PRB | Performance review body of the single european sky

PRB assessment of RP3 performance plans

Annex I – Technical guide to the RP3 assessment factbooks

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Introduction to this document

1 This document describes the different sections of the RP3 Assessment factbooks, the report used by the Performance Review Body (PRB) to support the assessment and revision of national or FAB draft performance plans as required by Chapter IV of Commission Implementing Regulation (EU) 2019/317, hereafter referred to as "the Regulation".

2 The sections of the factbooks and the assessment approach were designed by KPA Task Forces including members of the Commission, the PRB and Eurocontrol. Weekly meetings were held from May to August 2019 for each of the key performance areas (KPAs).

3 The aim of this document is to explain how the tool used is organised and what information, figures and tables are shown.

Presentation conventions

4 Use and interpretation of check marks (ticks, crosses, warning symbols):

	The check is passed, or the answer to the question is yes, or the result is in the range of expected values, or there is no particular issue to be mentioned.
	The check is not passed, or the answer to the question is no.
	Face value, the check is passed, but possibly due to the use of assumptions that do not seem adequate, or the result is outside the range of expected values.
n/a	The section, the answer or the specific analysis is not applicable since it is not relevant in the specific draft performance plan.

5 Grey text boxes are text areas including factual analysis developed by the PRB and Eurocontrol.

6 Green text boxes are text areas that summarise the PRB conclusions/recommendations.

7 Text in quotation marks (“ ”) indicates direct quotes from the draft performance plan.

I. Scope

8 This section of the factbook provides information on:

- The version of the draft performance plan used to perform the assessment;
- The relative weight of a Member State in the Single European Sky (SES) area, calculated as its share in the total flight-hours and its share in total costs (box at the top-right of the sheet);
- The FAB membership, the list of air navigation service providers (ANSPs) and other entities (as per Article 1(2)) of Commission implementing Regulation (EU) 2019/317);
- For each charging zone, the name of the zone, the number of airports (for terminal charging zones) and additional information on whether market conditions, simplified charging schemes and modulation of charges are applicable;
- The average cost allocation between en route and terminal over RP3;
- Information on whether there were some changes in the charging zones compared to the RP2 scope;
- The "Comparator group" that the State belongs to as per Article 7 of the Commission implementing decision (EU) 2019/903 together with the other members of the group;
- The national currency and the 2017 exchange rate used for the draft performance plans.

II. PRB Assessment

9 The PRB assessment sheet provides a summary of the PRB's assessment for each key performance area. This includes a table outlining the draft targets, followed by a green box for the PRB to provide its assessment.

10 Each section presents a tick, which is green if the PRB advises to approve the target (red if not to approve).

III. PRB Recommendations

11 A section with a green text box for the PRB to enter its overall recommendations, taking into account the assessment made in the four KPAs (safety, environment, capacity, and cost-efficiency).

1 Safety

12 Most Member States submitted individual performance plans. However, FABEC submitted a FAB-level performance plan which was assessed at the FAB level for the purposes of the performance and charging Regulation. However, considering that the EoSM targets are set at the ANSPs level, safety analysis was conducted at a Member State level and ANSP level for MUAC, and not at FAB level.

1.1 Summary of safety key data and assessment results

13 This worksheet provides a summary of key data related to the safety KPA. In particular, it presents:

- The effectiveness of safety management (EoSM) targets set at the level of the ANSPs.
- The measures undertaken by the Member State and the ANSP in order to achieve the targets.
- The approach taken by the ANSP and the Member State to address the interdependencies between safety and other KPAs.
- The description of change management procedures and transition plans.

14 Each consecutive section provides the PRB's conclusions with respect to the above points of assessment.

1.1.1 Target for EoSM for ANSPs

15 The section summarises the conclusions regarding the EoSM targets for RP3. It indicates if a Member State has provided the EoSM targets for each relevant ANSP for each year in RP3 and if the EoSM target at the end of RP3 are complaint with the Union-wide targets set by Commission Implementing Decision (EU) 2019/903.

1.1.2 Measures planned to reach the targets

16 This section summarises conclusions regarding assessments of relevancy and sufficiency of the measures that the Member State plans to implement to achieve the RP3 targets. Measures are relevant at a national level, i.e. for both ANSPs and at the Member State level (for NSAs).

1.1.3 Interdependencies and trade-offs

17 This section summarises the conclusions regarding the approach taken by a Member State to address the interdependencies and trade-offs between safety and needed developments on other KPAs.

1.1.4 Change management

18 This section summarises the conclusions regarding the application of change management procedures by a Member State for major airspace changes and their impact on the network performance.

1.1.5 PRB Conclusions

19 This section summarises the final conclusions about the assessment of the draft performance plan in safety area. It provides the justification for the PRB decision based on the arguments derived from above subsections.

1.2 Target for EoSM for ANSPs and measures

20 This worksheet presents the EoSM targets for each management objective for each year of the RP3 period.

1.2.1 Target for EoSM for ANSPs and associated measures

21 The targets (presented in the factbook as in Figure 1), are expected to be set for each ANSP relevant under the Charging and Performance Scheme individually.

		2020 Target	2021 Target	2022 Target	2023 Target	2024 Target	RP3 Union-wide targets consistent
ENAIRE	Safety policy and objectives	C	C	C	C	C	✔
	Safety risk management	C	C	C	C	D	✔
	Safety assurance	C	C	C	C	C	✔
	Safety promotion	C	C	C	C	C	✔
	Safety culture	C	C	C	C	C	✔

Figure 1: Example of EoSM targets.

22 The green tick at the right hand side of the table indicates that the targets in the last year of RP3 are in accordance with Union-wide targets for each management objectives (MO).

23 The following section provides explanation of the Member State's approach concerning the targets and the measures to achieve the RP3 targets. The PRB assessment aims to verify if the described measures are **relevant** and **sufficient** to allow attaining the targets. The measures are considered **relevant** if they apply to management objectives that require improvement, and are suitable considering their safety levels. The measures are considered **sufficient** if they are appropriate to the effort required to improve the maturity levels from the start of RP3 until the Union-wide targets are planned to be reached. The measures may be provided at the ANSP and NSA levels i.e. at national level.

1.3 Interdependencies, and Change management practices

1.3.1 Interdependencies and trade-offs

24 This section aims to describe the approach the Member State takes to address the interdependencies and trade-offs with safety and others KPAs. The Member States are expected to declare what assumptions were used to assess the trade-off between safety and other KPAs in case of changes are needed to be implemented to reach targets on other KPAs: capacity, environment and cost-efficiency. Additionally, the role of State oversight of such activities is also examined.

1.3.2 Change management practices

25 This section addresses the approach the Member States adopt to manage the major implementation into the ATM Functional Systems with special focus on the impact on network performance. The approach may be described at the ANSP and at the State level. The change management procedures or transition plans, compliant with the Commission Implementing Regulation (EU) 2017/373, are considered sufficient to ensure that the implementation that minimises the negative impact on the network performance.

2 Environment

26 Most Member States submitted individual performance plans. However, FABEC submitted a FAB level performance plan, which was assessed at the FAB level for the purposes of the Performance and Charging Regulation. Nonetheless, at Member State level and ANSP level for MUAC, analysis was performed to fully explore the performance plan. Thus, there is a FABEC factbook along with the individual Member States' factbooks and MUAC.

2.1 Summary of environment key data and assessment results

27 This worksheet provides a summary of key data related to the environment KPA. It presents:

- A comparison of the European Route Network Improvement Plan (ERNIP) Part 2, June 2019 reference values, draft performance plan targets and an overview of the union wide targets;
- The measures undertaken by the Member State and ANSP in order to achieve the targets, including:
  - Details of Member State's commitment to free route area (FRA) by 2022;
  - Major ERNIP recommended measures committed to or implemented;
  - Status of flexible use of airspace (FUA) implementation according to latest Local Single Sky Implementation (LLSIP).

28 The following sections describe the above elements of the summary data for the environment KPA.

2.1.1 Annex IV 1.2: Comparison of ERNIP reference values and draft performance targets

29 The section contains a table and graph (as shown in Figure 2) providing a comparison between ERNIP reference values and draft performance targets of the draft performance plan along with information on past performance.

30 The key checks related to RP3 targets and their consistency with the reference values are presented in the table above the graph. For each year, it is verified whether the draft performance targets are consistent with the reference values and the difference, if any, between them. The table also provides a view upon the Union-wide targets.

31 The graph provides a visual representation of actual RP2 achieved KEA (black diamonds), and looking forward to RP3, the Network Manager ERNIP reference values (yellow bars) and the draft performance targets (blue bars). An indicative target is presented for non-FABEC States that is calculated by assuming a linear extrapolation between 2018 performance and the 2020 reference value.

	2020	2021	2022	2023	2024
Reference values	1.90%	1.88%	1.86%	1.86%	1.86%
Draft performance targets	1.90%	1.88%	1.86%	1.86%	1.86%
Comparison of draft performance targets with reference values	▲0.00%	▲0.00%	▲0.00%	▲0.00%	▲0.00%
Consistency with reference values	✓	✓	✓	✓	✓

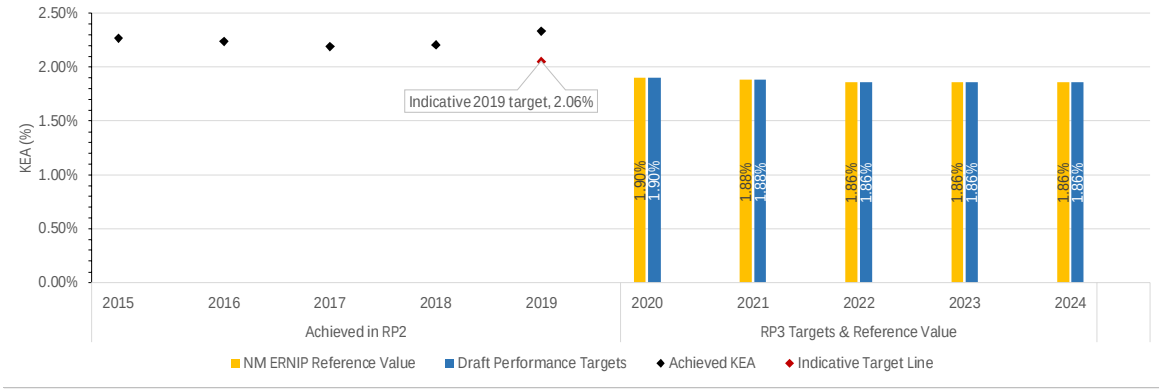


Figure 2: Example environment targets comparison between reference values and draft performance targets.

2.1.2 PRB conclusions

32 This section summarises the final PRB conclusions on the assessment of the draft performance plan with regards to environment and whether that component of the draft performance plan should pass or not.

2.2 Measures of achievement

33 This worksheet provides a summary of key data related to the measures committed to in the draft performance plan, enabling the Member States and ANSPs to achieve their targets.

2.2.1 Annex IV 2.1 (a): Measures of achievement

34 This section contains tables, as shown in Figure 3, providing an overview of key checks related to the measures committed to in the draft performance plans, along with a cross check between the pages of reference in the LSSIP/ERNIP and the pages of reference in the draft performance plan. These include:

- Commitment to implementing FRA by 2022, as is required for all Member States in accordance with the ATM Functionality 3 (AF3) in the pilot common project (PCP);[1]
- Commitment to the major ERNIP recommended measures related to each Member State;
- The stage of FUA implementation according to latest LLSIP.

Commitment to FRA by 2022?	✗
Austria implemented FRA within the Vienna FIR in November 2016. Austria is yet to extend FRA to its western border.	

Reference in PP	Reference in LSSIP
3.2.1(b)	Page 38

Major ERNIP Recommended Measures:	1
Measure included within performance plan?	
Implementation of SECSI (South East Common Sky Initiative) FRA	✓

Reference in PP	Reference in ERNIP
Implemented	Page 13

FUA Implementation according to latest LLSIP	Implementation
1	✓
2	✓
3	✓

Figure 3: Example of checks related to measures committed to in the draft performance plan.

[1] Commission Implementing Regulation (EU) No 716/2014.

35 The green ticks and red crosses on the right-hand side of each measure indicates whether the ER-NIP measures are committed to within the draft performance plan.

36 This section also contains a comment box below the tables, providing a more detailed description and additional relevant information on the measures of achievement included in the draft performance plans.

2.2.2 Annex IV 2.1(f): Incentive schemes

37 This section contains a table, as shown in Figure 4, indicating whether an incentive scheme in accordance with Article 11(4) is planned or not.

Figure 4: Example of checks related to environmental incentive schemes described in the draft performance plan.

3 Capacity

38 Most Member States submitted national performance plans. However, FABEC submitted a FAB level performance plan, which was assessed at the FAB level for the purposes of the Performance and Charging Regulation. Nonetheless, at Member State level and ANSP level for MUAC, analysis was performed to fully explore the performance plan. Thus, there is a FABEC factbook along with the individual Member States' factbooks and MUAC.

3.1 Summary of capacity key data and assessment results

39 This worksheet provides a summary of key data and insights related to the capacity KPA.

3.1.1 En route ATFM delay

40 This section provides a summary of key data and insights related to en route ATFM delay targets as defined in the draft performance plan, their consistency with the national reference values and comparison to NOP delay forecasts.

3.1.2 Arrival AFTM delay

41 This section provides a summary of key data and insights related to 'the review of' in accordance with point 2.1(b) of Annex IV, of arrival ATFM delay targets as defined in the draft performance plan.

3.1.3 Incentives

42 This section provides a summary of key data and insights related to both en route and terminal incentive schemes as defined in the draft performance plan.

3.1.4 Investments

43 This section provides a summary of key data and insights related to major capacity related investments defined in the draft performance plan, along with the relevance of their justification regarding their contribution to capacity.

