PRB | Performance review body of the single european sky

Performance Review Body Monitoring Report

France - 2021

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1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2023/176 of 14 December 2022

List of ACCs 5
Bordeaux ACC
Brest ACC
Marseille ACC
Paris ACC
Reims ACC

No of airports in the scope of the performance plan:
- **≥80'K** 6
- **<80'K** 52

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

Share of Union-wide:
- **traffic (TSUs) 2021** 16.7%
- **en route costs 2021** 21.9%

Share en route / terminal costs 2021 84% / 16%

En route charging zone(s)
France

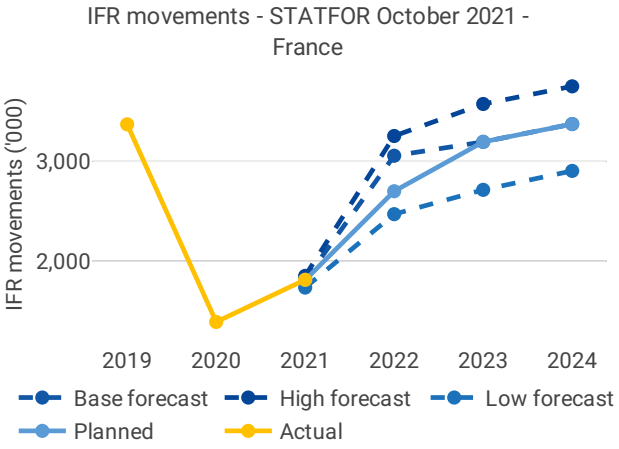
Terminal charging zone(s)
France Zone 1
France Zone 2

Main ANSP
- DSNA

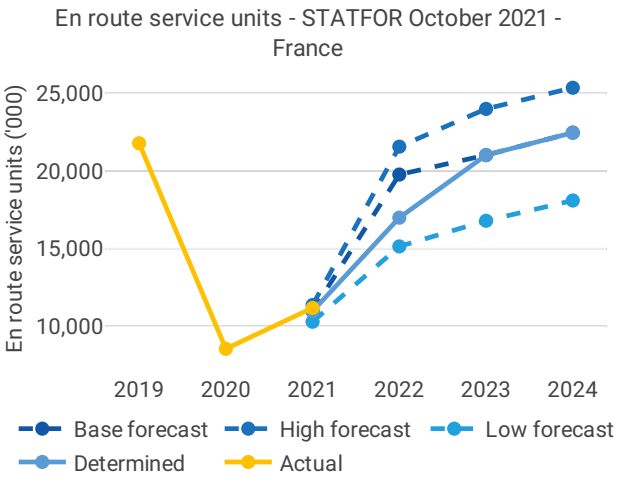
Other ANSPs
–

MET Providers
- Météo France

1.2 Traffic (En route traffic zone)

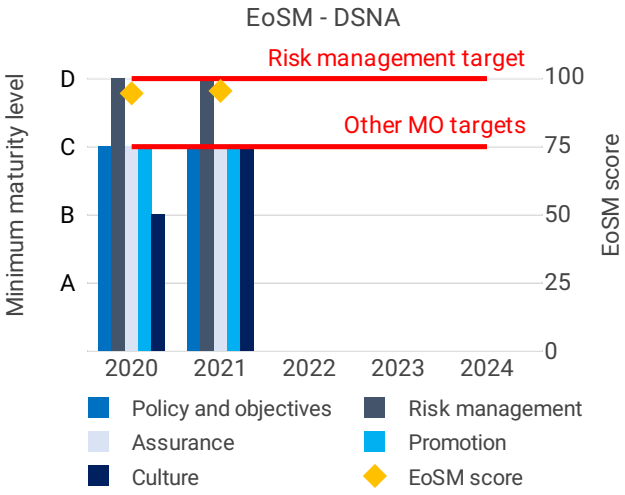


- France recorded 1,813K actual IFR movements in 2021, +30% compared to 2020 (1,390K).
- Actual 2021 IFR movements were +0.1% above the plan (1,811K).
- Actual 2021 IFR movements represent 54% of the actual 2019 level (3,372K).



- France recorded 11,181K actual en route service units in 2021, +31% compared to 2020 (8,547K).
- Actual 2021 service units were +1.9% above the plan (10,969K).
- Actual 2021 service units represent 51% of the actual 2019 level (21,782K).

1.3 Safety (Main ANSP)



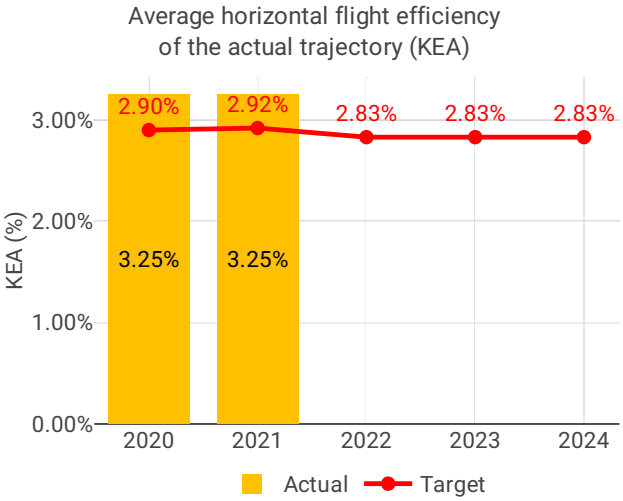
• In 2021, DSNA continued demonstrating good safety performance. DSNA implemented all necessary measures in the area of safety culture, reaching level C and achieving the targets in all five management objectives.

• France recorded a decrease in the rate of runway incursions relative to 2020 and an increased rate of separation minima infringements. DSNA observed the highest number of SMIs with ANS contribution in 2021 (228) and a rate of 16.7 SMIs per 100,000 flight hours. The rate increased by 32,1% with respect to 2020. DSNA should continue assessing occurrences and risk mitigate them according to their SMS, if necessary.

• DSNA monitors and analyses the safety data using automated recording tools for separation minima infringements. The French NSA oversight addresses those elements.

• DSNA should improve its safety management by implementing automated safety data recording systems for runway incursions.

1.4 Environment (Member State)



• France achieved a KEA performance of 3.25% compared to its target of 2.92% and did not contribute positively towards achieving the Union-wide target. KEA performance is at similar levels to 2020.

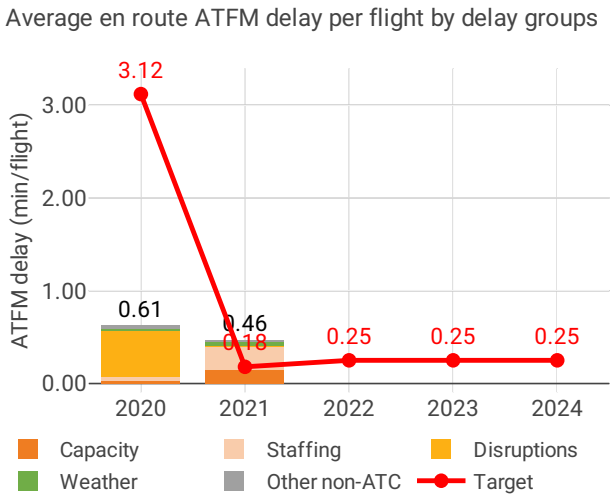
• The NSA stated that 2020 and 2021 performance was affected by a decrease in overflights (which are usually the best performing flights, positively impacting overall performance) in addition to increased military activity in these years.

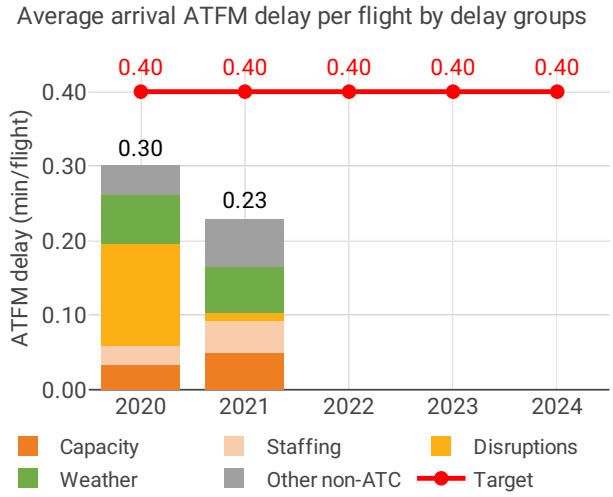
• Both KEP and SCR have slightly reduced in 2021.

• The percentage of flights achieving CDOs decreased compared to pre-COVID-19 values.

• Both additional time in terminal airspace and additional taxi out time increased, but are still significantly below 2019 values.

1.5 Capacity (Member State)





• France registered 0.45 minutes of average en route ATFM delay per flight during 2021, thus missing the local breakdown value of 0.18.

• Delays were higher than the breakdown value despite the lower traffic: In France IFR movements in 2021 were 46% lower than in 2019.

• The delays were mainly caused by limited ATC capacity, staffing and severe weather at Reims and Marseille ACCs with the training activities for 4-FLIGHT implementation, OJT and competency maintenance contributing to staffing issues. Specifically during the traffic recovery in summer 2021, the main delay causes in Brest, Marseille and Reims ACCs were ATC capacity and ATC staffing.

• Traffic is expected to grow, with 2019 levels likely being reached in 2023 (in high growth scenario). The number of ATCOs in OPS is planned to increase during RP3 in Bordeaux, Marseille, Paris and Brest ACC with no significant increase in Reims. The implementation of the new ATM system should also improve capacity in affected ACCs.

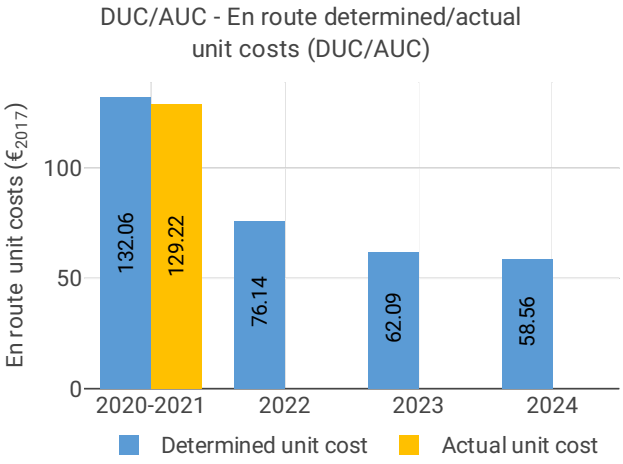
• Delays were highest between July and October, mostly driven by ATC Capacity and Staffing issues.

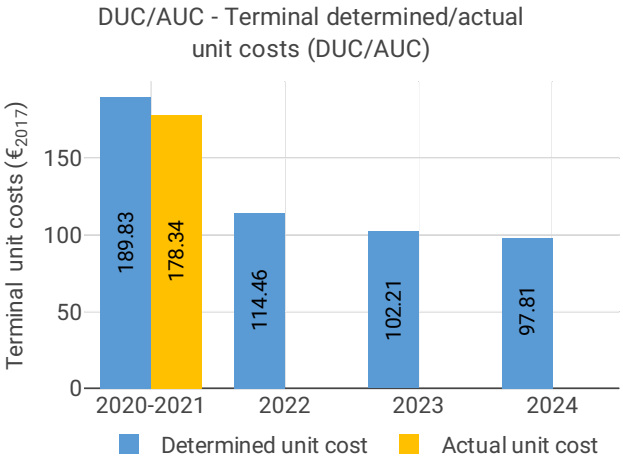
• The share of delayed flights with delays longer than 15 minutes in France decreased by 15.75 p.p. compared to 2020 and was lower than 2019 values.

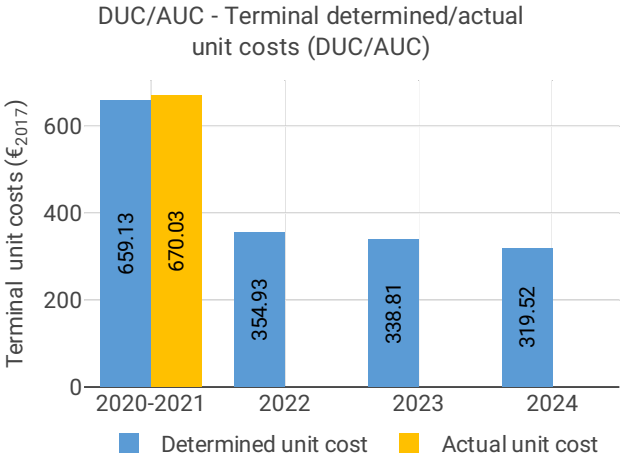
• The yearly total of sector opening hours in Bordeaux ACC was 80,480, showing a 28.7% increase compared to 2020. Sector opening hours are 9.1% below 2019 levels. The yearly total of sector opening hours in Reims ACC was 45,444, showing a 22.2% increase compared to 2020. The yearly total of sector opening hours in Paris ACC was 73,955, showing a 25.5% increase compared to 2020. Sector opening hours are 28.3% below 2019 levels. The yearly total of sector opening hours in Marseille ACC was 91,569, showing a 33.6% increase compared to 2020. Sector opening hours are 9.0% below 2019 levels. The yearly total of sector opening hours in Brest ACC was 49,235, showing a 2.5% increase compared to 2020. Sector opening hours are 39.6% below 2019 levels.

• Bordeaux ACC registered 6.58 IFR movements per one sector opening hour in 2021, being 50.7% below 2019 levels. Sector opening hours are 33.4% below 2019 levels. Reims ACC registered 11.99 IFR movements per one sector opening hour in 2021, being 19.7% below 2019 levels. Paris ACC registered 8.82 IFR movements per one sector opening hour in 2021, being 25.0% below 2019 levels. Marseille ACC registered 7.27 IFR movements per one sector opening hour in 2021, being 36.9% below 2019 levels. Brest ACC registered 10.59 IFR movements per one sector opening hour in 2021, being 21.7% below 2019 levels.

