PRB | Performance review body of the single european sky

Performance Review Body Monitoring Report

Sweden - 2021

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1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/2423 of 5 December 2022

List of ACCs 2
Malmo ACC
Stockholm ACC

No of airports in the scope of the performance plan:
- **≥80'K** 1
- **<80'K** 0

Exchange rate (1 EUR=)
2017: 9.63311 SEK
2021: 10.1376 SEK

Share of Union-wide:
- **traffic (TSUs) 2021** 2.7%
- **en route costs 2021** 3.6%

Share en route / terminal costs 2021 92% / 8%

En route charging zone(s)
Sweden

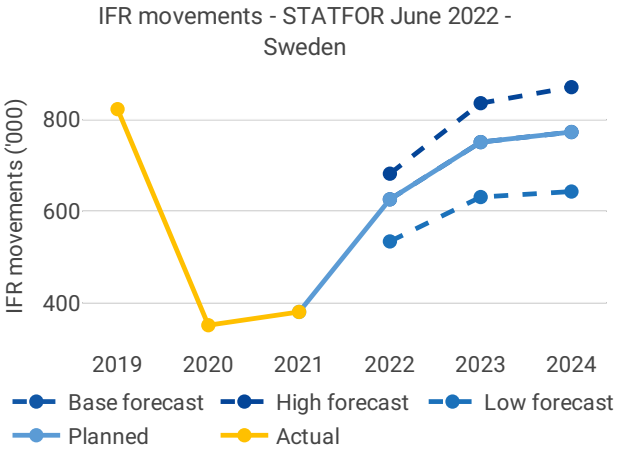
Terminal charging zone(s)
Sweden

Main ANSP
- LFV

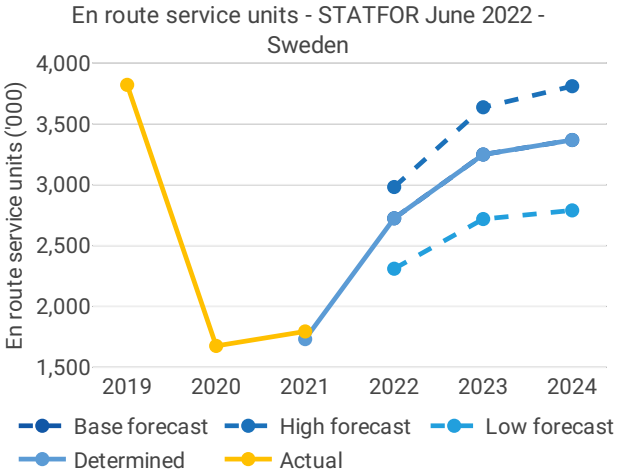
Other ANSPs
- SDATS
- ACR
- ARV - Arvidsjaur
- Swedavia

MET Providers
- SMHI

1.2 Traffic (En route traffic zone)

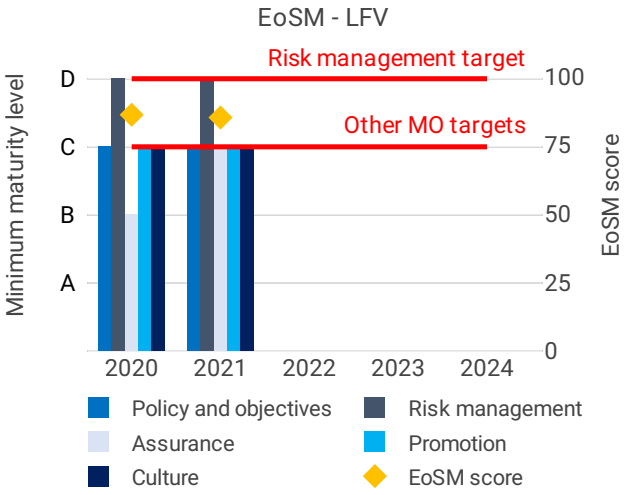


- Sweden recorded 380K actual IFR movements in 2021, +8.3% compared to 2020 (351K).
- Actual 2021 IFR movements represent 46% of the actual 2019 level (823K).



- Sweden recorded 1,795K actual en route service units in 2021, +7.1% compared to 2020 (1,676K).
- Actual 2021 service units represent 47% of the actual 2019 level (3,820K).

1.3 Safety (Main ANSP)



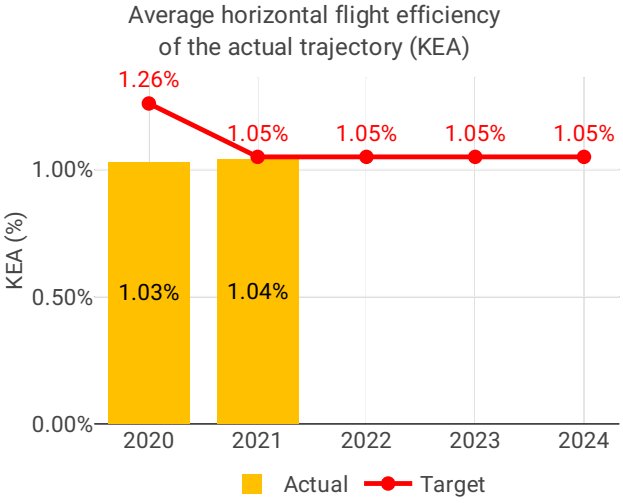
• LFV continued good safety performance in 2021 and maintained the RP3 EoSM targets levels achieved in 2020.

• None of the remaining ANSPs achieved the targets. SDATS needs to improve in only one area, ARV – Arvidsjaur in two areas, whereas ACR needs to improve in three areas.

• Sweden recorded improved performance with respect to safety occurrences, with lower rate of both separation minima infringements and runway incursions relative to 2020. The rate for runway incursions remains above the Union-wide average. The NSA declared that they are unable to discriminate the occurrences with safety impact only.

• LFV should improve its safety management by implementing automated safety data recording systems.

1.4 Environment (Member State)



• Sweden achieved a KEA performance of 1.04%, matching its target, and contributing positively towards achieving the Union-wide target. KEA worsened by 0.01 p.p. compared to 2020.

• The NSA states that in Sweden the airspace is not closed off when the armed forces are shelling training sectors, but the oppor-tunity exists to coordinate flights for fly-through (with some exceptions).

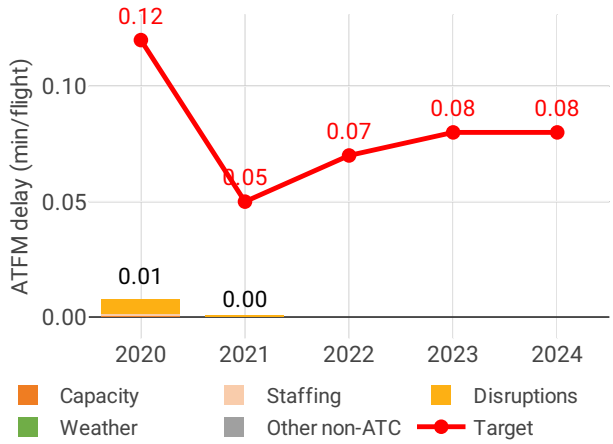
• Both SCR and KEP worsened compared to last year, but remain lower than pre-pandemic levels.

• The share of CDO flights remained constant over the past five years.

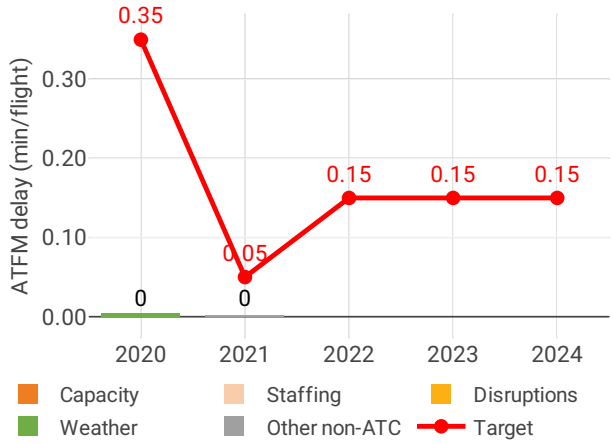
• Additional time in terminal airspace and additional taxi out time further improved in 2021 by 48% and 28% respectively.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



Average arrival ATFM delay per flight by delay groups



• Sweden registered near zero minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.05.

• En route ATFM delays in Sweden were also near zero on average during the past years.

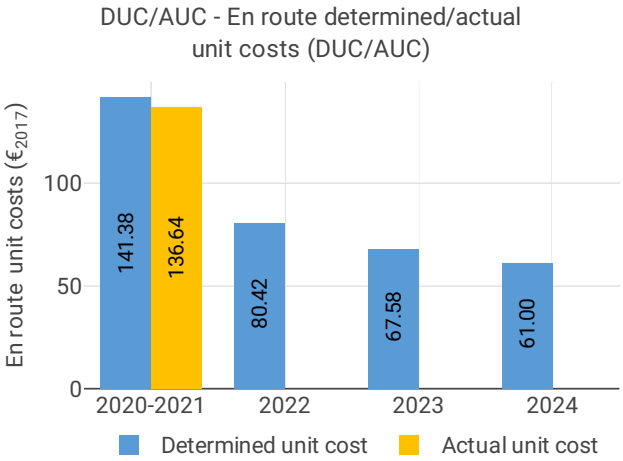
• Traffic recovery in Sweden has continued to be impacted by the airspace closures East of the SES area. Between February and May 2022, Sweden has been one of the five Member States to be the most affected by this and, as a result, 2019 traffic levels are not likely to be reached during RP3. An increase in the number of ATCOs in OPS is planned at both ACCs during RP3.

