Performance Review Body
designated by
the European Commission

EUROCONTROL

PRB Proposal on Terminal Air Navigation Services Union-wide cost-efficiency targets for 2017-19: approach, issues and proposal

FINAL REPORT

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1 Introduction

1.1.1 Following the Performance Review Body (PRB) Proposal on Terminal Air Navigation Services (TANS) Union-wide cost-efficiency targets[1] (published in May 2015), this Paper provides a summary of the stakeholder consultation responses to the May paper, assesses three updated options for the establishment of a Union-wide TANS cost- efficiency target years 2017, 2018 and 2019 of Reference Period 2 (RP2) as required by Article 10(3) of the Performance Scheme Regulation (Commission Implementation Regulation (EU) No. 391/2013) and sets out the PRB's recommendations.

1.1.2 The report is structured as follows:

- Chapter 2: presents a summary of the stakeholder consultation responses regarding the PRB Proposal on TANS Union-wide cost-efficiency targets;
- Chapter 3: presents planned trends for RP2 TANS cost-efficiency as provided in the RP2 adopted Performance Plans and RP2 revised Performance Plans (PPs) (where these Revised PPs included TANS updates);
- Chapter 4: provides an overview of the challenges associated with the diversity of arrangements in Member States.
- Chapter 5: presents Option 1 for a TANS Union-wide cost-efficiency target (no Union-wide TANS cost-efficiency targets for RP2);
- Chapter 6: presents Option 2 (Union-wide TANS targets in line with RP2 PP consolidation of local TANS cost-efficiency targets);
- Chapter 7: presents Option 3 (TANS Union-wide cost-efficiency target setting that takes different categories of airport, based on size, into account);
- Chapter 8: provides the PRB conclusions and recommendations.

2 Summary of stakeholder consultation responses

2.1.1 An on-line public consultation was carried out between 20 May and 21 July 2015 regarding the PRB Proposal on TANS Union-wide cost-efficiency targets[1]. This document set out the PRB's main Policy Objectives for any such targets, namely:

- To maintain pressure to improve cost-efficiency on an en-route + terminal ("gate to gate") basis for ANS; and
- To deter cross-subsidy between the en-route and terminal segments i.e. to ensure the charges for both en-route and terminal reflect the costs properly allocated to these services.

2.1.2 The stakeholder consultation indicated strong diverging/opposite views between the different stakeholder groups. While airspace user associations were of the opinion that more ambition is required, Member States, National Supervisory Authorities (NSAs), Air Navigation Service Providers (ANSPs) and Social partners tended to dispute the rationale and added value of setting Union-wide cost-efficiency targets in RP2.

2.1.3 **Airspace users' associations** supported the policy objectives, but they disagreed with the PRB assessment that terminal ANS data is insufficiently mature to support the detailed analysis required to set TANS Union-wide cost-efficiency targets. They also disagreed with the PRB assessment that the diversity of arrangements precludes meaningful benchmarking, and considered the PRB's proposal to defer Union-wide target setting until RP3 to be "completely unacceptable to the airspace user community and does not meet the requirements of (EU) No. 390/2013." The airspace users' associations considered the stated benefits of deferring the target

[1] TANS Union-wide cost-efficiency targets: approach, issues and option, May 2015.

setting (minimal regulatory burden and no resubmission of performance plans) to be unrelated to the cost-efficiency policy objectives. The airspace user community considered that setting meaningful TANS targets is required by EU regulation and is "an essential step in properly addressing the gate-to-gate cost-efficiency performance of European air navigation services, and that the current PRB proposal is counterproductive to the stated policy objectives". Airline associations sought a complete and urgent revision of the proposal and wish to be involved.

2.1.4 The **social partner** response was generally in line with that provided by ANSPs and NSAs. It fully supported the PRB's description of the current situation and assessment of the diversity of arrangements, and considered that setting a Union-wide cost-efficiency target for TANS is currently not appropriate, due to the lack of detailed information and complexity of the current Member States' arrangements. The social partners urged the PRB to recommend that the Commission defers setting targets until more work has been completed to fully understand the issues.

2.1.5 The **ANSP, Functional Airspace Block (FAB), and ANSP association stakeholder group** considered that the current regulation of terminal ANS cost-efficiency at national level is appropriate; indeed for many, this was the stated position for the current and future RPs. The ANSP group was in overall agreement with the PRB's description of the current situation, including the diversity of arrangements across the Member States. Some also noted that inter-dependencies should be considered when setting TANS Union-wide cost-efficiency targets.

2.1.6 A number of **NSA** and **ANSP** respondents considered that the PRB's proposed three step approach was not ordered correctly, and that further investigative work (Cost Benefit Analysis (CBA), Impact assessment) should be undertaken before, and not after, setting targets, in line with the European Commission's "better regulation" principles.

2.1.7 Overall, NSA/other regulatory body respondents do not believe the system is ready and mature enough to deliver on Union-wide cost-efficiency targets for TANS. Concerns were expressed, in particular, to demonstrate the benefits (and how they outweigh the costs) of introducing a target mid-RP2 by opening up a five year regulatory regime which provides the best incentives when remaining in place for the full term. Caution against rushing to regulate before a proper CBA or Impact Assessment is carried out was again emphasised.

2.1.8 Whilst some NSAs, ANSPs and other regulatory bodies agreed with the possibility of TANS Union-wide cost-efficiency targets in the future, all considered that the focus of RP2 should be on information gathering and building understanding.

3 Planned trends for RP2 TANS cost-efficiency (2015-2019)

3.1.1 Due to changes in the scope of terminal charging zones (TCZs) and the number of airports included within TCZs between RP1 and RP2, it is not possible to make meaningful comparisons of trends in TANS costs between RP1 and RP2.

3.1.2 In addition, a harmonised TNSU formula across all TCZs only applies from 2015 as required by the Charging implementing Regulation 391/2013.

3.1.3 This section therefore focuses on trends from information in States' Performance Plans for RP2 (2015-19). For information purposes, in 2014 there were 33 TCZs comprising 230 airports, with actual TANS costs amounting to some 1350 M€$_{2009}$.

