2022 Traffic Light System for Environmental Performance

Comment response document

October 2023

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1   INTRODUCTION AND CONTEXT

1.1   About the document

1   This document provides the comments received on the draft Traffic Light System report of 2022 provided to the Member States following on from the Single Sky Committee (SSC) meeting of 21st June 2023, in which Member States were invited to provide comments by 7th July 2023.

2   Each comment has been included in the document and a PRB response has been provided.

1.2   Overview of comments received

3   Four Member States and FABEC provided comments to the draft Traffic Light System report 2022 (Table 1).

Member State	Date
Bulgaria	05/07/2023
FABEC[1]	07/07/2023
Ireland	07/07/2023
Italy	07/07/2023
Poland	06/07/2023

Table 1 – Overview of comments received.

4   Most of the topics included in the comments related to the limitations of indicators used, the methodology underlying the Traffic Light System, and clarification.

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[1] Belgium, France, Germany, Luxembourg, the Netherlands, and Switzerland.

3 RESPONSE TO MEMBER STATES'S COMMENTS

3.1 *Bulgaria*

Type of comment	Comment	PRB response
General	[…] the key issues in the methodology for the assessment of the current HFE as it is influenced heavily by various factors (geo-political, technical, etc.) that go beyond the States and ANSPs control and thus could affect the fair and meaningful assessment of the ATM performance.	The indicators used in the Traffic Light System methodology are those within the scope of the monitoring activities as defined in Commission Implementing Regulation (EU) 2019/317 (Annex I, Section I, Parts 2.1 and 2.2, and Section 2, Parts 2.1 and 2.2). The Traffic Light System report clearly states that performance is also affected by other stakeholders (see page 3, paragraph 5).
Indicators/RP4	[…] it would be beneficial if the KPI's and PI's methodologies for RP4 are brought in advance to the attention of the States and the operational stakeholders who would be in the position to validate them before being agreed at the level of the SSC and before being implemented.	The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be considered in future iterations of the Traffic Light System methodology.

Table 2 – Summary of Bulgaria's comments and PRB response.

3.2 *FABEC*

Type of comment	Comment	PRB response
General	We thank the PRB for the report and the balanced statements regarding the validity and the accountability of its results. From a our *[sic]* point of view it is essential to communicate those limitations in order to actively manage third parties' expectations concerning the impact of ANS to the European Green Deal. […] we suggest that the final report is supplemented by a statement concerning the quantitative impact of the aviation industry and the associated impact of ANS provision to European greenhouse gas emissions.	The report will make it clear that the purpose of the Traffic Light System is not to quantify the excess emissions attributable to ANS.
Indicators/RP4	The limitations of the environmental indicators used to measure the performance of ANSPs or States lie mainly in the fact that they depend on numerous factors not sufficiently influenceable by ANSPs or States. Current environmental indicators are sensitive to various factors such as traffic, costs, and weather. These influencing factors should be also taken into account in the performance evaluation.	The indicators used in the Traffic Light System methodology are those within the scope of the monitoring activities as defined in Commission Implementing Regulation (EU) 2019/317 (Annex I, Section I, Parts 2.1 and 2.2, and Section 2, Parts 2.1 and 2.2). The Traffic Light System report clearly states that performance is also affected by

		other stakeholders (see page 3, paragraph 5). The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be reflected in the Traffic Light System methodology.
General	It is well knows *[sic]*, that comparability among states and ANSPs is limited. The more abstract the approach becomes, the more limited the comparability of states/ANSPs. Simplified comparison without adequately looking into the details can therefore not provide important insights. The approach seems more suitable to compare performance of one ANSP/state over several years (intrastate/-ANSP) than provide a valid interstate/-ANSP comparison.	The purpose of the Traffic Light System is not to compare the performance among Member States, but rather to present how the performance of a Member State is evolving over time. However, the only comparison amongst Member States is possible via the Member States' average, given that for each indicator the specific Member State value is compared to the sample's average. For the Union-wide assessment, please refer to the Monitoring Report of 2022.
General	The presentation of the performance of each ANSP could suggest that the main factors for improvement are the FRA and the advanced FUA. However, the implementation of a FRA does [sic] guarantee additional improved performance, as the FRA is usually designed considering the actual trajectories (direct routes). The real improvement in environmental performance lies in the quality of the connections, whether in a FRA context or in an ATS context. For example, some ANSPs have simply implemented a FRA with exactly the same constraints as the ATS network in use before. Conversely, some ATS networks are already very successful outside the FRA context. The same is true for the advanced FUA. The efficiency of the advanced FUA varies considerably from country to country. Purely implementing advanced FUA (e.g. as part of a checkbox exercise – does not necessarily imply environmental improvements (e.g. if flight planning cannot be optimized).	The PRB has coordinated with the Network Manager and SESAR Deployment Manager on this matter and would encourage FABEC States to continue efforts to implement FRA and FUA in an effective and coordinated manner. The PRB considers them to be strong enablers of environmental performance as requirements outlined in the CP1 Regulation.
General	Due to its limitations and the political sensitivity of the topic, the approach should avoid any tendency to blame or stigmatise but should focus on actual potentials for improvement.	The PRB's role is not to recommend what operational measures Member States should implement but rather to conduct a fact-based assessment of performance to facilitate Member State discussions.
Editorial	The reader's guide seems to contradict itself in some parts (does the report at this stage contain 2022 data or not) and refers	The reader's guide refers to the scorecards which have not been provided at this stage

| | to claimed elements of the report, which the report itself does not contain (blue rhombuses). Before publication, these parts should be carefully checked. | of the review. Before publication, this section will be checked to ensure consistency. |

Table 3 – Summary of FABEC's comments and PRB response.

3.3   Ireland

Type of comment	Comment	PRB response
AXOT and ASMA	*The NSA provided the reasons for the deteriorated performance in terminal area. More details to be found in the letter above.*	The PRB acknowledges the explanation provided which provides additional context to further understand Ireland's performance in additional ASMA time and AXOT indicators.
Indicators	[…] the current indicators are appropriate in terms of tracking trends. However, it should be clearly acknowledged that performance against the indicators may be affected by parties other than the ANSP, such as the airport operator, airlines, or other parties such as the Noise Regulator who imposes Noise Mitigation Measures or Operating Restrictions which have an impact on performance. Thus, while we are reporting in the context of ANS, changes in performance may or may not have to do with the performance of the ANSP.	The indicators used in the Traffic Light System methodology are defined in the Commission's Implementing Regulation (EU) 2019/317 (Annex I, Section I, Parts 2.1 and 2.2, and Section 2, Parts 2.1 and 2.2).

The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be reflected in the Traffic Light System methodology.

The Traffic Light System report clearly states that performance is also affected by other stakeholders (see page 3, paragraph 5). |
| General | In the initial Traffic Light System for Environmental Performance, published in 2022, the PRB identified several limitations to its methodology. These included the fact that the traffic light system does not provide the specific drivers of performance or the reasons for attaining the given level of performance, or how to improve it, and that it does not account for or reflect the interdependencies between key performance areas, such as capacity. It is noted that the purpose is to facilitate discussion and consideration of these questions. Nonetheless, given that the reporting is in the context of ANS, the Traffic Light System risks being interpreted as a reflection on the performance of ANSPs, even if the ANSPs did not perform any worse Year-on-Year and the reason for metrics returning closer to 2019 | The PRB's role is not to identify specific operational inefficiencies within each Member State but rather to conduct a fact-based assessment of performance to facilitate Member State discussions.
Additionally, the Traffic Light System report clearly states that performance is also affected by other stakeholders (see page 3, paragraph 5). |

	levels, is traffic returning closer to 2019 levels.	
Methodology	Considering the 2021 and 2022 traffic development, a year-on-year comparison is not useful in identifying trends in performance, as it primarily demonstrates the return of traffic. We suggest that a comparison to 2019 would be more insightful. Due to the traffic recovery, a year-on-year comparison would be constructive from next year. If that option is not pursued, we ask that the 2022 report be caveated with the above details.	The environmental performance (KEA) in pre-pandemic times was particularly poor and hence would not provide for an appropriate baseline to measure future improvements.
Indicators	[…] there are issues with the indicators used to monitor environmental performance. For example, the reference taxi-out times underpinning the ATXOT [sic] do not account for special events which affect taxi-out procedures such as airfield construction works, or the exact route taken by the aircraft from the stand to runway. The indicators also fails to account for factors outside the control of the ANSP such OTP. The indicators are also unable to account for the impacts of major changes in traffic, as happened in 2022.	The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be reflected in the Traffic Light System methodology.
Indicators	Looking forward to RP4, we note that there is an incentive scheme for ANSPs in relation to environmental performance, the performance indicators must be designed such that they 1) only capture performance within the control of the ANSP, and 2) reliably measure true performance. Incentive schemes which do otherwise risk unintended consequences or perverse incentives.	The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be reflected in the Traffic Light System methodology.