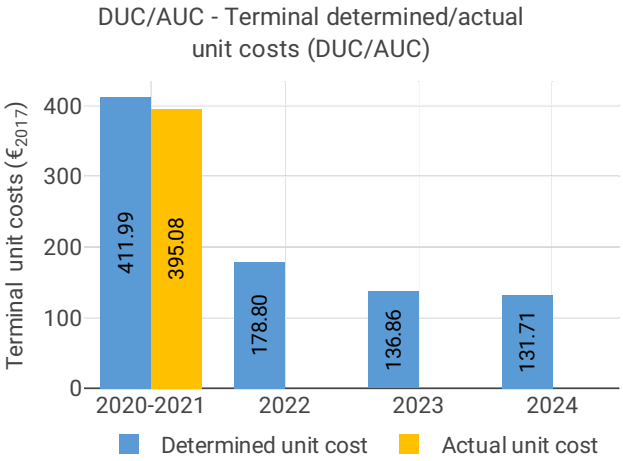
• The share of delayed flights with delays longer than 15 minutes in Sweden decreased by 34.46 p.p. compared to 2020 and was lower than 2019 values.

• The yearly total of sector opening hours in Malmo ACC was 44,622, showing a 7.7% decrease compared to 2020. Sector opening hours are 22.4% below 2019 levels. The yearly total of sector opening hours in Stockholm ACC was 24,520, showing an 11.3% decrease compared to 2020. Sector opening hours are 44.6% below 2019 levels.

• Malmo ACC registered 6.08 IFR movements per one sector opening hour in 2021, being 39.6% below 2019 levels. Stockholm ACC registered 7.36 IFR movements per one sector opening hour in 2021, being 20.6% below 2019 levels.

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





• The en route 2020/2021 actual unit cost of Sweden was 136.64 €2017, -3.4% lower than the determined unit cost (141.38 €2017). The terminal 2020/2021 actual unit cost was 395.08 €2017, -4.1% lower than the determined unit cost (411.99 €2017).

• The en route 2021 actual service units (1,795K) were +3.6% higher than determined (1,732K).

• In 2021, Sweden decreased total costs by -7.6 M€2017 (-3.6%) compared to determined costs. Sweden decreased all cost categories except cost of capital (+0.9 M€2017, or +23%) due to higher inflation rates than planned increasing the value of the pension debt.

• The decrease in total costs was mainly driven by lower other operating costs (-4.7 M€2017, or -7.7%) due to lower maintenance costs and travels, and lower pension costs than planned (-3.4 M€2017, or -8.3%). The NSA did not provide an explanation for the lower pension costs.

• LFV spent 16.8 M€2017 in 2021 related to costs of investments, -2.3% less than determined (17.2 M€2017), due to a delay in the investment plan (induced by the COVID-19 pandemic).

• The en route actual unit cost incurred by users in 2020/2021 was 133.35€, while the terminal actual unit cost incurred by users was 394.68€.

2 SAFETY - SWEDEN

2.1 PRB monitoring

• LFV continued good safety performance in 2021 and maintained the RP3 EoSM targets levels achieved in 2020.

• None of the remaining ANSPs achieved the targets. SDATS needs to improve in only one area, ARV – Arvidsjaur in two areas, whereas ACR needs to improve in three areas.

• Sweden recorded improved performance with respect to safety occurrences, with lower rate of both separation minima infringements and runway incursions relative to 2020. The rate for runway incursions remains above the Union-wide average. The NSA declared that they are unable to discriminate the occurrences with safety impact only.

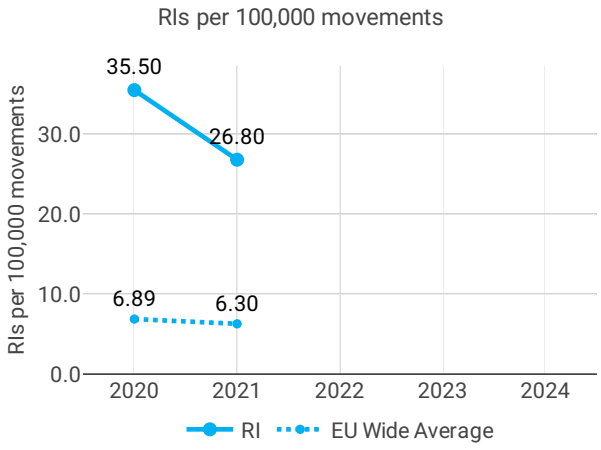
• LFV should improve its safety management by implementing automated safety data recording systems.

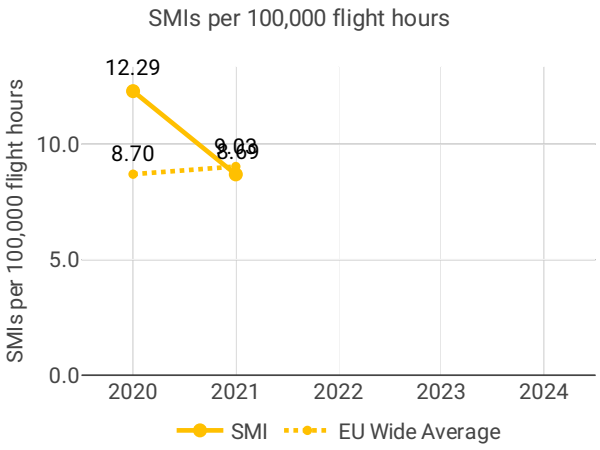
2.2 Effectiveness of Safety Management (EoSM) (KPI#1)

Focus on EoSM

LFV: All five EoSM components of LFV meet already the 2024 target level. ACR: two out of five EoSM components of ACR meet already the 2024 target level. Improvements in the other three components, namely "Safety Culture", "Safety risk management" and "Safety Assurance" are still expected during RP3 to achieve 2024 targets. SDATS: Four out of five EoSM components of SDATS meet already the 2024 target level. Improvements in "Safety Culture"are still expected during RP3 to achieve 2024 targets. AFAB: Four out of five EoSM components of AFAB meet already the 2024 target level. Improvements in "Safety risk management" are still expected during RP3 to achieve 2024 targets. IMPORTANT: EASA/European Commission did not received the verified questionnaire from the NSA on time. This is an important step to receive confirmation that the self-evaluated questionnaire by the ANSP has been actually verified. It should be sent in due time to allow proper and timely drafting of the Monitoring Report.

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





3 ENVIRONMENT - SWEDEN

3.1 PRB monitoring

• Sweden achieved a KEA performance of 1.04%, matching its target, and contributing positively towards achieving the Union-wide target. KEA worsened by 0.01 p.p. compared to 2020.

• The NSA states that in Sweden the airspace is not closed off when the armed forces are shelling training sectors, but the oppor-tunity exists to coordinate flights for fly-through (with some exceptions).

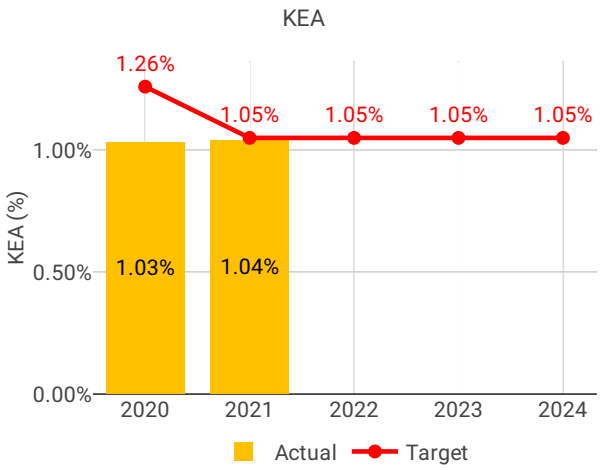
• Both SCR and KEP worsened compared to last year, but remain lower than pre-pandemic levels.

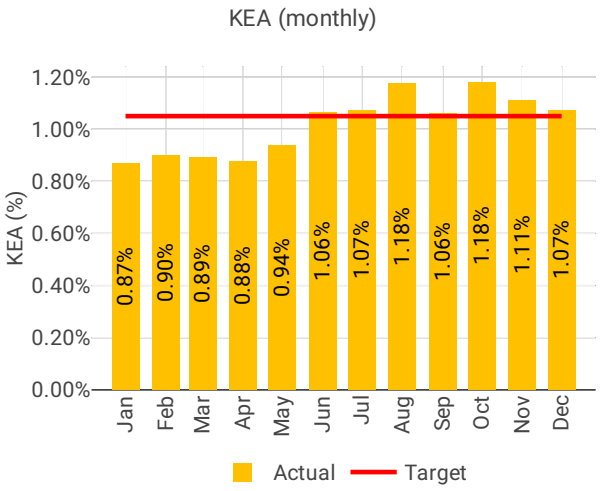
• The share of CDO flights remained constant over the past five years.