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







• The en route 2020/2021 actual unit cost of France was 129.22 €2017, -2.1% lower than the determined unit cost (132.06 €2017). The terminal zone 1 actual unit cost was 178.34 €2017, -6.1% lower than the determined unit cost (189.83 €2017), while terminal zone 2 actual unit cost was 670.03 €2017, +1.7% higher than the determined unit cost (659.13 €2017).

• The en route 2021 actual service units (11,181K) were +1.9% higher than determined (10,969K).

• In 2021, actual total costs were -28 M€2017 lower (-2.2%) than determined, despite the increase in cost of capital and other operating costs.

• The decrease in total costs was driven by lower staff costs (-19 M€2017, or -2.6%) due to staff costs containment, and lower depreciation (-17 M€2017, or -10%). The reduction in depreciation was mainly due to the postponement of investments commissioning and because a part of the investment costs was transferred to project-related OPEX costs.

• According to 2021 reporting tables, DSNA spent 208 M€2017 in 2021 related to costs of investments, -7.1% lower than determined (224 M€2017) mostly driven by lower depreciation costs.

• The en route actual unit cost incurred by users in 2020/2021 was 135.73€, while the terminal zone 1 actual unit cost incurred by users was 329.27€ and 447.86€ for terminal zone 2.

2 SAFETY - FRANCE

2.1 PRB monitoring

• In 2021, DSNA continued demonstrating good safety performance. DSNA implemented all necessary measures in the area of safety culture, reaching level C and achieving the targets in all five management objectives.

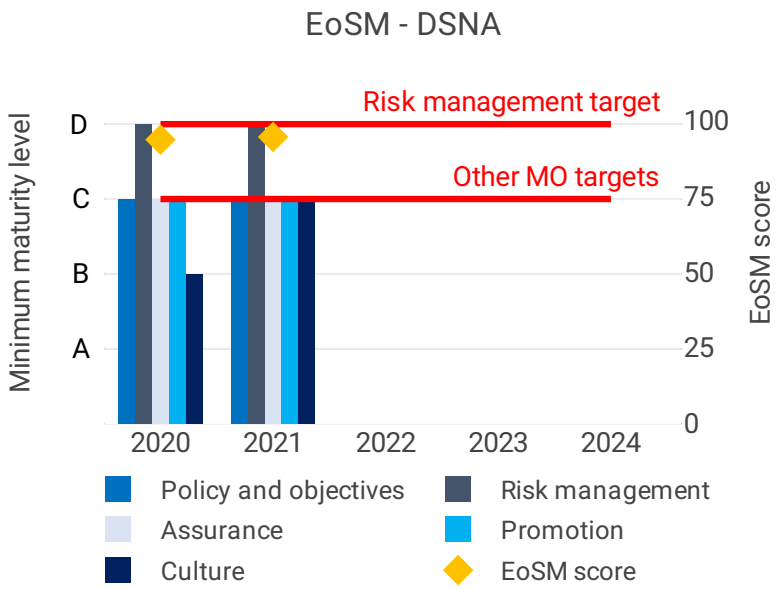
• France recorded a decrease in the rate of runway incursions relative to 2020 and an increased rate of separation minima infringements. DSNA observed the highest number of SMIs with ANS contribution in 2021 (228) and a rate of 16.7 SMIs per 100,000 flight hours. The rate increased by 32,1% with respect

to 2020. DSNA should continue assessing occurrences and risk mitigate them according to their SMS, if necessary.

• DSNA monitors and analyses the safety data using automated recording tools for separation minima infringements. The French NSA oversight addresses those elements.

• DSNA should improve its safety management by implementing automated safety data recording systems for runway incursions.

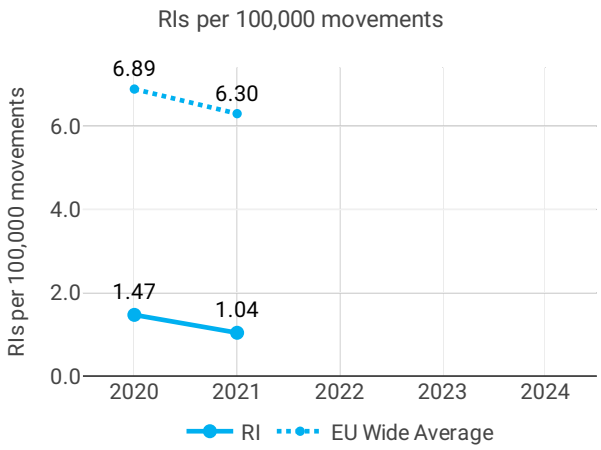
2.2 Effectiveness of Safety Management (EoSM) (KPI#1)

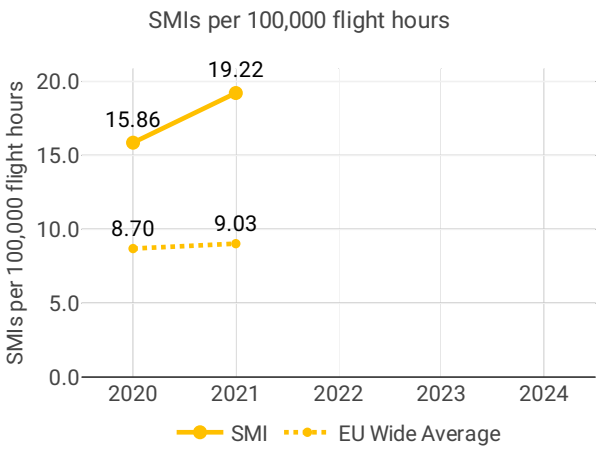


Focus on EoSM

Improvements in maturity levels have been observed with respect 2020, reaching already the 2024 targtes in all components.

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





3 ENVIRONMENT - FRANCE

3.1 PRB monitoring

• France achieved a KEA performance of 3.25% compared to its target of 2.92% and did not contribute positively towards achieving the Union-wide target. KEA performance is at similar levels to 2020.

• The NSA stated that 2020 and 2021 performance was affected by a decrease in overflights (which are usually the best performing flights, positively impacting overall performance) in addition to increased military activity in these years.

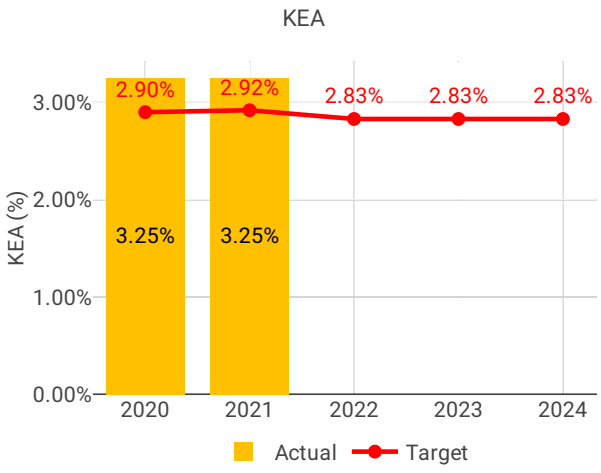
• Both KEP and SCR have slightly reduced in 2021.

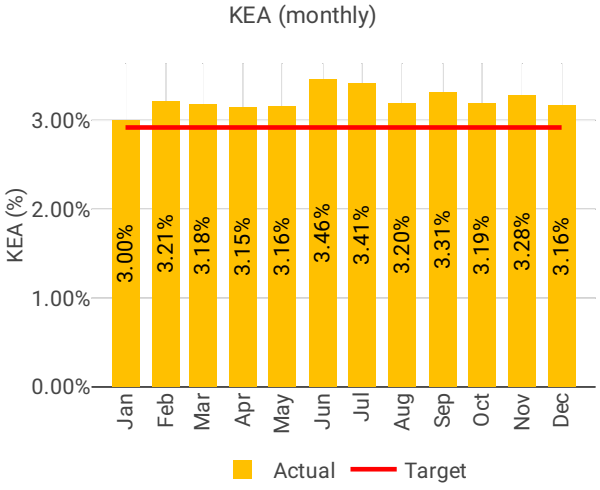
• The percentage of flights achieving CDOs decreased compared to pre-COVID-19 values.

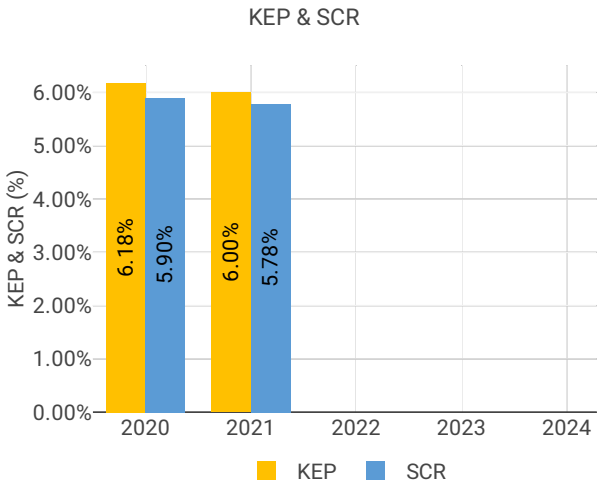
• Both additional time in terminal airspace and additional taxi out time increased, but are still significantly below 2019 values.

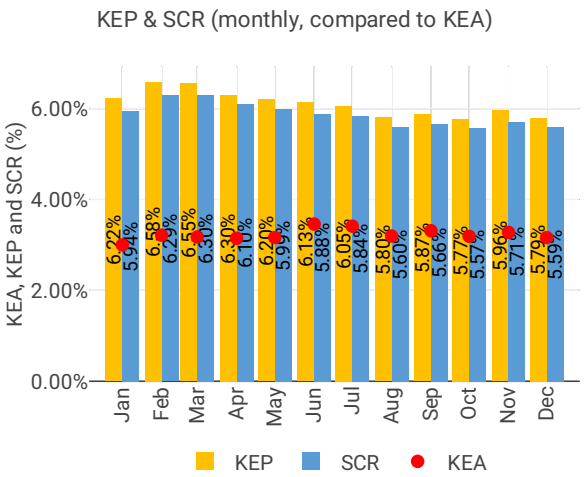
3.2 En route performance

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



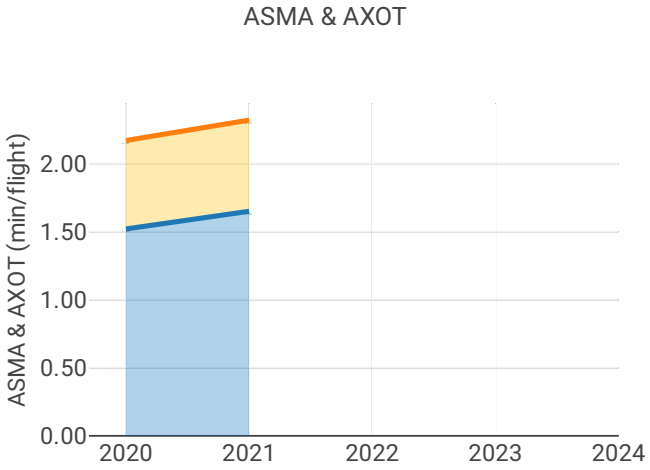


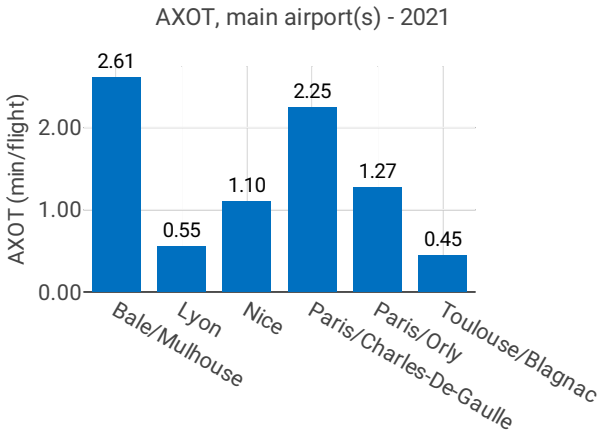


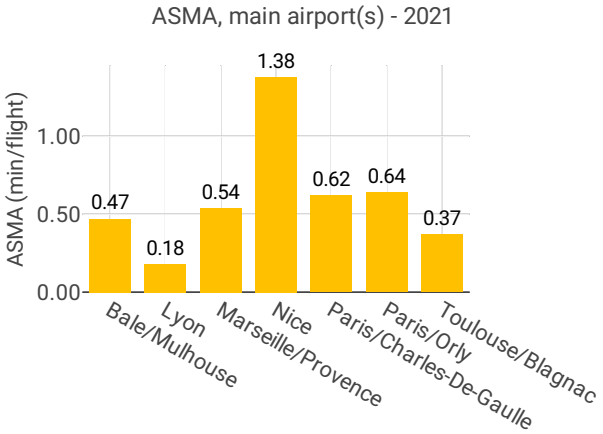


3.3 Terminal performance

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







Focus on ASMA & AXOT

AXOT

Although at annual level most airports show similar performance as in 2020, the evolution is very different along the year.

For the first 3 to 5 months depending on the airport, the additional taxi-out times at French airports under montioring were lower than in 2020. But with the recovery of the traffic the performance deteriorated the national average between June and December was 70% higher than in 2020. Nevertheless, these additional times were still 45% better than in 2019.