3.1.5 PRB conclusions

44 This section summarises the final PRB conclusions on the assessment of the draft performance plan with regards to capacity. It provides justifications for the PRB decision based on the arguments derived from all the other subsections.

3.2 En route ATFM delay per flight

3.2.1 Overview of en route ATFM delay per flight

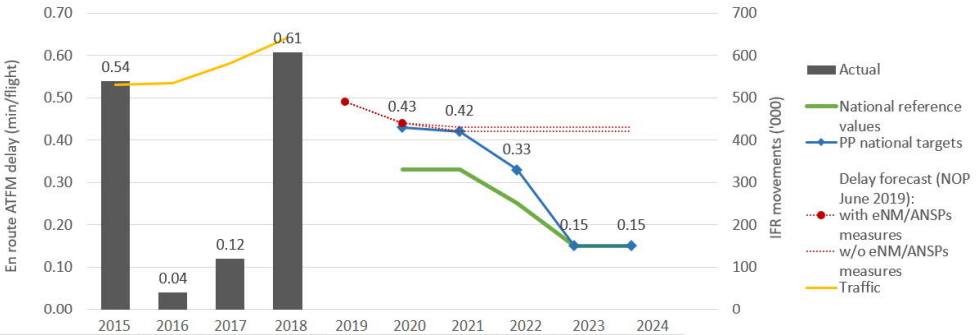
45 This section provides an overview of en route ATFM delay per flight (Figure 5). The data presented includes actual RP2 values for:

- En route ATFM delay per flight (solid grey bars).
- Traffic in terms of IFR movements (yellow line).

46 Looking forward to RP3, it presents:

- National reference values for each year of RP3 (green line).
- Targets within the draft performance plan for each year of RP3 (blue line).

- Delay forecasts provided by the NM in the NOP (red dotted lines).



Traffic variation	+1.9%	+0.6%	+8.9%	+10.2%					
Actual delay/flight	0.54	0.04	0.12	0.61					
National reference values						0.33	0.33	0.25	0.15	0.15
PP national targets						**0.43**	**0.42**	**0.33**	**0.15**	**0.15**
Forecast with eNM/ANSPs measures*					0.49	0.44				
Forecast w/o eNM/ANSPs measures*					0.49	0.44	0.42-0.43			

** NOP June 2019*

1. PP capacity target is consistent with the reference value	✗	✗	✗	✓	✓
Deviation target v. reference value	+30%	+27%	+32%	+0%	+0%
2. NOP delay forecast is lower or equal to the PP capacity target	✗	!	✗	✗	✗

Trend of capacity targets shows a gradual convergence towards the reference values?	**Yes**
Capacity target in the year 2024 is less than or equal to the 2024 reference value 2024?	**Yes**

Figure 5: Example en route capacity targets comparison between reference values and draft performance plan targets.

47 The key checks undertaken by the PRB are presented in the tables beneath the graph. For each year they check whether:

- The draft performance plan targets (blue line) is consistent with (lower than or equal to) the reference values (green line). In the example, the draft performance plan targets are higher than the reference values for the first three years and are equal to them for the final two years.
- The NOP delay forecast (red dotted line) is lower or equal to the draft performance plan targets (blue line). This checks whether the NM simulations suggest that the targets are achievable based on the latest information provided to the NM. In the example above, the draft performance plan targets are lower than the NOP delay forecasts for all years except 2021.

48 The relation of draft performance targets and the NOP delay forecast values are used assess the level of ambition, and the overall realism of draft performance targets. When draft proposed targets are significantly below the NOP delay forecast, but no additional measures are committed to, then the targets are deemed unachievable. In other words, additional capacity enhancement measures would be needed compared to those contained in the NOP.

49 Two additional checks are then performed to assess:

- Whether the trend of the draft performance targets (blue line) are converging towards the reference values (green line) as RP3 progresses, assessing whether performance is improving throughout RP3.
- Whether the draft performance plan target (blue line) is less than or equal to the reference value (green line) in 2024. This assesses whether the plan is set to achieve the target by the end of RP3.

50 The conclusion from these checks is presented in 3.1 Summary of capacity key data and assessment results, under the first paragraph of 3.1.1.

3.2.2 Review of PP list of capacity enhancement measures vs NOP

51 This section provides a review of capacity enhancement measures listed in draft performance plans vs NOP. The data presented includes:

- Description of capacity enhancement measures (i.e. measures for achievement of capacity targets).
- Air traffic controller (ATCO) planning/full time equivalents (FTEs).

52 The key checks undertaken by the PRB are:

- Whether enhancement measures contained in draft performance plans reflect those mentioned in the NOP, and whether the measures are in line with the ambition of the draft performance targets regarding closing future capacity gaps.
- Whether the number of additional ATCOs in operations (OPS) to start working in the OPS room, number of ATCOs in OPS to stop working in the OPS room and the final number of ATCOs to be operational at year-end is in line with predicted future capacity gaps. This is presented for both area control centres (ACCs) and en route operations.

53 The section presents the evolution of ATCO numbers as shown in the draft performance plan (Figure 6). The increase in ATCO numbers is a subject to be discussed in comparison with the capacity gap. This is provided in the above section – capacity enhancement measures.

		2018A	2019P	2020P	2021P	2022P	2023P	2024P
Vienna ACC (LOVV)	Additional ATCOs in OPS to start working in the OPS room	0	8	5	10	10	10	10
	ATCOs in OPS to stop working in the OPS room	0	3	3	0	3	7	7
	ATCOs in OPS to be operational at year-end	**126.6**	**131.6**	**133.6**	**143.6**	**150.6**	**153.6**	**156.6**
Total - Austro Control (en route)	Additional ATCOs in OPS to start working in the OPS room	0	8	5	10	10	10	10
	ATCOs in OPS to stop working in the OPS room	0	3	3	0	3	7	7
	ATCOs in OPS to be operational at year-end	**126.6**	**131.6**	**133.6**	**143.6**	**150.6**	**153.6**	**156.6**

Figure 6: Example of growth of the number of ATCO FTEs to be operational overall years of RP3.

3.2.3 Existing and previous ANSP capacity plans (planned capacity profiles vs actual capacity profile offered per ACC)

54 This section provides an overview of existing and previous ANSP capacity plans for each ACC in terms of IFR movements per hour (planned capacity profiles vs actual capacity profile offered – per ACC) in both a graph and table format (Figure 7). The data presented includes actual RP2 values for:

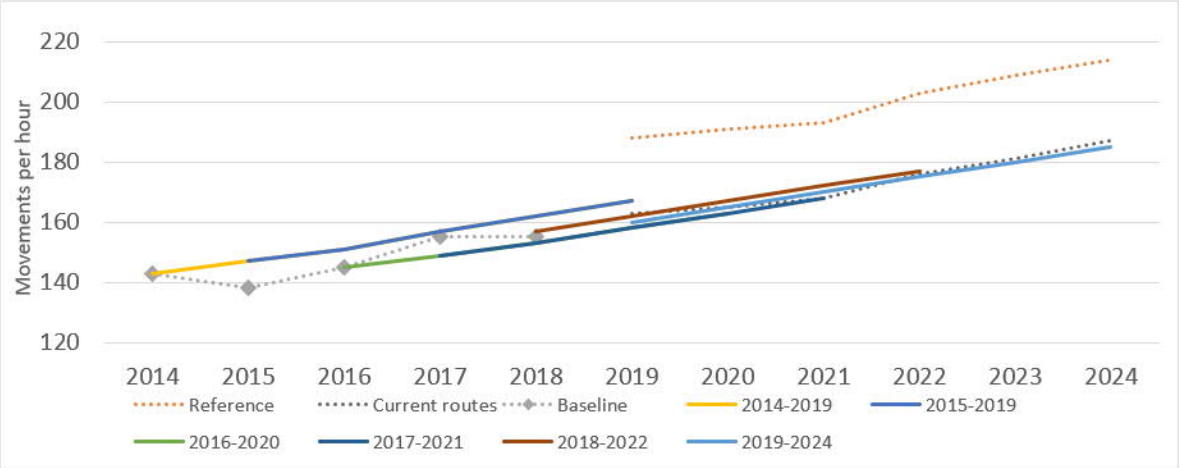
- Baseline (light grey dotted line).

55 For both RP2 and RP3, it presents:

- Planned values for:
  - 2014-2019 (yellow solid line);
  - 2015-2019 (blue line);
  - 2016-2020 (green line);
  - 2017-2021 (dark blue line);
  - 2018-2022 (brown line);
  - 2019-2024 (light blue line).

56 Looking forward to RP3, it presents

- Reference (orange dotted line).
- Current routes (grey dotted line).



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Reference						188	191	193	203	209	214
Current routes						163	165	168	176	181	187
Baseline	143	138	145	155	155						
2014-2019	143	147	151	157	162	167					
2015-2019		147	151	157	162	167					
2016-2020			145	149	153	158	163				
2017-2021				149	153	158	163	168			
2018-2022					157	162	167	172	177		
2019-2024						160	165	170	175	180	185

Figure 7: Example arrival capacity targets.

57 The key checks undertaken by the PRB are presented on the right side to the graph. The checks include:

- The comparison of baseline values[2] (dotted grey line) to planned values (colour solid lines) and the evolution in time.
- The comparison of latest capacity plans (colour solid lines) against the reference profile (orange dotted lines) and current routes profile (grey dotted line).
- The expected capacity gap which is driven by current capacity plans (colour solid lines), reference profile (orange dotted line), current routes (grey dotted line) and implementation of enhancement measures (summarised in section 2.2.2.).

3.2.4 Significant/special events leading to higher delays in some years of RP3 and related enhancement measures

58 This section provides additional details on events that the Member State claims will lead to higher delays in some years of RP3 along with the relevant capacity enhancement measures.

3.2.5 Review of the measures to increase capacity and address capacity gaps

[2] As required and defined by the European Network Operations Plan 2019-2024.

59 This section provides an analysis of capacity increasing measures and the effectiveness of other measures aiming to address any capacity gaps.

3.2.6 PRB Key Points

60 This section provides the key points that PRB came to by reviewing the above elements relating to en route air traffic flow management (ATFM) delay in the draft performance plan. It summarises the information contained in worksheet 3.2 regarding en route delay, the national en route ATFM delay targets, capacity enhancement measures, ATCO planning, capacity plans, inconsistencies between the NOP and draft performance plan, events that could lead to higher delays and the mitigation measures to lower the impact from these events, and the measures to reduce and address capacity gaps. By putting together this information.

61 A brief summary on en route delay is also presented in section 3.1.1.

3.3 Arrival ATFM delay per flight

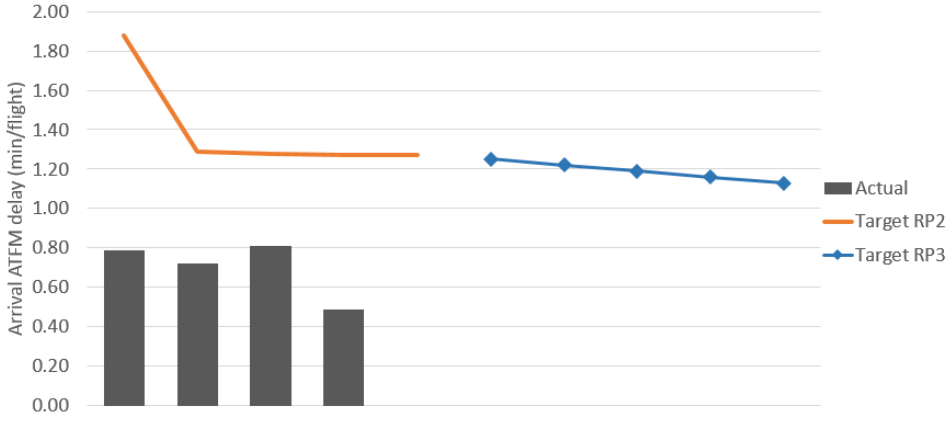
3.3.1 Overview of arrival ATFM delay per flight

62 This section provides an overview of arrival ATFM delay per flight - in both a graph and table format (Figure 8). The data presented includes actual RP2 values for:

- RP2 targets (orange line).
- Actual values (grey bars).

63 Looking forward to RP3, it presents:

- RP3 targets (blue line).



	2015A	2016A	2017A	2018A	2019A	2020T	2021T	2022T	2023T	2024T
National level	**0.79**	**0.72**	**0.81**	**0.49**	-	**1.25**	**1.22**	**1.19**	**1.16**	**1.13**
Vienna (LOWW)	1.06	0.96	1.08	0.64	-	1.27	1.24	1.21	1.18	1.15
Graz (LOWG)	0.00	0.00	0.00	0.00	-	0.01	0.01	0.01	0.01	0.01
Innsbruck (LOWI)	0.01	0.05	0.22	0.15	-	0.15	0.15	0.15	0.15	0.15
Klagenfurt (LOWK)	0.00	0.00	0.00	0.00	-	0.01	0.01	0.01	0.01	0.01
Linz (LOWL)	0.00	0.00	0.00	0.00	-	0.01	0.01	0.01	0.01	0.01
Salzburg (LOWS)	0.07	0.12	0.05	0.11	-	0.11	0.11	0.11	0.11	0.11

Figure 8: Example overview of existing, and previous, ANSP capacity plans (planned capacity profiles vs actual capacity profile offered).

64 This section graphically represents the following:

- Actual arrival ATFM delay for the period of RP2 together with RP2 targets, which shows whether the targets were met or exceeded.
- RP3 targets to visualise the gradual evolution of targets beginning in RP2 and to determine if the targets are evolving ambitiously.

3.3.2 Review of targets and comparison with level and trend of past performance during RP2

65 This section provides a review of targets and comparison with level and trend of past performance during RP2. This section essentially summarises the previous graph and table in written form and explains possible future situation based on past performance, expected traffic growth, and forecasts the likelihood of meeting the targets.