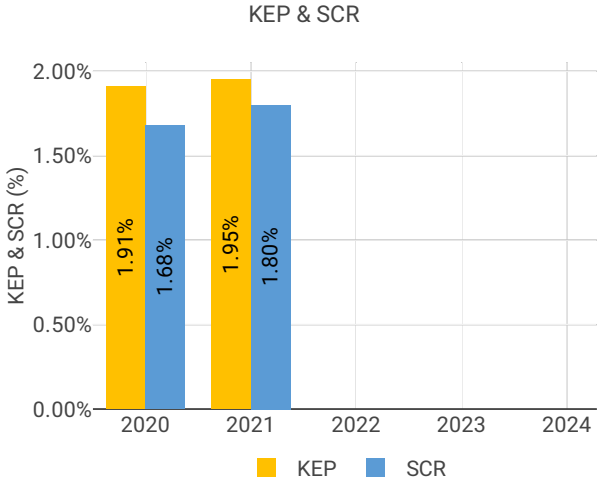
• Additional time in terminal airspace and additional taxi out time further improved in 2021 by 48% and 28% respectively.

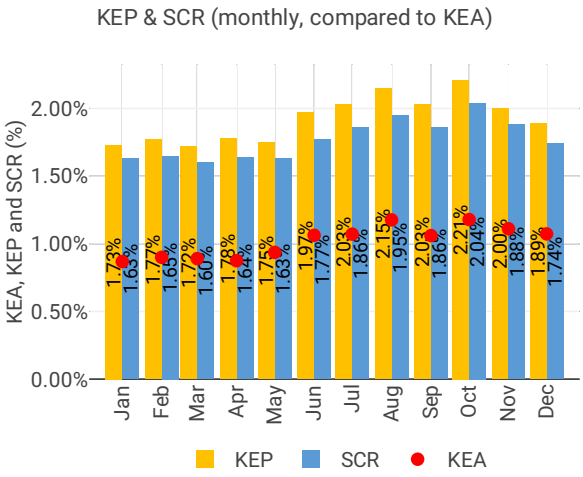
3.2 En route performance

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



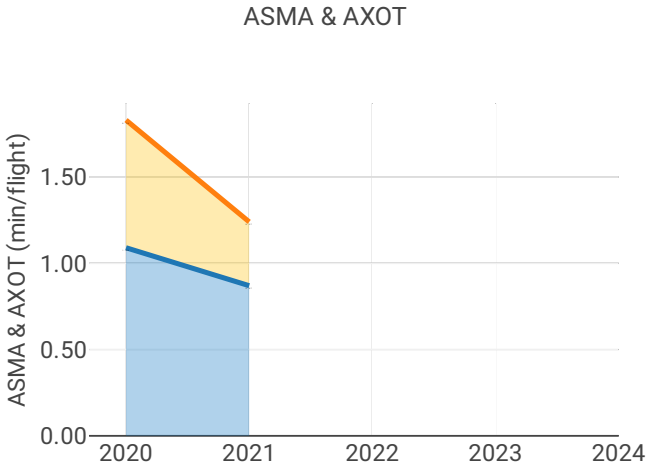


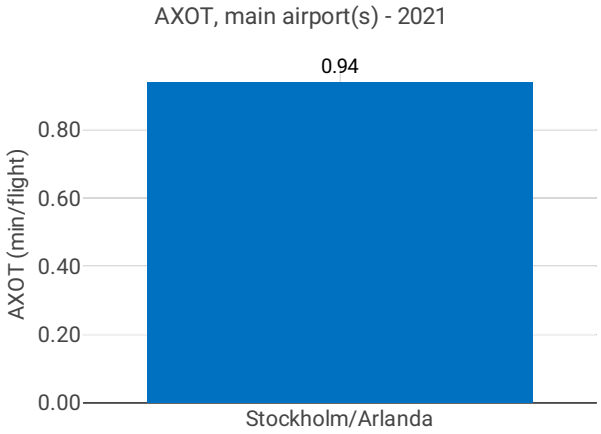


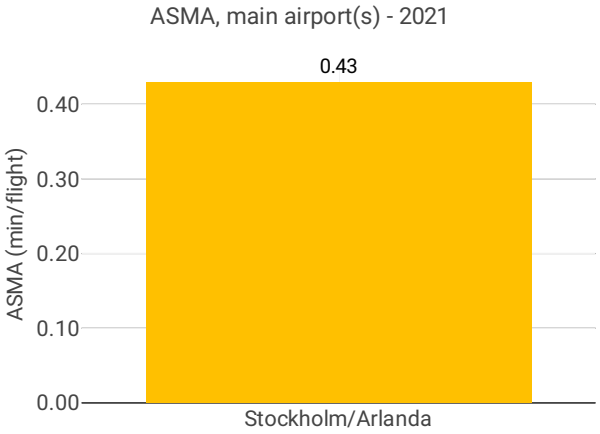


3.3 Terminal performance

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







Focus on ASMA & AXOT

AXOT

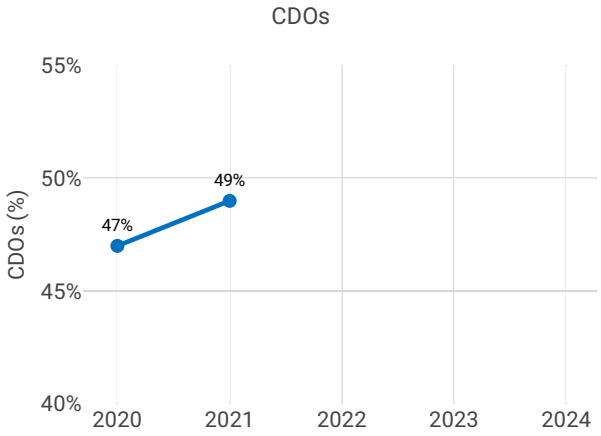
The additional taxi-out times at Stockholm decreased once again (ESSA; 2019: 2.05 min/dep.; 2020: 1.3 min/dep.; 2021: 0.94 min/dep.)
This indicator is significantly affected by the de-icing procedures so it reached almost 2 min/dep in the months of January and December.According to the Swedish monitoring report: *The A-CDM process is active at Stockholm Arlanda airport and is the main tool to control and limit the actual taxitimes for departures. All the stands have individual VTT (Variable Taxi Time) to the different runways and we also make a difference between aircraft turbulence category, as statistics show that heavy aircraft have tendency to taxi slower. The taxitimes (VTT) are monitored on a daily basis and can be modified based on seasonal changes or any other change in the infrastructure at the maneuvering area.
For arrivals, Swedavia have together with Eurocontrol initiated a project (ECRA) in order to get better control over the departure times from domestic airports. This project will lead to better predictability of the ELDT/EIBT (Estimated Landing Time/ Estimated in Block Time) at Stockholm Arlanda, enabling ramp management to plan the stand allocation in the most optimal way. This will avoid excessive waiting time for arrival aircraft at taxiway or apron.

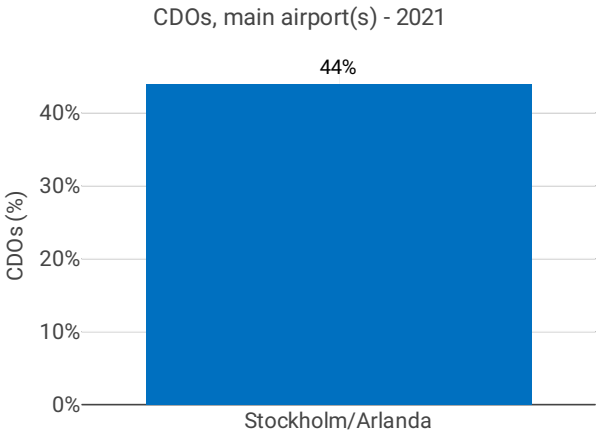
ASMA

The additional time in the terminal area at Stockholm Arlanda was low and very stable around 1.2 min/arr during RP2. The traffic reduction led to an improvement in performance in 2020 and even further in 2021 (ESSA; 2019: 1.15 min/arr.; 2020: 0.83 min/arr.; 2021: 0.43 min/arr.)

Additional times were zero or nearly zero from May to August, rising at the end of the year to reach 1.02 min/arr. in December.