Table 4 – Summary of Ireland's comments and PRB response.

3.4 Italy

Type of comment	Comment	PRB response
General	[…] a subsequent investigation revealed further computation anomalies, mostly related to negative factors/errors in evaluating the data of the aircraft trajectories which affected the Italian airspace.	As the PRB is not responsible for data collection and KPI calculation, the PRB would encourage liaising directly with the PRU of Eurocontrol and the Network Manager.

Table 5 – Summary of Italy's comments and PRB response.

3.5 Poland

Type of comment	Comment	PRB response
General	The report does not provide any highlights regarding possible improvements - no	The PRB's role is not to recommend what operational measures Member States

	advice is provided by the PRB what can be done by individual States/ANSPs to improve the situation. The very simplified report, with simple comparison of YoY evolution of figures, without detailed analysis of reasons for change and quantification of impact of external vs. internal factors does not stimulate informed discussion but rather makes the readers to draw not right conclusions.	should implement but rather to conduct a fact-based assessment of performance to facilitate Member State discussions.
General	In practice, the main body of the report presents only comparison of 2022 vs. 2021, not a full analysis of trends over 2016-2022 with underlying changes in the operating environment. The report should provide further information on the traffic evolution and its impact on ENV performance – simple performance of 2022 results with 2021 when the traffic levels were significantly lower and when impact of the war was not existing, does not provide the right perception and leads to unrightful conclusions.	The Traffic Light System methodology does not allow for comparison across previous years as there is no set common targets to refer to and no tools available to make the comparison possible. Union-wide trends and the interdependencies between KPAs are considered in the PRB Monitoring Report 2022.
General	The Union-wide targets do not take into account changed external environment, specifically the military aggression on Ukraine and its consequences for HFE/KEA performance. Current scope of military activities, especially in the eastern part of the EU, is much wider than considered during the process of developing Union-wide RP3 targets. This should be duly note in the TRS [sic] report.	The PRB duly notes in the report that in 2022, due to capacity constraints and significant disruption to flights caused by Russia's war of aggression against Ukraine, the Union-wide KEA target was not achieved. The PRB encourages feedback on the indicators in the context of RP4 discussions. Any change to the Regulation will be reflected in the Traffic Light System methodology.
Editorial	We propose to add: "… Baltic **(including Poland)** …" – usually, reference to the Baltic States covers Lithuania, Latvia and Estonia, while Poland was also highly impacted by the invasions.	The PRB takes note of the comment and text has been updated accordingly.
General	As indicated above, at many airports 2022 was marked with significant traffic increase as compared to 2021. Comparison of 2022 performance should rather be made in relation to pre-pandemic times, and not 2020-2021 when the traffic was low.	The environmental performance (KEA) in pre-pandemic times was particularly poor and hence would not provide for an appropriate baseline to measure future improvements.
Editorial	In Poland, KEA indicator deteriorated over 2022 as compared to previous years – due to closed airspace behind Poland's eastern border and restrictions for air carriers to	The PRB takes note of the comment and text has been updated accordingly (see page 6, paragraph 28).

	operate as earlier – both resulting from the outbreak of the war. Poland is not among the countries that improved the KEA score in 2022. The second part of the paragraph is correct in terms of reference to the KEA result achieved by Poland in 2022.	
General	It is unclear how the quoted sentence is related to paragraph 29 (quoted above), where Poland is mentioned as one of the States with the largest deterioration of KEA and to the red lights indicated in the table. The results of KEA and ASMA for Poland in 2022 were worse than in 2021.	The paragraph indicates that compared to the SES average (all Member States) Poland's scores are worse. However, Poland's scores have improved in 2022 compared to its own scores of 2021. Several factors can affect the scores for KEA and ASMA. Please refer to PRB 2021 monitoring: Traffic light system for environmental performance for more detail regarding the rationale for including these indicators in the Traffic Light System.
Editorial	Annex I, Section 1 to Regulation 2019/317 does not mention ASMA, AXOT or CDO. It seems that Section 1 was wrongly quoted here.	The PRB takes note of the comment and text has been updated accordingly (see page 11, paragraph 42).

Table 6 – Summary of Poland's comments and PRB response.

4 MEMBER STATE'S COMMENTS

4.1 Bulgaria

Republic of Bulgaria
Ministry of Transport and Communications
Directorate General
CIVIL AVIATION ADMINISTRATION

TO:

CHAIR PERFORMANCE REVIEW BODY OF THE SINGLE EUROPEAN SKY

COPY TO:

HEAD OF SINGLE EUROPEAN SKY UNIT
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Subject: *Traffic light system report in light of the Performance and Charging scheme*

Sent by email:

Dear

Please accept my congratulations on your appointment as chair of the PRB and my best wishes for every success in your important role in a very significant moment of post-COVID aviation recovery.
I also would like to thank the EC and the PRB for the opportunity given during the SSC 85 to send comments on the Draft 2022 report "Traffic light system for environmental performance".

As you may know BG CAA took the chance to provide comments on the 2021 version of the "Traffic light" report (attached for your convenience). We have already pointed out some of the key issues in the methodology for the assessment of the current HFE as it is influenced heavily by various factors (geopolitical, technical, etc.) that go beyond the States and ANSPs control and thus could affect the fair and meaningful assessment of the ATM performance.

As you rightfully point in the PRB Capacity/Environment Interdependency Study, presented during the last SSC, Bulgaria HFE is very vulnerable to delays in the European ATM network as all the EU - Middle and Far East traffic avoids the congested areas by operating through the Bulgarian airspace. These occurrences in combination with the geopolitical situation in Ukraine, worsen the KEA regardless of the efforts to extend the cross-border FRA[1] and bring challenges to provide additional unplanned capacity.

We are thankful for the reply received from PRB (also attached) and we would like to bring to your attention a proposal for a possible way forward.

We consider the current "Traffic light" report and the coming RP4 deliberations as an opportunity to trigger a wider discussion on how the performance of air traffic management could be better assessed and improved for RP4 and beyond. We believe that it would be beneficial if the KPI's and PI's methodologies for RP4 are brought in advance to the attention of the States and the operational stakeholders who would be in position to validate them before being agreed at the level of the SSC and before being implemented.

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[1] SEE FRA project (South East Europe Free Route Airspace) allows Aircraft Operators to plan their flights freely across the airspace of Bulgaria, Hungary, Romania, Slovakia, Republic of Moldova and Czech Republic 24/7 without the limitations of the geographical boundaries. In addition to the SEE FRA expansion, the implementation of cross border operations between SEE FRA and BALTIC FRA opens the airspace from the Black Sea to the Baltic Sea for free route operations.

As a closing remark I would like to thank again the EC and the PRB for the efforts towards a sustainable and resilient ATM network and to assure you that Bulgaria will continue its best efforts to contribute to the achievement of the EU-wide performance targets and to the improvement of the ANS performance in Europe.

Yours sincerely,

4.2   FABEC

PRB Traffic Light System for Environmental Performance,
PRB Interdependency Study between capacity and environment
- **Comments from the FABEC member states (Belgium, France, Germany, Luxembourg, Netherlands & Switzerland)**

SSC/85 WP3 and WP4

A. PRB Traffic Light System for Environmental Performance

General Comments:

- We thank the PRB for the report and the balanced statements regarding the validity and the accountability of its results.
- From a our point of view it is essential to communicate those limitations in order to actively manage third parties' expectations concerning the impact of ANS to the European Green Deal.
- In this respect we suggest that the final report is supplemented by a statement concerning the quantitative impact of the aviation industry and the associated impact of ANS provision to European greenhouse gas emissions.

Comments on the indicators and the approach used in the Traffic Light System:

- The limitations of the environmental indicators used to measure the performance of ANSPs or States lie mainly in the fact that they depend on numerous factors not sufficiently influenceable by ANSPs or States. Current environmental indicators are sensitive to various factors such as traffic, costs, and weather. These influencing factors should be also taken into account in the performance evaluation.
- It is well knows, that comparability among states and ANSPs is limited. The more abstract the approach becomes, the more limited the comparability of states/ANSPs. Simplified comparison without adequately looking into the details can therefore not provide important insights. The approach seems more suitable to compare performance of one ANSP/state over several years (intrastate/-ANSP) than provide a valid interstate/-ANSP comparison.
- The presentation of the performance of each ANSP could suggest that the main factors for improvement are the FRA and the advanced FUA. However, the implementation of a FRA does guarantee additional improved performance, as the FRA is usually designed considering the actual trajectories (direct routes). The real improvement in environmental performance lies in the quality of the connections,

- 2 -

whether in a FRA context or in an ATS context. For example, some ANSPs have simply implemented a FRA with exactly the same constraints as the ATS network in use before. Conversely, some ATS networks are already very successful outside the FRA context. The same is true for the advanced FUA. The efficiency of the advanced FUA varies considerably from country to country. Purely implementing advanced FUA (e.g. as part of a checkbox exercise – does not necessarily imply environmental improvements (e.g. if flight planning cannot be optimized).

