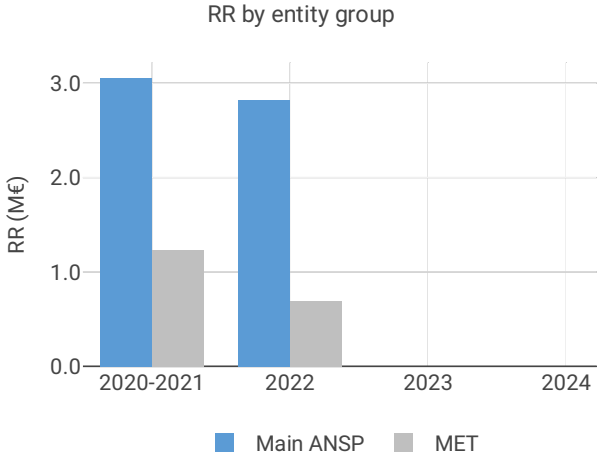
AUCU components (€/SU) – 2022

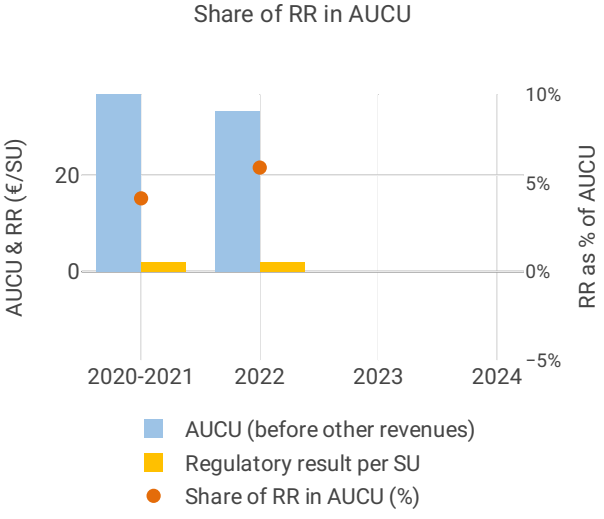
Components of the AUCU in 2022	€/SU
DUC	**32.76**
Inflation adjustment	0.60
Cost exempt from cost-sharing	-0.38
Traffic risk sharing adjustment	0.11
Traffic adj. (costs not TRS)	0.28
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	0.61
AUCU	**33.37**
AUCU vs. DUC	**+1.9%**

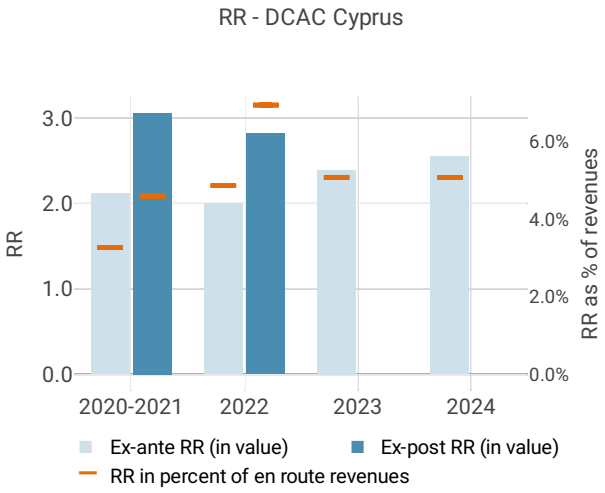


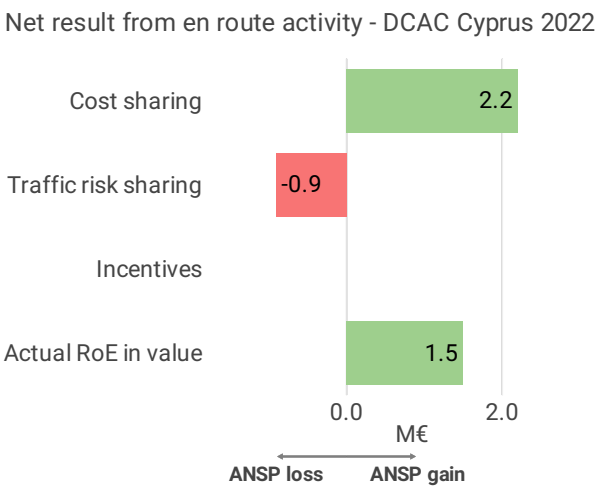
Cost exempt from cost sharing by item - 2022	€'000	€/SU
New and existing investments	-554.9	-0.31
Competent authorities and qualified entities costs	-187.5	-0.10
Eurocontrol costs	65.2	0.04
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-677.2**	**-0.38**

5.2.3 Regulatory result (RR)









Focus on regulatory result

DCAC Cyprus net gain on activity in the Cyprus en route charging zone in the year 2022

DCAC Cyprus reported a net gain of +1.3 M€, as a combination of a gain of +2.2 M€ arising from the cost sharing mechanism, with a loss of -0.9 M€ arising from the traffic risk sharing mechanism.

DCAC Cyprus overall regulatory result (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+1.3 M€) and the actual RoE (+1.5 M€) amounts to +2.8 M€ (6.9% of the en route revenues). The resulting ex-post rate of return on equity is 9.2%, which is higher than the 5.0% planned in the PP.