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





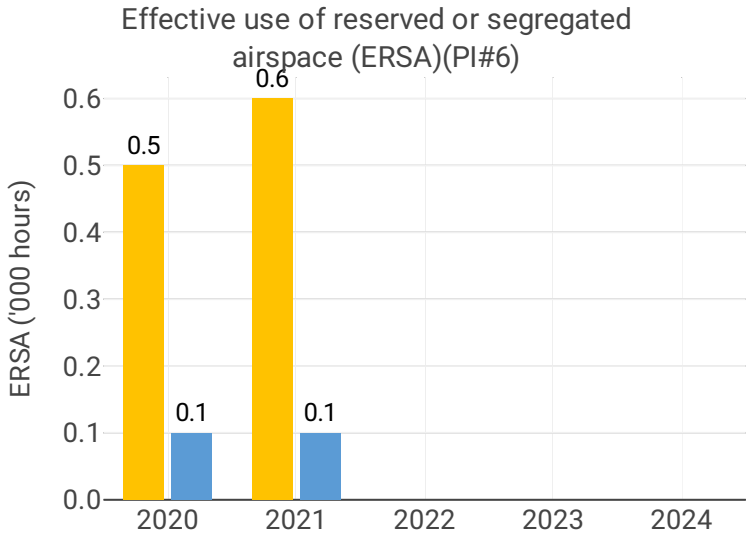
Focus CDOs

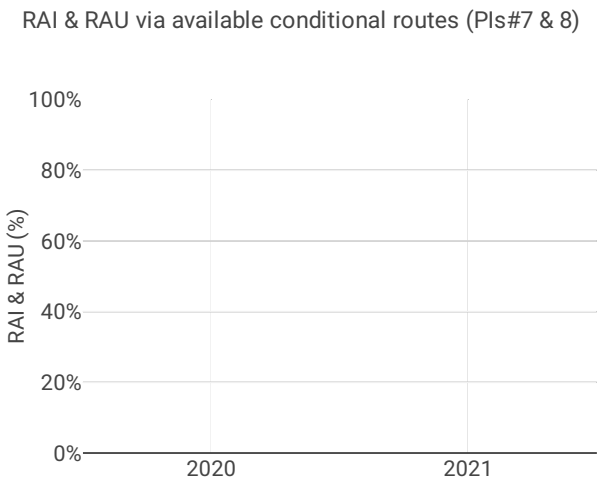
The share of CDO flights at Stockholm (ESSA) increased from 42.5% to 44.1% in 2021 which is above the overall RP3 value in 2021 (30.5%).
From June to September, the monthly values were above 47%.

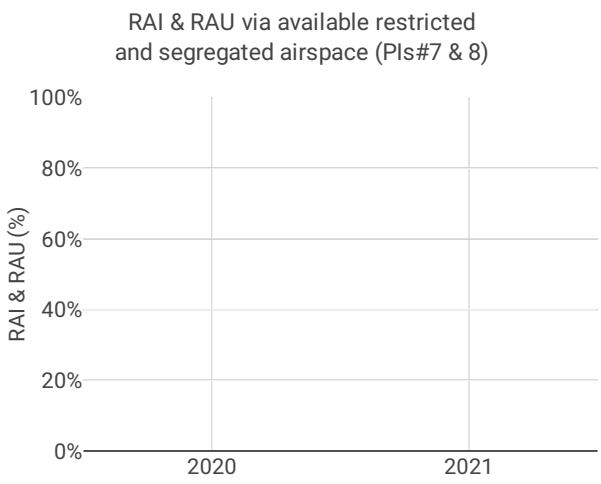
Airport level

	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
Stockholm/Arlanda	1.30	0.94	NA	NA	NA	0.83	0.43	NA	NA	NA	NA	44%	NA	NA	NA

3.4 Civil-Military dimension







Focus on Civil-Military dimension

Update on Military dimension of the plan

FUA has been implemented in Sweden since 1978, before the concept was defined on European level and the benefit is already achieved, therefore its limitations to environmental factors are small.
Sweden has implemented extended FUA to the extent that it doesn't limit the capacity.

Military - related measures implemented or planned to improve capacity

No data available

Initiatives implemented or planned to improve PI#6

During the ASM level 1 meeting, which is held 5-6 times a year, various airspace issues are discussed regularly. Prior to each meeting, LFV level 2 writes a special report to level 1 with follow-up of certain issues, including the number of allocated hours of airspace blocks with a comparison of hours then used. Various problems and measures are discussed when so is deemed necessary by level1, level2 and level3.

Initiatives implemented or planned to improve PI#7

No data available

Initiatives implemented or planned to improve PI#8

No data available

4 CAPACITY - SWEDEN

4.1 PRB monitoring

• Sweden registered near zero minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.05.

• En route ATFM delays in Sweden were also near zero on average during the past years.

• Traffic recovery in Sweden has continued to be impacted by the airspace closures East of the SES area. Between February and May 2022, Sweden has been one of the five Member States to be the most affected by this and, as a result, 2019 traffic levels are not likely to be reached during RP3. An increase in the number of ATCOs in OPS is planned at both ACCs during RP3.

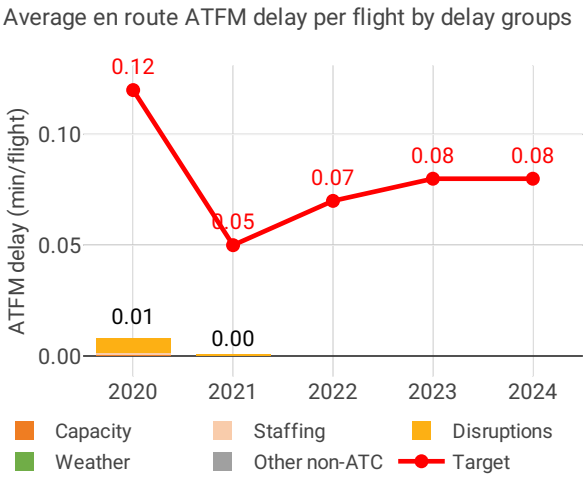
• The share of delayed flights with delays longer than 15 minutes in Sweden decreased by 34.46 p.p. compared to 2020 and was lower than 2019 values.

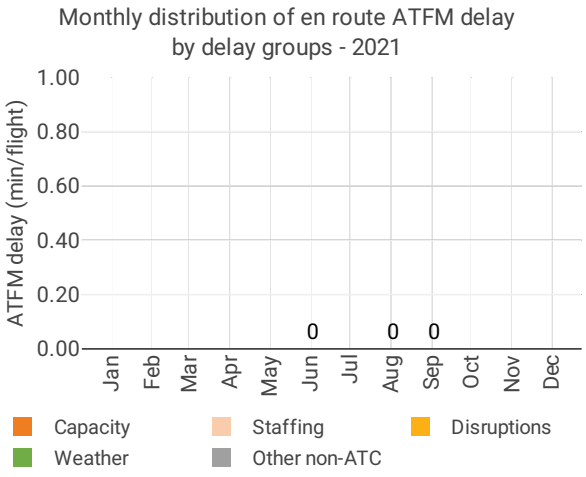
• The yearly total of sector opening hours in Malmo ACC was 44,622, showing a 7.7% decrease compared to 2020. Sector opening hours are 22.4% below 2019 levels. The yearly total of sector opening hours in Stockholm ACC was 24,520, showing an 11.3% decrease compared to 2020. Sector opening hours are 44.6% below 2019 levels.

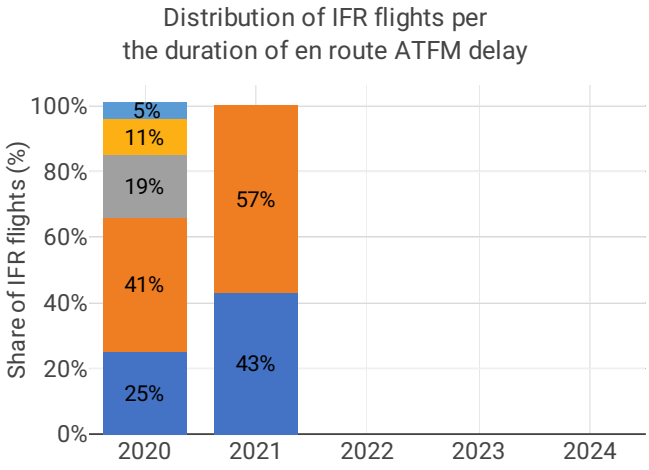
• Malmo ACC registered 6.08 IFR movements per one sector opening hour in 2021, being 39.6% below 2019 levels. Stockholm ACC registered 7.36 IFR movements per one sector opening hour in 2021, being 20.6% below 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)







Focus on en route ATFM delay

Summary of capacity performance

Sweden experienced an increase in traffic from 351k flights in 2020 to 380k flights in 2021, with practicaly zero ATFM delay. However, traffic levels were still substantially below the 823k flights in 2019.