3.1.4 For RP2, Member States have included 174 airports in 36 TCZs (compared to 230 airports in 33 TCZs for 2014).

3.1.5 The size of TCZs ranges from 60 airports in the French TCZ to only 1 airport for one TCZ in several States (see map in Figure 1).

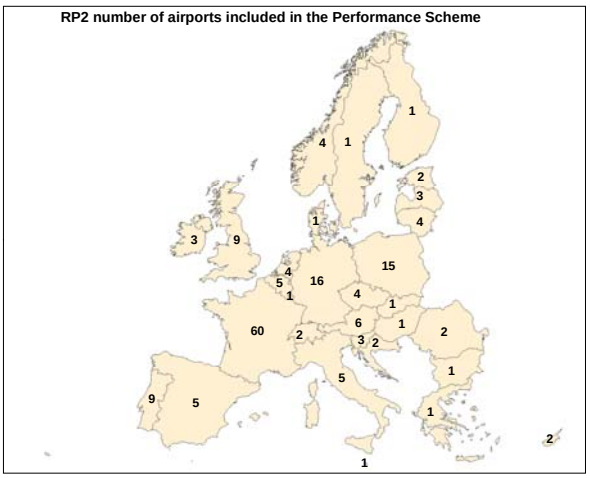


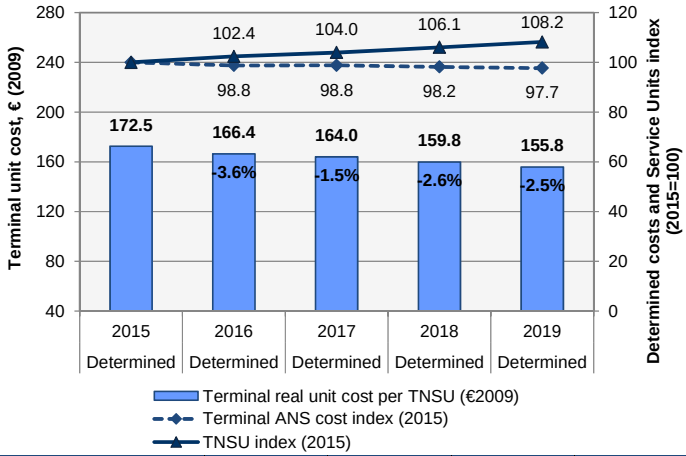
Figure 1: Geographical scope and number of airports in RP2

3.1.6 A new feature of the Performance Scheme for RP2 (Regulation 390/2013) is that Member States must set local TANS DUC targets for each year of RP2 based on determined costs (DCs) for TANS and forecast traffic (in TNSUs) for each TCZ. The cost risk on TANS is now borne by the States/ANSPs in the same manner as for en-route (save that there is no costs exempt regime for TANS).

3.1.7 Under Article 13(6) of the charging Regulation States may exempt airports with less than 225,000 IFR movements from the traffic risk sharing mechanism. Such exemptions have been notified by: Belgium, Cyprus, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Poland, Romania, the Slovak Republic, Slovenia, Sweden and Switzerland and cover 18 TCZs and 44 airports in total. Thus, these States are operating cost recovery, which is a factor to be taken into consideration.

3.1.8 Under Article 3 of the Charging Regulation 391/2013, if a Member State assesses that its TANS are subject to 'market conditions' it may decide not to set TANS cost-efficiency targets, not to calculate TANS determined costs, not to calculate terminal charges and not to set terminal unit rates. Such exemptions are subject to the agreement of the Commission that market conditions have been established in accordance with the Regulation. The United Kingdom has so assessed its TANS as subject to market conditions. The Commission asked the PRB to advise it and the PRB has provided separate advice on this issue. For the purposes of this present report, the data in the rest of this section below includes total costs for UK airports. However UK TANS costs have been excluded from elsewhere in this report, as well as from the baseline for target-setting.

3.1.9 Figure 2 shows TANS cost-efficiency trends[2] as available from the PPs for RP2 (2015-2019).



Real terminal ANS unit costs for SES RP2 States (€2009)		2015 Determined	2016 Determined	2017 Determined	2018 Determined	2019 Determined	2015-2019 (CAGR)
Number of	SES States reporting	30	30	30	30	30	-
	Charging zones	36	36	36	36	36	-
	Airports covered	174	174	174	174	174	-
Determined terminal ANS costs (M€2009)		1,265	1,250	1,250	1,243	1,236	-0.6%
Determined terminal service units ((MTOW/50)^0.7, M TNSU)		7.3	7.5	7.6	7.8	7.9	2.0%
Terminal real unit cost per TNSU (€2009)		172.5	166.4	164.0	159.8	155.8	-2.5%

Figure 2: Union-wide TANS data, 2015-2019

3.1.10 Figure 2 presented above uses the latest available data[2] and as a result updates the data previously published. There are 174 airports included in the consistent series covering 2015-2019. From 2015-2019, real TANS DCs are forecast to reduce on average by -0.6% p.a., while TNSUs are forecast to increase at an average rate of +2.0% p.a. As a result at SES level the real TANS unit cost (DUC) is forecast to decrease at an average rate of -2.5% p.a.

3.1.11 These TANS cost-efficiency trends are similar to those for en-route over the period 2015-2019, where on average en-route DCs are forecast to decrease by -0.7% p.a., en-route TSUs increase at +1.9% p.a. and the resulting en-route DUC is forecast to decrease at -2.6% p.a.

3.1.12 Table 1 compares actual and determined en-route, TANS, and en-route+TANS ("gate-to-gate") data over the period 2015-2019. En-route trends over the periods 2011-2019 and 2014-2019 are also shown. As explained above, a consistent series of TANS data is only available from 2015 onwards, so TANS trends are shown for 2015-2019 only. To ensure consistency in en-route trends over RP1 and RP2, data for Croatia has been included for RP1. Union-wide en-route DUC targets (and underpinning assumptions for DCs and SUs) as per EC Decision of 11 March 2014 (2014/132/EU) are also shown.