- Due to its limitations and the political sensitivity of the topic, the approach should avoid any tendency to blame or stigmatise but should focus on actual potentials for improvement.

Comments on the report presented as Annex to SSC/85 WP3

- The reader's guide seems to contradict itself in some parts (does the report at this stage contain 2022 data or not) and refers to claimed elements of the report, which the report itself does not contain (blue rhombuses). Before publication, these parts should be carefully checked.

B. PRB Interdependency Study between Capacity and Environment

General Comments:

- we welcome that the interdependency between the key performance areas capacity and environment, here the one between the currently used capacity and environmental indicators, has been examined in a further study. The analysis shows complex relations and local differences, that need to be acknowledged in an efficient performance scheme. It is essential to find effective ways to take these dependencies into account in the EU/national target setting process, respectively target achievement process.

Comments on the indicators and the approach used in the study:

- An extension of the study to include interdependencies with regard to cost-efficiency and CO_2 effects in order to provide clear environmental and economic implications is considered as very useful. Also, a combination of HFE and VFE could provide useful and meaningful insights.

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- 3 -

- The report indicates causalities from the given correlations. It is left open, whether the risk of a spurious correlation has been taken into account. It seems necessary to analyse for example the impact of situations, in which the capacity in an airspace is intensively used, i.e. the more complexity and flights there are, the stronger the potential negative impact on the ENV indicators. In addition, challenging weather situations per se are generating the need for detours, regardless of the capacity provided. An extension of the study in this regard would be appreciated.

- It is unclear to what extend the study takes into account or is following up projects that have already been carried out and should be capitalized, for example:

  - APACHE (Assessment of Performance in current ATM operations and of new Concepts of operations for its Holistic Enhancement) project had the objective to 'capture the complex interdependencies among different KPAs' (https://apache-sesar.barcelonatech-upc.eu/en)

  - INTUIT (Interactive Toolset for Understanding Trade-offs in ATM Performance) aimed at 'improving our understanding of the trade-offs between Air Traffic Management KPAs, identify cause-effect relationships between performance drivers and performance indicators at different scales, and develop new decision support tools for ATM performance monitoring and management' (https://www.nommon.es/research-projects/intuit/)

  - AURORA (Advanced user-centric efficiency metrics for air traffic performance analytics) 'explored new efficiency indicators that encapsulate fuel consumption, schedule adherence, route charges and overall cost efficiency of flight' (https://www.sesarju.eu/projects/aurora)

  - InterFAB studies on interdependencies produced by TU Dresden and Metroeconomica.

- A new set of indicators is needed to help measure and improve the overall environmental performance. Transparency working group, and now AVENIR working group help to identify promising projects, e.g. indicators based on machine learning which calculate CO_2 using radar data.

4.3 Ireland

1. Comments on the PRB draft traffic light report 2022

1.1 The PRB's traffic light report for 2022 gave Ireland a red for both the additional Arrival Sequencing and Metering Area (ASMA) time and the Additional time in taxi-out (ATXOT), indicating that the Member State shows lower levels of performance compared to previous years and the score is degrading or stable. While the target for the KEA was met, taxi-out times and ASMA significantly increased year on year (YoY) between 2021 and 2022 at Dublin Airport which, to our understanding, is what has led to the overall 'Red' rating for 2022. The Irish Aviation Authority, as NSA, would like to provide the comments set out below and ask that they be considered before the report is finalised.

Overview of Additional ASMA and ATXOT

1.2 The ASMA is defined as a cylinder with a 40NM radius around the airport. The time spent by a flight between its last entry and the actual landing time is denoted the ASMA transit time. The additional ASMA time provides an approximate measure of the average inbound queuing time on the inbound traffic flow, during times that the airport is congested.

1.3 The ATXOT is a proxy for the average departure runway queuing time on the outbound traffic flow, during congestion periods at airports. It is the difference between the actual taxi-out time of a flight and a statistically determined unimpeded taxi-out time based on taxi-out times in periods of low traffic demand.

Taxi-Out (ATXOT) Factors

1.4 Additional taxi-out time was higher in 2022 than 2020 and 2021 for a variety of reasons. These include:

- **Traffic levels:** As figure 1 below shows, ATXOT has varied considerably in recent years with the most striking difference being for 2020 and 2021. Those two years were heavily impacted by Covid-19 which significantly reduced air traffic which resulted in less airfield congestion. The significant increase in ATXOT in 2022 is largely related to the return of traffic, with overall Irish traffic at the three main airports increasing by 104% from 134,703 movements in 2021 to 275,725 in 2022 as Covid-19 restrictions eased. The emergency regulation ((EU) 2020/1627) recognised that 2020 and 2021 were so exceptional that a specific new regulation was required for them. There is therefore little value in assessing a year-on-year trend in ATXOT or additional ASMA time in absolute terms, when there has been a 104% year-on-year change in traffic levels. In Ireland, this Year-on-Year recovery has been relatively sharp compared to other countries, which is linked to the greater relative deterioration in the metrics compared to other countries. Given that traffic in 2022 was more similar to 2019, we believe this would be a better comparator to 2022 than 2021. We

also note that higher traffic levels in 2019 and in 2022 meant there was greater need to maintain a high throughput in busy single runway operations by queueing aircraft on the airfield, relative to 2020 and 2021. In this regard, there is a trade-off between efficiently maximising airport capacity, as required by the Slot Regulation[1], and achieving low levels of taxi time.

- **On Time Performance (OTP):** OTP was significantly worse in 2022 than in 2019 with arrival OTP in the first half of 2022 down 14% and departure OTP down 15% compared to 2019. These issues persisted throughout 2022, with November and December remaining significantly worse than the corresponding months of 2019. Summer 2022 was heavily impacted by the challenges faced by operational stakeholders in ramping up the industry following the two-year period impacted by COVID-19. This has led to poor OTP due to factors such as En Route ATFM delay and aircraft rotational delay. Worse OTP means that there were significant differences between scheduled and actual times which caused challenges for the ANSP and airport operator at Dublin Airport in areas such as stand planning, the timing of runway demand, etc., this likely contributed to taxi-out delay. Much of the OTP deterioration, and therefore its consequences, is outside of the control of the airport operator or the ANSP, much of it was also caused by issues which we would expect will be addressed in future seasons.

- **Construction works:** Construction projects at Dublin Airport, such as Critical Taxiways North (which was in development across 2022, and remains on-site) and the North Runway (which was completed in Q3 2022) will have resulted in extended taxi times due to construction. Critical Taxiways North is a major airfield project which will improve the taxiway system in the northern part of the airfield, providing new and less restricted taxiways. The North Runway is a newly constructed runway parallel to the existing main runway. The North Runway has been phased into operation and is only very recently (from 4th July 2023) operating the full currently permitted hours, from 0700 to 2300 local time. Again, there is a tradeoff between applying the Balanced Approach to addressing a night-time Noise Problem at the airport, as required by Regulation 598/2014, and minimising taxi times.

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[1] Council Regulation (EEC) No. 95/93, as amended.

Figure 1: Additional Taxi Out Time
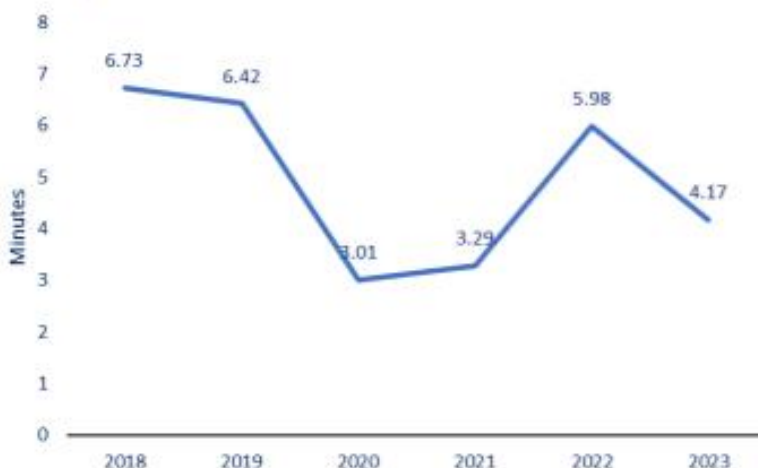
Reference taxi out times

1.5 As noted above, the ATXOT is calculated as the difference between the actual total taxi-out time (TXOT) and a reference taxi-out time estimated for each stand-runway combination. The reference time for each month is calculated based on actual taxi out time over the previous 12 rolling month period. The reference times for 2022 are therefore largely based on 2021 which experienced lower taxi-out times due to a much quieter airfield and are not representative of the actual average taxi out times for 2022.