3.3.3 Contribution of individual airports to the national target

66 This section provides an overview of contribution of individual airports to the national target (Figure 9). The section consists of:

- A table summarising the average RP3 targets (minutes per flight).
- A graph presenting individual airports contribution vs national target.
- A written description of the table and graph.

Airport	Average RP3 target (min/flight)
Vienna (LOWW)	1.21
Graz (LOWG)	0.01
Innsbruck (LOWI)	0.15
Klagenfurt (LOWK)	0.01
Linz (LOWL)	0.01
Salzburg (LOWS)	0.11
National Target	**1.19**

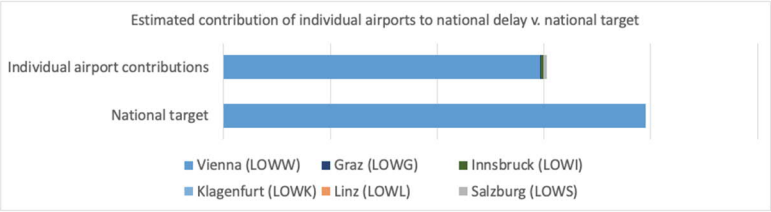


Figure 9: Example overview of contribution of individual airports to national delay vs. national targets.

67 This table and graph present the following:

- The table summarises the average RP3 target (minutes per flight) for each airport contribution to national targets.
- The graph presents the contribution of individual airports to national delay vs. national targets to show whether the national target contribution coincides with the airports' targets contribution.

68 A written description is included in this section which provides an overview of what the graph and table are presenting, and describes potential delay associated with the targets of the individual airports, taking into account actual traffic share.

3.3.4 Comparison of performance with other similar airports

69 This section provides a comparison of performance with other similar airports (Group I, II, III or IV based on number of movements and seasonality, as grouped by the PRB). This section consists of:

- A table providing the basis for comparison of performance between airports (Figure 10).
- A written description of the table and graph.

Airport	Group*	Median airport group 2015-2018 delay/flight	RP2 performance		RP3 target	
			Average delay/flight 2015-2018	Difference v. Median	RP3 average target	Difference v. Median
Vienna (LOWW)	GROUP I	0.87	0.93	+0.06	1.21	+0.34
Graz (LOWG)	GROUP IV	0.01	0.00	-0.01	0.01	+0.00
Innsbruck (LOWI)	GROUP IV	0.01	0.11	+0.10	0.15	+0.14
Klagenfurt (LOWK)	GROUP IV	0.01	0.00	-0.01	0.01	+0.00
Linz (LOWL)	GROUP IV	0.01	0.00	-0.01	0.01	+0.00
Salzburg (LOWS)	GROUP IV	0.01	0.09	+0.08	0.11	+0.10

** GROUP I - Avg. mvts. in 2016-2018 ≥ 225,000; GROUP II - Avg. mvts. in 2016-2018 ≥80000 and <225000 and seasonal; GROUP III - Avg. mvts. in 2016-2018 ≥80000 and <225000 and not seasonal; GROUP IV - Avg. mvts. in 2016-2018 < 80,000*

Figure 10: Example comparison of performance with other similar airports.

70 This table presents the following:

- Airport comparator groups based on average movements in 2016-2018.
- The median delay per flight of the airport group (2015-2018).
- An overview of RP2 performance:
  - Average delay per flight during 2015-2018;
  - Difference vs. median of the relevant comparator group.
- An overview of RP3 performance:
  - RP3 average target;
  - Difference v. median.

71 The grouping of airports (equivalent to the one for cost-efficiency analysis) is done based on the two following criteria:

- Average number of movements over 2016-2018;
- Seasonality.

72 To establish an airport as seasonal, the three busiest months (2018 data) are compared to the three lowest months. If the traffic in the high season is more than double than in low season, it is flagged as seasonal. Based on this criteria, four groups are established:

GROUPS	Criteria
GROUP I	Average 225000 movements or above in 2016-2018
GROUP II	Average ≥80000 and <225000 movements in 2016-2018 and SEASONAL
GROUP III	Average ≥80000 and <225000 movements in 2016-2018 and NOT SEASONAL
GROUP IV	Less than 80000 movements average in 2016-2018

3.3.5 PRB Key Points

73 This section provides the key points that PRB identified by reviewing the above elements relating to arrival ATFM delay. The section summarises past performance and its trend, targets for RP3, and how they are in line with the observed performance. It also summarises how individual airports are performing and the impact on the overall performance.

74 A brief summary on arrival ATFM delay is also presented in worksheet 3.1, section 3.1.2.

3.4 Capacity incentive schemes

3.4.1 En route capacity incentive scheme

75 This section provides a review of the en route capacity incentive scheme. As in Figure 11, the data presented includes:

- Parameters of the en route capacity incentive scheme (table form).
- Threshold review (written form).
- Modulation review (written form).
- Review of financial advantages/disadvantages (written form).

Parameters of the en route capacity incentive scheme

Dead band	Max bonus	Max penalty
±0.04 min	0.500%	0.500%
	✓	!

Has the NSA chosen to modulate the pivot values?	No
If yes, is the modulation CRSTMP?	n/a

	2020	2021	2022	2023	2024
NOP reference values	0.37	0.37	0.27	0.19	0.19
Alert threshold (Δ Ref. value in fraction of min	±0.059	±0.059	±0.054	±0.050	±0.050
Performance Plan targets	0.95	1.07	1.07	1.07	1.07
Pivot values for RP3	0.95	1.07	1.07	1.07	1.07

Figure 11: Example overview of en route capacity incentive scheme.

76 The checks undertaken by the PRB presented in the tables above include:

- Maximum bonus check:
  If the maximum bonus percentage is lower or equal to the maximum penalty percentage, it is presented by a green tick. If the maximum bonus percentage is higher than the maximum penalty percentage, it is presented by a red cross.
- Maximum penalty check:
  If the maximum penalty is higher or equal to 1% and higher or equal to the maximum bonus, it is considered to have a material impact on the revenue at risk, as provided by paragraph 3 of Article 11 of Implementing Regulation (EU) 2019/317, and is presented by a green tick. If the maximum penalty is lower than 1%, but higher or equal to the maximum bonus, it is presented as a warning by a yellow exclamation mark. If the maximum penalty is lower than the maximum bonus, it is and presented by a red cross.
- NSA's choice to modulate the pivot values:
  This only includes a yes or no answer.
- Check whether the modulation is limiting the scope of incentives to cover only delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual:
  If the answer to previous question is yes, the NSA choses to modulate the pivot values, a check is performed to see whether the modulation is CRSTMP. 'N/A' is displayed for NSAs that did not choose to modulate the pivot values. This information is used when assessing the possible impact of the Incentive Scheme.
- An overview of the following values for 2020-2024:
  - NOP reference values;
  - Alert threshold (Δ Ref. value in fraction of min);
  - Draft performance targets;
  - Pivot values for RP3.

77 When the modulation of pivot values is informed by the latest NOP reference values of year n-1 (in accordance with point 1.1(a) of Annex XIII of IR 2019/317), these pivot values are only known for 2020 and will be notified annually by the Member State.

78 The threshold review provides a written overview on the threshold, whether it is symmetrical around the pivot value, and if the pivot value is based on the reference values.

79 The modulation review provides information on modulation processes in place.

3.4.2 Terminal capacity incentive scheme

80 This section provides a review of terminal capacity incentive scheme. The data presented includes:

- Parameters of the terminal capacity incentive scheme (table form).
- Threshold review (written form).
- Modulation review (written form).
- Review of financial advantages/disadvantages (written form).

Parameters of the en route capacity incentive scheme

Dead band	Max bonus	Max penalty
±25.0%	0.500%	0.500%
	✔	!

Has the NSA chosen to modulate the pivot values?	No
If yes, is the modulation CRSTMP?	n/a

	2020	2021	2022	2023	2024
Bonus/penalty range Δ (in fraction of min)	±0.625	±0.610	±0.595	±0.580	±0.565
Performance Plan targets	1.25	1.22	1.19	1.16	1.13
Pivot values for RP3	1.25	1.22	1.19	1.16	1.13

Figure 12: Example overview of terminal capacity incentive scheme.

81 The checks undertaken by the PRB presented in the tables above include:

- Maximum bonus check:
  If the maximum bonus percentage is lower or equal to the maximum penalty percentage, it is presented by a green tick. If the maximum bonus percentage is higher than the maximum penalty percentage, it is presented by a red cross.
- Maximum penalty check:
  If the maximum penalty is higher or equal to 1% and higher or equal to the maximum bonus, it is presented by a green tick. If the maximum penalty is lower than 1%, but higher or equal to the maximum bonus, it is presented as a warning by a yellow exclamation mark. If the maximum penalty is lower than the maximum bonus, it is presented by a red cross.
- NSA's choice to modulate the pivot values:
  This only includes a yes or no answer.
- Check whether the modulation is CRSTMP:
  If the answer to previous question is yes – the NSA choses to modulate the pivot values, a check is performed to see whether the modulation is CRSTMP. 'N/A' is displayed for NSAs that did not choose to modulate the pivot values.

82 Besides the checks, the table also presents the following values for 2020-2024:

- An overview of the following values for 2020-2024:
  - Alert threshold (Δ Ref. value in fraction of min);
  - Draft performance plan targets;
  - Pivot values for RP3.

83 When the modulation of pivot values is informed by the latest NOP reference values of year n-1 (in accordance with point 1.1(a) of Annex XIII of IR 2019/317), these pivot values are only known for 2020 and will be notified annually by the Member State.

84 The threshold review provides a written overview on the threshold, whether it is symmetrical around the pivot value, and if the pivot value is based on the reference values.

85 The modulation review provides information on modulation processes in place.

3.4.3 Additional capacity incentive scheme

86 This section provides an overview of any additional capacity incentive schemes, if presented in the draft performance plan.

3.4.4 PRB Key Points

87 This section provides the conclusions that PRB identified by reviewing the above elements relating to en route and terminal capacity incentive schemes. The PRB also investigated and indicated whether the ANSP's performance is likely to incur a penalty, bonus, or neither.

88 A brief summary on incentives is also presented in worksheet 3.1, section 3.1.3.

3.5 Investments

89 This section presents an analyses how the new and existing investments affect the determined costs (3.5.1), the list of new major investments for the main en route air traffic service provider (3.5.2), and a review of how investments contribute to the capacity targets (3.5.3). All the costs presented in the worksheet are expressed in nominal terms seeing as depreciation and cost of capital are not subject to inflation adjustments as per the last subparagraph of Article 26 of the Regulation.

3.5.1 Determined costs of investments over RP3

90 This section provides a table and pie chart presenting the total and annual determined costs relating to en route and terminal investments for the 2020-2024 period (Figure 13). These costs are calculated as the sum of:

- Depreciation costs reported in the reporting tables, Table T1 ANSP, item 3.10.
- Cost of capital reported in the reporting tables, Table T1 ANSP, item 3.11.
- Cost of leasing reported in the reporting tables, Table T1 ANSP, item 3.12.

91 It is important to remark, that in case of inconsistencies between the draft performance plan and its Annexes A and B, the numbers presented in this worksheet may not fully correspond.

		2020	2021	2022	2023	2024	Total
Total determined costs of investments*	M€ (nominal)	32.0	33.2	35.1	34.2	32.8	167.4
En route	M€ (nominal)	24.7	25.8	27.4	26.9	25.8	130.6
Terminal	M€ (nominal)	7.3	7.4	7.7	7.3	7.1	36.8

** Determined costs of investments include depreciation, cost of capital and cost of leasing for the main ANSP in the State*

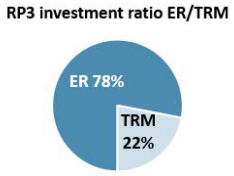


Figure 13: Example overview of determined costs of investments over RP3.

3.5.2 Major investments and justifications for major investments

3.5.2.1 New major investments per ANSP (i.e. above 5M€) – Main ANSP

92 This section provides a table with the list of the major investments (i.e. investments above 5M€) for the main en route air traffic service provider as reported in the draft performance plan (Figure 14). The table includes:

- The name of the investment.
- The draft performance plan description of the assets (or a reference to the draft performance plan for detailed descriptions).
- The total asset value.
- A check if the asset is mandatory based on the Regulation as indicated in the draft performance plan.
- An expert judgment based on the description provided if the specific asset is linked to the measures to achieve capacity targets.
- The RP3 determined costs of the investments by allocation as provided in section 2 "Investments" of the draft performance plan.

Nr	Name of the major investment	Asset description	Total value of the asset (M€)	Is the investment mandatory based on SES legislation?	Is there a justified link with measures to achieve capacity	Costs RP3 (M€)	
						ER	TMZ
1	MULTIFUNCTIONAL BUILDING FACILITIES (B-dul Ion Ionescu de la Brad no.5)	*The building will provide/assure: -meeting and teleconference rooms -classrooms and training facilities for ANS staff (theoretical and practical) -Operational Contingency Room facility (CR 2) space from actual site relocation (remote location outside the city) -Data Recovery Center as required by Cyber Security Management Standard*	7.5	No	No	0.4	0.0
2	ATM System 2015+ Phase 2	*The "ATM2015+ System" project addresses the flight data processing systems, surveillance data processing systems, human-machine interface systems and the introduction of CPDLC capability. The roadmap of the project includes the following stages of STEP 1 development: the baseline system - phase 1, operational as of the 8th April of 2019 and phase 2 that is planned to be operational in 2020 and will include enhanced functionalities. More details can be found in section 2.1 of the performance plan.*	8.6	Yes	Yes	6.4	0.0
					Total:	**6.8**	**0.0**

Figure 14: Example overview of major investments and justifications for major investments.