	Costs			Service Units			Unit costs		
	CAGR 2011-19	CAGR 2014-19	CAGR 2015-19	CAGR 2011-19	CAGR 2014-19	CAGR 2015-19	CAGR 2011-19	CAGR 2014-19	CAGR 2015-19
En-route	0.0%	0.1%	-0.7%	1.7%	1.7%	1.9%	-1.6%	-1.6%	-2.6%
TANS (RP2)			-0.6%			2.0%			-2.5%
En-route + TANS (RP2)			-0.7%			1.9%			-2.6%
Union-wide en-route targets	**-0.8%**	**-2.1%**	**-2.3%**	**0.9%**	**1.2%**	**1.3%**	**-1.7%**	**-3.3%**	**-3.5%**

Table 1: Comparison of en-route, TANS and en-route+TANS costs, traffic and unit costs

[2] In order to reflect the best available information on States cost-efficiency performance, this report uses the most up-to-date data, including the latest available data provided by SES States up to 26 October 2015.

3.1.13 It can be seen that the TANS costs trend over 2015-2019 (-0.6% p.a.) is of a similar low level of ambition to that seen in en-route (-0.7% p.a.). As far as unit costs are concerned, TANS forecast DUC trends over RP2 are also similar to those seen for en-route (-2.5% p.a. for TANS forecast DUC reductions, as compared to -2.6% p.a. for en-route).

3.1.14 Figure 3 shows the proportion of actual or determined TANS costs in total "gate-to- gate" costs for the years 2013, 2015 and 2019. There is a decrease in the proportion of TANS costs from 19% (actual costs) to 17% (determined costs) between 2013 and 2015. However there is no significant change forecast in the allocation between TANS and en-route DCs in the "gate-to-gate" total between 2015 and 2019.

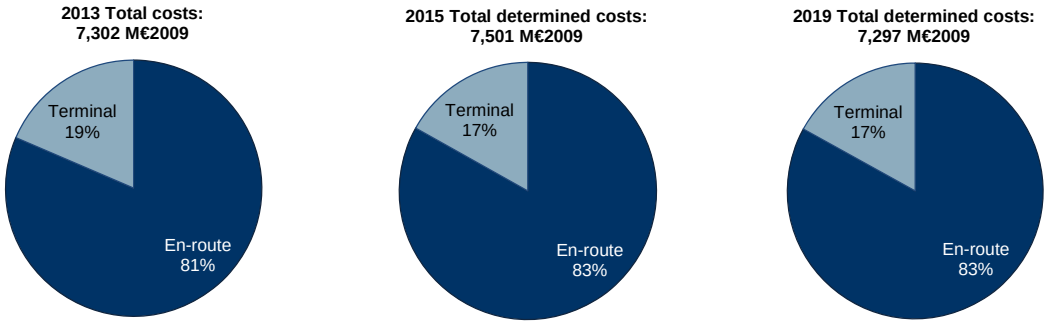


Figure 3: TANS costs as a percentage of total "gate-to-gate" costs, 2013, 2015 and 2019

4 Diversity of arrangements in Member States

4.1.1 TANS may involve the following services, although the scope of service included within the TANS charge varies, see below:

- Approach control: i.e. control of the aircraft from the "en route" service (and up to en route for departing aircraft);
- Aerodrome tower control: control of the aircraft from approach to landing on the runway (or taking off for departing aircraft);
- Ground movement control: control of the aircraft on taxiways; and
- Apron movement control: control of the aircraft on the apron up to entering taxiways (usually only relevant for very large airports).

4.1.2 The PRB has identified a number of challenges associated with establishing Union-wide targets for TANS cost-efficiency in RP2:

- **Comparisons between TCZs are difficult given the wide variety of airports within different TCZs**: Airports vary significantly in terms of their size[3], their mode of operations (regional or hub airports), scheduling intensity, the operational complexity of the location (weather, nearby topography, etc.) and their layout.
- **The scope of services provided in each TCZ also differs:** As described above there can be 4 different services included in "TANS". However not all are provided in each TCZ; the boundary between the different service varies between TCZs; and the scope of the TANS charge (i.e. what services it buys) also varies. For example, different TCZs, even within the same State, have different boundaries between approach and en- route services, and between approach and airport services and, in some TCZs, the ANS service and charge includes both approach and tower services but in others the ATS service in a TCZ is limited to tower services only, with approach services covered by en-route or a separate charge. This issue is not necessarily linked to the airport size.

[3] While the Charging Regulation only applies to airports with more than 70,000 IFR air transport movements, some States include airports much smaller than this in their TCZs.

- **Charges for infrastructure:** charges for NAVAIDS such as ILS and Surveillance equipment (e.g. Secondary Radars covering the TMA) vary by State and airport. At some airports the infrastructure is owned by the airport while at others it is owned by the ANSP. In the former case, the costs associated with this equipment are likely to be charged to users through airport charges rather than TNC. Again, this issue is not necessarily linked to the airport size.
- **Different cost-allocations between en-route and terminal segments:** Where en-route and terminal services are provided by the same ANSP there are also noticeable differences in cost allocation between en-route and terminal. In a recent survey of 12 SES ANSPs conducted for the European Commission's Modulation of Charges study, the range in total costs allocated to Terminal ANS ranged from 11% to 33% with a variety of treatments of approach services and different cost allocation metrics including: activity based costing; allocation based on flight kilometres controlled, IFR movements, composite flight-hours and % global totals.
- **The method of charging also varies by Member State:** In some States, charges take the form of a terminal unit rate whereas in others the ANSP contracts with the airport operator to provide TANS and these services are included within the airport charges levied by the airport operator. Again, this issue is not necessarily linked to the airport size.
- **There are a number of different operating models for TANS**, including: mandated direct provision by the designated en-route ANSP; provision under contract between the ANSP and airport operator; airport self-supply, and provision (by either the en-route ANSP in that State or another ANSP) following competition for the market (to date, mainly tower services in the United Kingdom[4], Sweden, Germany and Spain).

4.1.3 So far there is no comprehensive data set which describes these differences between States/ANSPs/Airports and their TCZs, making it challenging to establish a basis for meaningful comparison of cost-efficiency performance.