According to FABEC monitoring report: *Regarding France, 2021 performance is quite similar to 2020 achievement except at Nice where, in 2020 very low traffic was reported whereas 2021 was a year with much higher traffic close to 2019 levels.*

ASMA

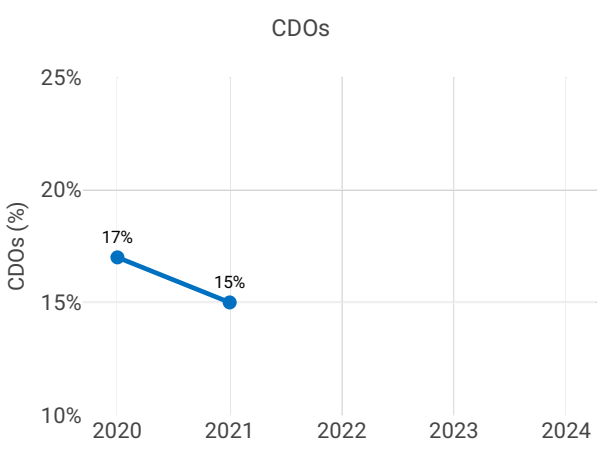
Like observed in the additional taxi-out times, in general the annual average of the additional ASMA times does not show a significant change with respect to 2020 (except for Nice). However once more this is the result of considerably better performance in the first three months of the year, and notably longer additional ASMA times than in 2020 alongside the traffic recovery during the rest of the year.

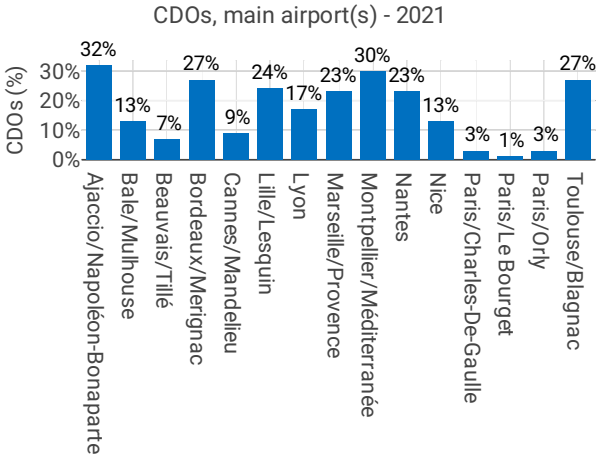
At Nice, where the traffic recovered better than at the rest of French airports, additional times increased significantly (LFMN; 2019: 1.76 min/arr.; 2020: 0.86 min/arr.; 2021: 1.38 min/arr.) reaching 2019 levels in the second half of the year and resulting in the second highest additional ASMA times amongst the SES monitored airports.

According to FABEC monitoring report: Regarding France, 2021 performance is quite similar to 2020

achievement or even better, except at Nice where, in 2020 very low traffic was reported whereas 2021 was a year of strong recovery for this airport, with much higher traffic close to 2019 levels.

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





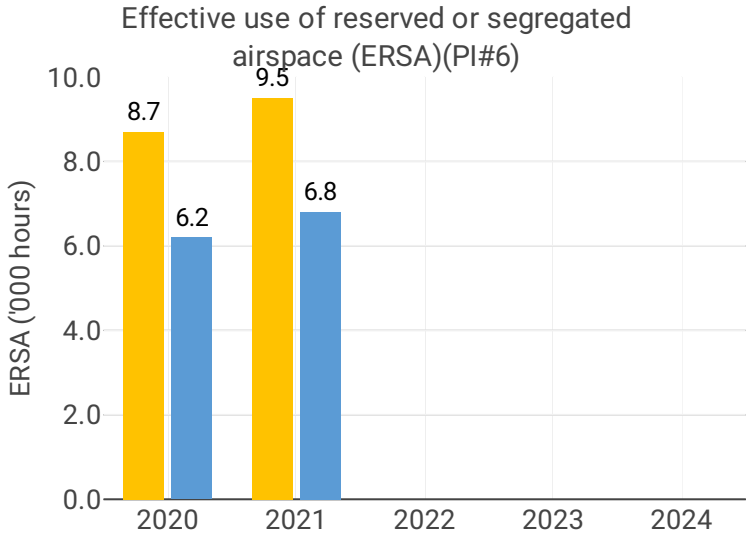
Focus CDOs

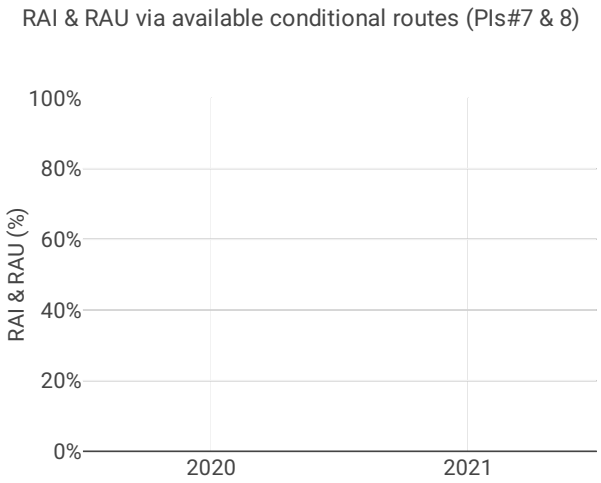
For 11 out of the 58 airports, the share of CDO flights was above the RP3 overall value in 2021 (30.5%). In 2021, 13.9% of the arrivals performed a CDO compared to 16.5% in 2020.
The Paris airports have a remarkably low share of CDO flights. The 6 airports with the lowest share of CDO flights in 2021 are French, followed by Frankfurt. As in 2020, Paris-Le Bourget (LFPB) has the lowest share of CDO flights of all airports monitored during 2021 (0.8%).
According to the FABEC monitoring report: *Regarding French airports, Green Aviation Plan is to be developped for the top ten airports in France with the objective of vertical profiles improvements (Ops Dept Task Force); Octavie Project at Toulouse; SESAR PJ 01 and SESAR PJ 38, and Albatros project are on going for vertical improvements.*

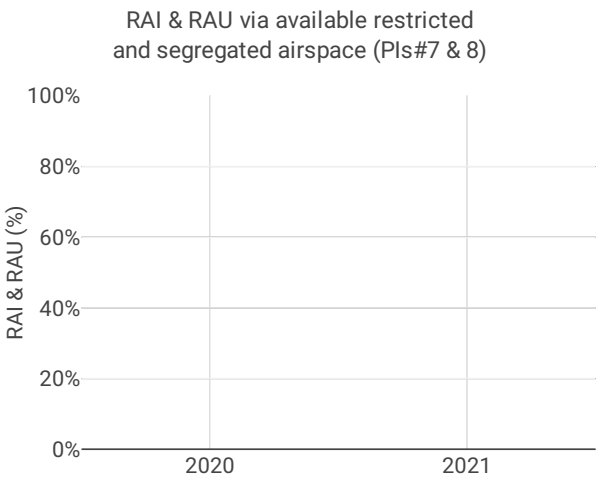
Airport level

	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
Airport Name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Bale/Mulhouse	1.87	2.61	NA	NA	NA	0.41	0.47	NA	NA	NA	18%	13%	NA	NA	NA
Lyon	0.51	0.55	NA	NA	NA	0.33	0.18	NA	NA	NA	22%	17%	NA	NA	NA
Marseille/Provence	NA	NA	NA	NA	NA	0.51	0.54	NA	NA	NA	27%	23%	NA	NA	NA
Nice	0.77	1.10	NA	NA	NA	0.86	1.38	NA	NA	NA	20%	13%	NA	NA	NA
Paris/Charles-De-Gaulle	2.17	2.25	NA	NA	NA	0.66	0.62	NA	NA	NA	4%	3%	NA	NA	NA
Paris/Orly	1.22	1.27	NA	NA	NA	0.82	0.64	NA	NA	NA	3%	3%	NA	NA	NA
Toulouse/Blagnac	0.43	0.45	NA	NA	NA	0.54	0.37	NA	NA	NA	30%	27%	NA	NA	NA
Albert/Bray	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29%	31%	NA	NA	NA
Agen/La-Garenne	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21%	13%	NA	NA	NA
Bordeaux/Merignac	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32%	27%	NA	NA	NA
Bergerac/Roumanière	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15%	13%	NA	NA	NA
La-Rochelle/Ile de Ré	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26%	22%	NA	NA	NA
Poitiers/Biard	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16%	12%	NA	NA	NA
Limoges/Bellegarde	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30%	31%	NA	NA	NA
Pau/Pyrénées	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23%	17%	NA	NA	NA
Tarbes-Lourdes/Pyrénées	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63%	64%	NA	NA	NA
Biarritz/Bayonne-Anglet	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	26%	21%	NA	NA	NA
Rodez/Marcillac	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17%	16%	NA	NA	NA
Dole/Tavaux	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13%	12%	NA	NA	NA
Metz-Nancy/Lorraine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9%	8%	NA	NA	NA
Bastia/Poretta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40%	33%	NA	NA	NA
Calvi/Sainte-Catherine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	38%	34%	NA	NA	NA
Figari/Sud-Corse	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35%	32%	NA	NA	NA
Ajaccio/Napoléon-Bonaparte	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	39%	32%	NA	NA	NA
Chambéry/Aix-les-Bains	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9%	14%	NA	NA	NA
Clermont-Ferrand/Auvergne	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22%	16%	NA	NA	NA
Annecy/Meythet	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15%	13%	NA	NA	NA
Grenoble/Isère	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19%	20%	NA	NA	NA
Châteauroux/Déols	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12%	10%	NA	NA	NA
Lyon/Bron	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10%	7%	NA	NA	NA
Cannes/Mandelieu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13%	9%	NA	NA	NA
Saint-Etienne/Bouthéon	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11%	12%	NA	NA	NA
Istres/Le-Tubé	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31%	24%	NA	NA	NA
Carcassonne/Salvaza	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19%	19%	NA	NA	NA
Perpignan/Rivesaltes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	43%	39%	NA	NA	NA
Montpellier/Méditerranée	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33%	30%	NA	NA	NA
Béziers/Vias	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28%	25%	NA	NA	NA
Avignon/Caumont	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15%	13%	NA	NA	NA
Beauvais/Tillé	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8%	7%	NA	NA	NA
Châlons/Vatry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27%	28%	NA	NA	NA
Rouen/Vallée-de-Seine	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29%	28%	NA	NA	NA
Tours/Val-de-Loire	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	48%	46%	NA	NA	NA
Paris/Le Bourget	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1%	1%	NA	NA	NA
Toussus/Le-Noble	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5%	5%	NA	NA	NA
Lille/Lesquin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	29%	24%	NA	NA	NA
Brest/Bretagne	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33%	33%	NA	NA	NA
Dinard/Pleurtuit-Saint-Malo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19%	12%	NA	NA	NA
Deauville/Normandie	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11%	11%	NA	NA	NA
Lorient/Lann-Bihoué	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30%	28%	NA	NA	NA
Caen/Carpiquet	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11%	10%	NA	NA	NA
Rennes/St-Jacques	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	53%	49%	NA	NA	NA
Quimper/Pluguffan	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	28%	25%	NA	NA	NA
Nantes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27%	23%	NA	NA	NA
Saint-Nazaire/Montoir	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20%	22%	NA	NA	NA
Brive/Souillac	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	15%	20%	NA	NA	NA
Strasbourg/Entzheim	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17%	14%	NA	NA	NA
Hyères/Le-Palyvestre	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31%	22%	NA	NA	NA
Nîmes/Garons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19%	20%	NA	NA	NA

3.4 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

Military - related measures implemented or planned to improve capacity

Initiatives implemented or planned to improve PI#6

Initiatives implemented or planned to improve PI#7

Initiatives implemented or planned to improve PI#8

4 CAPACITY - FRANCE

4.1 PRB monitoring

• France registered 0.45 minutes of average en route ATFM delay per flight during 2021, thus missing the local breakdown value of 0.18.

• Delays were higher than the breakdown value despite the lower traffic: In France IFR movements in 2021 were 46% lower than in 2019.

• The delays were mainly caused by limited ATC capacity, staffing and severe weather at Reims and Marseille ACCs with the training activities for 4-FLIGHT implementation, OJT and competency maintenance contributing to staffing issues. Specifically during the traffic recovery in summer 2021, the main delay causes in Brest, Marseille and Reims ACCs were ATC capacity and ATC staffing.

• Traffic is expected to grow, with 2019 levels likely being reached in 2023 (in high growth scenario). The number of ATCOs in OPS is planned to increase during RP3 in Bordeaux, Marseille, Paris and Brest ACC with no significant increase in Reims. The implementation of the new ATM system should also improve capacity in affected ACCs.

• Delays were highest between July and October, mostly driven by ATC Capacity and Staffing issues.

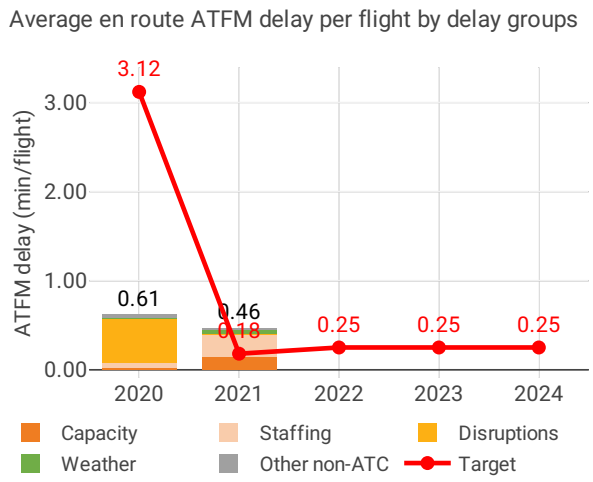
• The share of delayed flights with delays longer than 15 minutes in France decreased by 15.75 p.p. compared to 2020 and was lower than 2019 values.