NSA's assessment of capacity performance

Due to low traffic volumes and well functioning systems no delays were registered in 2021

Monitoring process for capacity performance

No data available

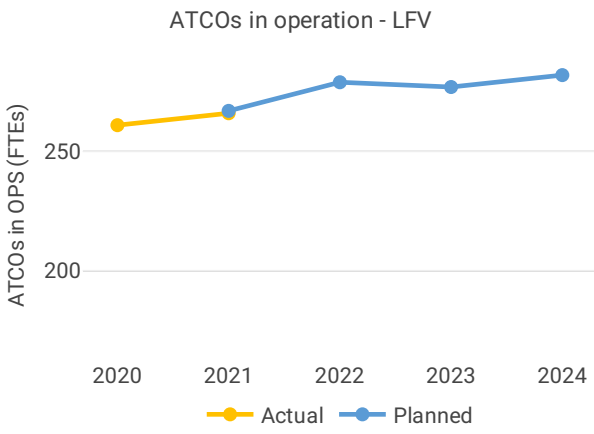
Capacity planning

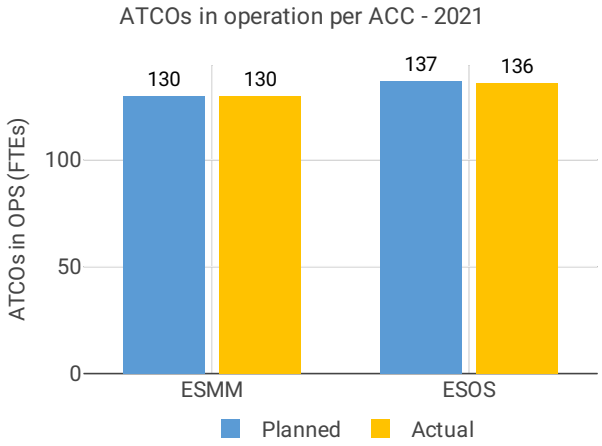
No data available

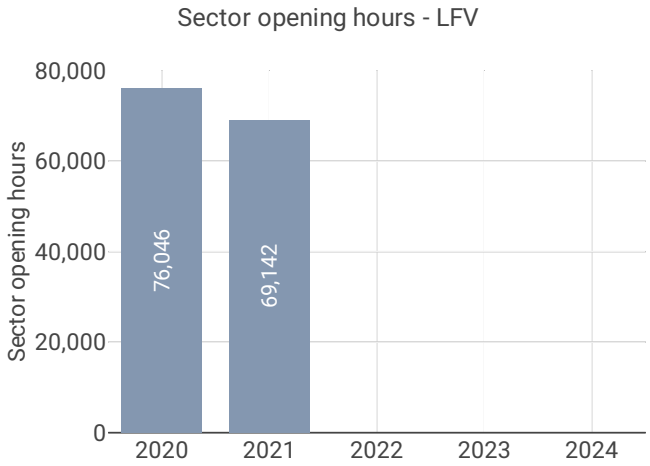
Application of Corrective Measures for Capacity (if applicable)

No data available

4.2.2 Other indicators





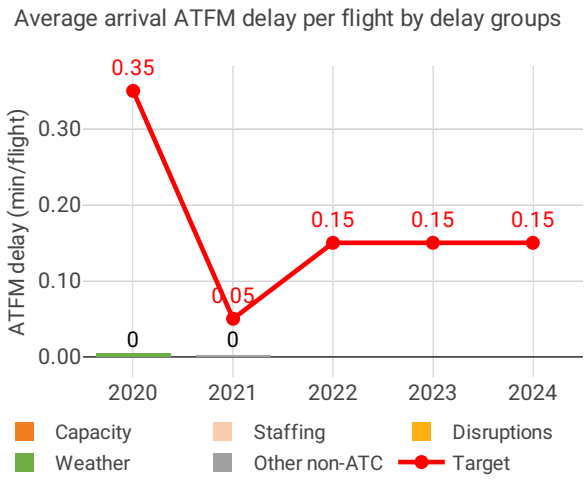


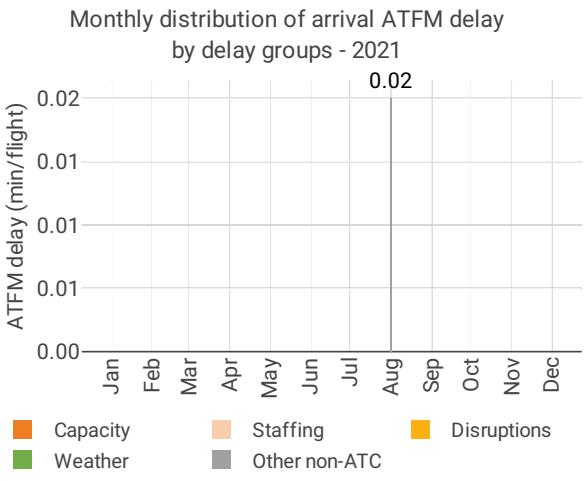
Focus on ATCOs in operations

Malmo ACC: Sweden has previously reported 147,5 FTE ATCOs for 2020 in ESMM ACC.**Stockholm ACC**: Sweden has previously reported 143 FTE ATCOs for 2020 in ESOS ACC.The number of ATCOs are calculated as total ATCOs reduced with ATCOs on other duties, outside the opsroom. The number of FTEs reported are december each year (not the average FTE over the year of 2018 which was earlier reported). Overtime and sickness leave is not included. The number of additional ATCOs in OPS, includes 13 ATCOs that are planned to be converted to En Route from the control-tower of Malmö airport (3 ATCOs 2021, 2 2022, 8 2023).

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)





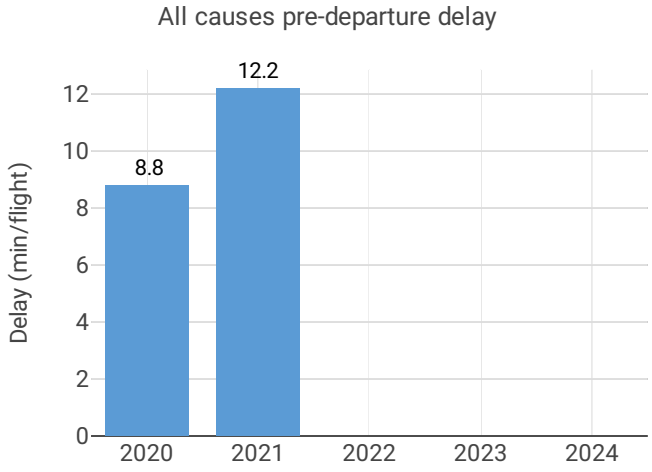
Focus on arrival ATFM delay

Sweden only has Stockholm (ESSA) airport subject to RP3 monitoring for which the APDF is successfully established and the monitoring of the capacity indicators can be performed.
Traffic at this airport in 2021 was still 61% lower than the 2019 levels, with a low recovery of only 6% of the traffic compared to 2020.
Average arrival ATFM delays in 2021 was 0.00 min/arr, same as in 2020.
ATFM slot adherence has slightly deteriorated (2021: 97.9%; 2020: 98.2%).

Only 77 minutes of arrival ATFM delay were registered in 2021 at Stockholm, in August, resulting in an average of 0 min/arr for the year. According to the Swedish monitoring report this was due to *low traffic volumes and well functioning systems.*

The provisional national target on arrival ATFM delay in 2021 was met.
In accordance with Article 3 (3) (a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

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



Airport level

	Avg arrival ATFM delay (KPI#2)				Slot adherence (PI#1)			
Airport name	2020	2021	2022	2023	2020	2021	2022	2023
Stockholm/Arlanda	0	0	NA	NA	98.2%	97.9%	NA%	NA%

	ATC pre departure delay (PI#2)				All causes pre departure delay (PI#3)			
Airport name	2020	2021	2022	2023	2020	2021	2022	2023
Stockholm/Arlanda	0.06	0.13	NA	NA	8.3	11.5	NA	NA

Focus on performance indicators at airport level

ATFM slot adherence

With the drastic drop in traffic, regulated departures from Stockholm virtually disappeared until July 2021. Stockholm's ATFM slot compliance was 97.9%, slightly worse than the performance in 2020 (98.2%). With regard to the 2.1% of flights that did not adhere, 0.6% was early and 1.6% was late. The Swedish monitoring report adds: *The ATC provider LFV reports the actual performance which is monitored by the NSA. There is no present risk at the awareness of the NSA that there will be a violation to EU 255/2010.*

ATC pre-departure delay

The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Stockholm. The quality of the airport data reported by ESSA has improved after the COVID crisis and it is possible again to calculate this indicator.
Unlike at most airports, at Stockholm the annual value has increased with respect to 2019 (ESSA: 2019: 0.09 min/dep; 2021: 0.13 min/dep). At monthly level, in general figures have been significantly higher than in 2019, despite the lower traffic.

All causes pre-departure delay

The total (all causes) delay in the actual off block time at Sweden increased in 2021 (ESSA: 2020: 8.34 min/dep.; 2021: 11.48 min/dep.), with the highest delays observed in January and December.

5 COST-EFFIENCY - SWEDEN

5.1 PRB monitoring

• The en route 2020/2021 actual unit cost of Sweden was 136.64 €2017, -3.4% lower than the determined unit cost (141.38 €2017). The terminal 2020/2021 actual unit cost was 395.08 €2017, -4.1% lower than the determined unit cost (411.99 €2017).

• The en route 2021 actual service units (1,795K) were +3.6% higher than determined (1,732K).

• In 2021, Sweden decreased total costs by -7.6 M€2017 (-3.6%) compared to determined costs. Sweden decreased all cost categories except cost of capital (+0.9 M€2017, or +23%) due to higher inflation rates than planned increasing the value of the pension debt.

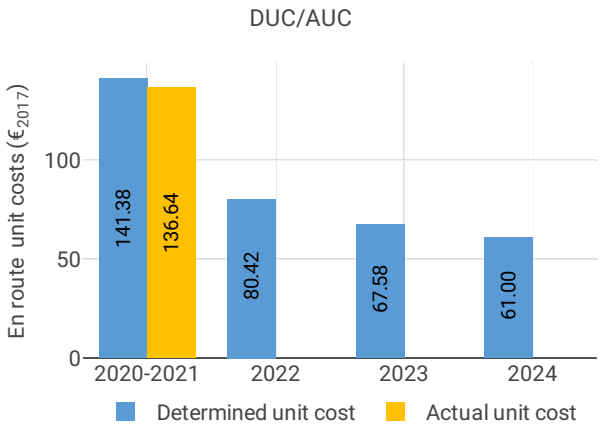
• The decrease in total costs was mainly driven by lower other operating costs (-4.7 M€2017, or -7.7%) due to lower maintenance costs and travels, and lower pension costs than planned (-3.4 M€2017, or -8.3%). The NSA did not provide an explanation for the lower pension costs.