1.6 We note a few further comments:

- **Different taxi-out routes/speeds:** The taxi-out data used to calculate the reference taxi-out times does not include the path followed by the aircraft during the taxi-out phase, and the reference is therefore calculated assuming the same or similar path from the stand to the runway.

- **North Runway:** As the new North Runway was not operational in 2021 and only for four months of 2022, there was no 12 month rolling period over which to calculate the reference taxi-out times by runway/stand combination. We are therefore unclear as to how the reference taxi-out times for all operations off Runways 10R/28L were calculated, and whether the Year-on-Year comparison includes these operations in 2022 (given that there were no such operations in 2021).

- **Construction works:** Special events which affect taxi-out procedures, and which might require a specific reference sample (e.g. construction works on certain apron areas) are not accounted for in the reference times. Where there are taxiway closures or restrictions due to major

works (as is currently the case at Dublin), the reference taxi time may not reflect the true unimpeded taxi time.

Table 1: Summer season average movements by runway and average TXOT

	2019	2020	2021	2022	2023*
Runway 28L	53,749	12,192	22,506	49,672	7,994
Runway 10R	16,653	2,522	2,995	15,570	16,375
Runway 28R (North Runway)	0	0	0	3,016	8,052
Runway 10L (North Runway)	0	0	0	0	37
Total movements	70,402	14,714	25,501	68,258	32,458
Average TXOT (in Minutes)	17.30	9.79	10.53	15.89	16.45

*The 2023 data covers the summer season up until 27/06/2023

Additional Arrival Sequencing and Metering Area (ASMA) Factors

1.7 Similarly, with the 104% increase in traffic, Point Merge at Dublin was used more frequently when compared to 2021. While bringing increased capacity and associated environmental benefits, the use of Point Merge sequence legs to eliminate airborne holding increased the time spent in the Terminal area.

1.8 As figure 2 shows, the average additional ASMA for 2022 was 27.5% lower than 2019. We believe that 2019 is a better comparator to 2022 than 2021, due to the more equivalent traffic levels (at least from March). More recently, when the first three months of 2023 are compared to same period in 2019, the average additional ASMA is 2.91, compared to 4.13 in 2019, an improvement of 29.5%.

Figure 2: Average Additional ASMA Time
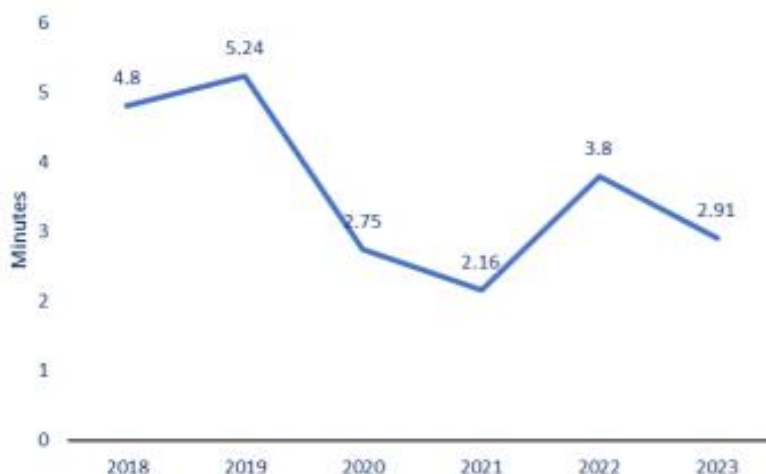
2023 Performance and Variation within the day

1.9   For both ATXOT and additional ASMA, 2023 performance so far has improved compared to 2022, and is considerably lower than 2019 (35% lower for ATXOT and 44% lower for additional ASMA), despite similar traffic levels. Additionally, as table 2 shows, the average total taxi-time trend is relatively worse pre-0900 than across the full day as shown in table 1. The key difference between these tables is that table 2 shows a period in which the North runway is not operational. This indicates that using the North Runway is leading to an improvement in TXOT.

1.10   Our expectation is that TXOT will improve in the latter half of 2023 with the North Runway being operational from 0700 to 2300 local time and with an improved taxiway network, which is expected to be complete in 2023/2024, along with A-CDM being fully in effect. Times should also improve further if the Noise Regulation appeal body does not overturn the decision of the Noise Competent Authority to allow the runway to be used before 0700 local.

Table 2: Summer season average movements by runway and average TXOT (pre-0900)

	2019	2020	2021	2022	2023*
Runway 28L	12,891	3,911	7,817	15,158	4,418
Average TXOT to RW 28L (minutes)	15.43	9.54	10.38	15.94	17.79
Runway 10R	2,579	559	517	2,473	3,573
Average TXOT to RW 10R (minutes)	20.84	13.28	12.93	18.05	21.38

*The 2023 data covers the summer season up until 27/06/2023

Appropriateness of the current indicators

1.11 We believe that the current indicators are appropriate in terms of tracking trends. However, it should be clearly acknowledged that performance against the indicators may be affected by parties other than the ANSP, such as the airport operator, airlines, or other parties such as the Noise Regulator who imposes Noise Mitigation Measures or Operating Restrictions which have an impact on performance. Thus, while we are reporting in the context of ANS, changes in performance may or may not have to do with the performance of the ANSP.

1.12 In the initial Traffic Light System for Environmental Performance, published in 2022, the PRB identified several limitations to its methodology. These included the fact that the traffic light system does not provide the specific drivers of performance or the reasons for attaining the given level of performance, or how to improve it, and that it does not account for or reflect the interdependencies between key performance areas, such as capacity. It is noted that the purpose is to facilitate discussion and consideration of these questions. Nonetheless, given that the reporting is in the context of ANS, the Traffic Light System risks being interpreted as a reflection on the performance of ANSPs, even if the ANSPs did not perform any worse Year-on-Year and the reason for metrics returning closer to 2019 levels, is traffic returning closer to 2019 levels.

1.13 Considering the 2021 and 2022 traffic development, a year-on-year comparison is not useful in identifying trends in performance, as it primarily demonstrates the return of traffic. We suggest that a comparison to 2019 would be more insightful. Due to the traffic recovery, a year-on-year comparison would be constructive from next year. If that option is not pursued, we ask that the 2022 report be caveated with the above details.

Indicators to use in RP4

1.14 As this report has demonstrated, there are issues with the indicators used to monitor environmental performance. For example, the reference taxi-out times underpinning the ATXOT do not account for special events which affect taxi-out procedures such as airfield construction works, or the exact route taken by the aircraft from the stand to runway. The indicators also fails to account for factors outside the control of the ANSP such OTP. The indicators are also unable to account for the impacts of major changes in traffic, as happened in 2022.

1.15 Looking forward to RP4, we note that where there is an incentive scheme for ANSPs in relation to environmental performance, the performance indicators must be designed such that they 1) only capture performance within the control of the ANSP, and 2) reliably measure true performance. Incentive schemes which do otherwise risk unintended consequences or perverse incentives.

4.4 Italy

<u>KEA analysis – Integration of algorithm anomalies detected by the post analysis of the KPI</u>

In addition to what has already been highlighted for DVT Flights at the first meeting with the representatives of the PRU and the NM, a subsequent investigation revealed further computation anomalies, mostly related to negative factors/errors in evaluating the data of the aircraft trajectories which affected the Italian airspace.