4.1.4 The PRB considers that, regardless of which option for targets is chosen and what targets are set, it is important to do further work during RP2 to increase transparency of the services covered by TANS charges and the cost allocation between en-route and TANS charges. Such transparency will both enable meaningful comparisons and also increase transparency for all stakeholders including NSAs, airspace users, airports and TANS service providers. This will help encourage best practice and assist in addressing the policy objectives described above. Specifically the PRB recommends:

- Further work to provide greater transparency (in terms of distance, services, and infrastructure covered) of existing TANS charges. This will help to address some of the issues identified in section 3.4 of the May 2015 PRB Proposal on TANS Union-wide cost-efficiency targets[1] (and presented in this report in Section 4), and will enable more reliable comparison and benchmarking between different ANSPs and TCZs; and
- Further investigation of cost allocation, building on the survey already undertaken, to enable identification of the extent of any cross charging between en-route and terminal services, and methodologies for calculation of the cross charging.

[4] See paragraph 3.1.8. The UK has applied for “market conditions” status for its airports. The PRB has provided separate advice on this issue.

5 Option 1: No Union-wide TANS cost-efficiency targets for RP2

5.1.1 Under this Option no Union-wide target for TANS would be set. Instead performance regulation would rely on the TANS local targets that have been submitted in FAB PPs RP2, noting that they set a similar level of cost-efficiency ambition to the en-route segment (see Table 1 above). Under this scenario, there would be a "light touch" approach whereby the PRB would monitor the actual trends in local and aggregated TANS costs, TNSUs and DUCs throughout RP2 and compare these to the aggregated local targets. The decision to set Union-wide cost-efficiency targets for TANS would be reconsidered for RP3.

5.1.2 Advantages of this option include:

- more time to gather more information on, and increase understanding of, existing TANS to enable meaningful comparisons of different TANS charges;
- More time to create longer dataset based on the harmonised TNSU formula; and
- No need to re-open and re-submit RP2 Performance Plans and associated targets that have already been adopted.

5.1.3 The main disadvantage of this approach is that the current situation would persist and no further progress would be made in RP2 towards achieving the policy objectives described in 2.1.1 above, apart from the work to improve understanding outlined in 4.1.4 above. It would also forego the chance to have a "transitional period" for TANS targets in advance of RP3.

6 Option 2: Union-wide TANS targets in line with RP2 PP consolidation

6.1.1 Under this option a Union- wide TANS cost-efficiency target would be set for the last three years of RP2. The PRB has considered 2 levels for such a target:

i) a Union-wide target based on the disclosed TANS costs in the original and revised RP2 PPs and updated with latest information on traffic forecasts provided in the approved FAB PPs. The starting point would be the aggregate 2016 Determined Costs for TANS from the original and revised PPs. In this option the target reduction for the Union-wide TANS Determined Unit Cost would be -2.2% per annum over the period 2016-2019 (and -2.5% per annum over RP2 as a whole) with a reduction in SES aggregated TANS DUC from 166.4 €$_{2009}$ in 2016 to 155.8 €$_{2009}$ in 2019; or

ii) A Union-wide target based on the disclosed TANS costs as above but with a target reduction of -3.5% per annum over the period 2016-2019 which is in line with the Union-wide Target for en route[5]. This would lead to a reduction in SES aggregated TANS DUC from 166.4 €$_{2009}$ in 2016 to 149.5 €$_{2009}$ in 2019.

6.1.2 In the PRB's view, the approach in ii) is to be preferred because this would better meet the policy objectives. It would ensure that the downward pressure on TANS DUC is kept in line with the Union-wide target for en route. It would be a forward step, to be viewed as transitional, towards RP3. The PRB recognises this would require States/NSAs to submit updated and revised PPs (and the PRB and EC to assess such plans for consistency with the target) but considers this is necessary to help deliver the policy objectives.

6.1.3 The PRB also considers that target-setting should focus on those airports with more than 70,000 IFR air transport movements a year. These airports comprise two-thirds of total TANS costs in 2016. The PRB considers this would focus regulation at EU level on those airports that are likely to impact on the European network. As such, focusing on these larger airports would be in accordance with the proportionality principle. NSAs are able to set local targets for smaller airports if they so wish.

[5] The Union-wide en route target DUC reduction for RP2 as a whole is -3.3%, but for the last 3 years of RP2 it is -3.5%.

7 Option 3: TANS Union-wide cost-efficiency target setting that takes categories of airport, based on size, into account

7.1 Airport groups

7.1.1 Under this option, targets would be set taking account of different airport situations, in particular size, complexity (including scheduling intensity) and local operational conditions.

7.1.2 The legislation already applies a differential approach to TANS via airport size thresholds:

- **70,000 IFR air transport movements**: Member States may decide not to apply the Common Charging Regulation (Regulation (EU) No. 391/2013) or Performance Scheme (Regulation (EU) No. 390/2013) to ANS services provided at airports with fewer than 70,000 IFR air transport movements per year, (although where none of the airports in a Member State reaches the threshold of 70,000 movements, the Performance Regulation shall still apply to the airport with the highest number of IFR air transport movements). For TCZs including more than one airport, this is also the threshold for requiring costs per airport to be reported in the reporting tables.
- **225,000 IFR air transport movements**: Member States may decide not to apply the traffic risk sharing provision in Regulation 391/2013 to airports with fewer than 225,000 IFR air transport movements per year.

7.1.3 Therefore, there are three airport groups:

- Group 1: Airports with greater than 225k IFR air transport movements (14 airports);
- Group 2: Airports with between 70k and 225k IFR air transport movements (37 airports) and;
- Group 3: Airports with less than 70k IFR air transport movements (123 airports).

7.1.4 The figure below shows the number of airports and total costs in each of the three airport groups.

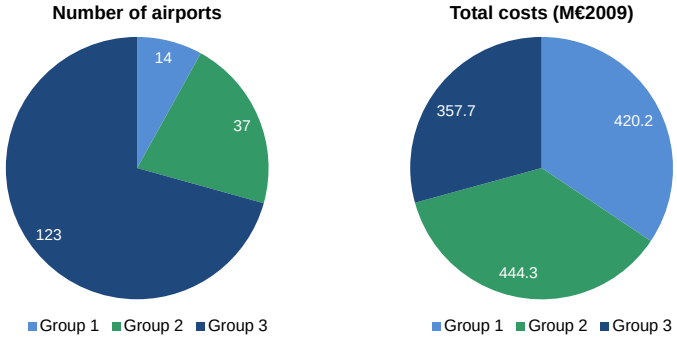


Figure 4: Number of airports and total costs in the three airport Groups

7.1.5 The airports in these three groups, along with their forecast TNSUs in 2015 (as provided in the STATFOR 2014 February forecast), are shown in Figure 5, Figure 6 and Figure 7 in the **Annex**. Note that the groupings are based on IFR movements but the traffic data shown in the charts is TNSUs used to calculate the DUC.