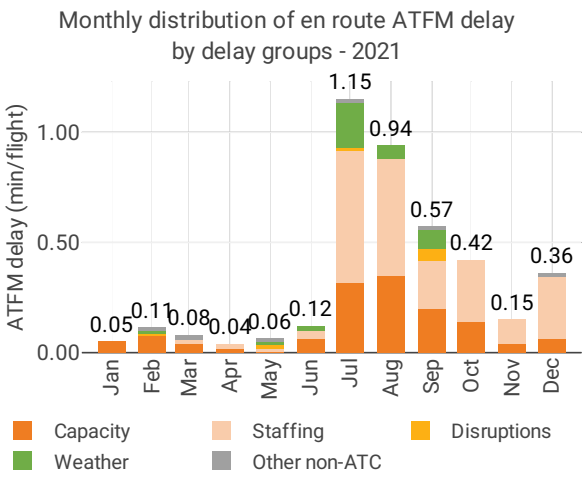
• The yearly total of sector opening hours in Bordeaux ACC was 80,480, showing a 28.7% increase compared to 2020. Sector opening hours are 9.1% below 2019 levels. The yearly total of sector opening hours in Reims ACC was 45,444, showing a 22.2% increase compared to 2020. The yearly total of sector opening hours in Paris ACC was 73,955, showing a 25.5% increase compared to 2020. Sector opening hours are 28.3% below 2019 levels. The yearly total of sector opening hours in Marseille ACC was 91,569, showing a 33.6% increase compared to 2020. Sector opening hours are 9.0% below 2019 levels. The yearly total of sector opening hours in Brest ACC was 49,235, showing a 2.5% increase compared to 2020. Sector opening hours are 39.6% below 2019 levels.

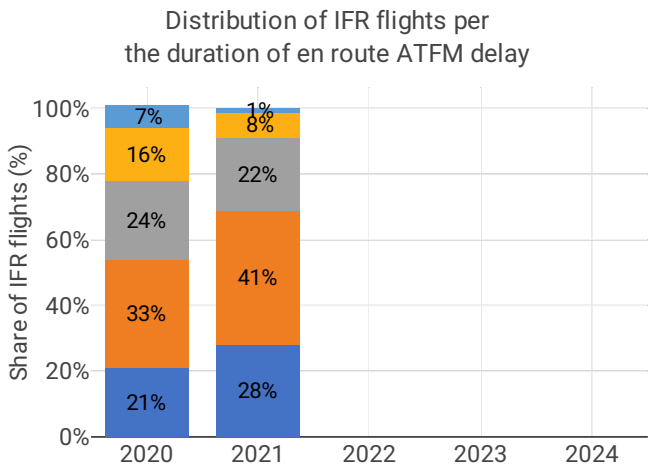
• Bordeaux ACC registered 6.58 IFR movements per one sector opening hour in 2021, being 50.7% below 2019 levels. Sector opening hours are 33.4% below 2019 levels. Reims ACC registered 11.99 IFR movements per one sector opening hour in 2021, being 19.7% below 2019 levels. Paris ACC registered 8.82 IFR movements per one sector opening hour in 2021, being 25.0% below 2019 levels. Marseille ACC registered 7.27 IFR movements per one sector opening hour in 2021, being 36.9% below 2019 levels. Brest ACC registered 10.59 IFR movements per one sector opening hour in 2021, being 21.7% below 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

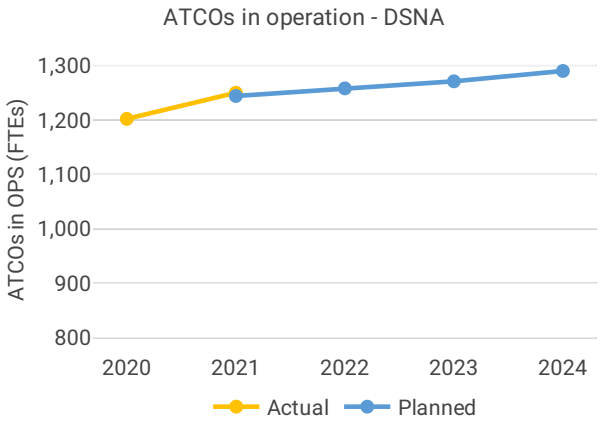
NSA's assessment of capacity performance

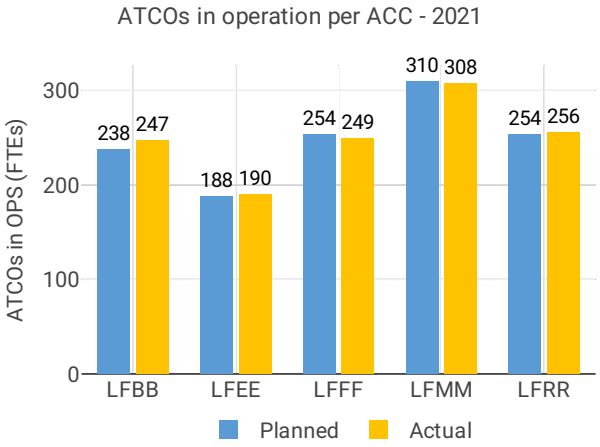
Monitoring process for capacity performance

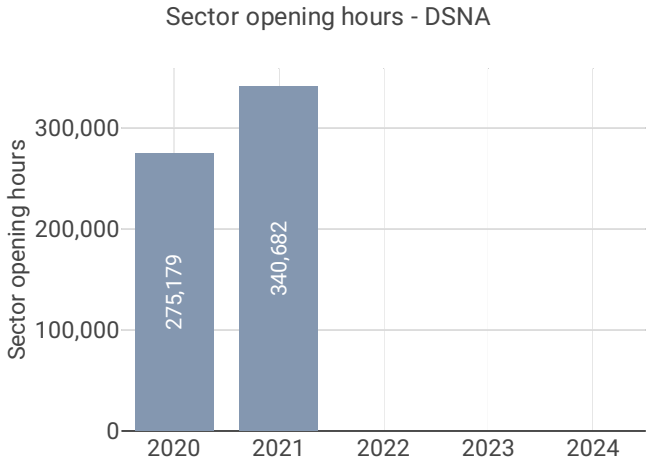
Capacity planning

Application of Corrective Measures for Capacity (if applicable)

4.2.2 Other indicators



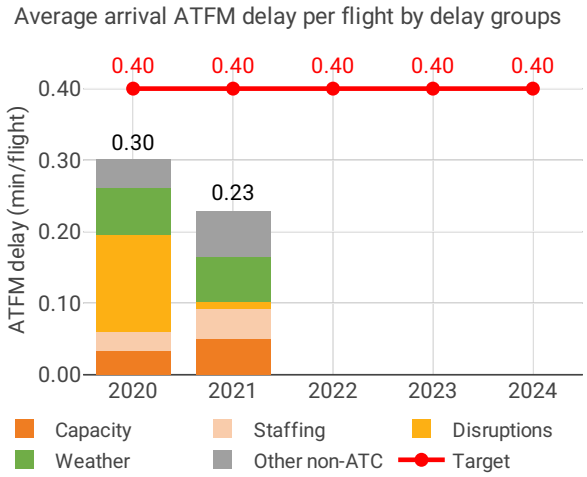


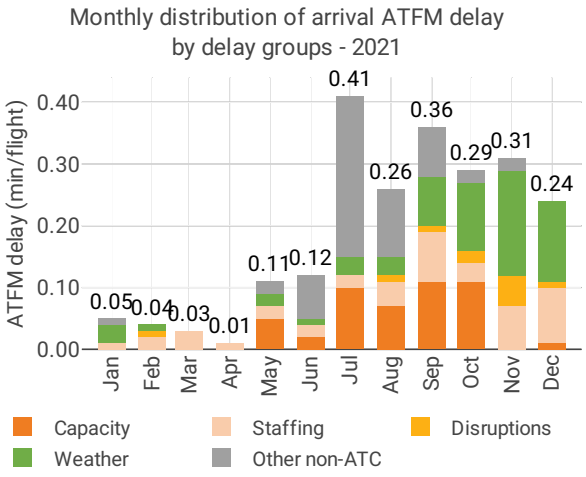


Focus on ATCOs in operations

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)





Focus on arrival ATFM delay

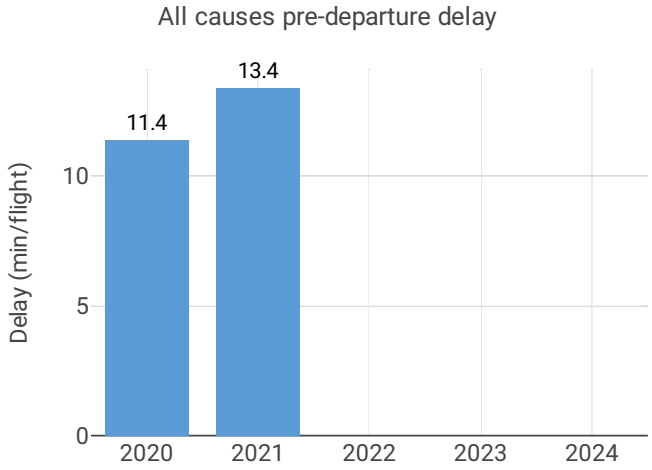
For France, the scope of the RP3 monitoring comprises a total of 58 airports. However, in accordance with IR (EU) 2019/317 and the traffic figures, only 6 of those airports must be monitored for pre-departure delays. 52 of these 58 airports are grouped into a basket ("LFXX") for monitoring and target setting purposes. The Airport Operator Data Flow, necessary for the monitoring of the pre-departure delays, is established for the 6 airports required. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay at 3 of those airports, with more than 60% of the reported delay not allocated to any cause.
The traffic at the ensemble of these 58 airports in 2021 is still 40% below the 2019 levels, despite the 27% increase with respect to 2020.
Average arrival ATFM delays in 2021 was 0.23 min/arr, compared to 0.30 min/arr in 2020.
ATFM slot adherence has improved (2021: 88.4%; 2020: 88.1%).

The national average arrival ATFM delay has decreased for the second year in a row reaching 0.23 min/arr in 2021, compared with 0.30 min/arr in 2020 and 0.42 min/arr in 2019.
The higher delays were observed at Nice (LFMN), where the 2021 traffic recovered better than at the rest of airports (in average 35% lower than in 2019). These delays were attributed to a mix of weather reasons (34%), ATC staffing (33%), ATC capacity (16%) and equipment (13%)
Paris Charles de Gaulle (LFPG) and Paris Orly (LFPO) only showed delays in the second half of the year mostly due to weather (around 50%) and then some industrial action in July for Charles de Gaulle and ATC staffing in November-December for Orly.
Lyon (LFLL) and Marseille (LFML) registered nearly zero delays.

According to FABEC's monitoring report: *At local level, all French major airports and the remaining group of airports have achieved a 2021 performance lower than their local monitoring breakdown values but Nice airport (LFMN) which had to face a strong traffic recovery during the Summer period (at the 2019 level, inducing some staff delay cause and also some technical and meteorological delay causes (densified rostering scheme should be implemented in 2022 and some additional work will be conducted regarding ATFCM and sector configuration management).It should be noted that half of 2021 limited delays (0,12 min/flight) were due to non CRSTMP delay causes.*

The provisional national target on arrival ATFM delay in 2021 was met.
In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024. No bonus will be awarded to DSNA for 2021 achievement.