93 Two text boxes are also included in the section:

- The first includes a summary of the comments provided during the consultation by the airspace user. The second box includes additional information concerning the weight of the determined costs for new major investments, a review of the lifecycle of the assets compared to the determined costs new major investments per year, an RP2 summary of CAPEX expenditures RP2 to date (2015-2018) and the RP2 underspend charged/reimbursed to users in RP3 (if any).
- The second focusses on the investments which are not required by a SES legislation (Figure 15). When provided, the table highlights the main KPAs impacted and the specific justification as presented in the draft performance plan. Below the table, additional information (if any) is included in a box.

3.5.2.2 Justification for major investments (i.e. above 5M€), which are not required by SES legislation

Nr	Name of the major investment	Level of impact (network/local/none)	Main KPAs impacted	Specific justifications provided
8	Plant & Equipment Replacement	Local	Environment, Capacity, Cost efficiency	Replacement programme for end of life critical plant and equipment which supports IAA Operations. Plant and equipment includes AHUs, Chiller Units, VSDs, Heat Pumps and internal mechanical and electrical equipment.
9	Capital Costs of IAA Restructure	Local	Environment, Cost efficiency	Provision of a suitable new Head Office for the ANSP following the restructure process. The costs related to the professional fees, design costs, civil works and fit out of an alternative premises. The costs include all legal, relocation, building branding and related costs with the provision of a new premises.

Figure 15: Example of justifications for major investments (i.e. above 5M€), which are not required by SES legislation.

94 For each of the major investments not required by SES legislation, the table above contains the following information:

- Name of the major investment.
- Level of impact.
- Main KPAs impacted.
- Specific justifications provided.
- In the example above, two investments not required by SES legislation were reported. This table is complemented by a field with additional information, which is filled if necessary.

3.5.2.3 Other new and existing investments

95 This section summarises other new and existing investments. The data displayed in the table (Figure 16) are sourced from section 2 “Investments” of the draft performance plan.

96 The table above summarizes:

- Other new investments:
  - Total value of the asset;
  - Value of the assets allocated to ANS;
  - Investments 2020-2024;
  - Total cost in RP3.
- Existing investments:
  - Investments 2020-2024;
  - Total cost in RP3.

97 This table is complemented by a description and justification of other new and existing investments in fixed assets planned over RP3.

	Total value of the asset (MEUR)	Value of the assets allocated to ANS	2020	2021	2022	2023	2024	Total costs RP3 (MEUR)
Other new investments	100.0	97.8	5.6	11.2	15.1	18.9	20.0	70.8
Existing investments			22.6	20.2	15.3	13.0	12.4	83.6

Figure 16: Example of overview of other new and existing investments.

3.5.3 Review of investments contribution to capacity

98 This section provides a review of the investment’s contribution to capacity. The data presented includes written comments and answers on the following statements:

- Investment levels contribute to the provision of capacity that is scaled to demand: the PRB investigated whether the investments are foreseen to have a positive impact on capacity.
- Operational aspects of how and when capacity improvements foreseen in the investment plans which elaborated in the draft performance plan are realised: in this field, the PRB describes when and how it is foreseen that the investments will start to impact capacity and how the investments are justified in the draft performance plan.
- Capacity related capital expenditure takes due account of the time needed to get the ATM systems implemented: in this field the PRB investigates the schedule of implementing new systems/functionalities and whether the timescales are reasonable.

3.5.4 PRB Key Points

99 This section provides the key points that PRB identified by reviewing the above elements relating to the major investments planned over RP3, a review of RP2 CAPEX, the underspend/overspend charged/reimbursed to airspace users (if any), and what impact they have on capacity.

100 A brief summary on investments is also presented in worksheet 3.1, section 3.1.5.

4 Cost-efficiency

4.1 Summary of cost-efficiency key data and assessment results

101 The purpose of this worksheet is to show a one-page summary of the key cost-efficiency data from the draft performance plan, the assessment results on the criteria listed in point 1.4 of Annex IV of the Regulation and the conclusions of the PRB.

102 For the charging zones with no particular issues, this sheet may constitute the only piece of analysis to be retained.

4.1.1 Key data underlying en route cost-efficiency targets

103 This section contains a graph (Figure 17) presenting the evolution of the average unit cost (AUC) between 2014 and 2018 and the determined unit cost (DUC) between 2014 and 2024, together with the changes in costs and traffic over the same period. The value are shown in €$_{2017}$ and the costs and traffic are shown as indices (with a value of 100 in 2019).

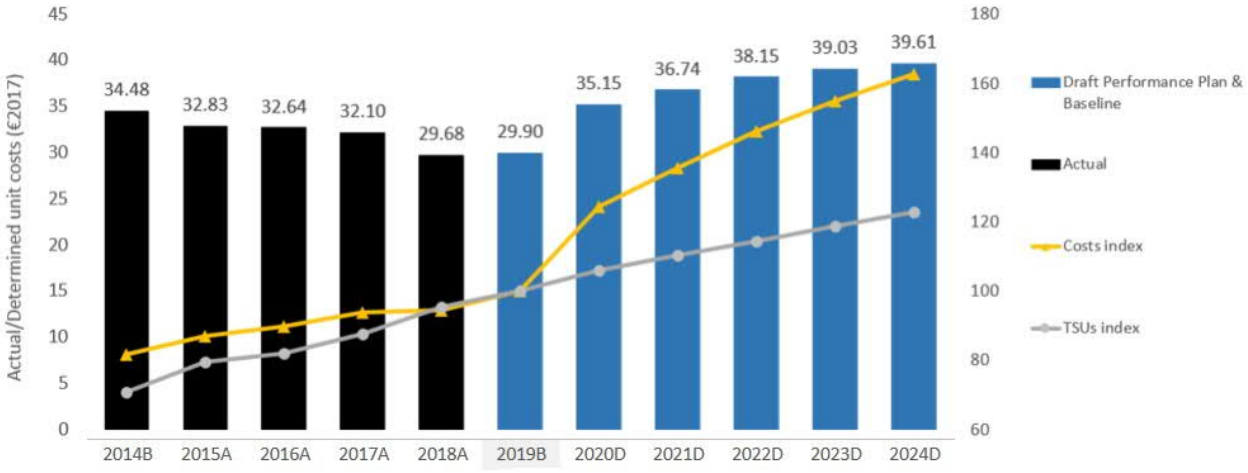


Figure 17: Example of overview of key data underlying en route cost-efficiency targets.

104 Depending on the years, the type of data may vary:

- 2014-2018 data is actual. The year 2014 is shown as 2014B instead of 2014A because it is used as the baseline value for calculation the long-term DUC trend (2014-2024). However, this value corresponds to 2014 actual costs and is therefore comparable to 2015A-2018A.
- For the year 2019, the graph shows the 2019 DUC baseline calculated dividing the costs baseline submitted by States, which should be consistent with the scope of activities of RP3, and the TSUs forecast for 2019 selected by the States.
- 2020-2024 data is planned data as reported by the State in its draft performance plan.

105 The table below the chart (Figure 18) is containing:

- The total determined costs for the charging zone, in national currency and in nominal terms over the 2014-2024 period. The data are sourced from the RP3 reporting tables (T1, item 4.2). In this series, it is not possible to show the 2019 baseline value of the DCs. The 2019 baseline value is only available in the draft performance plan in real terms and without the cost breakdown by nature. It is therefore not possible to calculate a nominal term value from

the real term value since for RP3 inflation does not apply to all cost items (depreciation and cost of capital are not adjusted for inflation).

- The total determined costs for the charging zone, in national currency and in 2017 prices over the 2014-2024 period. With the exception of 2019B, the data comes from the RP3 reporting tables (T1, item 5.3). Determined costs for 2019B come from the draft performance plan (section 3.4.1 ERT-CZ 1, cell E20).
- The total service units for the charging zone over the 2014-2024 period. Except for 2019B, the data comes from the RP3 reporting tables (T1, item 5.4). Total service units for 2019B come from the draft performance plan (section 3.4.1 ERT-CZ 1, cell E22).
- The DUC in national currency and in 2017 prices over the 2014-2024 period. With the exception of 2019B, the data comes from the RP3 reporting tables (T1, item 5.5). The DUC for 2019B comes from the draft performance plan (section 3.4.1 ERT-CZ 1, cell E24).
- The 2017 exchange rate, coming from the reporting tables, RP3 draft performance plan sheet (cell E27).
- The DUC in 2017 EUR over the 2014-2024 period is a calculation made in the Calcs sheet.

													CAGR 2019B-2024	CAGR 2014B-2024
Total costs	MNOK (nom)	946	969	932	1,071	988	-	1,197	1,266	1,316	1,324	1,325	-	+3.4%
Total costs	MNOK (2017)	1,008	1,014	946	1,071	966	1,147	1,135	1,183	1,211	1,200	1,191	+0.8%	+1.7%
TSU	'000	2,221	2,314	2,495	2,527	2,522	2,427	2,462	2,484	2,519	2,549	2,583	+1.3%	+1.5%
AUC/DUC	NOK (2017)	454.05	438.35	379.25	423.78	382.97	472.52	461.10	476.12	480.59	470.91	461.10		
Exchange rate	*NOK:€*				*9.328*									
AUC/DUC	**€ (2017)**	**48.68**	**46.99**	**40.66**	**45.43**	**41.06**	**50.66**	**49.43**	**51.04**	**51.52**	**50.49**	**49.43**	**-0.5%**	**+0.2%**
Annual change	*%*		*-3.5%*	*-13.5%*	*+11.7%*	*-9.6%*	*+23.4%*	*-2.4%*	*+3.3%*	*+0.9%*	*-2.0%*	*-2.1%*		

Figure 18: Example of overview of key data underlying en route cost-efficiency.

4.1.2 Summary of baseline review

106 This section shows the level of the 2019 DUC baseline. The section includes a text box to indicate whether the 2019 baseline seems adequately justified or not (after examining the justifications provided by the State in the draft performance plan).

4.1.3 Summary of cost-efficiency assessment results

107 This section contains the assessment results on the criteria listed in Annex IV of the Regulation.

Consistency with the Union-wide target over 2019-2024 (RP3)

108 Line (a) displays the CAGR of the DUC between 2019 baseline and 2024.

- If the percentage change is lower than or equal to -1.9% per year, the criterion is met and a green tick is shown on the right-hand side.
- If the percentage change is higher than -1.9% per year, the criterion is not met and a red cross is shown on the right-hand side.

109 Consistency is assessed with a 1 decimal rounding (i.e. -1.851% is approximated to -1.9%).

110 If the expert judgment differs from the automatic checks, the analyst can decide to insert a different check mark. In these cases, additional explanations are inserted in the text box below.

Consistency with the Union-wide target over 2014-2024 (RP2+RP3)

111 Line (b) displays the CAGR of the DUC between 2014 baseline and 2024.

- If the percentage change is lower than or equal to -2.7% per year, the criterion is met and a green tick is shown in on the right-hand side.
- If the percentage change is higher than -2.7% per year, the criterion is not met and a red cross is shown in on the right-hand side.

112 Consistency is assessed with a one decimal rounding (i.e. -2.651% is approximated to -2.7%).

113 If the expert judgment differs from the automatic checks, the a different check mark can be inserted. In these cases, additional explanations should be inserted in the text box below.

Consistency with the comparator group average in 2019

114 Line (c) displays the difference in % between the 2019 DUC baseline and the average of the comparator group.

115 If the expert judgment differs from the automatic checks, the a different check mark can be inserted. In these cases, additional explanations should be inserted in the text box below.

Deviation exclusively due to measures necessary to achieve the capacity targets

116 Line (d) shows information only if there is a deviation from the Union-wide cost efficiency trends and the capacity targets are consistent with the reference values.

117 In such cases, Line (d) provides a check if the cost-efficiency criterion is met. The text box below Line (d) provides a summarised justification of the evaluation, in case additional comments are needed.

Deviations necessary to implement restructuring measures

118 Line (e) shows information only if a deviation from the Union-wide cost efficiency targets may be justified due to the implementation of "restructuring measures" as defined in the Regulation.

119 A text box is available below, in case additional comments are needed.

4.1.4 PRB conclusions

120 The PRB summarises the conclusions on cost-efficiency for the State. This section is aligned to the PRB Key Points on the DUC (section 4.4.5).

4.2 Traffic

121 The purpose of this worksheet is to provide an analysis of en route traffic forecast (expressed in service units) underpinning the calculation of the DUC, both for the 2019 baseline and the whole RP3 period.

4.2.1 Overview of service units forecasts for RP3

122 This section contains a graph presenting the evolution of the actual en route traffic (in service units) for the 2014-2018 period and a comparison of the forecast used in the draft performance plans with the STATFOR forecasts from February 2019 (high, base and low), and when available, from October 2019 (base) for the period 2019-2024 (Figure 19).

123 Since the methodology for traffic computation and forecasting is, as of January 2020, changing from using the trajectories as filed in the flight plans (M2) to the actual route flown (M3), the year

2019 is duplicated in order to show values from both methodologies and better understand the impact of the change.[3]

124 It should be noted that the Central Route Charges Office (CRCO) evaluated the impact of the change of methodology on the service units computation from M2 to M3.[4] It initially published correction factors for each State based on a 3-month traffic sample that was used to convert the STATFOR February forecast to M3 methodology. In May, it published further correction factors based on a 12-month traffic sample.[5] These correction factors will be later used in the analysis of the traffic baseline for 2019.