Given that the same PRU, having verified the consistency of the reporting of the DVTs, has communicated that starting from April 2022 it has excluded the DVTs from the Flight List used for monitoring the KPI KEA, **the need remains, already identified many times in the past months (and obviously to be emphasized firmly for the months to come) to avoid a continuous negative carry-over of this KPI for Italy**, and therefore:

- *to obtain a formal recalculation and consequent revision of the results of the monitoring carried out by the PRU for the years 2020, 2021 and 2022;*

- **to verify the additional anomalies reported, so that there are no possible inconsistencies in the recalculation of the monitoring of the KPI KEA for 2020 for 2021 and 2022, but also for the years to come.**

Among the most evident anomalies found during this second analysis, we note:

- ✓ **the double, triple or "nth" imputation of a single flight path (Current Flight Plan/CPF)** with the calculation of an improper increase in the comparison between the AFT value and that of the relative GCD; proof of what has been found can be verified by comparing the number of flights included in the PRU Flight List and the number of flights that NMIR considers to be operated in the airspace in the same reference period (the former are always greater than the latter);

- ✓ **the management of GAT/OAT military flights**, for which the reference distance (AFT) does not take into account the "nature" of the operative flight;

- ✓ **the anomalous management of the accounting of *additional distance flown* for flights that have had a delay associated with a waiting procedure** (for example due to adverse weather conditions, runway occupied, change of runway in use, contingency scenarios or emergency, etc.), to whom the additional distance flown in holding is also counted.

In conclusion, it is shown that:

- ➢ the anomalous management of the DVTs (corrected only starting from April 2022) and the other improper valorisations and manipulations of the Flight Lists used by the PRU make a <u>recalculation</u> indispensable with consequent revision of the annual monitoring of the KPI KEA starting from the years *2020, 2021 and 2022 but also for the years to come*;

- ➢ *the improper valuations of the Flight Lists used by the PRU have determined (incorrect results of the RP3 monitoring: Y2020, Y2021 and Y2022) and risk continuing to determine (the failure to review the trajectories considered for the whole of 2022 will have effects on the monitoring) a valuation of the KPI KEA not real, making the assessments regarding the failure to achieve the associated Performance Target assigned to Italy inconsistent and unquestionable.*

Detailed analysis of the anomalies found.

Multiple flights counted

In addition to what has already been highlighted for the management of DVTs, among the most significant anomalies with respect to the failure to achieve the assigned Environmental Performance Target, we note the artificial inclusion in the Flight List used by the PRU of a certain number of "not real" trajectories which are not present in the NMIR Database of the NM and which, instead, are "cloned" with respect to a single actual flight.

From an initial analysis of the Flight Lists PRU considers (as demonstrated by the images relating to some trajectories extracted from the Flight List used by PRU (cf. multiple flights counted)), the undue increase in flights, as well as determining an artificial redundancy of the additional distances flown, causes an anomalous comparison between the "*actual trajectory*" and the reference GCD.

EHAM_LIRN - 01-07 Aprile 2023 – EJU – multiple flights counted
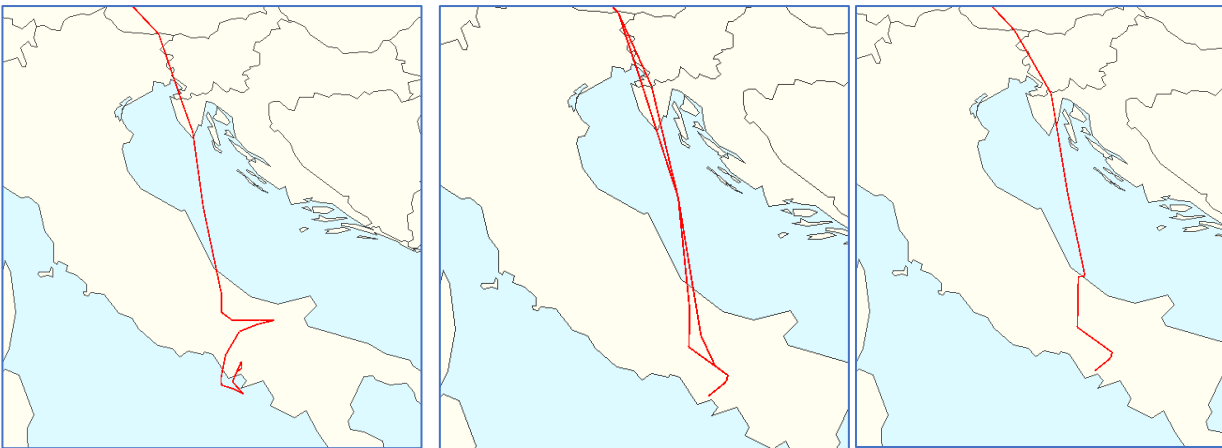
| 1 April | 3 April | 4 April |

| 5 April | 6 April | 7 April |

Flight List

LOBT	Aircraft ID	IFPS ID	Aircraft Type	Aircraft Operator	OPR AO	ADEP	ADES	Diverted ADES	ETOT	CTOT	ATOT	FLT_ETA	ATA	FSA/DEP	FSA/DEP-ETOT/CTOT (min)	MP Regulation	ATOT Accuracy Source
01/04/2022 20:00:00	EJU48NZ	AA35735422	A320	EJU	EJU	EHAM	LIRN		20:30		01/04/2022 20:46:52	01/04/2022 22:36:16	01/04/2022 23:35:53	20:48	18		CPM
03/04/2022 14:40:00	EJU67CD	AA35771540	A320	EJU	EJU	EHAM	LIRN		14:53		03/04/2022 15:02:00	03/04/2022 16:59:47	03/04/2022 17:10:07	15:02	9		FSA_AD
03/04/2022 18:15:00	EJU48NZ	AA35787600	A320	EJU	EJU	EHAM	LIRN		18:26		03/04/2022 18:41:00	03/04/2022 20:34:00	03/04/2022 20:50:59	18:41	15		FSA_AD
04/04/2022 15:05:00	EJU67CD	AA35797585	A320	EJU	EJU	EHAM	LIRN		15:32	15:47	04/04/2022 15:53:00	04/04/2022 17:37:10	04/04/2022 18:06:22	15:54	7	LIRNA04A	CPM
05/04/2022 14:44:00	EJU67CD	AA35823325	A320	EJU	EJU	EHAM	LIRN		14:47		05/04/2022 14:54:00	05/04/2022 16:53:26	05/04/2022 16:55:54	14:54	7		FSA_AD
06/04/2022 14:44:00	EJU67CD	AA35848975	A319	EJU	EJU	EHAM	LIRN		14:57		06/04/2022 14:58:00	06/04/2022 17:03:25	06/04/2022 17:04:39	14:58	0		FSA_AD
07/04/2022 16:20:00	EJU67CD	AA35876406	A319	EJU	EJU	EHAM	LIRN		16:33	16:40	07/04/2022 16:37:18	07/04/2022 18:34:48	07/04/2022 18:34:28	16:38	-2	KWUR107L	CPM

Stampa - Esporta

KSDF_OMDB - 01-07 Aprile 2023 – EJU – multiple flights counted

1 April

2 April

5 April

6 April

7 April

For this particular city-pair, in addition to the anomaly of non-existent flights generated and accounted for, we also note a different evaluation between the comparison between additional flight distance and GCD carried out on 1 April compared to that relating to 7 April: same trajectories, but different evaluations compared to the additional flight distance (+ 656 KM calculated on April 1 against +5.4 KM calculated for April 7).

VLG8VR LEAL_LSZH – +173 KM/additional KM due to wrong calculation & double flight

4 April

In this case, in addition to the undue duplication of the same flight, it should be noted that the additional distance of the city-pair #2 determines an additional flight distance of 173 KM while, in reality, the flight involved the Italian airspace (FIR) for a few KM and , therefore, the effective value of additional flight distance is only 1.9 KM.
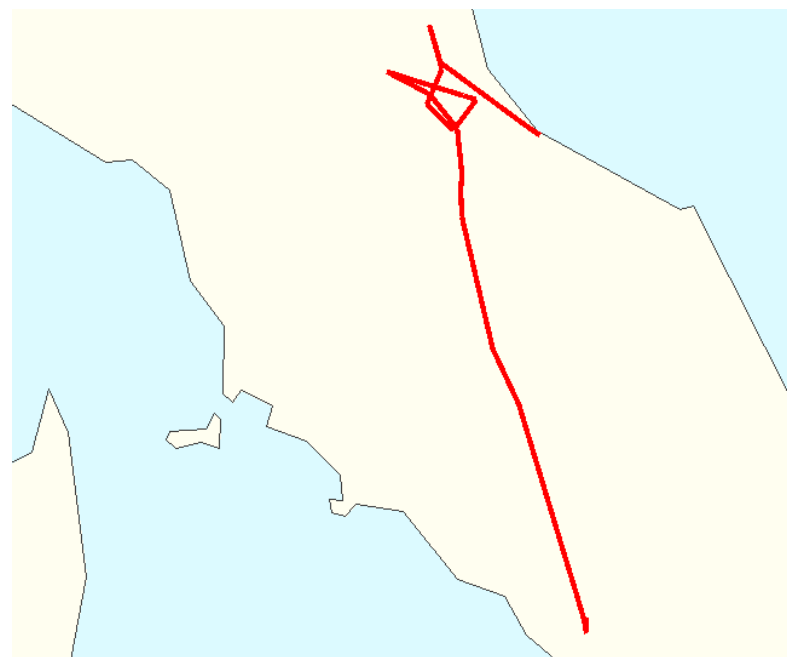

GAT/OAT flight

A further anomaly is that relating to military traffic, GAT/OAT. The trajectory of these flights is a function of the purpose of the mission and, therefore, these flights could not and should not be considered in the *additional flight distance* calculation even if the mission presented a GAT FPL.