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



Airport level

	Avg arrival ATFM delay (KPI#2)				Slot adherence (PI#1)			
Airport name	2020	2021	2023	2022	2020	2021	2023	2022
Agen/La-Garenne	NA	NA	NA	NA	79.2%	85.7%	NA%	NA
Ajaccio/Napoléon-Bonaparte	NA	0.05	NA	NA	76.4%	71.3%	NA%	NA%
Albert/Bray	NA	0.00	NA	NA	44.0%	72.7%	NA%	NA%
Annecy/Meythet	0.16	0.06	NA	NA	74.9%	82.3%	NA%	NA%
Avignon/Caumont	0.23	0.02	NA	NA	78.7%	84.8%	NA%	NA%
Bale/Mulhouse	0.41	0.05	NA	NA	87.4%	89.2%	NA%	NA%
Bastia/Poretta	0.00	0.06	NA	NA	80.7%	87.0%	NA%	NA%
Beauvais/Tillé	0.05	0.01	NA	NA	72.6%	89.3%	NA%	NA%
Bergerac/Roumanière	NA	0.14	NA	NA	81.8%	89.4%	NA%	NA%
Biarritz/Bayonne-Anglet	0.05	0.15	NA	NA	88.8%	93.0%	NA%	NA%
Bordeaux/Merignac	0.77	0.07	NA	NA	91.5%	89.7%	NA%	NA%
Brest/Bretagne	NA	0.05	NA	NA	97.0%	83.8%	NA%	NA%
Brive/Souillac	NA	NA	NA	NA	95.7%	85.6%	NA%	NA%
Béziers/Vias	NA	NA	NA	NA	68.5%	70.7%	NA%	NA%
Caen/Carpiquet	NA	0.00	NA	NA	94.2%	92.3%	NA%	NA%
Calvi/Sainte-Catherine	0.07	0.28	NA	NA	82.1%	87.3%	NA%	NA%
Cannes/Mandelieu	2.97	3.00	NA	NA	93.4%	90.2%	NA%	NA%
Carcassonne/Salvaza	NA	0.00	NA	NA	81.8%	84.3%	NA%	NA%
Chambéry/Aix-les-Bains	1.67	0.08	NA	NA	89.3%	82.5%	NA%	NA%
Châlons/Vatry	0.50	0.78	NA	NA	78.0%	86.1%	NA%	NA%
Châteauroux/Déols	NA	NA	NA	NA	86.7%	84.9%	NA%	NA%
Clermont-Ferrand/Auvergne	0.00	0.01	NA	NA	81.5%	86.9%	NA%	NA%
Deauville/Normandie	NA	NA	NA	NA	90.0%	88.6%	NA%	NA%
Dinard/Pleurtuit-Saint-Malo	NA	NA	NA	NA	61.3%	93.2%	NA%	NA%
Dole/Tavaux	NA	NA	NA	NA	59.4%	77.5%	NA%	NA%
Figari/Sud-Corse	0.18	1.24	NA	NA	80.3%	76.8%	NA%	NA%
Grenoble/Isère	0.50	0.02	NA	NA	93.6%	85.2%	NA%	NA%
Hyères/Le-Palyvestre	0.06	0.04	NA	NA	81.1%	88.3%	NA%	NA%
Istres/Le-Tubé	NA	NA	NA	NA	66.7%	68.4%	NA%	NA%
La-Rochelle/Ile de Ré	NA	NA	NA	NA	81.2%	89.2%	NA%	NA%
Lille/Lesquin	0.33	0.01	NA	NA	86.1%	87.7%	NA%	NA%
Limoges/Bellegarde	0.19	0.11	NA	NA	93.4%	92.4%	NA%	NA%
Lorient/Lann-Bihoué	NA	NA	NA	NA	88.8%	88.3%	NA%	NA%
Lyon	0.03	0.00	NA	NA	84.5%	84.1%	NA%	NA%
Lyon/Bron	0.01	NA	NA	NA	89.5%	83.8%	NA%	NA%
Marseille/Provence	0.10	0.01	NA	NA	78.3%	83.4%	NA%	NA%
Metz-Nancy/Lorraine	NA	NA	NA	NA	82.5%	84.6%	NA%	NA%
Montpellier/Méditerranée	0.01	NA	NA	NA	75.1%	84.6%	NA%	NA%
Nantes	0.24	0.08	NA	NA	91.6%	91.3%	NA%	NA%
Nice	0.13	0.39	NA	NA	87.7%	88.8%	NA%	NA%
Nîmes/Garons	NA	0.02	NA	NA	83.4%	82.5%	NA%	NA%
Paris/Charles-De-Gaulle	0.11	0.22	NA	NA	95.4%	94.7%	NA%	NA%
Paris/Le Bourget	0.60	0.53	NA	NA	94.2%	95.3%	NA%	NA%
Paris/Orly	0.96	0.25	NA	NA	87.3%	90.4%	NA%	NA%
Pau/Pyrénées	1.45	0.00	NA	NA	85.9%	87.6%	NA%	NA%
Perpignan/Rivesaltes	0.07	0.03	NA	NA	77.4%	77.0%	NA%	NA%
Poitiers/Biard	NA	NA	NA	NA	87.8%	72.5%	NA%	NA%
Quimper/Pluguffan	NA	NA	NA	NA	84.7%	90.6%	NA%	NA%
Rennes/St-Jacques	NA	NA	NA	NA	78.7%	86.7%	NA%	NA%
Rodez/Marcillac	NA	NA	NA	NA	88.5%	82.5%	NA%	NA%
Rouen/Vallée-de-Seine	NA	0.27	NA	NA	NA	83.9%	NA%	NA%
Saint-Etienne/Bouthéon	NA	NA	NA	NA	79.6%	86.8%	NA%	NA%
Saint-Nazaire/Montoir	NA	NA	NA	NA	97.2%	94.7%	NA%	NA%
Strasbourg/Entzheim	0.03	0.01	NA	NA	79.6%	88.9%	NA%	NA%
Tarbes-Lourdes/Pyrénées	NA	0.02	NA	NA	90.5%	91.3%	NA%	NA%
Toulouse/Blagnac	0.16	0.26	NA	NA	90.2%	89.0%	NA%	NA%
Tours/Val-de-Loire	0.00	0.11	NA	NA	50.0%	0.0%	NA%	NA%
Toussus/Le-Noble	0.97	0.89	NA	NA	77.7%	88.3%	NA%	NA%

	ATC pre departure delay (PI#2)				All causes pre departure delay (PI#3)			
Airport name	2020	2021	2023	2022	2020	2021	2023	2022
Agen/La-Garenne	NA	NA	NA	NA	NA	NA	NA	NA
Ajaccio/Napoléon-Bonaparte	NA	NA	NA	NA	NA	NA	NA	NA
Albert/Bray	NA	NA	NA	NA	NA	NA	NA	NA
Annecy/Meythet	NA	NA	NA	NA	NA	NA	NA	NA
Avignon/Caumont	NA	NA	NA	NA	NA	NA	NA	NA
Bale/Mulhouse	0.13	0.12	NA	NA	8.6	11.5	NA	NA
Bastia/Poretta	NA	NA	NA	NA	NA	NA	NA	NA
Beauvais/Tillé	NA	NA	NA	NA	NA	NA	NA	NA
Bergerac/Roumanière	NA	NA	NA	NA	NA	NA	NA	NA
Biarritz/Bayonne-Anglet	NA	NA	NA	NA	NA	NA	NA	NA
Bordeaux/Merignac	NA	NA	NA	NA	NA	NA	NA	NA
Brest/Bretagne	NA	NA	NA	NA	NA	NA	NA	NA
Brive/Souillac	NA	NA	NA	NA	NA	NA	NA	NA
Béziers/Vias	NA	NA	NA	NA	NA	NA	NA	NA
Caen/Carpiquet	NA	NA	NA	NA	NA	NA	NA	NA
Calvi/Sainte-Catherine	NA	NA	NA	NA	NA	NA	NA	NA
Cannes/Mandelieu	NA	NA	NA	NA	NA	NA	NA	NA
Carcassonne/Salvaza	NA	NA	NA	NA	NA	NA	NA	NA
Chambéry/Aix-les-Bains	NA	NA	NA	NA	NA	NA	NA	NA
Châlons/Vatry	NA	NA	NA	NA	NA	NA	NA	NA
Châteauroux/Déols	NA	NA	NA	NA	NA	NA	NA	NA
Clermont-Ferrand/Auvergne	NA	NA	NA	NA	NA	NA	NA	NA
Deauville/Normandie	NA	NA	NA	NA	NA	NA	NA	NA
Dinard/Pleurtuit-Saint-Malo	NA	NA	NA	NA	NA	NA	NA	NA
Dole/Tavaux	NA	NA	NA	NA	NA	NA	NA	NA
Figari/Sud-Corse	NA	NA	NA	NA	NA	NA	NA	NA
Grenoble/Isère	NA	NA	NA	NA	NA	NA	NA	NA
Hyères/Le-Palyvestre	NA	NA	NA	NA	NA	NA	NA	NA
Istres/Le-Tubé	NA	NA	NA	NA	NA	NA	NA	NA
La-Rochelle/Ile de Ré	NA	NA	NA	NA	NA	NA	NA	NA
Lille/Lesquin	NA	NA	NA	NA	NA	NA	NA	NA
Limoges/Bellegarde	NA	NA	NA	NA	NA	NA	NA	NA
Lorient/Lann-Bihoué	NA	NA	NA	NA	NA	NA	NA	NA
Lyon	0.17	0.21	NA	NA	12.0	11.9	NA	NA
Lyon/Bron	NA	NA	NA	NA	NA	NA	NA	NA
Marseille/Provence	NA	0.05	NA	NA	9.6	9.9	NA	NA
Metz-Nancy/Lorraine	NA	NA	NA	NA	NA	NA	NA	NA
Montpellier/Méditerranée	NA	NA	NA	NA	NA	NA	NA	NA
Nantes	NA	NA	NA	NA	NA	NA	NA	NA
Nice	0.21	0.38	NA	NA	7.5	10.5	NA	NA
Nîmes/Garons	NA	NA	NA	NA	NA	NA	NA	NA
Paris/Charles-De-Gaulle	NA	NA	NA	NA	12.9	17.1	NA	NA
Paris/Le Bourget	NA	NA	NA	NA	NA	NA	NA	NA
Paris/Orly	0.33	0.49	NA	NA	13.4	12.5	NA	NA
Pau/Pyrénées	NA	NA	NA	NA	NA	NA	NA	NA
Perpignan/Rivesaltes	NA	NA	NA	NA	NA	NA	NA	NA
Poitiers/Biard	NA	NA	NA	NA	NA	NA	NA	NA
Quimper/Pluguffan	NA	NA	NA	NA	NA	NA	NA	NA
Rennes/St-Jacques	NA	NA	NA	NA	NA	NA	NA	NA
Rodez/Marcillac	NA	NA	NA	NA	NA	NA	NA	NA
Rouen/Vallée-de-Seine	NA	NA	NA	NA	NA	NA	NA	NA
Saint-Etienne/Bouthéon	NA	NA	NA	NA	NA	NA	NA	NA
Saint-Nazaire/Montoir	NA	NA	NA	NA	NA	NA	NA	NA
Strasbourg/Entzheim	NA	NA	NA	NA	NA	NA	NA	NA
Tarbes-Lourdes/Pyrénées	NA	NA	NA	NA	NA	NA	NA	NA
Toulouse/Blagnac	0.17	0.21	NA	NA	8.9	8.3	NA	NA
Tours/Val-de-Loire	NA	NA	NA	NA	NA	NA	NA	NA
Toussus/Le-Noble	NA	NA	NA	NA	NA	NA	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

National level and main national individual airports involved are above the 80% threshold of compliance. The national average was 88.4%, slightly better than in 2020 when the adherence was 88.1%. With regard to the 11.6% of flights that did not adhere, 5.6% was early and 6% was late.

According to FABEC monitoring report: *DSNA identified in 2021 that a reason generating a lack of measured adherence in 2020 for Marseille (LFML)was a wrong information sent to NMOC. Indeed, except in the two main Paris airports, the signal for activating the flight plan in the current FDPS system of DSNA (CAUTRA) is also used as the first system activation message (FSA) signal sent to the NMOC. However, this*

takes place at a time after off-block time (OBT), but well before the actual take-off, while it is interpreted by NMOC as Take-Off Time (TOT). Hence, NMOC detects a large percentage of regulated flights as taking off in advance of the tolerance window, although the actual take-off time is later and actually generally within the STW.
This appeared in particular for Marseille (LFML) airport. This is was acknowledged by DSNA as a clear deviation on many airports where the taxiing time is significant. This default has however been corrected in Paris-Charles-de-Gaulle and Paris-Orly through a specific local system that allows sending the NMOC a correct take-off time (TOT).
However, an in depth analysis of past results in Marseille (LFML) conducted in 2021 has shown that the root causes were less operational in terms of ATC management but due to problems in calculating the correct CTOT; so the issue was more about the correct calibration of the CTOT calculation than about the accuracy of the detection of actual take-offs (as a reminder, either the ATS unit has an automatic take-off detection system and the "FSA" (First System Activation) message is sent to the NM as close as possible to this event, or the NM itself recalibrates the take-off time using the CPRs).
The Marseille (LFML) Operations Department has modified in coordination with the NM the parameters of the LFML taxi time thus the CTOT calculation has been improved and the CTOT compliance measurement has been more adequate; as a result, we can observe an increase in the CTOT compliance rate which brings LFML back to a good level: figures for 2021 now show a compliance of 83.4%.

ATC pre-departure delay

The share of unidentified delay reported by 3 out of the 6 French airports subject to this monitoring in 2020 was above 40% for more than 2 months in the year, preventing the calculation of this indicator. This is partially due to the special traffic composition during the COVID crisis, and there has been some improvement in the reporting with the traffic recovery, although not at all airports.
The insufficient data quality provided by Charles de Gaulle is a long standing issue prior to April 2020, and the reporting by Marseille has improved significantly by still not enough.
At Nice the performance has deteriorated with the traffic recovery (LFMN; 2019: 0.31 min/dep.; 2020: 0.21 min/dep.; 2021: 0.38 min/dep.). FABEC monitoring report mentions that *LFMN also faced some more capacity issues in 2021 than in 2020 due to the traffic Summer recovery.*

All causes pre-departure delay

The total (all causes) delay in the actual off block time at French airports in 2021 was between 8.28 min/dep for Toulouse(LFBO) and 17.09 min/dep. for Paris Charles de Gaulle (LFPG) which was the 4th highest among the RP3 monitored airports.
The highest delays per flight at these airports were observed in Summer and December
According to FABEC monitoring report: *Regarding LFMN: A new densified rostering scheme should be implemented in order to improve this situation. Some work will also be done to implement a better ATFCM and sector configuration management.*
Regarding LFPG, half of the 2021 delays were due to meteorological causes and remaining 40% were due to strikes at the airport operator and also for a minor part due to the 14th July event management. No special measures is needed on the ATC side.

5 COST-EFFIENCY - FRANCE

5.1 PRB monitoring

• The en route 2020/2021 actual unit cost of France was 129.22 €2017, -2.1% lower than the determined unit cost (132.06 €2017). The terminal zone 1 actual unit cost was 178.34 €2017, -6.1% lower than the determined unit cost (189.83 €2017), while terminal zone 2 actual unit cost was 670.03 €2017, +1.7% higher than the determined unit cost (659.13 €2017).

• The en route 2021 actual service units (11,181K) were +1.9% higher than determined (10,969K).

• In 2021, actual total costs were -28 M€2017 lower (-2.2%) than determined, despite the increase in cost of capital and other operating costs.