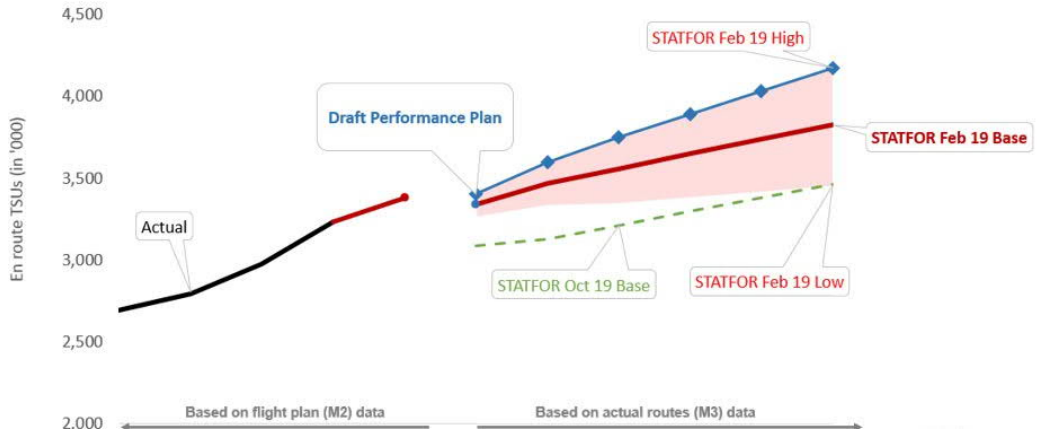


Figure 19: Example of overview of service units forecasts for RP3.

125 The chart in this section shows:

- 2014-2018 - actual traffic evolution computed using the M2 methodology.
- 2019F (M2) - traffic forecast based on the M2 methodology as submitted by States in their reporting tables. This value will be used to compare the coefficients used by States to change from M2 to M3 methodology with those calculated by the CRCO.
- 2019B (M3) - shows:
  - traffic forecast based on the M3 methodology, as submitted by States in their draft performance plans and actually used to calculate the 2019 DUC baseline;
  - STATFOR February 2019 (high, base and low) traffic forecast for 2019 based on M3 methodology (i.e. using the 3-month coefficients calculated by the CRCO);
  - STATFOR October 2019 (base) traffic forecast for 2019 (when available) based on M3 methodology produced after a recalculation of historical traffic values according to actual routes flown.
- 2020F-2024F - the same elements described above for 2019B (M3) but for 2020-2024.

126 The table below the chart contains the values depicted in the chart, their annual change, and where relevant, the compound annual growth rate (CAGR) for the 2019B-2024 period.

[3] EUROCONTROL, En Route Service Units Forecast Method with Model 3 data.
[4] EUROCONTROL, Seven-Year forecast February 2019, Annex4.
[5] EUROCONTROL, Intermediate two-year Forecast – Service Units 2019-2020.

		2015A	2016A	2017A	2018A	2019F(M2)	2019B(M3)	2020F	2021F	2022F	2023F	2024F	CAGR 2019B-2024
Actual	'000 TSUs	2,696	2,790	2,973	3,236								
Annual change	*%*		*+3.5%*	*+6.6%*	*+8.8%*								
STATFOR Feb 19 Base	'000 TSUs					**3,378**	**3,337**	**3,468**	**3,555**	**3,650**	**3,737**	**3,826**	**+2.8%**
Annual change	*%*					*+4.4%*	*+3.1%*	*+3.9%*	*+2.5%*	*+2.7%*	*+2.4%*	*+2.4%*	
STATFOR Oct 19 Base	'000 TSUs					-	3,088	3,130	3,208	3,298	3,379	3,465	+2.3%
Annual change	*%*					-	*-4.6%*	*+1.4%*	*+2.5%*	*+2.8%*	*+2.5%*	*+2.5%*	
Performance Plan	'000 TSUs						**3,402**	**3,597**	**3,751**	**3,892**	**4,031**	**4,173**	**+4.2%**
Annual change	*%*						*+5.1%*	*+5.7%*	*+4.3%*	*+3.8%*	*+3.6%*	*+3.5%*	

Figure 20: Example of overview of service unit figures over RP2 and RP3.

4.2.2 Overview of service units forecasts for RP3

127 This section reviews two aspects of the 2019 traffic baseline submitted by the States in their draft performance plans:

- M3/M2 coefficient check: This check calculates the ratio between the 2019 traffic baseline submitted in the draft performance plan (M3) and the 2019 forecast submitted in the reporting tables (2019B/2019F), and compares it with the coefficients calculated by the CRCO.

M3/M2 coefficient check	'000 TSUs	*CRCO Coefficient*	
		3 months	*12 months*
2019B (PP baseline, M3)	**3,402**		
2019F (as in the Reporting tables, M2)	3,402		
2019B/ 2019F	**0.00%**	*-1.22%*	*-1.19%*

- Comparison vs. STATFOR forecasts: This check compares the 2019 traffic baseline with the STATFOR February and October forecasts (low, base, and high). All figures presented in this check are calculated according to the M3 methodology.

Comparison vs. STATFOR forecasts	'000 TSUs			Δ(B) (%)
2019B (PP baseline, M3)		**3,402**		
*2019F (STATFOR **Feb** 19, M3)*	*L 3,268*	*B 3,337*	*H 3,401*	*+1.9%*
*2019F (STATFOR **Oct** 19, M3)*	*L 3,075*	*B 3,088*	*H 3,097*	*+10.2%*

128 At the end of the section, there is a text box presenting the analysis of the items above.

4.2.3 Review of the performance plan traffic forecast

129 In the first part of this section, a simple check confirms whether the State has used the STATFOR February 2019 base forecast (latest available before the submission of the draft performance plans) as required by Article 10(2) of the Regulation.

130 Under this check, if the State has decided to avail itself of the provisions of the last paragraph of Article 10(2) and use a different forecast than the STATFOR February 2019 base, a text box presents a summary of the justifications provided in the draft performance plan.

131 Finally is a text box which presents a factual description of the traffic forecast used by States in the draft performance plan in comparison with the available STATFOR forecasts (February and October 2019), and, where applicable, a review of the justifications provided by the State in case of using a different forecast than the STATFOR February 2019 base.

4.2.4 PRB Key Points

132 This section provides the key points that PRB identified by reviewing the above elements relating to traffic. It summarises the traffic forecast chosen, and in the case where it may differ from the STATFOR February 2019 base forecast, justifications for the difference.

4.3 Review of determined costs and baseline

133 The purpose of this worksheet is to provide a review of the determined costs, their components and their evolution in RP3 as well as a review of the 2019 cost baseline submitted in the draft performance plan.

4.3.1 Overview of en route costs in RP2 and RP3

134 This section contains a graph (Figure 21) presenting the evolution of total costs in the charging zone for the 2015-2024 period. All figures are in M€$_{2017}$ but depending on the years the type of the data may vary:

- 2015A-2018A shows two series of data:
  - The black columns show the actual costs for the period;
  - The orange diamonds show, for the sake of comparison, the RP2 determined costs.
- 2019F shows the costs forecast submitted by States in their reporting tables. This forecast is valid for the scope of activities of the RP2 draft performance plan.
- 2019B shows the costs baseline submitted by States for the purpose of setting the RP3 targets, consistent with the scope of activities of RP3 as per Article 10(2)(a) of the Regulation. The difference between both values (2019B and 2019F) is highlighted in a data callout pointing at the 2019B column.
- 2020D-2024D data is the RP3 planned determined costs as reported by the State in its draft performance plan.

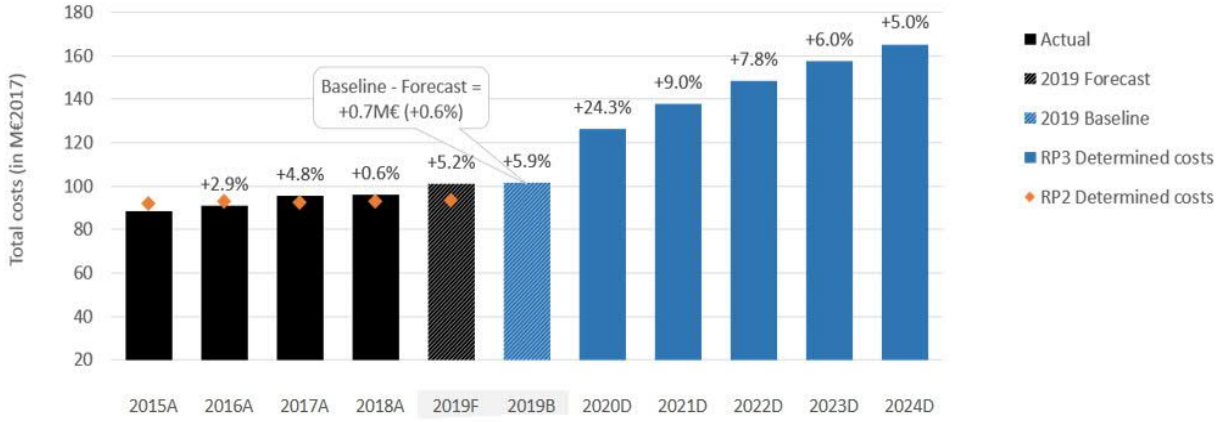


Figure 21: Example of overview of en route costs in RP2 and RP3.

135 Below the chart, also there is a table containing:

- The total costs in nominal terms (in millions of national currency) and their annual changes in percentage (ref. Reporting Tables T1, item 4.2).
- The inflation index (with a value of 100 in 2017), actual for the 2015-2018 period and planned for 2019-2024. This index is used to convert staff costs, other operating costs, and exceptional items in real terms (ref. Reporting Tables T1, item 5.2).
- The total costs in real terms and their annual changes in percentage (ref. Reporting Tables T1, item 5.3 divided by exchange rate).

- Finally, the table shows the compound annual growth rate (CAGR) for the 2019B-2024D period.

		2015A	2016A	2017A	2018A	2019F	2019B	2020D	2021D	2022D	2023D	2024D	CAGR 2019B-2024	Exchange rate 2017
Total costs	MHUF (nom)	26,757	27,629	29,492	30,337	32,700	-	42,004	46,832	51,729	56,137	60,373	-	HUF:€
Annual change	*%*		*+3.3%*	*+6.7%*	*+2.9%*	*+7.8%*	-	-	*+11.5%*	*+10.5%*	*+8.5%*	*+7.5%*		308.99300
Inflation index	2017 = 100	97.3	97.7	100.0	102.9	106.1	106.1	109.4	112.7	116.0	119.5	123.1	+3.0%	
Total costs	MHUF (2017)	27,347	28,141	29,492	29,677	31,226	31,427	39,061	42,581	45,883	48,619	51,071	+10.2%	
Annual change	*%*		*+2.9%*	*+4.8%*	*+0.6%*	*+5.2%*	*+5.9%*	*+24.3%*	*+9.0%*	*+7.8%*	*+6.0%*	*+5.0%*		
Total costs	**M€ (2017)**	**89**	**91**	**95**	**96**	**101**	**102**	**126**	**138**	**148**	**157**	**165**	**+10.2%**	

Figure 22: Example of overview of costs over RP2 and RP3.

136 The 2019 baseline being submitted by States is only in real terms and without a breakdown by cost type, therefore it is not possible to show these costs in nominal terms.

137 On the right-hand side, the table shows the 2017 exchange rate between the national currency and € which is used throughout the plan to convert between both currencies.

138 Below the table, there is a check that confirms whether the inflation data submitted by the State for 2019-2024 is consistent with the IMF April 2019 forecast. Under the check there is a free text box for the analyst to comment in case the inflation data in the draft performance plan is not consistent with the IMF April 2019 forecast. This text box will be hidden if the data is consistent.

4.3.2 Baseline review

139 This section reviews the 2019 costs baseline submitted by the States in their draft performance plans in a two-step approach: first its difference versus the 2019 costs forecast submitted in the States' Reporting tables, and second, an analysis of the 2019 cost forecast itself and its components (Figure 23). For this, the following information is presented:

- 2019 forecast analysis: Presents the difference, in M€$_{2017}$ and percentage, between the 2019 costs forecast and:
  - The 2018 actual costs;
  - The 2019 RP2 determined costs;
  - The average actual costs over 2015-2018 (which can be a better reference than 2018 if 2018 was an exceptional year).
- 2019 baseline analysis check presenting the difference, in M€$_{2017}$ and percentage, between the 2019 costs baseline and forecast.
- 2019 baseline v. 2018 actual chart presenting the difference between these two values again in two steps:
  - First, the difference between the 2019 forecast and the 2018 actual costs, for each cost component;
  - Second, the difference between the 2019 baseline and the 2019 forecast, only for the total costs (the cost breakdown of the baseline is not available). The percentage for the baseline (blue bar) is computed as a difference between the total cost percentage and the forecast percentage.

2019 forecast analysis	M€2017	%
2019F v. 2018A	+5.0	+5.2%
2019F v. 2019 RP2 DC	+7.4	+7.9%
2019F v. average 2015-2018	+8.3	+8.9%

2019 baseline analysis	M€2017	%
2019B v. 2019F	0.7	+0.6%

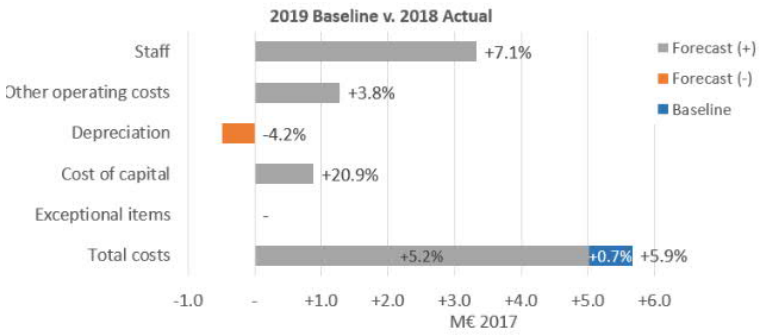


Figure 23: Example of review of baseline.

140 Two text boxes reflecting this two-step approach are foreseen for the analyst to review the 2019 forecast and baseline, together with the justifications and assumptions provided by the States in their draft performance plans, especially when the forecast and baseline differ, or when the forecast seems disproportionately high compared to actual costs of previous years.