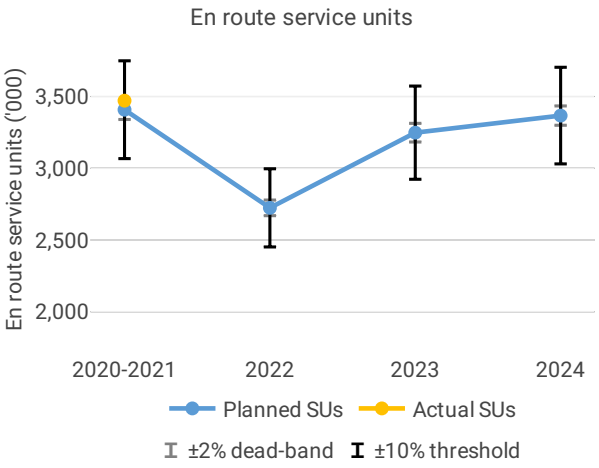
• LFV spent 16.8 M€2017 in 2021 related to costs of investments, -2.3% less than determined (17.2 M€2017), due to a delay in the investment plan (induced by the COVID-19 pandemic).

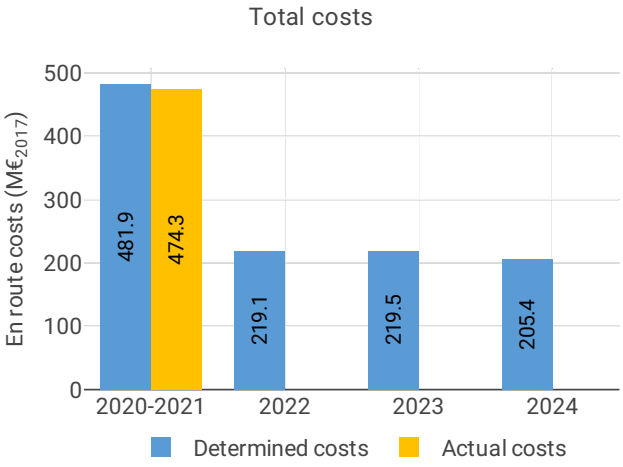
• The en route actual unit cost incurred by users in 2020/2021 was 133.35€, while the terminal actual unit cost incurred by users was 394.68€.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)

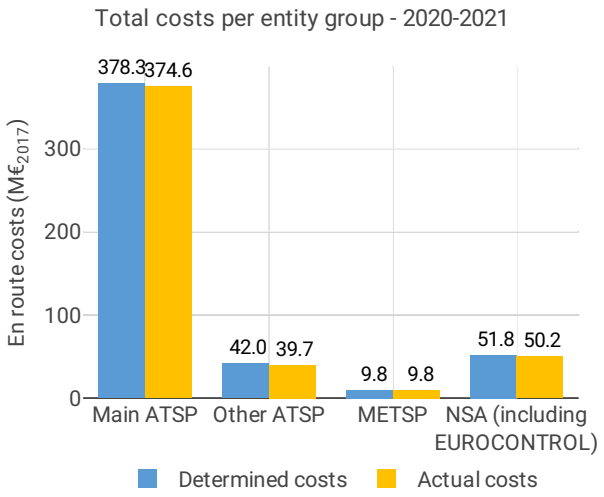


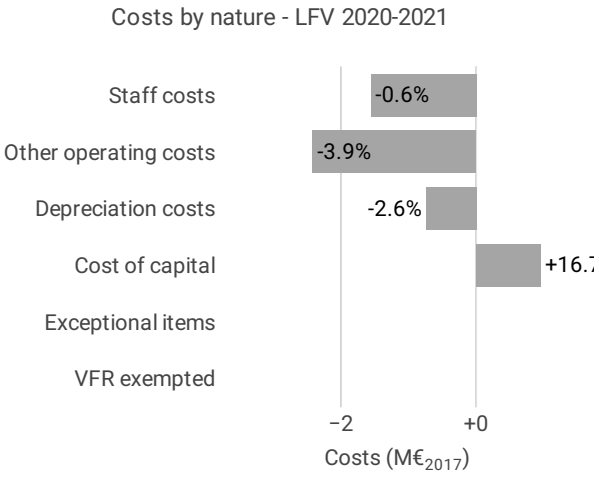




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	496	NA	NA	NA
Determined costs	502	240	245	232
Difference costs	-6	NA	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	4.8%	2.2%	1.7%
Determined inflation index	NA	112.4	114.9	116.9
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 -3.4% (or -45.65 SEK2017, -4.74 €2017) lower than the planned DUC. This results from the combination of higher than planned TSUs (+1.8%) and lower than planned en route costs in real terms (-1.6%, or-72.8 MSEK2017, -7.6 M€2017).

En route service units

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

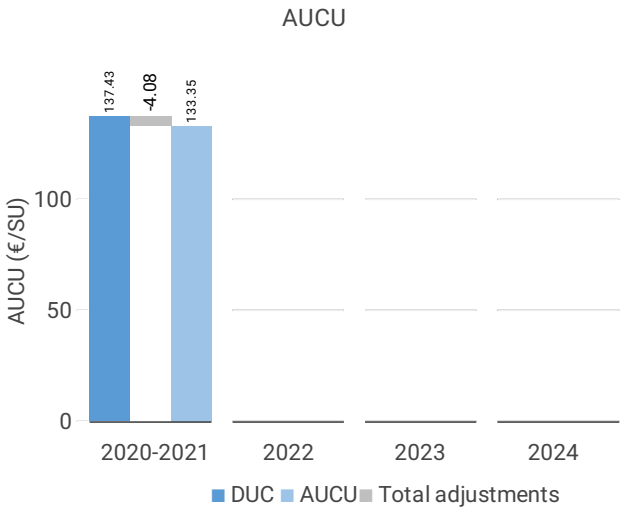
En route costs by entity

Actual real en route costs are -1.6% (-7.6 M€2017) lower than planned. This is driven by the main ANSP, LFV (-1.0%, or -3.8 M€2017), other ANSPs (-5.4%, or -2.3 M€2017) and NSA/EUROCONTROL (-3.0%, or -1.6 M€2017), while the actual costs of the MET service provider are close to the determined costs (+0.6%, or +0.1 M€2017).

En route costs for the main ANSP at charging zone level

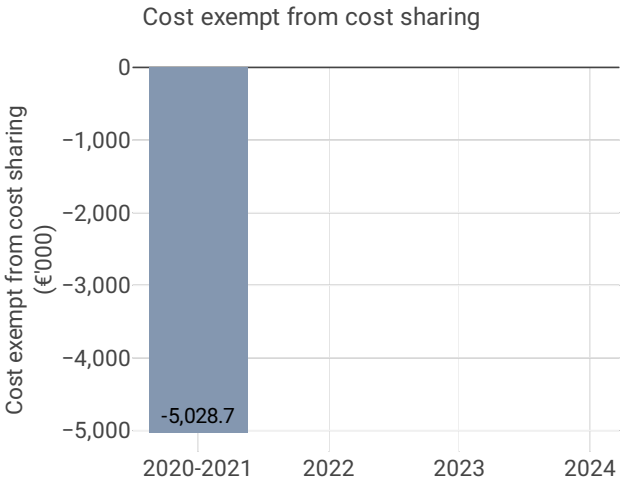
The lower than planned en route costs in real terms for LFV in 2020-2021 reflect a combination of:
- slightly lower staff costs (-0.6%); due to lower than planned pension costs. In addition, "staff costs were reduced by the revenues for staff participating in projects or other parts not financed by en route charges";
- lower other operating costs (-3.9%); "mainly due to lower costs for maintaining the systems and pandemic effects of less travelling and consultants";
- lower depreciation costs (-2.6%); reflecting "delayed investments as a result of the pandemic and lack of staff"; and,
- significantly higher cost of capital (+16.7%); linked with a higher interest rate on debt used to compute the cost of capital.