7.1.6 Within each group there is a wide range of size in terms of TNSUs and each chart also shows the average TNSUs in 2015 for the group.

7.1.7 For example, Figure 5 shows that there is a factor of 3.5 between the largest airport (London Heathrow) and the smallest airport (Wien) within Group 1, with an average value of TNSUs amounting to 250k.

7.2 Analysis of DCs for each airport group, 2016-2019

7.2.1 Figure 8 to Figure 13 show the total TANS costs for each airport by group in 2016 and 2019 (in €$_{2009}$) together with the total costs CAGR for each airport between 2016 and 2019.

7.2.2 The data is from the PPs submitted for RP2, including revised PPs where updates to TANS data were provided. It is important to note that airport data for the UK, Ireland, Croatia and Estonia are missing. The UK does not provide airport level data as these are considered to be under market conditions, Croatia reports DCs at TCZ level for the two airports in its TCZ as the smaller airport (Zagreb-Lucko) is so small that the impact is negligible. Ireland and Estonia did not provide the data.

7.2.3 The majority of states submitted cost data for all airports included in TCZs in their PPs, (with the exceptions outlined). On the other hand, TNSU data was provided less consistently, particularly for the smaller airports in the TCZ and, without this, the unit cost at airport level cannot be calculated.

7.2.4 In Group 1, individual airport total ANS costs range from approximately 19 M€$_{2009}$ to 39 M€$_{2009}$ in 2016. With the exception of three airports (Amsterdam Schiphol, Zurich, and Wein-Schwechat), all airports in the group plan a reduction in TANS costs over the 2016-2019 period.

7.2.5 As shown in Figure 8 no specific airport cost data is publicly available for London Gatwick and Heathrow, as these airports are part of a Terminal Charging Zone which is considered by the UK as operating under market conditions, and hence subject to limited reporting requirements.

7.2.6 From the available data for Group 1, overall the TANS costs are planned to decrease by -0.4% p.a. over 2016-19.

7.2.7 In Group 2, individual airport total ANS costs range from approximately 6 M€$_{2009}$ to 31 M€$_{2009}$ in 2016. With the exception of seven airports (Brussels, Genève, Athens, Praha, Bucharest, Warsaw and Lisboa), all airports in the group plan a reduction in total ANS costs over the 2016-2019 period. As shown in Figure 10 no cost data is available for Irish and UK airports. From the available data for Group 2, overall the TANS costs are planned to decrease by -1.52% p.a. over 2016-19).

7.2.8 Group 3 is the largest group, with 123 airports, with total individual airport ANS costs ranging between 0.1 M€$_{2009}$ and 15 M€$_{2009}$ in 2016.

7.2.9 From the available data for Group 3, overall the TANS costs are planned to increase by +0.6% p.a. over 2016-19.

7.2.10 We can infer from this analysis that the majority of the large and medium sized airports (in Groups 1 and 2) plan for a reduction in total ANS costs over the final three years of RP2 (2016-2019). This is reflected at TCZ level, where, as noted above, the Union-wide TANS DUC reduction as planned in the PPs is -2.5% over RP2, or a reduction in SES aggregated TANS DUC from 172.5€$_{2009}$ in 2015 to 155.8€$_{2009}$ in 2019.

7.3 Mapping airports to TCZs

7.3.1 For RP2 (2015-2019), reporting is mandatory within the thresholds provided in the regulation and 36 TCZs covering 174 airports have been declared. TCZs range from having one airport to 60 (France).

7.3.2 A key issue is that a number of TCZs also include airports of different sizes (i.e. a TCZ may include airports from each of the three airport Groups identified in the differentiated approach presented in Option 3). Thus, if the Union-wide target were to be set on the basis of the airport groups, then a mapping of the airports to TCZs should take place for the States. In cases where the TCZ has only one airport, this process will be quite straightforward. However in cases where there are several airports in the same TCZ this becomes more complex. For example, in Group 1, the 14 different airports are comprised in 10 different TCZs. Only two of these airports (Rome Fiumicino and Copenhagen Kastrup) are the only airports in their TCZs, the rest are included in TCZs with multiple airports (up to 60 in the case of Paris Charles de Gaulle and Paris Orly).

7.4 Quality of service metrics and targets at airport level

7.4.1 The PRB has also considered whether it would be possible to link targets for TANS cost-efficiency with quality of service. Ultimately the aim would be targets which take account of other aspects of operational performance to enable a true test of cost efficiency rather than costs alone.

7.4.2 As of 2015, each airport has a number of local operational targets of which one of the most important is ATFM arrival delay per flight. Table 4 and Table 5 in the Annex show actual values for 2014 and the local target for this metric for airports in Group 1-3. A full set of local operational target information is available for all 14 airports in Group 1, and all apart from one airport (Brussels National) in Group 2. Local operational target information is not available for four airports out of the 123 included in Group 3.

7.4.3 Establishing a concrete link between these local operational targets at airports and a possible cost-efficiency target at TCZ level is difficult, particularly given the fact that some of the operational constraints may not be ANS-related. Other factors apart from ANS performance may impact on delay, for example weather and the scheduling intensity of the airport (a low scheduling intensity may lead to good quality of service in terms of low delay but with less capacity which could inhibit expansion/new entrants). On the other hand, a high scheduling intensity would give more capacity but may come at the price of more delay.

7.5 Thoughts on potential approaches to setting TANS targets, differentiated by airport group

7.5.1 The PRB sees some advantages in a differentiated approach whereby targets are set by airport group. Targets could be set based on the contribution each group is expected to make to the Union-wide target. Further, the differentiation could take into consideration the type of airport rather than a “one size fits all” approach. And taking account of quality of service could be a way to incentivize true efficiency rather than cost control alone. However, as with Option 2, the PRB considers that this approach should focus on Groups 1 and 2 for proportionality reasons. As noted above, airports in these groups account for two-thirds of total ANS costs in 2016.