4.3.3 Review of the RP3 determined costs and incentives

141 This section provides a review of some cost elements that are further analysed in dedicated sheets, a summary of the incentive mechanisms, and the planned changes in determined costs (per cost category and per entity) between 2019 (forecast) and 2024.

Review of cost elements

142 The aim is to provide an overview on the status important cost drivers such as investments, cost of capital, pensions and allocation between en route and terminal charging zones, which are all analysed in more details in other parts of the factbook.

Incentives

143 This area shows the main characteristics of the incentives proposed by the State in its draft performance plan, with information on the following attributes:

- Traffic risk sharing parameters modulated (yes/no):
  - Maximum risk exposure to traffic (in percentage of the determined costs).
- Financial advantages/disadvantages from incentive scheme:
  - Maximum bonus (percentage of determined costs);
  - Maximum penalty (percentage of determined costs).
- Additional incentives (yes/no).

Changes in cost categories and cost by entity

144 The right-hand side of the section shows a graphical presentation of the planned changes in determined costs (per cost category and per entity) between 2019 (forecast) and 2024, both in percentage and in M€$_{2017}$ (Figure 24). The data feeding this graph is taken from the Reporting Tables:

- "T1 ANSP" for the cost breakdown for the main ANSP (items 1.1 to 1.5 converted in €$_{2017}$).
- "T1 NSA", "T1 MET", etc. (item 5.3).

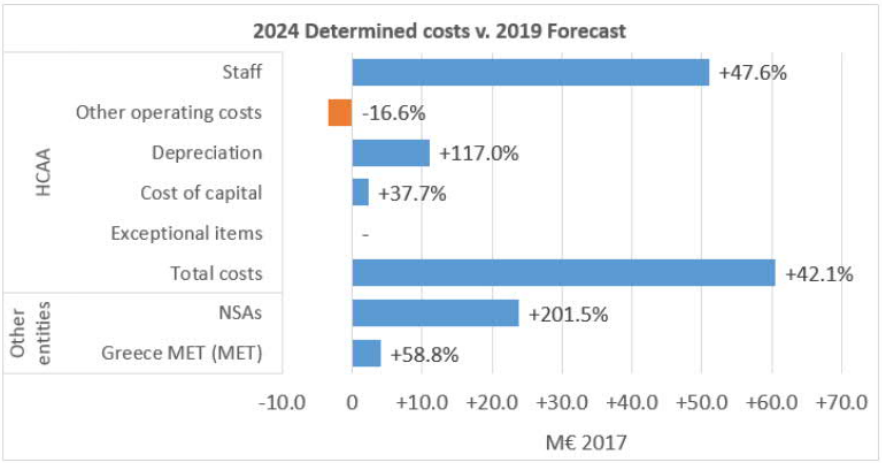


Figure 24: Example of review of the RP3 determined costs and incentives.

145 NSA costs are set in nominal terms, and depreciation and cost of capital are also set in nominal terms where historical cost accounting is applied (all States except for the United Kingdom) as per Article 22(2) of the Regulation. For simplicity, when creating the charts and the comments in the box, these costs are mentioned as $€_{2017}$ despite being in nominal terms.

146 At the end of the section, there is a text box for the presenting the analysis of items above.

4.3.4 PRB Key Points

147 This section provides the key points that PRB came to by reviewing the above elements relating to costs. It summarises the increases in costs in the 2019 baseline compared to 2019 forecast and 2018 actuals, identifying the main drivers for this cost increase.

4.3.A Cost of capital (COC)

148 This worksheet presents an analysis of the cost of capital as submitted by the States.

4.3.A.1 Determined costs vs return on equity (RoE)

149 The table included in this section presents for each year of RP3:

- The nominal value of the determined costs (ref. Reporting Tables T1 ANSP, item 4.2).
- The monetary value of the return on equity (i.e. the surplus embedded in the cost of capital).
- For ANSPs reporting the real weighted average cost of capital (WACC) parameters, the monetary value of the RoE is computed as $\left(\frac{E}{E+D}\right) \times RoE \times regulated\ asset\ base$.
- For ANSPs fully financed through equity, the monetary value of the RoE equals the reported cost of capital.
- For ANSPs reporting notional parameter and with no terminal charging zone, the monetary value of the RoE is calculated as the difference between the reported cost of capital and the monetary value of the debt stated in section 3.4.4 of the draft performance plan.
- For all remaining ANSPs, the analysis is not performed since it is not possible to compute the embedded surplus.
- The ratio between the two values indicates the level of return that the ANSP is embedding in the determined costs.

Nominal values ('000 €)	2020	2021	2022	2023	2024
Determined costs	117,218	124,982	130,712	135,348	141,161
Monetary value of Return on Equity	4,596	4,883	5,017	4,972	5,130
Ratio RoE/DC (%)	3.9%	3.9%	3.8%	3.7%	3.6%

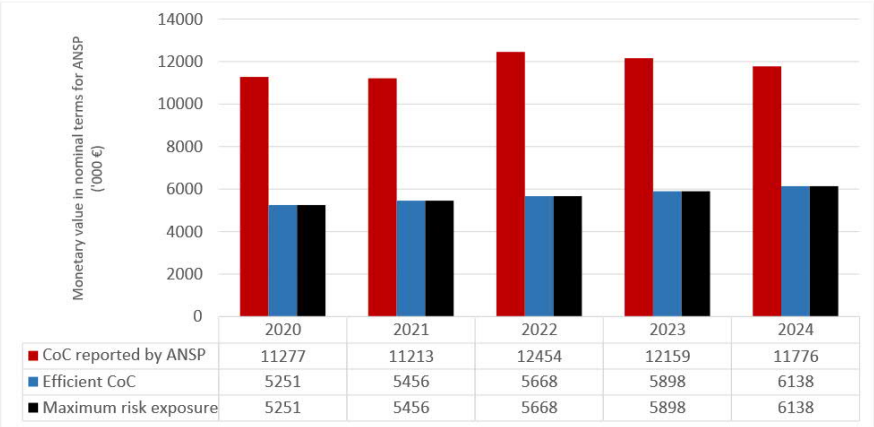
Figure 25: Example of overview of determined costs vs return on equity.

4.3.A.2 Cost of capital comparison: reported in draft performance plan. Efficient cost of capital, maximum risk exposure

150 This section presents a chart and a table (Figure 26), showing for each year of RP3:

- A red bar corresponding to the cost of capital as reported in the Reporting Tables T1 ANSP, item 1.4.
- A blue bar, corresponding to the efficient cost of capital as computed based on the report published by the PRB "Study on Cost of Capital".[6]
- A black bar, corresponding to the maximum risk exposure computed based on the traffic risk sharing mechanism (i.e. 4.4% of the determined costs for the States not modifying the Traffic Risk parameters).

151 The table below the chart presents the value displayed in the chart and the difference between the cost of capital reported in the draft performance plan and the efficient cost of capital. The right end side shows the total sum of such difference. All the values are presented in nominal euroS.



	2020	2021	2022	2023	2024	Total 2020-2024
CoC reported by ANSP	11277	11213	12454	12159	11776	
Efficient CoC	5251	5456	5668	5898	6138	
Maximum risk exposure	5251	5456	5668	5898	6138	
Difference CoC reported by ANSP v. Efficient ('000 €)	6027	5757	6786	6261	5638	30,469

Figure 26: Example of cost of capital comparison.

4.3.A.3 WACC review

152 This section presents the table with the WACC parameters (i.e. RoE, interest on debt and capital structure) to compute the reported cost of capital and the efficient cost of capital (Figure 27).

153 The draft performance plan parameters are the ones reported by the ANSPs (ref. Reporting Tables T1 ANSP, items 3.6, 3.7 and 3.8).

[6] Report and data sources available at: https://webgate.ec.europa.eu/eusinglesky/sites/eusinglesky/files/cost_of_capital_methodology_review.pdf

154 The efficient parameters are computed based on the report published by the PRB "Study on Cost of Capital".[7] This report defines four options to compute the efficient WACC. For option 1, 2 and 3, the efficient parameters are shown. For option 4, the cost of capital is capped to the maximum risk exposure and the WACC value computed following a top down approach. For this reason, when option 4 is applied, the efficient WACC parameters are shown as 'n/a'.

155 The reported interest on debt is compared to the efficient interest of debt to determine if it is in line with competitive market practices. If the reported interest of debt is below the competitive market practices value (as evaluated in the PRB "Study on Cost of Capital") the answer to the question below the table is 'Yes' and 'No' otherwise. The answer is 'n/a' if the interest on debt is not applicable.

156 The text box below the table offers additional information concerning the WACC parameters, including the nature of WACC parameters (i.e. real or notional), the origin of the interest on debts, if the return on equity is administered by the State, the difference between the reported cost of capital and the efficient one (if any) and a comment on the monetary value of the RoE (in case where the reported cost of capital is higher than the efficient value).

	2020		2021		2022		2023		2024	
Nominal values (%)	PP	Efficient	PP	Efficient	PP	Efficient	PP	Efficient	PP	Efficient
Return on Equity	7.0%	n/a	7.0%	n/a	7.0%	n/a	7.0%	n/a	7.0%	n/a
Interest on debts	0.0%	n/a	0.0%	n/a	0.0%	n/a	0.0%	n/a	0.0%	n/a
Capital structure (% debt)	0.0%	n/a	0.0%	n/a	0.0%	n/a	0.0%	n/a	0.0%	n/a
WACC	7.0%	3.3%	7.0%	3.4%	7.0%	3.2%	7.0%	3.4%	7.0%	3.6%

Is the interest on debts in line with the market?	**n/a**

Figure 27: Example of WACC review.

4.3.A.4 Regulated asset base review

157 This section presents a table reporting the values presented in Reporting Tables T1 ANSP (items 3.1, 3.2, 3.3 and 3.4):

- Fixed asset base.
- Net current assets.
- Adjustments total assets.
- Total asset base.

Nominal values ('000 €)	2020	2021	2022	2023	2024
Fixed asset base	114,568	122,956	129,052	128,097	129,605
Net current assets	46,537	37,230	48,864	45,606	38,626
Adjustments total assets	0	0	0	0	0
Total asset base	161,106	160,185	177,916	173,703	168,231

Figure 27: Example of regulated asset base review.

158 Below the table, there is a text box with additional information and an analysis on the total asset base elements, namely if the fixed asset base is aligned with the evolution of the investments in section 3.5, if the net current assets seem appropriate compared to the expected cashflow and if

[7] Report and data sources available at: https://webgate.ec.europa.eu/eusinglesky/sites/eusinglesky/files/cost_of_capital_methodology_review.pdf

the rationale of the adjustments is justified in the "Additional Information" of Annex A of the Reporting Tables.

4.3.A.5 PRB Key Points

159 This section provides the key points that PRB identified by reviewing the above elements relating to costs. It summarises if the reported cost of capital presents any issues. In the case where the reported cost of capital is higher than the efficient cost of capital (and consequently higher than the maximum risk exposure), the difference is stated and the monetary value of the return on equity is analysed. If the ratio between the monetary value of the return on equity compared to the total determined costs is higher than 5%, the cost of capital is considered excessive and non-acceptable. Moreover, if the parameters of the cost of capital present any peculiarity, e.g. when the return on equity is administered by the State, this information is highlighted.

4.3.B Pensions

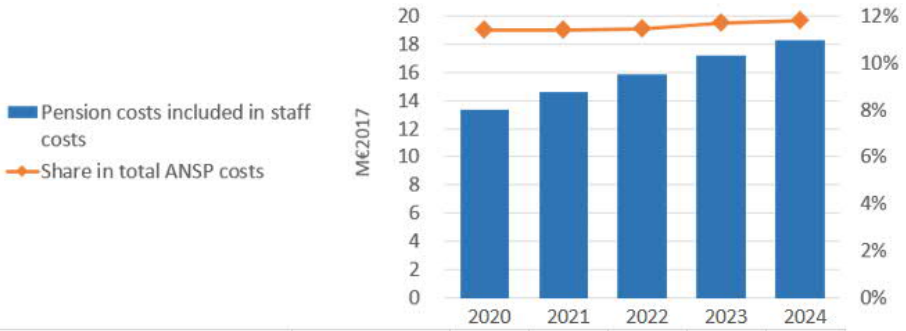
4.3.B.1 Review of en route pension costs for the main ANSP

160 This section uses information from the en route reporting tables (T1 ANSP) to look at the trend in the share of pension costs during RP3 and to examine whether the ANSP has a lower or higher proportion of pension costs compared to the average of other ANSPs at Union-wide level.

161 The chart on the left-hand side (Figure 28) shows:

- The total pension costs included in staff costs (sub item 1.1 in the reporting tables) in M€$_{2017}$ for all years of RP3, shown as blue bars.
- The share of the above-mentioned pension costs in the total ANSP costs (before deduction of the costs for visual flight rules (VFR) exempted flights, i.e. item 1.6).

162 The information from this chart is used to determine whether pension costs are likely to become an increasing burden during RP3, and possibly make the achievement of the cost efficiency target more challenging.



Pension costs included in staff costs	M€2017	13.3	14.6	15.8	17.2	18.3
Year on year variation	*% change*		*+9.5%*	*+8.7%*	*+8.6%*	*+6.2%*
Share in total ANSP costs	%	11.4%	11.4%	11.4%	11.7%	11.8%
Year on year variation	*p.p.*		*0.0p.p.*	*0.0p.p.*	*0.3p.p.*	*0.1p.p.*

What is the trend of pension costs share in the total ANSP costs between 2020 and 2014?	**Slight increase**

Figure 28: Example overview of en route pension costs.

