Frequently Asked Questions

New methodologies for the calculation of the Additional ASMA, Taxi-out and Taxi-in times.

Why are we considering the 5th percentile for the calculation of the reference in the additional ASMA times but the 10th percentile in the calculation of the reference in the additional taxi times?

Analysis of the approach tracks at the top30 airports in 2019 indicated that holding and vectoring in the approach to these airports appeared as of the 5th percentile. This means that 95% of the tracks showed some kind of inefficiency (longer tracks whether holding or vectoring for aircraft coming from the same direction and heading towards the same runway) for these airports in this year. This was the rationale to choose the 5th percentile to assign the reference ASMA time for each grouping of flights.

When translating this 5th percentile to taxi times, we observed that the 5th percentile fell more often in the outliers' part of the taxi-times distribution (so abnormally short taxi times). The reason for this is that the data used for the calculation of the taxi times (AOBT: actual off block time or AIBT: actual in block time) is more prone to suffer data quality issues (bad recording of the times, time stamp without seconds, etc) with exceptionally short taxi-times. So the 5th percentile did not represent a realistic reference taxi time. In this case the 10th percentile seemed to represent a realistic but optimal taxi time reference.

Why are we excluding night flights for additional ASMA times and not for additional taxi-times?

It was considered that noise abatement procedures during night operations might impact more the approach procedures than the taxi procedures. In addition, removing night flights in the additional taxi times calculation might remove data for the cargo stands. Based on these reasons, the working group decided to include nights flights for the additional taxi times but not for ASMA.

Why are we not considering the aircraft type or aircraft category?

In the past the additional ASMA times were calculated based on combos or groupings that considered the aircraft category, understanding that different categories would show different approach times due to different speed. However, it has been demonstrated that the differences between groupings with same combos (ARWY - ASMA sector) but different Aircraft Class are smaller than the standard deviation of the ASMA times distribution within each combo. As the consideration of the aircraft class breaks down the traffic sample into more groups, it was decided to remove this factor from the equation to have bigger traffic samples for the statistical analysis.

Why are we not using Stand Groups in the groupings for the calculation of the reference taxi times?

Stand groups (that is, a group of stands close enough to each other to consider they have similar taxi times) could potentially be used to reduce the number of combinations (STAND-RWY) for the calculation of the taxi times reference, which would result in bigger traffic samples and more robust statistical results. However, the stand groups require of manual intervention (not data driven) for establishing these groups, agreements and especially close monitoring as stand names change over time. Impact analyses were carried out and the consideration of stand groups or not did not show a significant impact in the additional times, only in the share of flights without reference. The WG decided, for the purpose of reproducibility, to base the combinations in the Stand and not make use of stand groups.