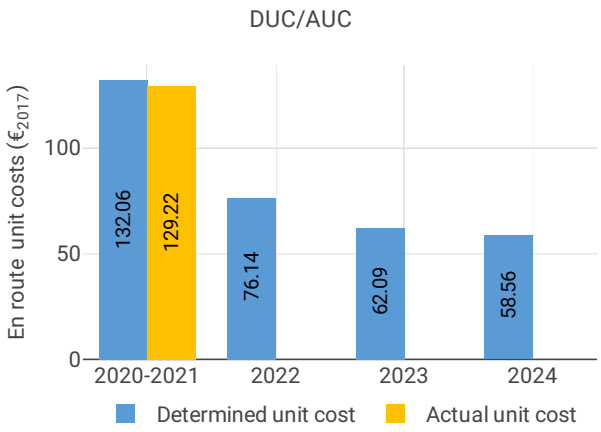
• The decrease in total costs was driven by lower staff costs (-19 M€2017, or -2.6%) due to staff costs containment, and lower depreciation (-17 M€2017, or -10%). The reduction in depreciation was mainly due to the postponement of investments commissioning and because a part of the investment costs was transferred to project-related OPEX costs.

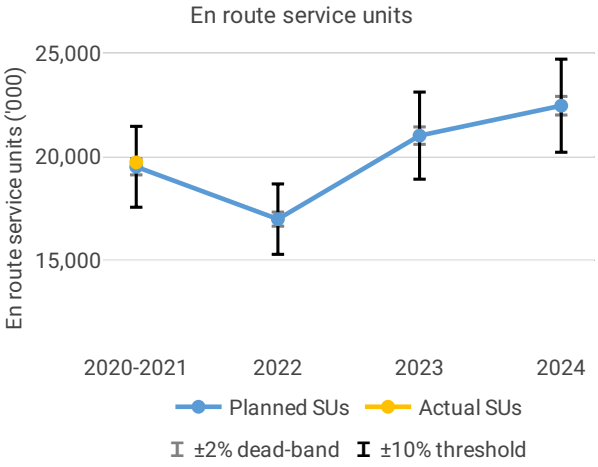
• According to 2021 reporting tables, DSNA spent 208 M€2017 in 2021 related to costs of investments, -7.1% lower than determined (224 M€2017) mostly driven by lower depreciation costs.

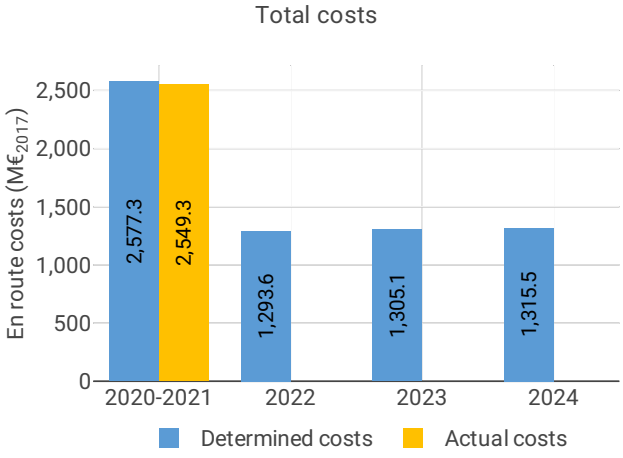
• The en route actual unit cost incurred by users in 2020/2021 was 135.73€, while the terminal zone 1 actual unit cost incurred by users was 329.27€ and 447.86€ for terminal zone 2.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)

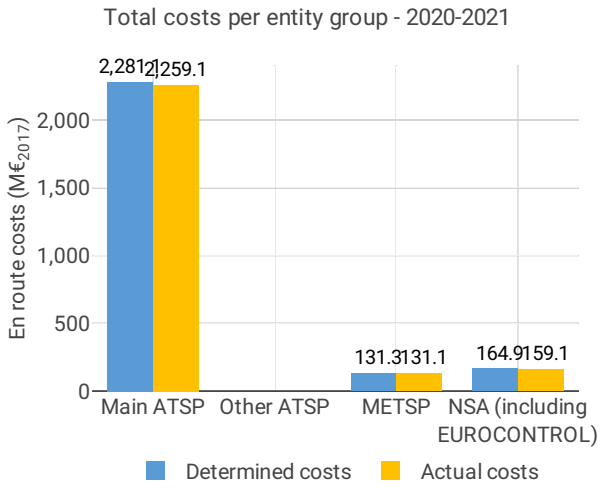


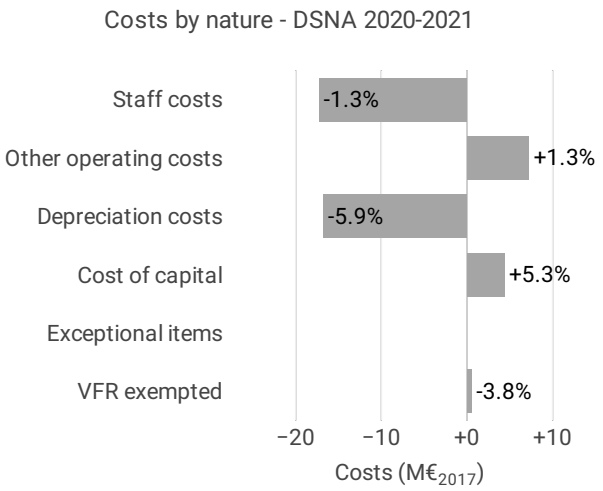




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	2,650	NA	NA	NA
Determined costs	2,668	1,357	1,382	1,407
Difference costs	-18	NA	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	1.2%	1.3%	1.4%
Determined inflation index	NA	106.3	107.7	109.3
Actual inflation rate	NA	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the AUC was lower than the planned DUC (by -2.1%, or -2.84€2017). This results from the combination of higher than planned TSUs (+1.1%) and lower than planned en route costs in real terms (by -1.1%, or -28.1 M€2017).

En route service units

The difference between actual and planned TSUs (+1.1%) falls within the ±2% dead band. Hence the resulting additional revenue is kept by the ANSPs.

En route costs by entity

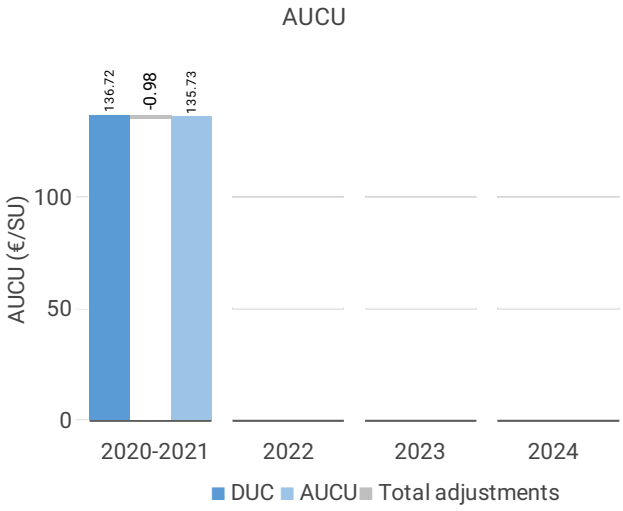
Actual real en route costs for 2020-2021 are -1.1% (-28.1 M€2017) lower than planned. This result is driven by the main ANSP, DSNA (-1.0%, or -21.9 M€2017), the MET service provider (-0.2% or -0.3 M€2017) and the NSA/EUROCONTROL costs (-3.5%, or -5.8 M€2017).

En route costs for the main ANSP at charging zone level

The lower then planned en route costs in real terms for DSNA in 2020-2021 (-1.0%, or -21.9 M€2017 lower) result from:

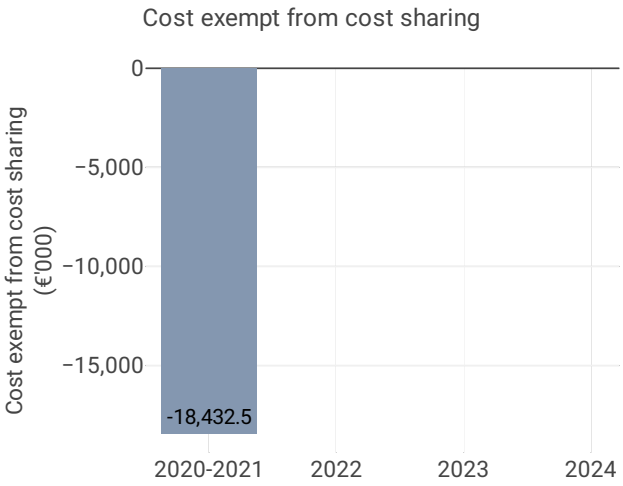
- slightly lower staff costs (-1.3%);
- slightly higher other operating costs (+1.3%);
- lower depreciation (-5.9%), “mainly in relation with the postponement of commissioning from 2021 to 2022 and the transfer of part of the investment costs to project-related OPEX costs”;
- higher cost of capital (+5.3%), due to increases in both the asset base (+1.3%) and WACC (+0.08 p.p.);
- lower deduction for VFR exempted flights (-3.8%).

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



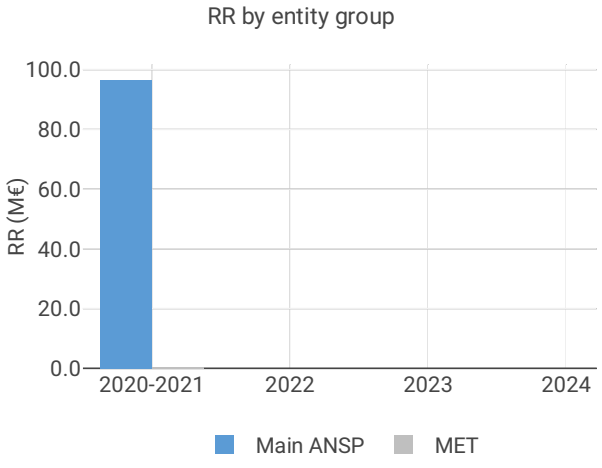
AUCU components (€/SU) – 2020-2021

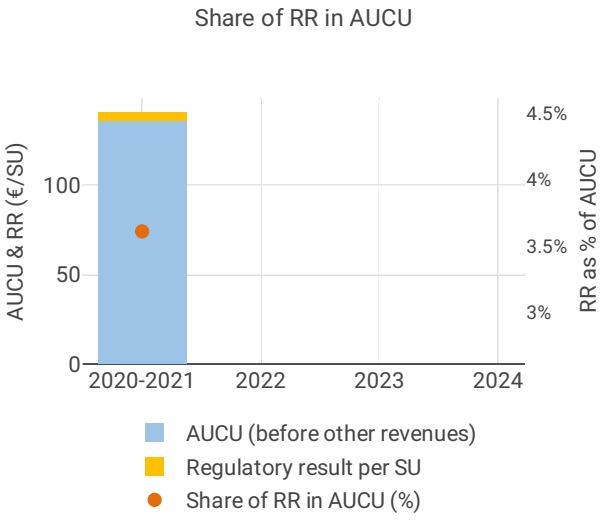
Components of the AUCU in 2020-2021	€/SU
DUC	**136.72**
Inflation adjustment	0.54
Cost exempt from cost-sharing	-0.93
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.17
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-0.42
Application of lower unit rate	0.00
Total adjustments	-0.98
AUCU	**135.73**
AUCU vs. DUC	**-0.7%**

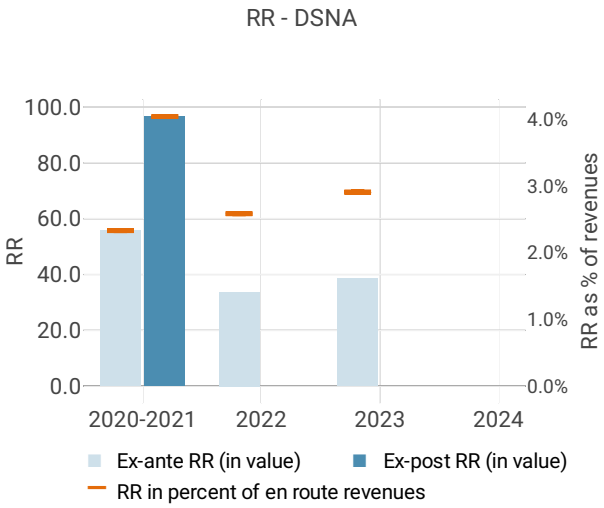


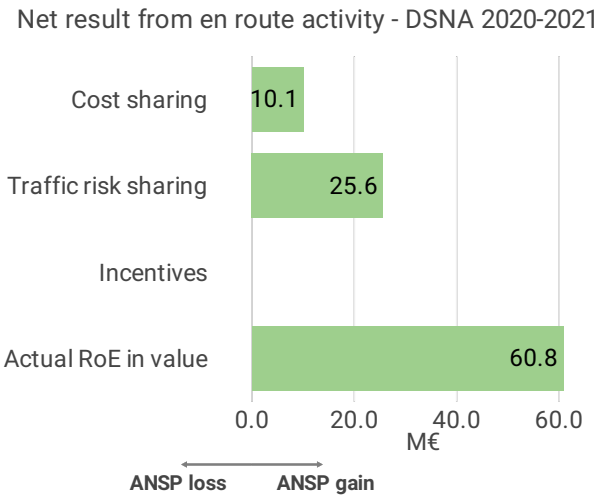
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	-12,593.7	-0.64
Competent authorities and qualified entities costs	-231.9	-0.01
Eurocontrol costs	-5,606.9	-0.28
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-18,432.5**	**-0.93**