The actual trajectory of this type of flight, in fact, cannot be compared with the corresponding GCD between city-pairs, but must be excluded from this comparison since it is a function of the operational mission being carried out: consider the distance of a trajectory as *additional flight distance* which is necessary for an in-flight refueling, for a holding in military areas, for training purposes or for other specific needs involves an adulteration of the monitoring of the KPI KEA.

To highlight the weight of this anomaly, even if only considering the trajectories of the GAT/OAT flights operated by the Italian Airforce (IAM), with reference to the Flight List used by the PRU, 433 IAM flights were registered in April alone and for flights operating over distances greater than 300 KM, 9 out of 25 are military flights, with over 8,000 KM of additional flight distance calculated ("Military flights – April – additional distance on City_Pair").

Military flights - April – additional distance on City-Pair

4 April – ENF02 LIRA_LIPR – P180 - +100 KM due to Military needs

Additional distances due to different reasons

A further inconsistency in monitoring the KPI KEA is the lack of assessment of flight constrains not attributable to either the ATS network or air traffic management, but deriving, for example, from: adverse weather conditions, holdings, repositioning/carriers for MA, RWY change in use , AUs choices, vectoring/heading assigned for Safety Reason, etc.

The trajectories that are flown for reasons not attributable to the ATS network and air traffic management cannot be accurately estimated, but compromise the value and significance of accounting for the *additional flight distance.*

Additional distances due to different reasons - April – additional distance on City_Pair

Extract from PRU's Flight list – Additional distances >100/<105 KM due to all reasons

MODEL_TYPE	City_Pair	AIRCRAFT_TYPE	AIRCRAFT_OP	ENTRY	NX_FLOWN_KM	NX_DIRECT_KM	NX_ACHIEVED_K	renza GCD vs	ENTRY_TIME	EXIT_TIME	ORIGIN_LOC	ORIGIN_TIME	DESTINATION_LOC	DESTINATION_TIME	
CPF	GMMN_OEMA	B789	RAM	1	1038,0	1033,60	937,80	100,20	01/04/2022 02:52	01/04/2022 03:54	GMMN	01/04/2022 01:03	LGGGUIR	01/04/2022 04:29	
CPF	OEJN_GMMN	B789	RAM	1	1038,0	1031,30	935,70	102,30	01/04/2022 14:34	01/04/2022 15:51	LGGGUIR	01/04/2022 13:43	GMMN	01/04/2022 18:01	
CPF	LFBO_LIRF	B738	RYR	1	303,0	247,20	200,30	102,70	02/04/2022 09:30	02/04/2022 10:00	LFBO	02/04/2022 08:37	LIRF	02/04/2022 10:16	
CPF	LDZA_LIRF	A320	RYR	1	315,0	224,20	214,60	100,40	02/04/2022 11:50	02/04/2022 12:20	LDZA	02/04/2022 11:28	LIRF	02/04/2022 12:39	
CPF	LICJ_LIRF	A320	ITY	1	385,0	308,00	282,10	102,90	02/04/2022 12:32	02/04/2022 13:06	LICJ	02/04/2022 12:23	LIRF	02/04/2022 13:24	
CPF	GMMX_OEMA	B788	RAM	1	854,0	853,40	751,00	103,00	03/04/2022 04:36	03/04/2022 05:27	GMMX	03/04/2022 02:47	LGGGUIR	03/04/2022 06:09	
CPF	EGBB_LIRN	B38M	TOM	1	801,0	719,80	700,90	100,10	04/04/2022 07:44	04/04/2022 08:43	EGBB	04/04/2022 06:29	LIRN	04/04/2022 09:01	
CPF	GMMN_DTTA	B738	RAM	1	306,0	301,30	203,50	102,50	05/04/2022 14:57	05/04/2022 15:17	GMMN	05/04/2022 13:12	LIRRUIR	05/04/2022 15:17	
CPF	LLBG_GMMX	B738	ELY	1	995,0	966,80	894,60	100,40	05/04/2022 16:36	05/04/2022 18:11	LCCCFIR	05/04/2022 14:14	GMMX	05/04/2022 20:58	
CPF	LIMC_LICC	B734	BBD	1	1004,0	905,40	902,90	101,10	05/04/2022 20:33	05/04/2022 23:32	LIMC	05/04/2022 20:24	LICC	05/04/2022 23:47	
CPF	EDDB_LICC	A320	EJU	1	1102,0	1037,90	998,00	104,90	07/04/2022 09:34	07/04/2022 10:53	EDDB	07/04/2022 08:43	LICC	07/04/2022 11:07	
CPF	LIMJ_EGKB	GLST	ZZZ	1	259,0	254,10	155,10	103,90	07/04/2022 10:22	07/04/2022 10:40	LIMJ	07/04/2022 10:13	EGKB	07/04/2022 12:12	
CPF	GMME_OMAD	GLF6	ZZZ	1	947,0	943,90	844,40	102,60	08/04/2022 17:22	08/04/2022 18:16	GMME	08/04/2022 15:45	LGGGUIR	08/04/2022 18:53	
CPF	KPHL_LIRF	B788	AAL	1	305,0	304,10	202,80	102,20	09/04/2022 06:32	09/04/2022 06:51	EISNUIR	09/04/2022 04:17	LIRF	09/04/2022 07:08	
CPF	EGAA_LATI	B752	ZZZ	1	783,0	778,40	681,10	101,90	12/04/2022 05:01	12/04/2022 05:55	EGAA	12/04/2022 02:42	LATI	12/04/2022 06:13	
CPF	LCPH_EINN	CL60	ZZZ	1	1272,0	1262,70	1168,50	103,50	12/04/2022 10:06	12/04/2022 11:35	LCPH	12/04/2022 08:23	EINN	12/04/2022 13:29	
CPF	LFPG_OLBA	A332	CTM	1	1393,0	1389,60	1289,30	103,70	12/04/2022 17:06	12/04/2022 18:41	LFPG	12/04/2022 16:20	LCCCFIR	12/04/2022 20:17	
CPF	ETNW_ORAA	A400	GAF	1	1046,0	1012,00	943,70	102,30	14/04/2022 09:48	14/04/2022 11:11	ETNW	14/04/2022 08:47	LCCCFIR	14/04/2022 13:04	
CPF	LKPR_LIRN	A21N	WZZ	1	732,0	684,90	631,00	101,00	15/04/2022 07:43	15/04/2022 08:37	LKPR	15/04/2022 07:10	LIRN	15/04/2022 08:51	
CPF	LIRP_LICA	B738	RYR	1	692,0	601,40	588,30	103,70	15/04/2022 11:00	15/04/2022 11:59	LIRP	15/04/2022 10:52	LICA	15/04/2022 12:12	
CPF	EIDW_LIRN	A320	EIN	3	747,0	681,30	646,80	100,20	16/04/2022 07:09	16/04/2022 08:05	EIDW	16/04/2022 05:27	LIRN	16/04/2022 08:17	
CPF	LEMD_LIRQ	A319	IBE	1	394,0	347,10	293,30	100,70	16/04/2022 08:44	16/04/2022 09:17	LEMD	16/04/2022 07:22	LIRQ	16/04/2022 09:31	
CPF	LIPE_LICC	B38M	RYR	1	814,0	725,40	710,30	103,10	17/04/2022 13:40	17/04/2022 14:44	LIPE	17/04/2022 13:30	LICC	17/04/2022 14:56	
CPF	LIRQ_LEBL	A319	VLG	1	378,0	317,30	275,80	102,20	17/04/2022 21:18	17/04/2022 21:45	LIRQ	17/04/2022 21:10	LEBL	17/04/2022 22:32	
CPF	GMMN_OEMA	B788	RAM	1	1039,0	1036,90	937,90	101,10	18/04/2022 02:39	18/04/2022 03:43	GMMN	18/04/2022 00:48	LGGGUIR	18/04/2022 04:18	
CPF	LLBG_GMMX	B738	ISR	1	1010,0	1008,00	908,30	101,70	18/04/2022 14:35	18/04/2022 15:56	LCCCFIR	18/04/2022 12:33	GMMX	18/04/2022 18:30	
CPF	LFMN_EGLL	A320	BAW	1	266,0	229,30	165,00	101,00	19/04/2022 10:12	19/04/2022 10:33	LFMN	19/04/2022 10:04	EGLL	19/04/2022 11:58	
CPF	LEBL_LOWW	A320	VLG	1	644,0	611,80	541,60	102,20	19/04/2022 10:44	19/04/2022 11:30	LEBL	19/04/2022 10:04	LOWW	19/04/2022 12:14	
CPF	LIRN_EINN	B763	CMB	1	690,0	639,10	586,70	103,30	20/04/2022 07:36	20/04/2022 08:30	LIRN	20/04/2022 07:25	EINN	20/04/2022 10:36	
CPF	GMMN_OEMA	B789	RAM	1	1039,0	1034,80	937,70	101,30	21/04/2022 02:34	21/04/2022 03:40	GMMN	21/04/2022 00:44	LGGGUIR	21/04/2022 04:16	
CPF	EDDL_LEPA	A320	EWG	1	408,0	400,80	306,30	101,70	21/04/2022 04:58	21/04/2022 05:29	EDDL	21/04/2022 04:11	LEPA	21/04/2022 06:31	
CPF	LSGG_LIEO	A20N	EZS	1	536,0	533,70	493,30	102,70	21/04/2022 10:24	21/04/2022 11:11	LSGG	21/04/2022 10:09	LIEO	21/04/2022 11:29	
CPF	LIEA_LIRP	B38M	RYR	1	347,0	255,30	245,00	102,00	21/04/2022 11:38	21/04/2022 12:03	LIEA	21/04/2022 11:30	LIRP	21/04/2022 12:14	
CPF	LBSF_LERT	B763	CMB	1	947,0	946,00	846,90	100,10	22/04/2022 00:11	22/04/2022 01:24	LBSF	21/04/2022 23:19	LERT	22/04/2022 03:20	
CPF	LEPA_EDDR	A320	EWG	1	311,0	308,10	208,80	102,20	22/04/2022 13:34	22/04/2022 13:58	LEPA	22/04/2022 12:40	EDDR	22/04/2022 14:35	
CPF	EDDB_LICC	C550	ZZZ	1	1103,0	1083,20	1002,50	100,50	22/04/2022 17:40	22/04/2022 19:18	EDDB	22/04/2022 16:30	LICC	22/04/2022 19:35	
CPF	LEPA_EDDR	A320	EWG	1	310,0	306,90	209,40	100,60	23/04/2022 06:31	23/04/2022 06:53	LEPA	23/04/2022 05:42	EDDR	23/04/2022 07:31	
CPF	GMFK_LLBG	CL60	ZZZ	1	970,0	969,30	869,40	100,60	23/04/2022 12:01	23/04/2022 13:03	GMFK	23/04/2022 10:23	LCCCFIR	23/04/2022 14:48	
CPF	LEPA_EDDR	A320	EWG	1	312,0	308,10	211,20	100,80	24/04/2022 07:31	24/04/2022 07:53	LEPA	24/04/2022 06:37	EDDR	24/04/2022 08:34	
CPF	LMML_LXGB	C650	VTB	1	664,0	656,80	559,90	104,10	24/04/2022 14:01	24/04/2022 14:58	LMML	24/04/2022 13:50	LXGB	24/04/2022 16:49	
CPF	LLBG_GMMX	B739	ELY	1	972,0	970,00	870,20	101,80	25/04/2022 16:22	25/04/2022 17:37	LCCCFIR	25/04/2022 14:24	GMMX	25/04/2022 19:58	
CPF	LIEA_LIRP	B38M	RYR	1	346,0	254,10	244,50	101,50	26/04/2022 06:47	26/04/2022 07:13	LIEA	26/04/2022 06:40	LIRP	26/04/2022 07:25	
CPF	EGGD_LIEO	A320	EZY	1	594,0	534,50	491,30	102,70	26/04/2022 12:33	26/04/2022 13:17	EGGD	26/04/2022 11:16	LIEO	26/04/2022 13:37	
CPF	OEJN_GMMN	B788	RAM	1	1039,0	1035,60	935,40	103,60	26/04/2022 14:27	26/04/2022 15:42	LGGGUIR	26/04/2022 13:39	GMMN	26/04/2022 17:50	
CPF	LIMF_LIEO	A320	EJU	1	501,0	434,50	396,40	104,60	26/04/2022 18:39	26/04/2022 19:19	LIMF	26/04/2022 18:30	LIEO	26/04/2022 19:38	
CPF	GMMN_LGIR	G280	ZZZ	1	1038,0	1030,00	935,20	102,80	27/04/2022 06:53	27/04/2022 07:59	GMMN	27/04/2022 05:01	LGIR	27/04/2022 08:50	
CPF	EDMO_LIBF	D228	ZZZ	1	745,0	691,00	644,20	100,80	27/04/2022 07:58	27/04/2022 09:49	EDMO	27/04/2022 07:33	LIBF	27/04/2022 10:11	
CPF	LIRP_LIEA	B738	RYR	1	344,0	249,30	242,80	101,20	28/04/2022 10:18	28/04/2022 10:43	LIRP	28/04/2022 10:11	LIEA	28/04/2022 10:54	