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



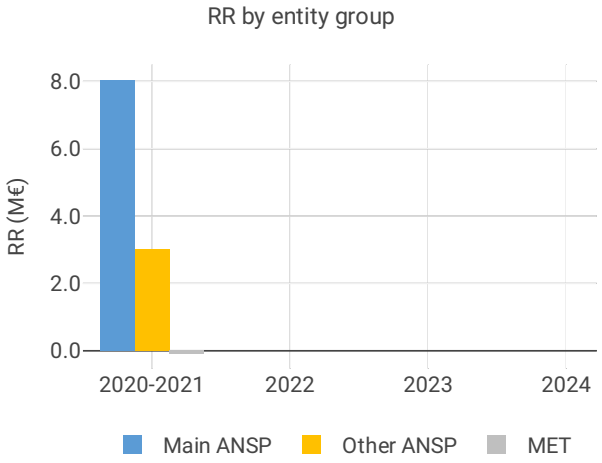
AUCU components (€/SU) – 2020-2021

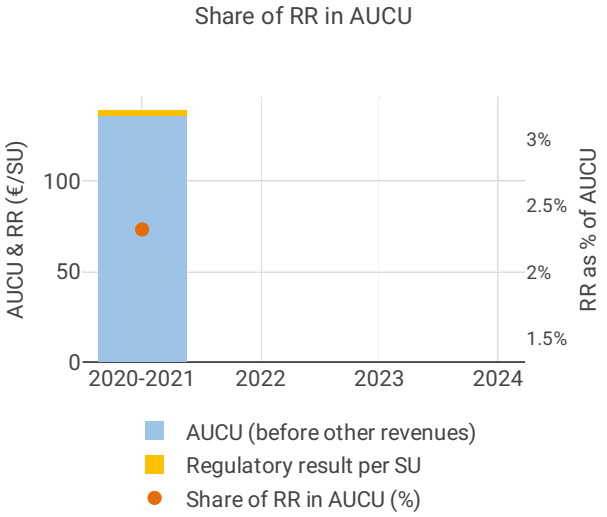
Components of the AUCU in 2020-2021	€/SU
DUC	**137.43**
Inflation adjustment	0.57
Cost exempt from cost-sharing	-1.45
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.33
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-2.87
Application of lower unit rate	0.00
Total adjustments	-4.08
AUCU	**133.35**
AUCU vs. DUC	**-3.0%**

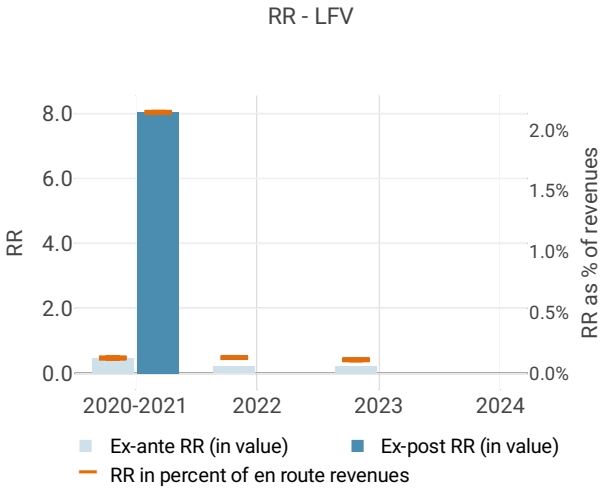


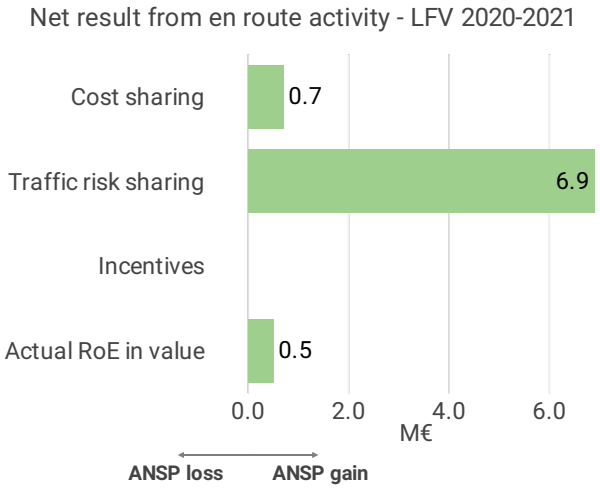
Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	-748.9	-0.22
Competent authorities and qualified entities costs	-128.6	-0.04
Eurocontrol costs	-1,359.2	-0.39
Pension costs	-2,791.9	-0.80
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-5,028.7**	**-1.45**

5.2.3 Regulatory result (RR)









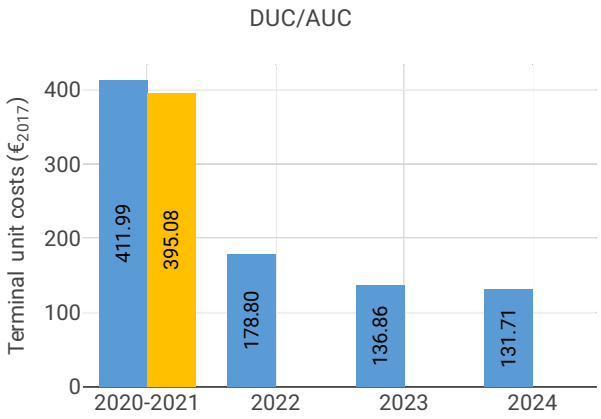
Focus on regulatory result

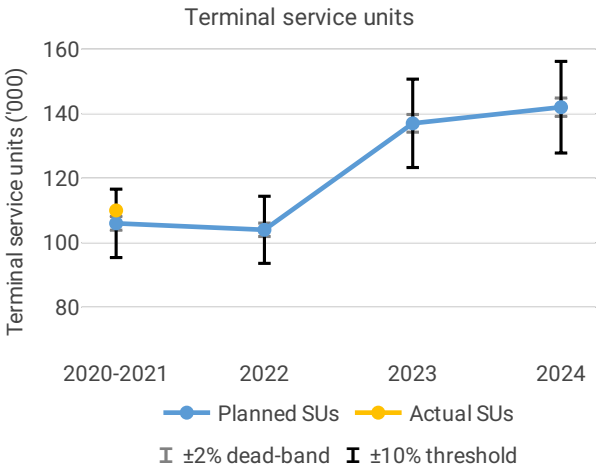
LFV net gain on en route activity in the Sweden charging zone in the combined year 2020-2021
LFV generated a net gain of +76.5 MSEK, as a combination of a gain of +6.9 MSEK arising from the cost sharing mechanism and a gain of +69.6 MSEK arising from the traffic risk sharing mechanism.

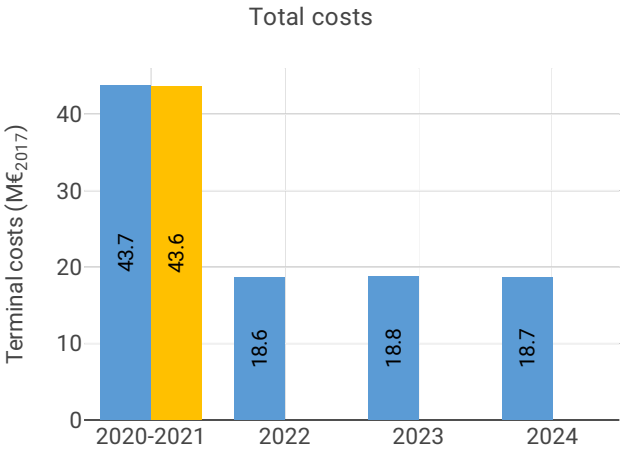
LFV overall regulatory results (RR) for the en route activity
Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+76.5 MSEK) and the actual RoE (+5.1 MSEK) amounts to +81.6 MSEK (2.1% of the en route revenues). The resulting ex-post rate of return on equity is 7.6%, which is higher than the 0.5% planned in the PP.

5.3 Terminal charging zone

5.3.1 Unit cost (KPI#1)

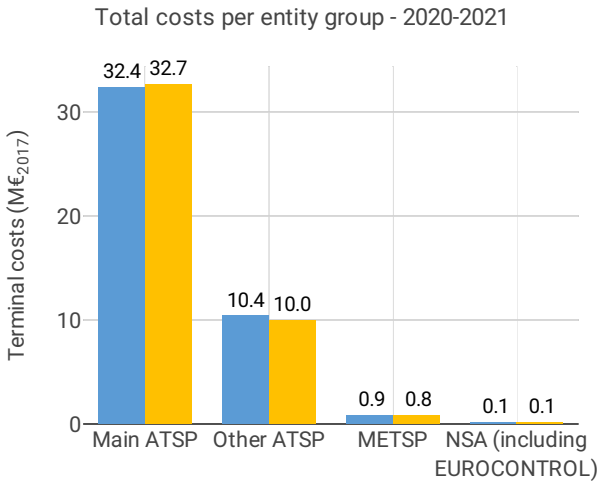


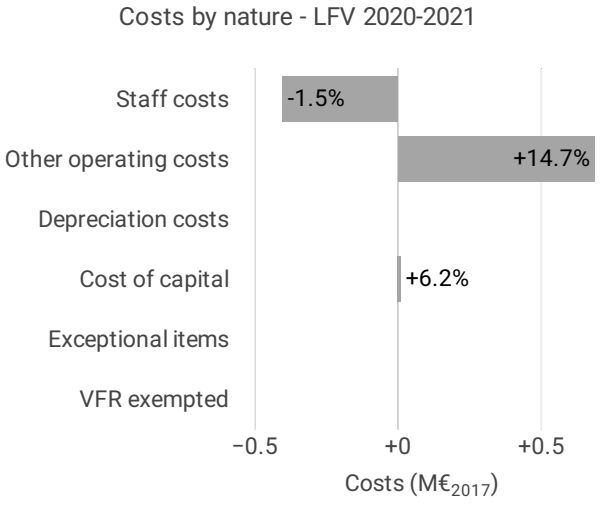




Actual and determined data

Total costs - nominal (M€)	2020-2021	2022	2023	2024
Actual costs	46	NA	NA	NA
Determined costs	46	21	21	22
Difference costs	0	NA	NA	NA
Inflation assumptions	**2020-2021**	**2022**	**2023**	**2024**
Determined inflation rate	NA	4.8%	2.2%	1.7%
Determined inflation index	NA	112.4	114.9	116.9
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

The AUC was -4.1% (or -162.86 SEK2017, -16.91 €2017) lower than the planned DUC resulting from the combination of higher than planned TNSUs (+3.9%) and slightly lower than planned terminal costs in real terms (-0.4%, or -1.6 MSEK2017, -0.2 M€2017).