5.2.3 Regulatory result (RR)







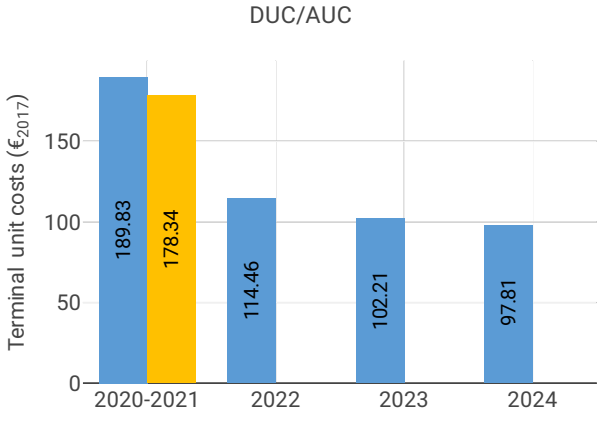


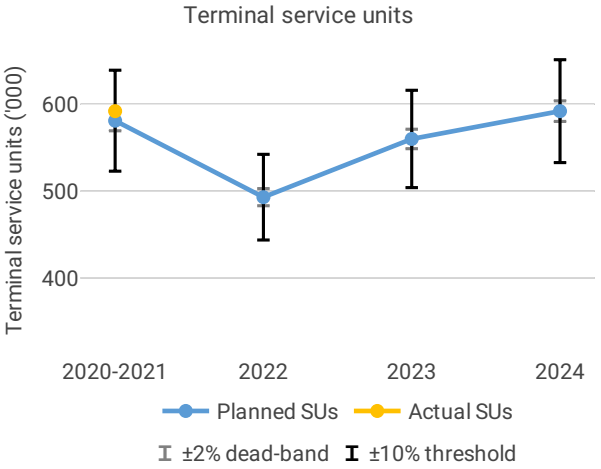
Focus on regulatory result

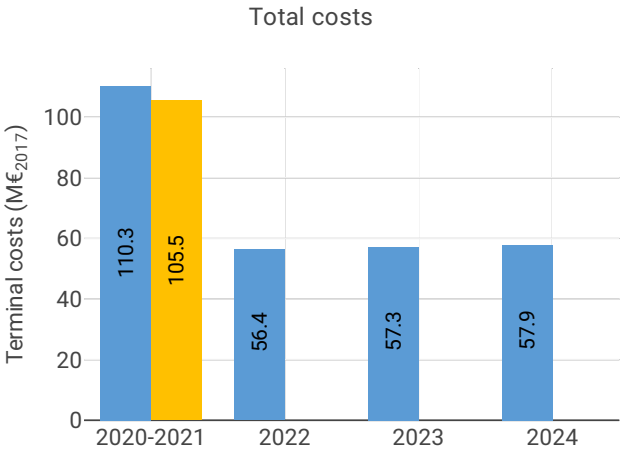
DSNA net gain on en route activity in the France charging zone in the combined year 2020-2021
DSNA's net gain amounts to +35.7 M€, as a combination of a gain of +10.1 M€ arising from the cost sharing mechanism and a gain of +25.6 M€ arising from the traffic risk sharing mechanism.
DSNA overall regulatory results (RR) for the en route activity
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+35.7 M€) and the actual RoE (+59.9 M€) amounts to +95.6 M€ (4.0% of the en route revenues). The resulting ex-post rate of return on equity is 27.7%, which is higher than the 17.1% planned in the PP.

5.3 Terminal charging zone - France Zone 1

5.3.1 Unit cost (KPI#1)

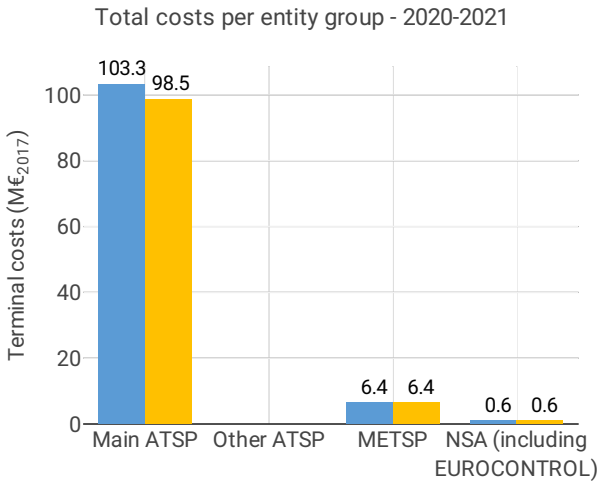


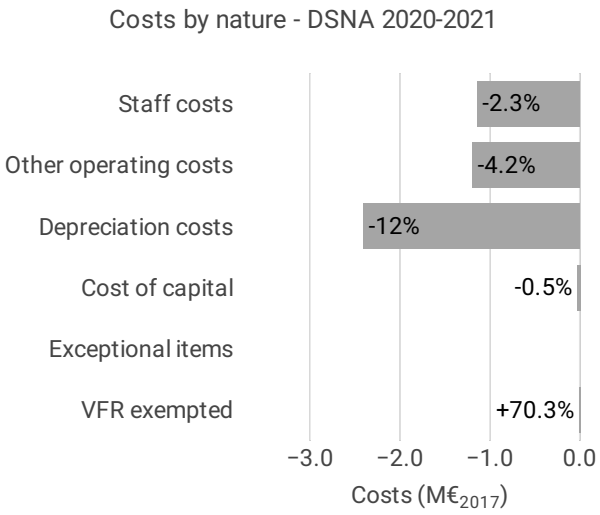




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	110	NA	NA	NA
Determined costs	114	59	60	62
Difference costs	-5	NA	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	1.2%	1.3%	1.4%
Determined inflation index	NA	106.3	107.7	109.3
Actual inflation rate	NA	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the terminal AUC was -6.1% (or -11.49€2017) lower than the planned DUC. This results from the combination of higher than planned TNSUs (+1.8%) and lower than planned terminal costs in real terms (-4.4%, or -4.8 M€2017).

Terminal service units

The difference between actual and planned TNSUs (+1.8%) falls within the ±2% dead band. Hence the resulting additional terminal revenue is kept by the ANSPs.

Terminal costs by entity

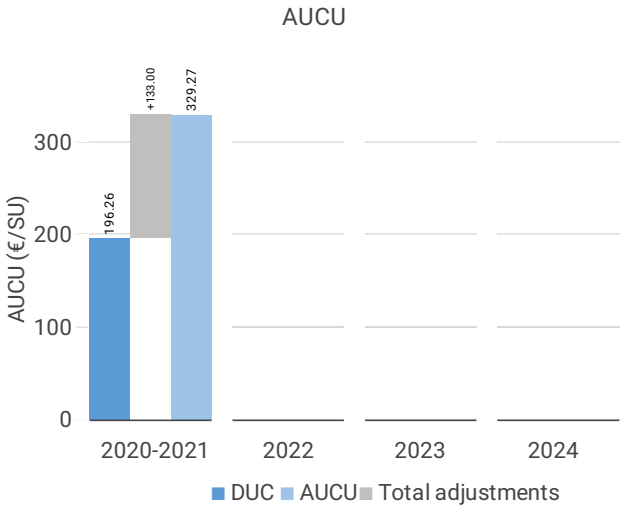
Actual real terminal costs are -4.4% (-4.8 M€2017) lower than planned. This is driven by the main ANSP, DSNA (-4.6%, or -4.8 M€2017), the MET service provider (-0.1%, or -0.01 M€2017) and NSA costs (-4.5% or -0.03 M€2017).

Terminal costs for the main ANSP at charging zone level

The lower than planned terminal costs in real terms for DSNA (-4.6%, or -4.8 M€2017) result from:
- lower staff costs (-2.3%);
- lower other operating costs (-4.2%);
- lower depreciation (-12.0%), mainly in relation with the postponement of commissioning from 2021 to 2022 (contractual negotiations for SYSAT project which were expected to be concluded by the end of 2021 have been delayed to early 2022 therefore shifting some expenditures from 2021 to 2022, including some related OPEX) and the transfer of some investment costs to project-related OPEX costs;
- lower cost of capital (-0.5%), due to decrease in net current assets (8.2%), compensating increase in NBV

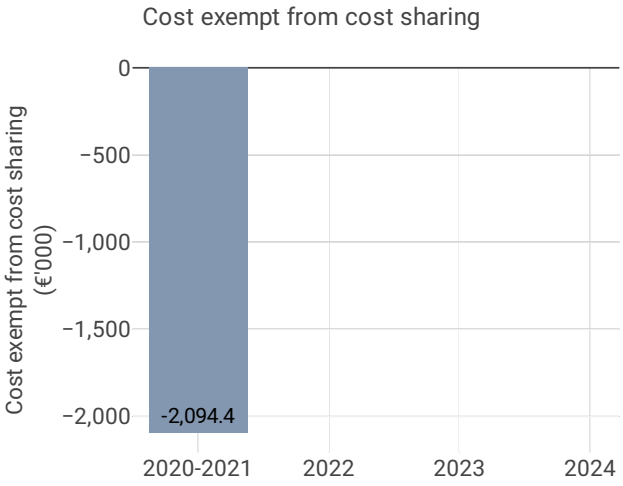
(+4.9%) and WACC (+0.07 p.p.);
- higher deduction for VFR exempted flights (+70.3%).

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



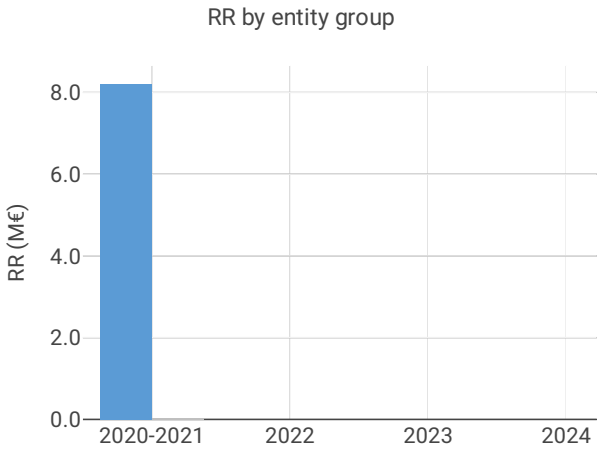
AUCU components (€/SU) – 2020-2021

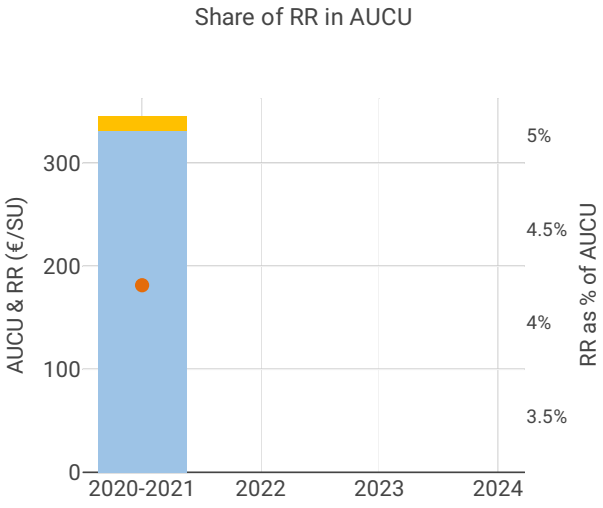
Components of the AUCU in 2020-2021	€/SU
DUC	**196.26**
Inflation adjustment	0.73
Cost exempt from cost-sharing	-3.54
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.22
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	137.84
Other revenues	-1.81
Application of lower unit rate	0.00
Total adjustments	133.00
AUCU	**329.27**
AUCU vs. DUC	**+67.8%**

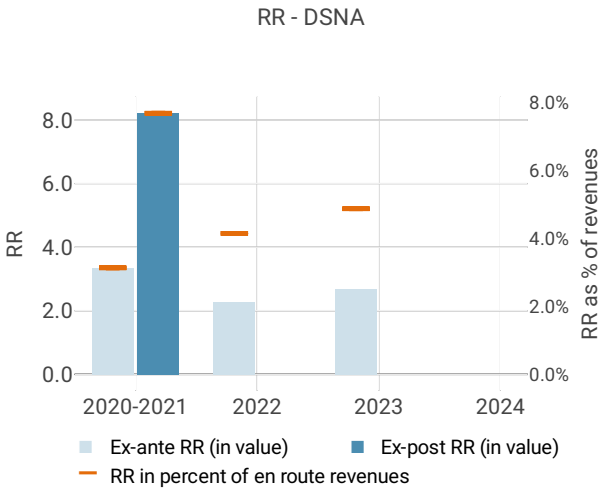


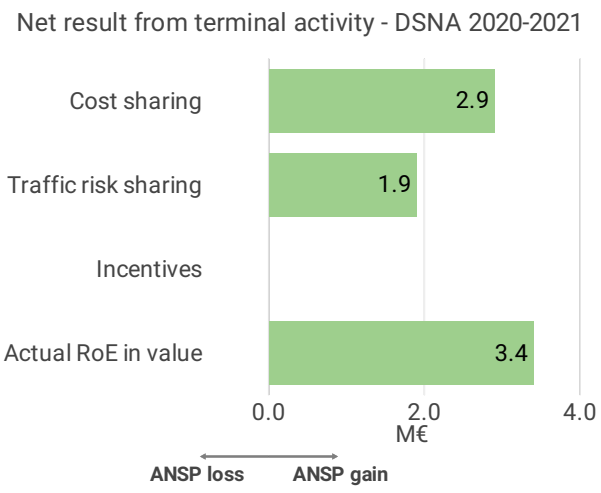
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	-2,066.5	-3.49
Competent authorities and qualified entities costs	-27.9	-0.05
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-2,094.4**	**-3.54**