KEA - analysis additional distance on City_Pair (2/2)

Additional distances on City_Pair due to different reasons - April 2022
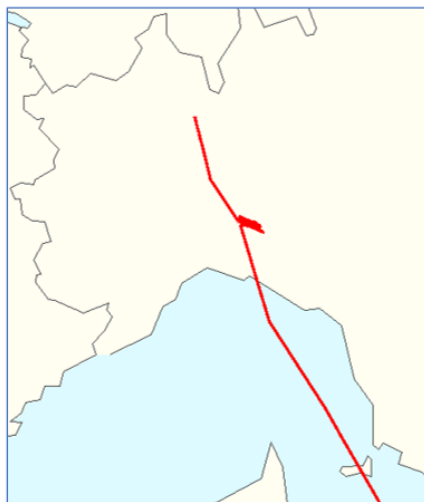
1 aprile – WZZ10JJ LICJ_LIMC   +467 KM due to Holdings
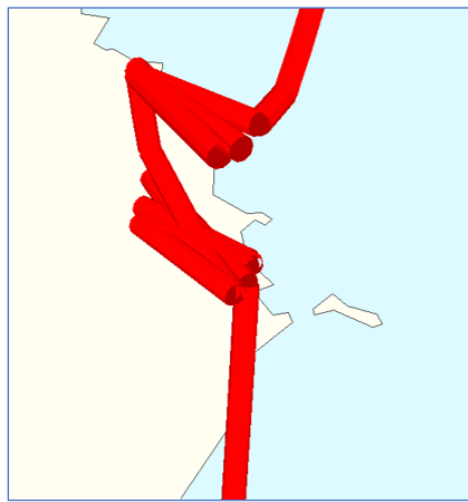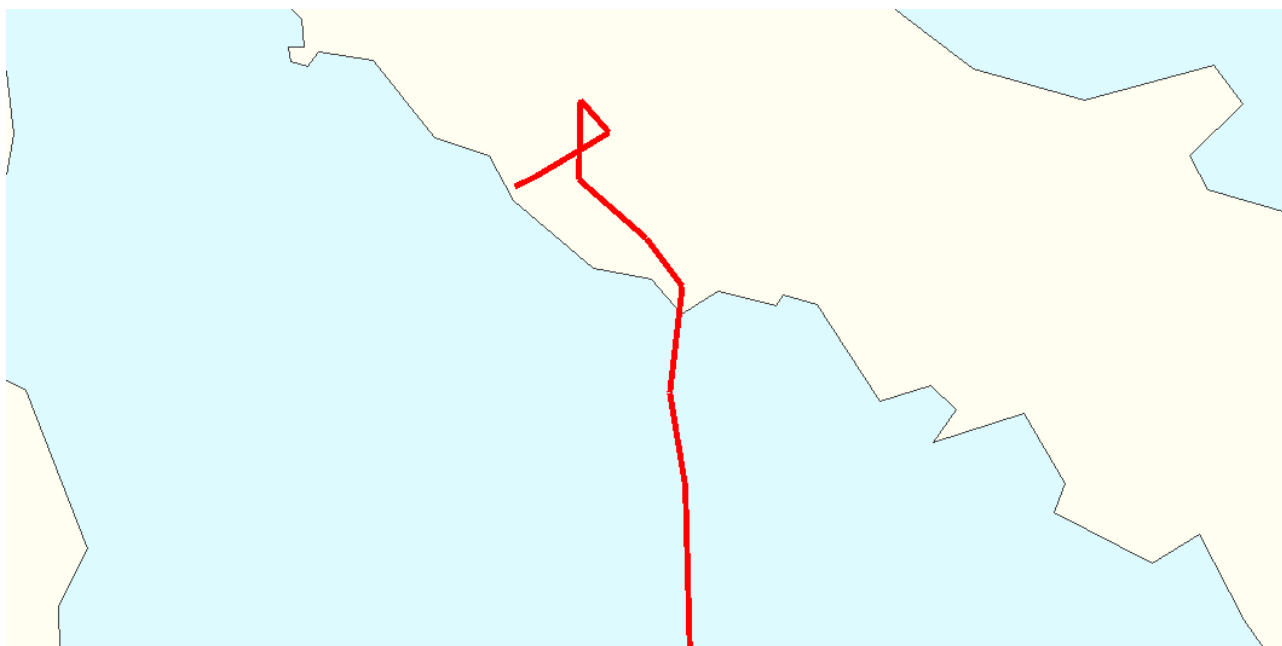