7.5.2 The PRB also considers there are several issues which would need to be addressed before Union-wide TANS cost-efficiency targets could be set on the basis of the differentiated groupings:

- Limits on the availability of costs and TNSU data at airport limits the capacity to analyse unit costs at airport level and therefore to have meaningful and robust trends;
- Potential cost allocation issues may arise when setting targets for TCZs with larger airports (with targets) and smaller airports (with no targets);
- How to aggregate individual airports to TCZ level? Is a bottom up approach the only/most effective approach?
- Link to quality of service: Some airspace users complain of differential service standards at airports and thus any approach must be aware of potential further amplification of differential service issues and local disadvantage, while taking account of non-ANS constraints on performance. Any solution must take account of this risk as well as the challenges associated with linking Quality of Service performance with cost performance.

7.5.3 At this stage, it is clear that further work, in addition to that outlined in 4.1.4 above, would need to be undertaken before differentiated targets could be set on the basis of a clearly defined and robust analysis. Further information would also need to be provided by States, as described above.

8 Conclusions and Recommendations

8.1.1 The PRB recognises that setting a TANS Union-wide cost-efficiency target is a complex issue and that a pragmatic approach should be considered for RP2 (2017-2019). The approach should be simple, proportional, and recognise that the final three years of RP2 will be a transitional period for establishing the basis of a TANS Union-wide cost-efficiency target.

8.1.2 Each of the three options presented above have their merits and limitations. After careful consideration of these three options the PRB recommends that a hybrid of the options should be proposed, drawing on the merits of the options and fulfilling the requirement for simplicity and proportionality.

8.1.3 The PRB proposes that a TANS Union-wide cost-efficiency target for 2017-19 should be set for the airports in Groups 1 & 2 only, i.e. for airports with more than 70 000 air transport movements which are not subject to market conditions[6] (for the purpose of this report, these two groups exclude UK airports, which remain subject to the forthcoming Commission Decision on market conditions).

8.1.4 Group 3 (airports with less than 70,000 air transport movements), comprising 123 airports and with total costs of 357.7 M€$_{2009}$ in 2016, should have no Union-wide targets, but local targets in line with those provided in the RP2 PPs should apply. While they may have local and regional importance, generally their efficiency does not impact significantly on the European network. Therefore, in accordance with the proportionality principle, the PRB does not propose to bring them within the scope of Union-wide target setting.

8.1.5 These targets should be accompanied by further work to establish transparency in the structure of TANS charges. In particular, it is important for the EC, NSAs and all stakeholders to have an understanding of the elements covered by the TANS charge at each airport in terms of the scope of service and infrastructure. TANS charge differences between States may be justified in terms of the operations at airports and the PRB is not, at this stage, proposing a common approach to defining the scope of TANS costs as this could have unforeseen adverse impacts. Nevertheless, transparency is important to understand what differences exist and why.

8.1.6 The PRB recommends that the targets should be more ambitious than those proposed in the RP2 PPs. Therefore the PRB proposes that the TANS Union-wide cost-efficiency target for Airport Groups 1 & 2 should be a -3.5% p.a. reduction in terminal ANS DUC for the period 2016-2019. This is in line with the Union-wide en-route DUC cost-efficiency target trend for RP2, as set out in Commission Implementing Decision 2014/132/EU[7]. These targets will require States to make an additional effort compared to the PPs already adopted.

8.1.7 Advantages:

- Groups 1 & 2 comprise 67% of the total terminal ANS costs in 2016, and can be considered as providing the greatest impact on the network in terms of cost-efficiency at SES level. A focus on these two groups means that the regulatory burden for airports in Group 3, where the impact of target setting is likely to be negligible, is reduced.
- Supports a level of ambition which is in line with the target set for en route and is higher than that currently provided for in the RP2 PPs.
- Provides both greater transparency and a better understanding of cost allocation of existing TANS charges to ensure the system wide transparency required to address the policy objectives is achieved.

8.1.8 Disadvantage:

- If targets are set by airport group, care must be taken when translating these to TCZ level contributions, particularly for the TCZs with large numbers of airports within them.

[6] Article 3 of Regulation 391/2013 excludes airports which are subject to market condition from setting of DCs and targets.

[7] Commission Implementing Decision 2014/132/EU of 11 March 2014 setting the Union-wide performance targets for the air traffic management network and alert thresholds for the second reference period 2015-19.

8.1.9 Taken together, the PRB considers these targets and the further work on transparency will make progress towards delivering the policy objectives of downward pressure on costs and deterring cross-subsidy between en-route and terminal.

8.1.10 The PRB considers that experience from RP2, including the response to targets, should be assessed to enable an informed decision to be taken on future regulation in RP3. The PRB considers that further consideration should be given to a differentiated approach, taking quality of service into account.

8.1.11 Finally the PRB notes that while cross-subsidy between en-route and terminal ANS services is prohibited, cross-subsidy within terminal ANS services is permitted (Article 15.2(e) of Regulation 550/2004). Nothing in this report prevents such practices continuing.

8.1.12 Table 2 presents the underpinning Union-wide TNSUs and TANS DCs that would be required over 2017-2019 to achieve the proposed Union-wide TANS DUC target trend of -3.5% p.a., using the STATFOR September 2015 TNSU forecast. Use of the latest available TNSU data (STATFOR September 2015 forecasts) ensures that the Union-wide targets are set using the latest available information. The 2016 starting point for the TANS DUC is determined using the costs as presented in the RP2 PPs and the STATFOR September 2015 TNSU forecast.

Group 1 & 2	2016	2017	2018	2019	CAGR 2016-2019
TANS cost, based on TANS unit cost target trend (-3.5% p.a.) and STATFOR Sep15 TNSUs (M€2009)	714.2	706.2	699.9	691.2	-1.1%
STATFOR Sep15 TNSUs (000s)	5,159.0	5,286.4	5,429.3	5,556.0	2.5%
TANS Unit cost, based on RP2 PP DCs and STATFOR Sep15 TNSUs for 2016, with -3.5% p.a. trend from 2017 (€2009)	138.4	133.6	128.9	124.4	-3.5%

Table 2: Group 1 & 2 implied DCs trend required to meet TANS Union-wide DUC target of -3.5% p.a. under STATFOR Sept. 2015 traffic scenario

8.1.13 As shown in Table 3, the current costs trend for Group 1 & 2 airports is -0.3% p.a. on average over 2016-2019; this is less than the implied costs target trend underpinning the proposed TANS DUC target of -1.1% p.a. on average.