5.3.3 Regulatory result (RR)







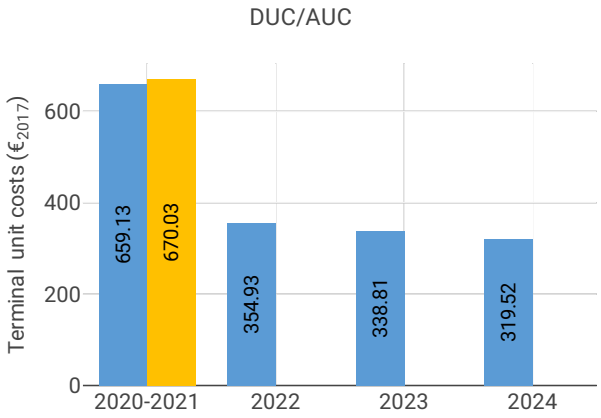


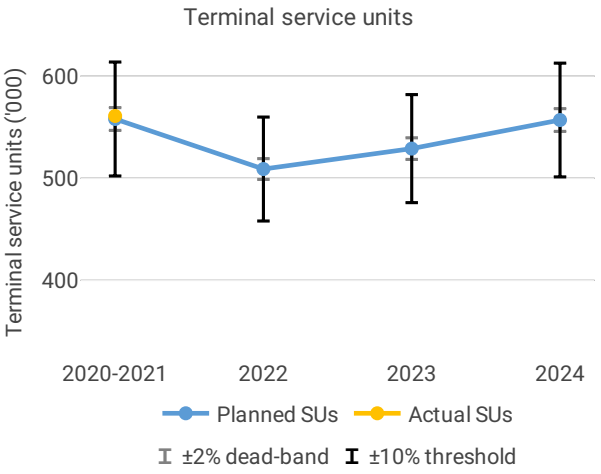
Focus on regulatory result

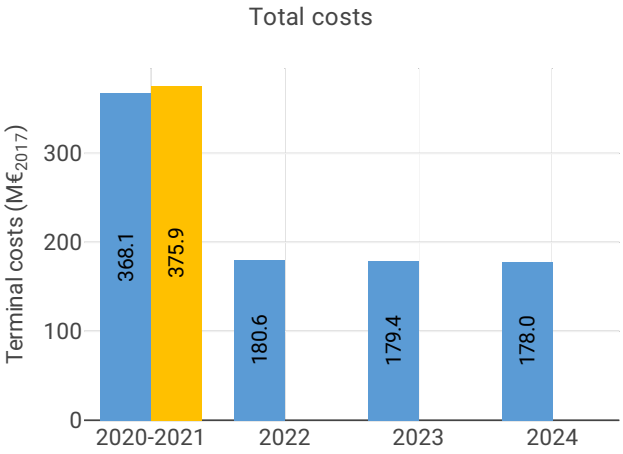
DSNA net gain on activity in the France terminal charging zone 1 in the combined year 2020-2021
DSNA's net gain amounts to +4.8 M€ due to gains of +2.9 M€ from the cost sharing mechanism and of +1.9 M€ from the traffic risk sharing mechanism.
DSNA overall regulatory results (RR) for the terminal charging zone 1 activity
Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+4.8 M€) and the actual RoE (+3.4 M€) amounts to +8.2 M€ (7.6% of the terminal revenues). The resulting ex-post rate of return on equity is 41.3%, which is higher than the 17.1% planned in the PP.

5.4 Terminal charging zone - France Zone 2

5.4.1 Unit cost (KPI#1)

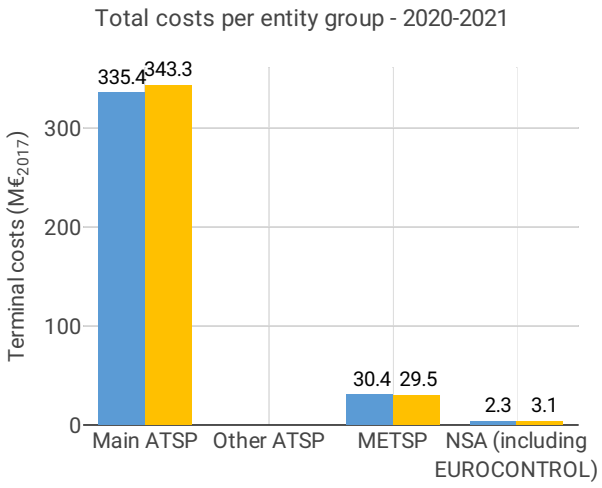


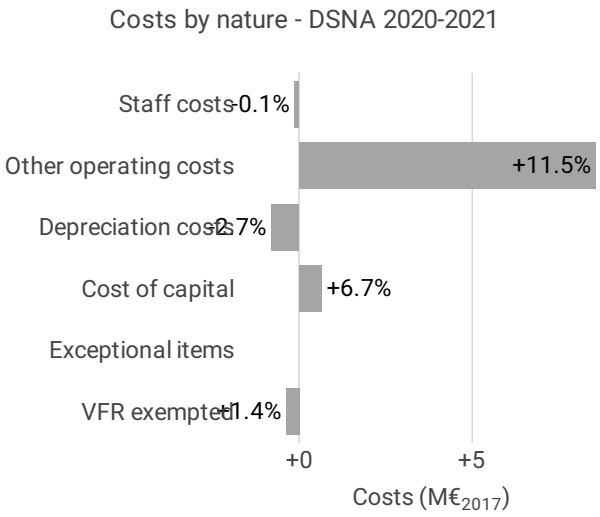




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	392	NA	NA	NA
Determined costs	382	190	191	192
Difference costs	10	NA	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	1.2%	1.3%	1.4%
Determined inflation index	NA	106.3	107.7	109.3
Actual inflation rate	NA	NA	NA	NA
Actual inflation index	NA	NA	NA	NA
Difference inflation index (p.p.)	NA	NA	NA	NA





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the terminal AUC was +1.7% (or +10.9€2017) higher than the planned DUC. This results from the combination of higher than planned TNSUs (+0.4%) and higher than planned terminal costs in real terms (+2.1%, or +7.8 M€2017).

Terminal service units

The difference between actual and planned TNSUs (+0.4%) falls within the ±2% dead band. Hence the resulting additional terminal revenue is kept by the ANSPs.

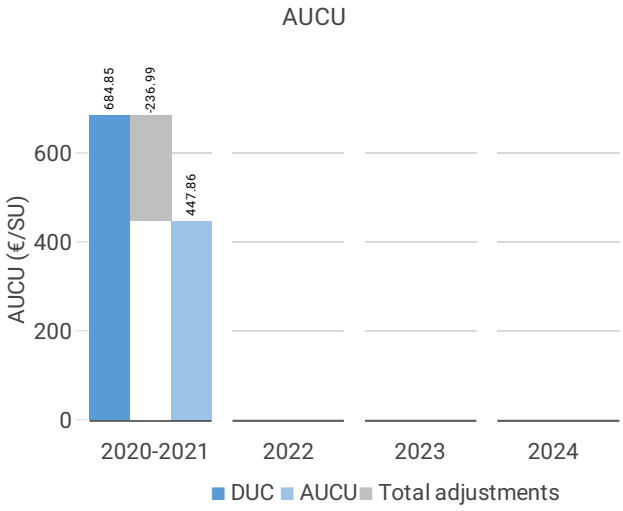
Terminal costs by entity

Actual real terminal costs are +2.1% (+7.8 M€2017) higher than planned. This is driven by the main ANSP, DSNA (+2.4%, or +7.9 M€2017), and NSA costs (+32.6% or +0.8 M€2017), whereas costs for the MET service provider are -3.0% (or -0.9 M€2017) lower than planned.

Terminal costs for the main ANSP at charging zone level

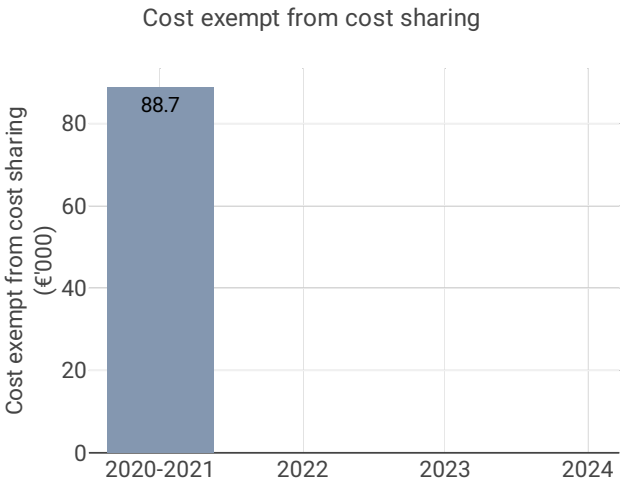
The higher than planned terminal costs in real terms for DSNA (+2.4%, or +7.9 M€2017) result from:
- slightly lower staff costs (-0.1%);
- higher other operating costs (+11.5%);
- lower depreciation (-2.7%), mainly in relation with the postponement of some commissioning from 2021 to 2022 and the transfer of investment costs to project related OPEX costs;
- higher cost of capital (+6.7%), due to increase in both asset base (+2.3%) and WACC (+0.1 p.p.);
- higher deduction for VFR exempted flights (+1.4%).

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



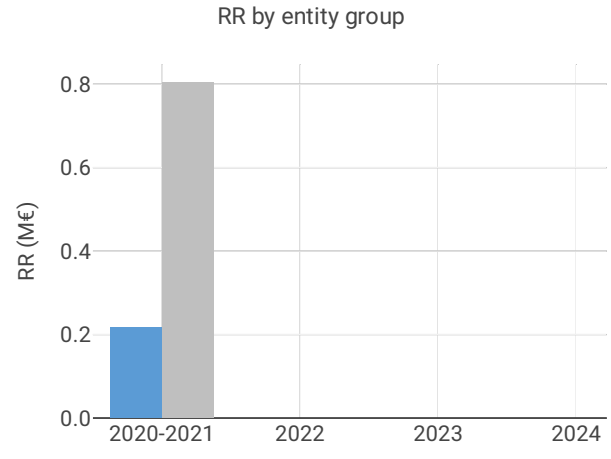
AUCU components (€/SU) – 2020-2021

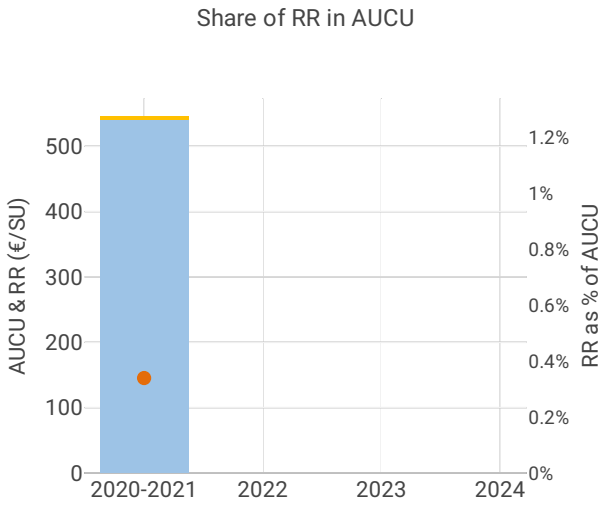
Components of the AUCU in 2020-2021	€/SU
DUC	**684.85**
Inflation adjustment	2.98
Cost exempt from cost-sharing	0.16
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.27
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	-145.37
Other revenues	-94.49
Application of lower unit rate	0.00
Total adjustments	-236.99
AUCU	**447.86**
AUCU vs. DUC	**-34.6%**

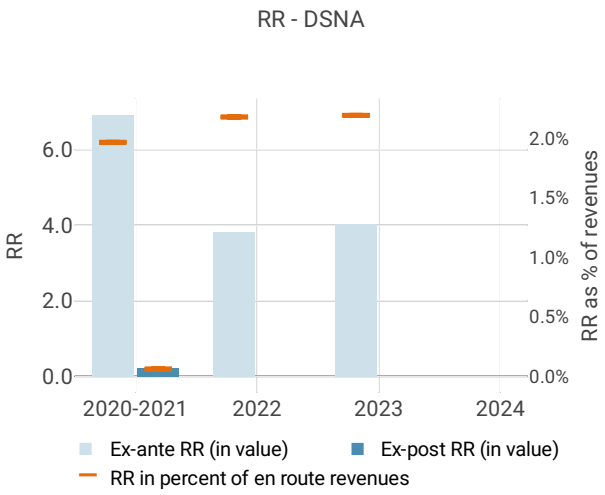


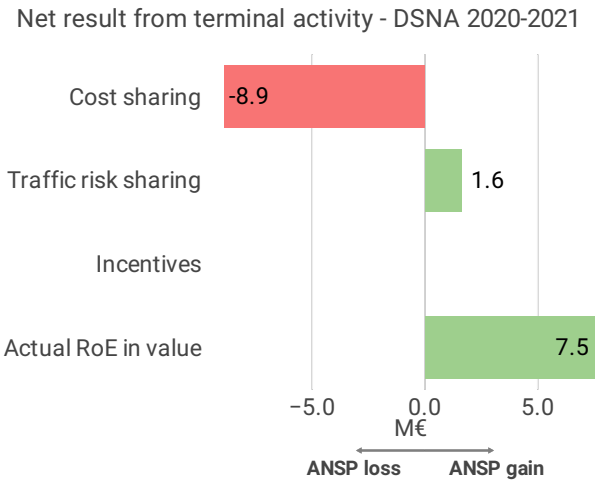
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	-665.0	-1.19
Competent authorities and qualified entities costs	753.8	1.34
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**88.7**	**0.16**

5.4.3 Regulatory result (RR)









Focus on regulatory result

DSNA net loss on activity in the France terminal charging zone 2 in the combined year 2020-2021
DSNA's net loss amounts to -7.3 M€ due to loss of -8.9 M€ from the cost sharing mechanism and gain of +1.6 M€ from the traffic risk sharing mechanism.

DSNA overall regulatory results (RR) for the terminal charging zone 2 activity
Ex-post, the overall RR taking into account the net loss from the terminal activity mentioned above (-7.3 M€) and the actual RoE (+7.5 M€) amounts to +0.2 M€ (0.1% of the terminal revenues). The resulting ex-post rate of return on equity is 0.5%, which is lower than the 17.1% planned in the PP.