163 The chart on the right-hand side (Figure 29) shows the share of pension costs in the total ANSP costs compared with the average calculated at EU-wide level:

- The inner ring shows the value for the ANSP, calculated as the RP3 average (i.e. the sum of 2020-2024 pension costs divided by the sum of 2020-2024 total ANSP costs).
- The outer ringer shows the same figure but calculated at Union-wide level (i.e. summing pension costs and total ANSP costs for all ANSPs).

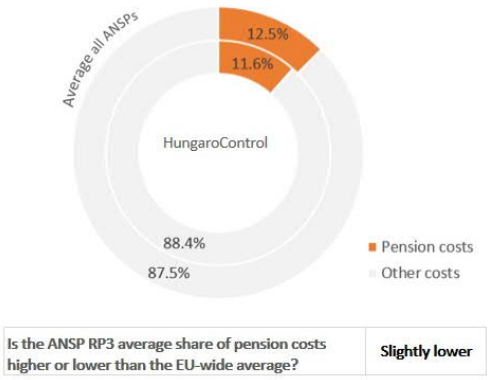


Figure 29: Example overview of share of pension costs in total ASNSP costs.

164 The information from this chart is used to determine whether pension costs for the ANSP under review represents a higher or a lower share than for an average ANSP.

	Lower than Union-wide average	Higher than Union-wide average
Increasing over RP3	Pensions are possibly an issue in the DUC trend check. Need to investigate the magnitude of the increase and its drivers (controllable or uncontrollable). Also check if the draft performance plan demonstrates that there was a significant change between 2019 and 2020.	Pensions are likely to be an issue to meet the trend and level targets. Need to investigate the magnitude of the increase and its drivers (controllable or uncontrollable by the ANSP). Also need to check what the State says about the actions taken to mitigate the risks and the reasons for higher costs (type on schemes proposed).
Decreasing over RP3	Pensions are not likely to be an issue.	Pensions are possibly an issue in the DUC level check. Need to investigate the magnitude and the reasons for higher costs (type of schemes proposed).

4.3.B.2 Reporting exceptions and planned changes in assumptions

165 This section reviews the cases where ANSPs allocate some defined benefit costs to another cost category than staff or when there are planned changes in contribution rates or actuarial assumptions during RP3 in further detail.

- Allocation of some defined benefit costs to another cost category than staff. The information can be retrieved from the draft performance plan section 3.4.3.4. In the case where the answer is yes, explanations are provided in the text box.

- Planned changes in state pension contribution rates. The information can be retrieved from the draft performance plan section 3.4.3.2. In the case where the answer is yes, explanations are provided in the text box.
- Planned changes in occupational defined contribution rates. The information can be retrieved from the draft performance plan section 3.4.3.3. In the case where the answer is yes, explanations are provided in the text box.
- Planned changes in actuarial assumptions for the defined contribution schemes. The information can be retrieved from the draft performance plan section 3.4.3.4. In the case where the answer is yes, explanations are provided in the text box.
- If the answers to all questions are no, the section is marked as 'n/a' and the questions are hidden.

4.3.B.3 Actions taken by the ANSP to manage the cost-risk associated with pensions

166 This section provides a text box summarising the information provided in the draft performance plan under section 3.4.3.4.

4.3.B.4 PRB Key Points

167 This section provides the key points that PRB identified by reviewing the above elements relating to costs. It summarises key issues concerning the pensions: lack of description of relevant parameters required to estimate future pension obligations, reporting errors in the pillars, the calculation of the pensions is not consistent, etc.

4.3.C Method for cost allocation between en route and terminal

4.3.C.1 Cost allocation overview

168 This section presents a text box describing the overall principles and criteria for cost allocation, as well as relevant additional information as provided in the Annex A of the draft performance plan.

169 Below the table, a text box specifies if there is any change in the allocation with respect of RP2, and if any issue has been identified during the analysis.

4.3.C.2 Review of changes in to cost allocation

170 This section analyses the allocation method changes between RP2 and RP3. If the answer to the first question is "No", the remaining part of the section is filled with 'n/a'. If there is a change in cost allocation, further information and analysis is provided in the text box on the right side. Similarly, whether changes are duly described and justified (question 2.2. and, if not, text box on the right) and if there is an impact on the determined costs (question 2.3 and, if yes, text box on the right) is also analysed.

4.3.C.3 PRB Key Points

171 This section provides the key points that PRB identified by reviewing the above elements relating to cost allocation. It summarises if there have been changes in the allocation from RP2 to RP3, and in the positive case, the quantified impact in the baseline and/or the costs over RP3.

4.4 DUC

172 The purpose of this worksheet is to show an overview of DUC trends and perform the cost efficiency target assessment following the five criteria listed in Annex IV of the Regulation.

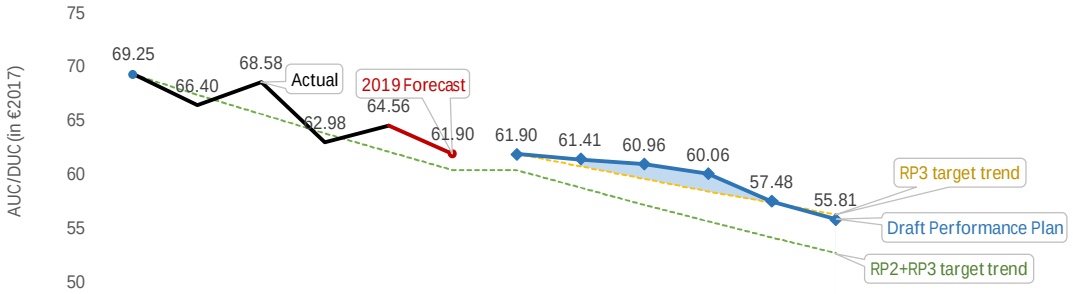
4.4.1 Overview and trends of the DUC

173 This section presents a text box describing the overall principles and criteria for cost allocation, as well as relevant additional information as provided in the Annex A of the draft performance plan.

174 This section provides a graph showing the DUCs over the period 2014-2024 (Figure 30):

- The back line shows actual values for the years 2014-2018.
- The red line shows the 2019 forecast DUC (see paragraph 4.3.1 above for explanations on the "2019 forecast").
- The blue line shows the 2019 DUC baseline (see paragraph 4.3.1 above for explanations on the "2019 baseline") as well as the determined DUC for the years 2020-2024.
- The yellow dotted line reflects the DUC trend the State would have to achieve if, starting from their proposed 2019 baseline, they would meet the Union-wide trend for RP3 in each year of RP3 (i.e. -1.9% per year).
- The green dotted line reflects the DUC trend the State would have to achieve if, starting from the 2014 actual DUC (though recalculated using M3 coefficient), they would meet the Union-wide (long-term) trend for RP2+RP3 in each year (i.e. -2.7% per year).

175 The table below the chart shows the DUC values in €$_{2017}$ and the year-on-year variations (sourced from Reporting Tables T1, item 5.5 divided by exchange rate). The final columns provide the calculation of the DUC variation between 2019 and 2024 and between 2014 and 2024.



		2014B	2015A	2016A	2017A	2018A	2019F	2019B	2020D	2021D	2022D	2023D	2024D	CAGR 2019B-2024	CAGR 2014B-2024
AUC/DUC	€2017	69.25	66.40	68.58	62.98	64.56	61.90	61.90	61.41	60.96	60.06	57.48	55.81	-2.1%	-2.1%
Annual Change	%		-4.1%	+3.3%	-8.2%	+2.5%	-4.1%	-4.1%	-0.8%	-0.7%	-1.5%	-4.3%	-2.9%		

Figure 30: Example overview and trends analysis of the DUC.

4.4.2 DUC consistency

176 This section reviews the DUC consistency against the criteria set out in Annex IV, Section 1.4 of the Regulation.

- DUC consistency with the Union-wide RP3 DUC trend (ref. Annex IV, Section 1.4(a)) presents the DUC trend for RP3 in the draft performance plan, the Union-wide target (i.e. -1.9% per year) and the difference between both values expressed in percentage points. The left side displays check marks to illustrate whether this criterion is met (i.e. the draft performance plan trend is equal or lower than the Union-wide target).
- DUC consistency with the Union-wide long-term DUC trend (ref. Annex IV, Section 1.4(b)) presents the DUC trend for the period RP2+RP3 (2014-2024) in the draft performance plan, the Union-wide target (i.e. -2.7% per year) and the difference between both values. The left side displays check marks to illustrate whether this criterion is met (i.e. the draft performance plan trend is equal or lower than the Union-wide target).

- DUC level consistency (ref. Annex IV, Section 1.4(c)) presents the DUC 2019 baseline level, the unweighted average of the DUC 2019 baseline for the States in the same comparator group (excluding the State being reviewed) and the difference between both values. The left side displays check marks to illustrate whether this criterion is met (i.e. the draft performance plan DUC 2019 baseline level is equal or lower than the average of the comparator group).
- DUC deviation (ref. Annex IV, Section 1.4(d)) which is divided in two sub blocks reviewing whether the deviation of the draft performance plan DUC trend with respect to the Union-wide targets is for the purpose of achieving the capacity targets or is due to restructuring costs. In particular:
    - Capacity: review the DUC deviation against the criteria of Annex IV, Section 1.4(d)(i).
    - Restructuring costs: review the DUC deviation against the criteria of Annex IV, Section 1.4(d)(ii).

177 At the end of the section there is a text box providing a factual analysis of the criteria.

✖ DUC consistency with the Union-wide RP3 DUC trend	PP trend	-0.4%	Union-wide trend	-1.9%	Difference	+1.5p.p.
✖ DUC consistency with the Union-wide long-term DUC trend	PP trend	+1.9%	Union-wide trend	-2.7%	Difference	+4.6p.p.
✔ DUC level consistency	PP 2019 baseline	25.79	Average comp. group	31.14	Difference	-17.2%

DUC deviation	
Are the PP capacity targets consistent?	Yes
Is the deviation due to restructuring costs invoked?	No
If yes, are the PP restructuring costs compliant with the definition in article 2(18) of the Regulation?	n/a

Figure 31: Example overview of DUC consistency.

4.4.3 Analysis of the DUC deviation for achieving the capacity targets

178 This section reviews the case where the DUC in the draft performance plan does not meet the trend criteria and where the State presents consistent capacity targets in the draft performance plan (ref. Annex IV, Section 1.4(d)(i) in more detail).

179 The first subsection "Deviation" shows valuations in M€$_{2017}$ of the deviations of the DUC submitted in the draft performance plan against the RP3 and the long-term (RP2+RP3) Union-wide trends (i.e. -1.9% and -2.7%, respectively). The deviations are calculated as follows:

- Deviation v. RP3 trend over the period 2020-2024: $Deviation = \sum_{2020}^{2024}[PP\ Total\ costs - (RP3\ target\ trend\ DUC^{*} \times Planned\ En\ route\ SUs)]$
  * See yellow dotted line of the graphic in section 1, which corresponds to the DUC that would be required to meet the RP3 Union-wide trend for each year of RP3.
- Deviation v. RP2+RP3 trend over the period 2020-2024: $Deviation = \sum_{2020}^{2024}[PP\ Total\ costs - (RP2{+}RP3\ target\ trend\ DUC^{**} \times Planned\ En\ route\ SUs)]$
  ** See green dotted line of the graphic in section 1, which corresponds to the DUC that would be required to meet the RP2+RP3 Union-wide trend for each year of RP3.

180 The second subsection "ATCO planning (en-route)" provides an estimation of the costs of the additional ATCOs recruited during RP3. This is done in two steps:

- Additional ATCOs in OPS during RP3 (FTEs) presents the planned change in the total number of ATCOs between 1 January 2020 to 31 December 2024 (sourced from draft performance plan section 3.3.1 for all ACCs).

- Additional ATCO Costs (M€$_{2017}$) presents an estimation of the costs of the additional ATCOs recruited in RP3. This is estimated by multiplying the FTEs calculated in the previous bullet by the yearly cost per ATCO in OPS as reported in the ATM Cost Effectiveness (ACE) 2017 Benchmarking report. For this estimation it is assumed that, each year, the FTEs provided in the draft performance plans in section 3.3.1.d) ATCO-Planning - Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs) start working on 1 July of the respective year.

181 It is important to stress that this is only an estimation to provide an order of magnitude of the costs of additional ATCOs recruited during RP3 to the analysts and the PRB, assuming no increase in ATCO employment costs per ATCO in OPS compared to their 2017 level. It should also be noted that this estimation only includes "staff costs"; it does not include "other operating costs" associated with ATCO recruitment (e.g. training).Further details of the ATCO planning can be seen in section 3.2.2 (1b) of the factbook.

182 The third subsection "Determined costs related to investments (en route)" presents two figures:

- Total determined costs of new major investments (in M€$_{2017}$) as submitted by the States in section 2.1.1 of the draft performance plan.
- Of which, related to capacity presents the part of the figure above that can be considered as contributing to capacity. A more detailed analysis of the investments is presented in section 3.5 of the factbook. See also section of this document on the methodology to assess whether an investment contributes to capacity.

183 At the end of the section there is a text box providing an analysis of the previous four subsections. This analysis substantiates the answer to the question at the end of the section – "Can it be considered that the deviation is exclusively for the purpose of achieving the capacity targets?" - which reflects the requirement of Annex IV, Section 1.4(d)(i) of the Regulation.

4.4.4 Analysis of the DUC deviation due to restructuring costs

184 This section reviews the case where the DUC in the draft performance plan does not meet the criteria in bullets 1 and 2 of the section 12.2 and the State claims that this deviation due to restructuring costs (ref. Annex IV, Section 1.4(d)(ii) in more detail).

185 If there is no deviation or the State does not report restructuring costs in section 3.4.5 of the draft performance plan, then "n/a" is displayed.

186 The first subsection "Deviation" shows a quantification in M€$_{2017}$ of the deviation of the DUC submitted in the draft performance plan and the RP3 and long-term trends if these followed the Union-wide targets (i.e. -1.9% and -2.7% respectively).