Group 1 & 2	2016	2017	2018	2019	CAGR 2016-2019
TANS cost, based on RP2 PP DCs (M€2009)	714.2	714.4	710.3	707.6	-0.3%
TANS cost, based on TANS unit cost target trend (-3.5% p.a.) and STATFOR Sep15 TNSUs (M€2009)	714.2	706.2	699.9	691.2	-1.1%

Table 3: Group 1 & 2 TANS total costs, as presented in the RP2 PPs and as required to achieve a DUC target trend of -3.5% p.a. under the STATFOR September 2015 TNSU forecast

8.1.14 A Union-wide TANS DUC target trend of -3.5% p.a. is more ambitious than is presently offered under the aggregated RP2 PP local targets. Achieving this target represents a net reduction of -35.0 M€$_{2009}$ in TANS DCs for Group 1 & 2 combined over the period 2017-2019 as compared to the RP2 PPs.

ANNEX

Group 1: Airports with greater than 225k IFR air transport movements (14 airports)

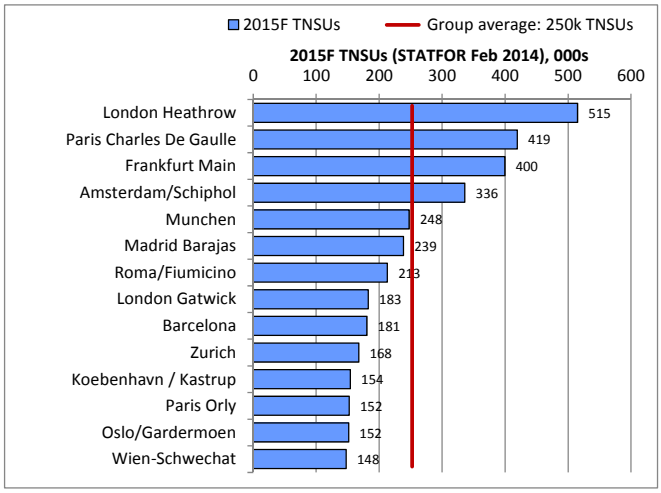


Figure 5: STATFOR February 2014 forecast TNSUs in 2015 for airports with >225k IFR air transport movements

Group 2: Airports with between 70k and 225k IFR air transport movements (37 airports)

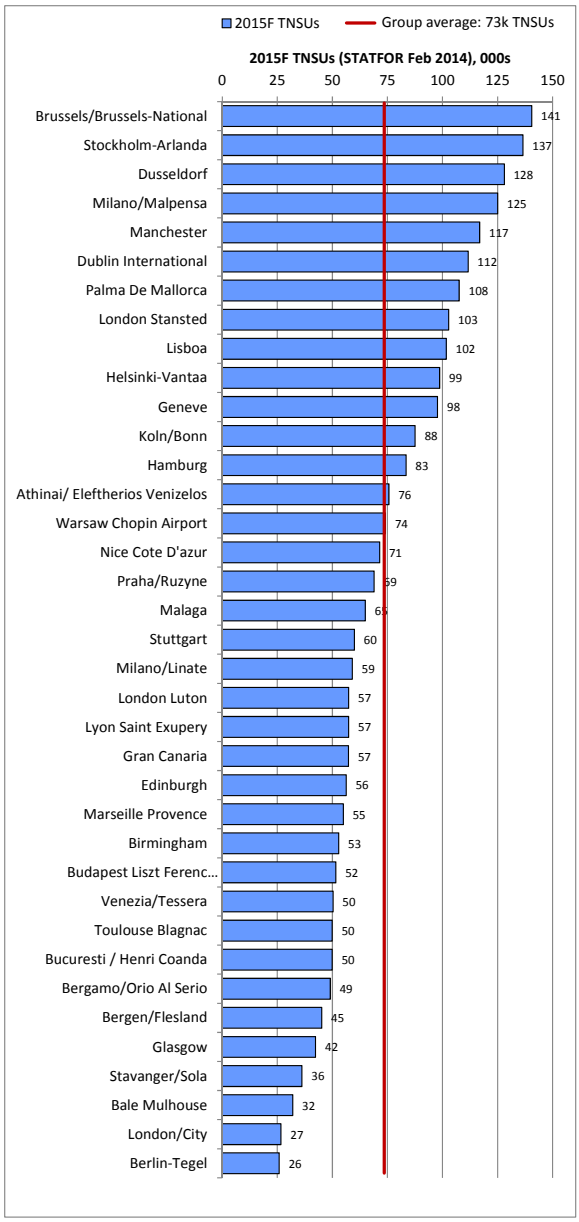


Figure 6: STATFOR February 2014 forecast TNSUs in 2015 for airports with between 70k and 225k IFR air transport movements

Group 3: Airports with less than 70k IFR air transport movements (123 airports)