Terminal service units

The difference between actual and planned TNSUs (+3.9%) falls outside the ±2% dead band. Hence the resulting additional terminal revenue is shared between the ANSPs and airspace users, with the main ANSP (LFV) retaining an amount of 8.4 MSEK (0.8 M€).

Terminal costs by entity

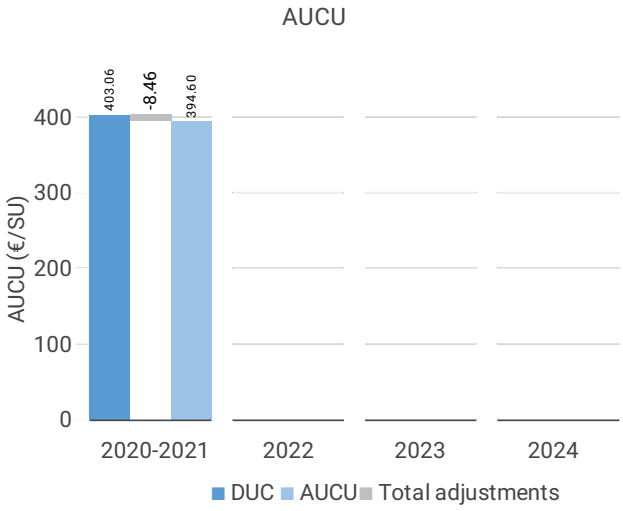
Actual real terminal costs are slightly lower than planned (-0.4% or -0.2 M€2017). This is driven by the other ANSP, Swedavia (-3.8%, or -0.4 M€2017) and MET SP (-7.7%, or -0.1 M€2017), while the actual costs of the main ANSP, LFV are slightly higher than planned (+0.9%, or +0.3 M€2017). NSA costs are close to the planned costs (-0.5%).

Terminal costs for the main ANSP at charging zone level

The slightly higher than planned terminal costs in real terms for LFV in 2020-2021 reflect a combination of:

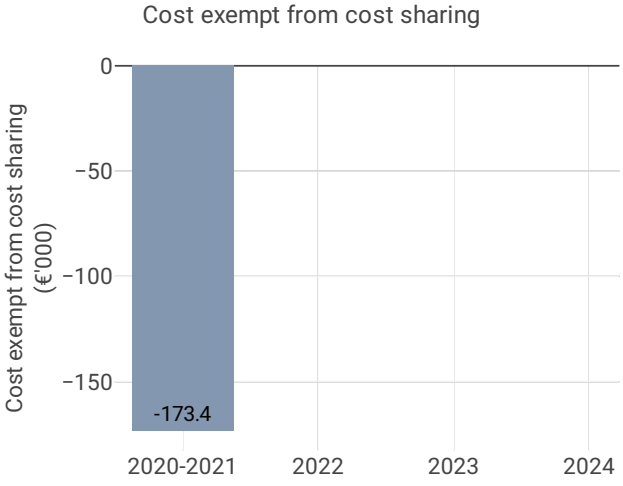
- lower staff costs (-1.5%); due to lower than planned pension costs. In addition, "staff costs were reduced by the revenues for staff participating in projects or other parts not financed by terminal charges";
- significantly higher other operating costs (+14.7%); mainly due to higher training costs;
- no depreciation costs are reported for LFV since these costs are fully borne by the other ANSP (Swedavia, airport operator) owning the CNS infrastructure at Arlanda;
- nevertheless, LFV reports the cost of capital (computed on costs exempt from cost sharing from RP2), which turned out higher than planned (+6.2%); linked with a higher interest rate on debt used to compute the cost of capital.

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



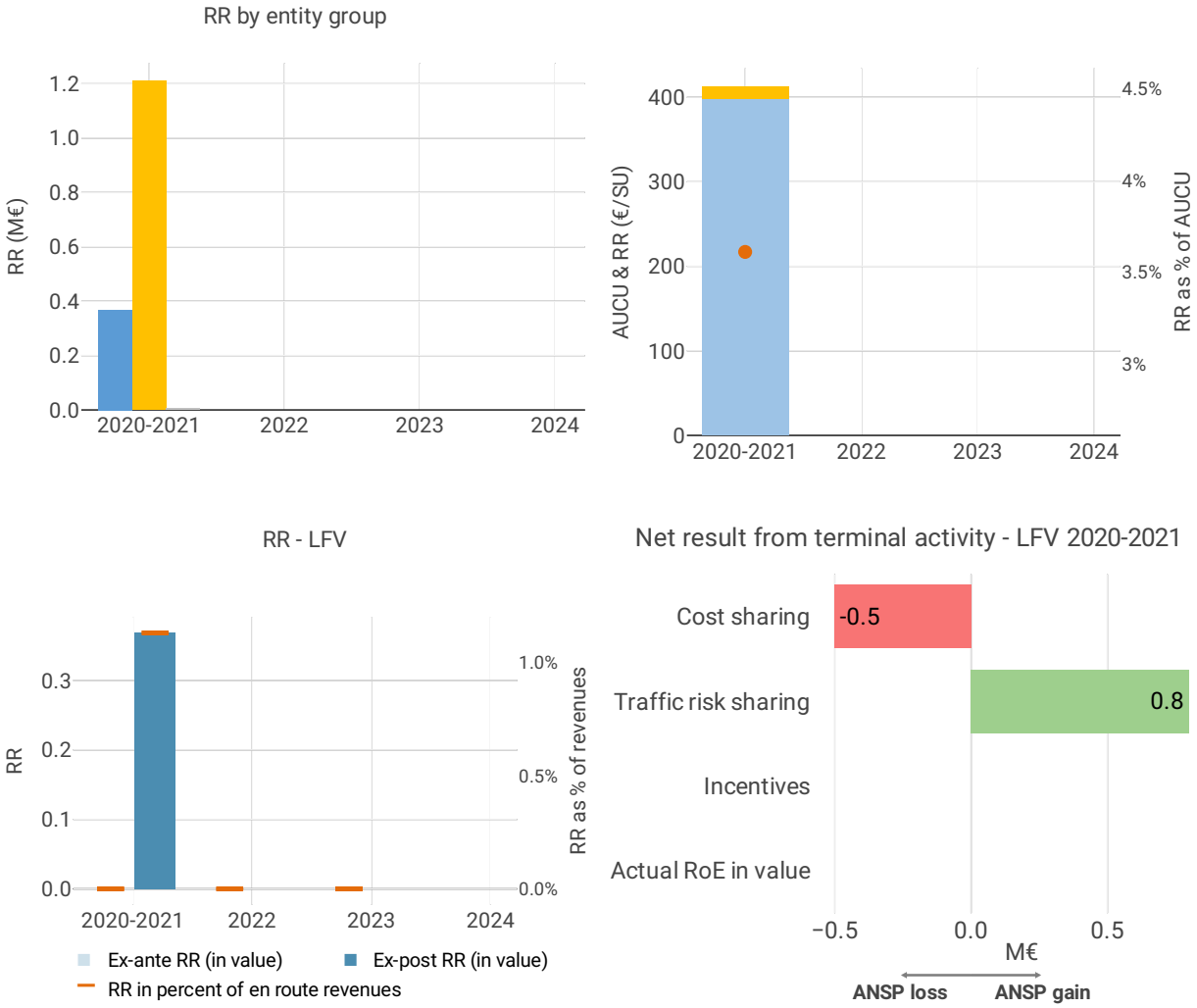
AUCU components (€/SU) – 2020-2021

Components of the AUCU in 2020-2021	€/SU
DUC	**403.06**
Inflation adjustment	1.91
Cost exempt from cost-sharing	-1.57
Traffic risk sharing adjustment	-5.11
Traffic adj. (costs not TRS)	-0.33
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	-3.37
Application of lower unit rate	0.00
Total adjustments	-8.46
AUCU	**394.60**
AUCU vs. DUC	**-2.1%**



Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	43.9	0.40
Competent authorities and qualified entities costs	-0.4	0.00
Eurocontrol costs	0.0	0.00
Pension costs	-216.8	-1.97
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	**-173.4**	**-1.57**

5.3.3 Regulatory result (RR)



Focus on regulatory result

LFV net gain on terminal activity in the Sweden-Arlanda terminal charging zone in the combined year 2020-2021

LFV generated a net gain of +3.8 MSEK (+0.4 M€), as a combination of a loss of -4.6 MSEK arising from the cost sharing mechanism and a gain of +8.4 MSEK arising from the traffic risk sharing mechanism.

LFV overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR is equal to the net gain from the terminal activity mentioned above and amounts to +3.8 MSEK (1.1% of the terminal revenues). The resulting ex-post rate of return on equity is 10.5%, which is higher than the 0.0% RoE planned in the PP.