4 April – TOM8NX EGBB_LIRN + 100 KM due to holdings to lose altitude
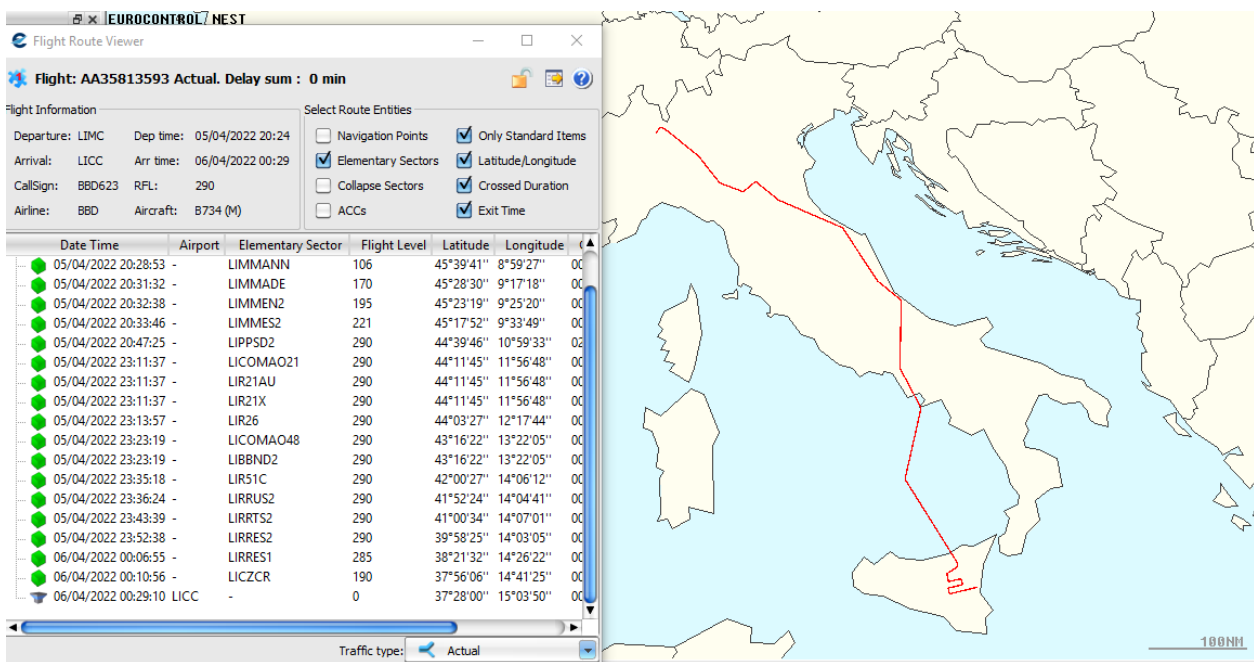
2 April – RYR7649 LFBO_LIRF + 102 KM due to Airport constrains (RWY 25 ARR)

2 April – ITY1784 LICJ_LIRF + 102 KM due to Airport constrains (RWY 25 ARR)

5 April – RAM572 GMMN_DTTA +102 KM due to AU constrains

5 April – BBD623 – B734 – LIMC_LICC +101 KM due to AU behavior (FL 290 as cruising level)

4.5   Poland

Context	Comments	Justification (if necessary)
(3) *"The objective of the Traffic Light System is to alert each Member State on environmental performance and to highlight areas where ANSP(s) can potentially improve. This is a useful tool to promote discussion, notwithstanding its limitations (outlined in the previous report)."*	The report does not provide any highlights regarding possible improvements - no advice is provided by the PRB what can be done by individual States/ANSPs to improve the situation. The very simplified report, with simple comparison of YoY evolution of figures, without detailed analysis of reasons for change and quantification of impact of external vs. internal factors does not stimulate informed discussion but rather makes the readers to draw not right conclusions.	
(6) *"The Traffic Light System focusses on the actual performance from 2016 to 2022 and compares the output of the indicators established in the Regulation within the environment KPA (Key Performance Area) rather than considering specific actions taken to influence environmental performance."*	In practice, the main body of the report presents only comparison of 2022 vs. 2021, not a full analysis of trends over 2016-2022 with underlying changes in the operating environment. The report should provide further information on the traffic evolution and its impact on ENV performance – simple performance of 2022 results with 2021 when the traffic levels were significantly lower and when impact of the war was not existing, does not provide the right perception and leads to unrightful conclusions.	
(9) *"The Union-wide targets set for horizontal flight efficiency acknowledge that zero deviation is not possible or desirable, because external factors (such as meteorological conditions and airspace circumnavigation because of military activities) influence the actual routes flown. These factors are considered in the targets. Other external factors include the decisions taken by airspace users, which may be influenced by the factors above as well as route charges. In its Annual Monitoring, the PRB determines how Member States contribute to achieving the Union-wide targets for horizontal flight efficiency."*	The Union-wide targets do not take into account changed external environment, specifically the military aggression on Ukraine and its consequences for HFE/KEA performance. Current scope of military activities, especially in the eastern part of the EU, is much wider than considered during the process of developing Union-wide RP3 targets. This should be duly note in the TRS report.	
(23) *"As a consequence of Russia's unprovoked invasion of Ukraine, Baltic and Northern European Member States have seen a loss in overflights from traffic flows from the Middle East and Asia, which have re-routed via the South-Eastern Member States."*	We propose to add: "... *Baltic (including Poland)* ..." – usually, reference to the Baltic States covers Lithuania, Latvia and Estonia, while Poland was also highly impacted by the invasions.	
(25) *"In addition to the deterioration of KEA, Member States have also experienced an overall*	As indicated above, at many airports 2022 was marked with significant traffic increase as compared to 2021. Comparison of 2022	

deterioration of terminal environmental performance in 2022 compared to 2021. In most European air-ports there has been an increase in additional arrival sequencing and metering area (ASMA) and taxi-out time compared to 2021 in addition to a reduction in the percentage of arrivals performing CDOs."	performance should rather be made in relation to pre-pandemic times, and not 2020-2021 when the traffic was low.	
(29) "In total, 11 Member States have improved their KEA score. In addition to Malta and Cyprus (as mentioned above), Belgium, Bulgaria, France, Greece, Hungary, Italy, the Netherlands, <u>Poland</u>, and Spain have also displayed an improvement in KEA scores. The KEA score has deteriorated for more than half of Member States with Estonia, Finland, Latvia, Lithuania, and <u>Poland</u> showing the highest deterioration being directly impacted by the effects of Russia's war of aggression against Ukraine."	In Poland, KEA indicator deteriorated over 2022 as compared to previous years – due to closed airspace behind Poland's eastern border and restrictions for air carriers to operate as earlier – both resulting from the outbreak of the war.	Poland is not among the countries that improved the KEA score in 2022. The second part of the paragraph is correct in terms of reference to the KEA result achieved by Poland in 2022.
(Table 1) "Poland - KEA and ASMA scores are worse than SES average but have improved compared to 2021."	It is unclear how the quoted sentence is related to paragraph 29 (quoted above), where Poland is mentioned as one of the States with the largest deterioration of KEA and to the red lights indicated in the table.	The results of KEA and ASMA for Poland in 2022 were worse than in 2021.
(43) "The indicators used for the Traffic Light System methodology are those defined by the Regulation (Annex I, Section I, Parts 2.1 and 2.2)."	Annex I, Section 1 to Regulation 2019/317 does not mention ASMA, AXOT or CDO. It seems that Section 1 was wrongly quoted here.	