187 The second subsection "Restructuring costs from previous periods to be recovered in RP3 (in M€$_{2017}$)" presents the data provided by the State in section 3.4.5.1 of the draft performance plan, per year and total for the RP3 period.

188 The third subsection "Restructuring costs planned for RP3 (in M€$_{2017}$)" presents the sum of the costs of all the restructuring measures provided by the State in section 3.4.5.2 of the draft performance plan, broken down per cost category, per year and total for the RP3 period.

189 The fourth subsection "Summary of restructuring measures presented in the draft performance plan" is a text box that summarises the restructuring measures provided by the State in the draft

performance plan. The purpose of this summary, in conjunction with the previous three subsections, is to provide the PRB with as much information as possible for their analysis. The analysis is complemented with a detailed reading of the justifications and material provided by the States in the draft performance plan.

190 At the end of the section there is a text box providing an analysis of the previous four subsections. This analysis should substantiate the answers to the two questions at the end of the section reflecting the requirements of Annex IV, Section 1.4(d)(ii) of the Regulation:

- Can it be considered that the deviation is exclusively due to restructuring costs?
- Is it demonstrated that the measures will deliver a net financial benefit to airspace users at the latest in RP4?

4.4.5 PRB Key Points

191 This section provides the key points that PRB identified by reviewing the above elements relating to DUC. It summarises if the States are consistent with the DUC short trend, the DUC long-term trend and the average DUC baseline of the comparator group. Moreover, in case of deviation for achieving capacity targets or for restructuring costs, the PRB indicates if the deviation(s) is justified (i.e. exclusively for the purpose of achieving the capacity targets or due to restructuring costs).

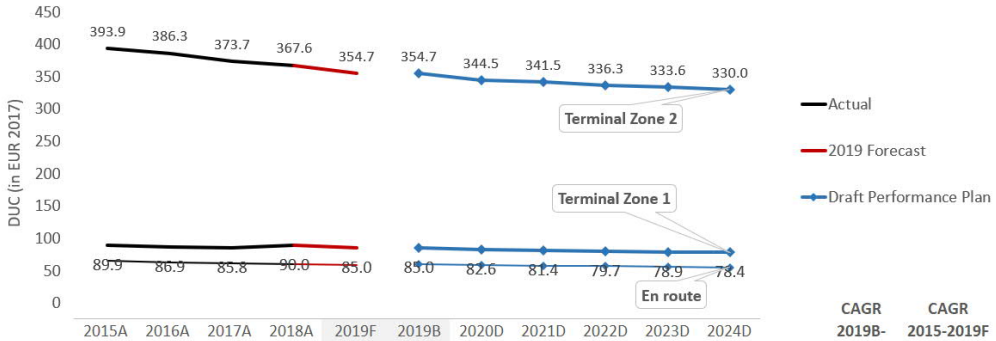
4.5 Terminal

4.5.1 Overview and trends of the terminal DUC

192 This section provides a graph showing the terminal and en route DUCs over the period 2015-2024 (Figure 32). The terminal DUCs are shown with thicker line(s) than en route; in both cases:

- The black line shows actual values for the years 2015-2018.
- The red line shows the 2019 forecast DUC.
- The blue line shows the 2019 DUC baseline and well as the determined DUC for the years 2020-2024.

193 The table below the chart shows the DUC values in 2017) and the year-on-year variations for both terminal and en route. The columns on the right provide the calculation of the DUC variation between 2019 and 2024 and between 2015 and 2024.



		2015A	2016A	2017A	2018A	2019F	2019B	2020D	2021D	2022D	2023D	2024D	CAGR 2019B-	CAGR 2015-2019F
AUC/DUC - Terminal Zone 1	€ (2017)	89.9	86.9	85.8	90.0	85.0	85.0	82.6	81.4	79.7	78.9	78.4	-1.6%	-1.4%
Annual Change	%		*-3.3%*	*-1.3%*	*+5.0%*	*-5.6%*	*-5.6%*	*-2.8%*	*-1.5%*	*-2.1%*	*-1.0%*	*-0.6%*		
AUC/DUC - Terminal Zone 2	€ (2017)	393.9	386.3	373.7	367.6	354.7	354.7	344.5	341.5	336.3	333.6	330.0	-1.4%	-2.6%
Annual Change	%		*-1.9%*	*-3.3%*	*-1.6%*	*-3.5%*	*-3.5%*	*-2.9%*	*-0.9%*	*-1.5%*	*-0.8%*	*-1.1%*		
AUC/DUC - En route	€ (2017)	66.1	63.4	61.3	60.9	59.9	59.8	58.9	58.3	57.3	56.3	55.7	-1.4%	
Annual Change	%		*-4.0%*	*-3.3%*	*-0.6%*	*-1.7%*	*-1.9%*	*-1.4%*	*-1.1%*	*-1.7%*	*-1.8%*	*-1.1%*		

Figure 32: Example overview and trends of the terminal DUC.

4.5.2 Comparison of performance with similar airports

194 This section provides a table with information on the performance of the airports included in the scope of the draft performance plan in terms of cost efficiency compared with similar airports:

- Airport: list of airports included by the State in the draft performance plan.
- Group: group to which the airport belongs (Group I, II, III or IV based on number of movements and seasonality).
- RP2 performance (2015-2018):
  - Group median – airport unit cost: shows the median of the airport unit cost for the relevant airport group for the 2015-2018 period. This is used as a reference for comparison.
  - Average airport unit cost: shows the average of the airport unit cost for the 2015-2018 period.
  - Difference v. median: shows, in percentage, the difference between the two previous values. It shows a red gradient if the unit cost of the airport is higher than the median, and a green gradient if it is lower than the median.
- RP3 plan (2020-2024):
  - Group median – airport DUC: shows the median of the airport planned determined unit cost for the relevant airport group for the 2020-2024 period. This is used as a reference for comparison.
  - Average airport DUC: shows the average of the airport planned DUC for the 2020-2024 period.
  - Difference v. median: shows, in percentage, the difference between the two previous values. It shows a red gradient if the DUC of the airport is higher than the median, and a green gradient if it is lower than the median.

Airport	Group*	RP2 performance (2015-2018)			RP3 Plan (2020-2024)		
		Group median - airport unit cost	Average airport unit cost	Difference v. Median	Group median - airport DUC	Average airport DUC	Difference v. Median
Warszawa/ Chopina (EPWA)	GROUP III	171.33	114.7	-33.1%	167.4	110.9	-33.8%
Bydgoszcz (EPBY)	GROUP IV	673.82	374.7	-44.4%	647.6	349.2	-46.1%
Gdansk (EPGD)	GROUP IV	673.82	155.4	-76.9%	647.6	162.2	-75.0%
Krakow - Balice (EPKK)	GROUP IV	673.82	165.8	-75.4%	647.6	160.4	-75.2%
Katowice - Pyrzowice (EPKT)	GROUP IV	673.82	174.7	-74.1%	647.6	158.1	-75.6%
Lublin (EPLB)	GROUP IV	673.82	276.9	-58.9%	647.6	297.9	-54.0%
Lodz - Lublinek (EPLL)	GROUP IV	673.82	466.5	-30.8%	647.6	614.0	-5.2%
Warszawa/ Modlin (EPMO)	GROUP IV	673.82	150.6	-77.6%	647.6	188.0	-71.0%
Poznan - Lawica (EPPO)	GROUP IV	673.82	294.3	-56.3%	647.6	276.4	-57.3%
Radom (EPRA)	GROUP IV	673.82	760.3	+12.8%	647.6	5163.3	+697.3%
Rzeszow - Jasionka (EPRZ)	GROUP IV	673.82	211.1	-68.7%	647.6	315.2	-51.3%
Szczecin - Goleniów (EPSC)	GROUP IV	673.82	242.8	-64.0%	647.6	241.0	-62.8%
Wroclaw/ Strachowice (EPWR)	GROUP IV	673.82	191.6	-71.6%	647.6	185.9	-71.3%
Zielona Gora - Babimost (EPZG)	GROUP IV	673.82	1863.7	+176.6%	647.6	1850.6	+185.8%
Olsztyn-Mazury (EPSY)	GROUP IV	673.82	-	-	647.6	1151.8	+77.8%

** GROUP I - Avg. mvts. in 2016-2018 ≥ 225,000; GROUP II - Avg. mvts. in 2016-2018 ≥80000 and <225000 and seasonal; GROUP III - Avg. mvts. in 2016-2018 ≥80000 and <225000 and not seasonal; GROUP IV - Avg. mvts. in 2016-2018 < 80,000*

Figure 33: Example overview and trends of the terminal DUC.

195 Under the table there is a text box providing a review of the data presented in the table.

196 The grouping of airports is done based on the two following criteria:

- Average number of movements over 2016-2018;
- Seasonality.

197 To establish an airport as seasonal, the three busiest months (2018 data) are compared to the three lowest months. If the traffic in the high season is more than double than in low season, it is flagged as seasonal.

Based on this criteria, 4 groups are established:

GROUPS	Criteria
GROUP I	Average 225000 movements or above in 2016-2018
GROUP II	Average ≥80000 and <225000 movements in 2016-2018 and SEASONAL
GROUP III	Average ≥80000 and <225000 movements in 2016-2018 and NOT SEASONAL
GROUP IV	Less than 80000 movements average in 2016-2018

4.5.3 Traffic and Costs review

198 This section is divided in three subsections: the first subsection "Baseline review" reviews the two underlying elements of the 2019 terminal DUC baseline submitted by the States in their draft performance plans:

- Traffic - Comparison vs. STATFOR forecasts: this check compares the 2019 traffic baseline with the STATFOR February and October forecasts (high, base and low) for each terminal charging zone defined by the State.
- Costs - 2019 forecast & baseline review: presents the difference, in M€ and % for each terminal charging zone defined by the State, between:
  - The 2019 costs forecast and the 2018 actual costs;
  - The 2019 costs forecast and the average actual costs over 2015-2018 (which can be a better reference than 2018 if 2018 was an exceptional year);
  - The 2019 costs baseline and forecast.

Traffic

Comparison vs. STATFOR forecasts	'000 TNSUs			Δ(B) (%)
2019B (Performance plan baseline) - TCZ1		**113.5**		
2019F (STATFOR Feb 19)	*L 110.5*	*L 112.5*	*L 114.6*	*+0.9%*
2019F (STATFOR Oct 19)	*L 107.4*	*L 107.8*	*L 108.2*	*+5.3%*
2019B (Performance plan baseline) - TCZ2		**139.5**		
2019F (STATFOR Feb 19)	*L 136.9*	*L 138.9*	*L 140.2*	*+0.4%*
2019F (STATFOR Oct 19)	*L 133.7*	*L 134.2*	*L 134.6*	*+3.9%*

Costs

2019 forecast & baseline review	M€ 2017	%
2019 Forecast v. 2018 Actual - TCZ1	+1.1	+11.2%
2019 Forecast v. Avg. 2015-2018 Actual	+1.4	+14.3%
2019 Baseline v. 2019 Forecast	1.2	+10.7%
2019 Forecast v. 2018 Actual - TCZ2	+3.3	+14.1%
2019 Forecast v. Avg. 2015-2018 Actual	+5.4	+25.3%
2019 Baseline v. 2019 Forecast	0.3	+1.0%

Figure 34: Example review of terminal baseline.

199 Below these two checks there is a text box commenting, where necessary, on the items above.

200 The second subsection "Traffic forecasts (terminal)" reviews the traffic forecasts used by the States in their draft performance plans for the 2020-2024 period. It consists of three parts:

- In the first part of the subsection, a simple check confirms whether the State has used the STATFOR February 2019 base forecast (latest available before the submission of the draft performance plans) as required by Article 10(2) of the Regulation.
- Under this check, if the State has decided to avail itself of the provisions of the last paragraph of Article 10(2) and use a different forecast than the STATFOR February 2019 base, a text box presents a summary of the justifications provided in the draft performance plan.
- Finally, in a free text box presents a factual description of the traffic forecast used by States in the draft performance plan in comparison with the available STATFOR forecasts (February and October 2019) and, where applicable, a review of the justifications provided by the State in case of using a different forecast than the STATFOR February 2019 base.

201 The third subsection “Determined costs (terminal)” consists of the following parts:

- A simple check confirms whether the inflation data submitted by the State for 2019-2024 is consistent with the IMF April 2019 forecast.
- Cost elements – Main ANSP (terminal): Provides a very quick overview on the status important cost drivers such as investments, cost of capital (including interest on loans, RoE and WACC), and pensions.
- Incentives (terminal): This area shows the main characteristics of the incentives proposed by the State in its draft performance plan.
- The right-hand side of the section shows a graphical presentation of the planned changes in determined costs (per cost category and per entity) between 2019 (forecast) and 2024, both in percentage and in M€$_{2017}$. The data feeding this graph is taken from the terminal Reporting Tables:
    - "T1 ANSP" for the cost breakdown for the main ANSP.
    - "T1 NSA", "T1 MET", etc.

Figure 35: Example review of terminal determined costs.

202 NSA costs are set in nominal terms, and depreciation and cost of capital are also set in nominal terms where historical cost accounting is applied (all States except for the United Kingdom) as per Article 22(2) of the Regulation. For simplicity, when creating the charts and the comments in the box, these costs are mentioned as €$_{2017}$ despite being in nominal terms.

203 At the end of the subsection, there is a free text box commenting on the items above.

4.5.4 PRB Key Points

204 This section provides the key points that identified by reviewing the above elements relating to cost allocation. It summarises the comparison with the en route costs DUC trend, the comparison of RP2 actual trend (2015 actual to 2019 forecasted) with the RP3 DUC trend, and at airport level, comparison of performance with similar airports. Moreover, PRB indicates other issues e.g. the traffic forecast used by the States, the cost evolution between 2019 and 2024 and, in case of an increase, the main drivers for this.