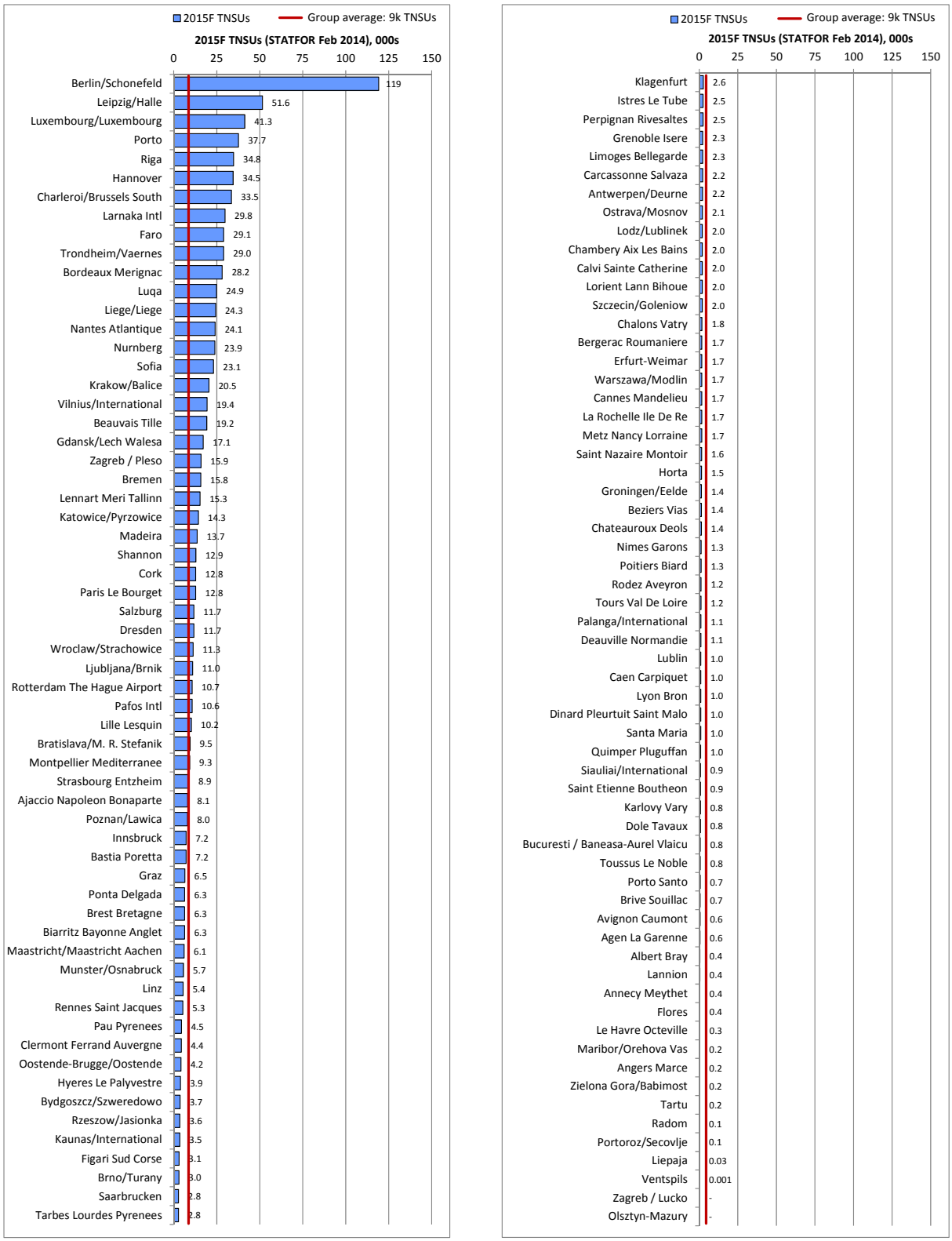


Figure 7: STATFOR February 2014 forecast TNSUs in 2015 for airports with < 70k IFR air transport movements

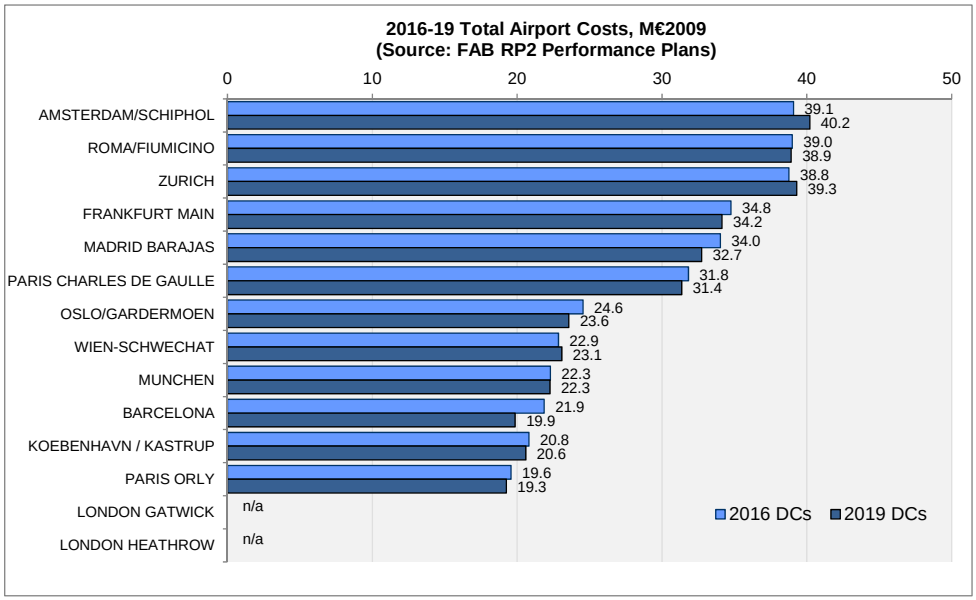


Figure 8: Group 1 Airports total TANS costs 2016 vs 2019

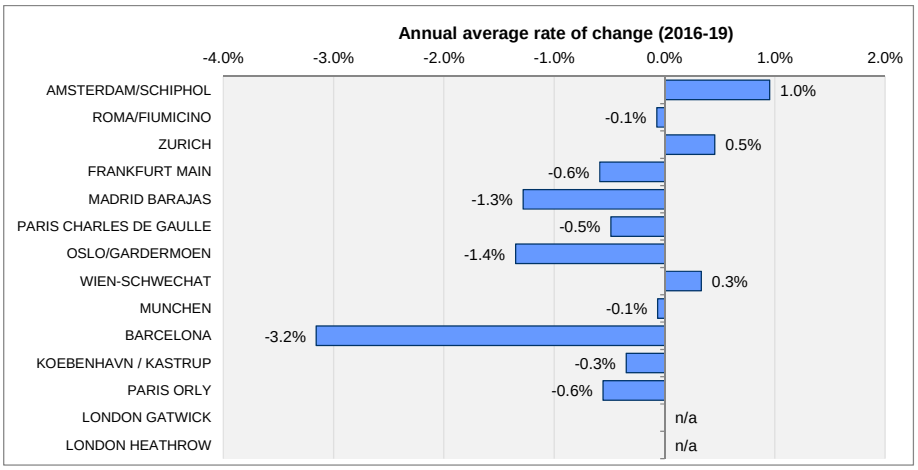


Figure 9: Group 1 Airports total TANS costs CAGR 2016-2019

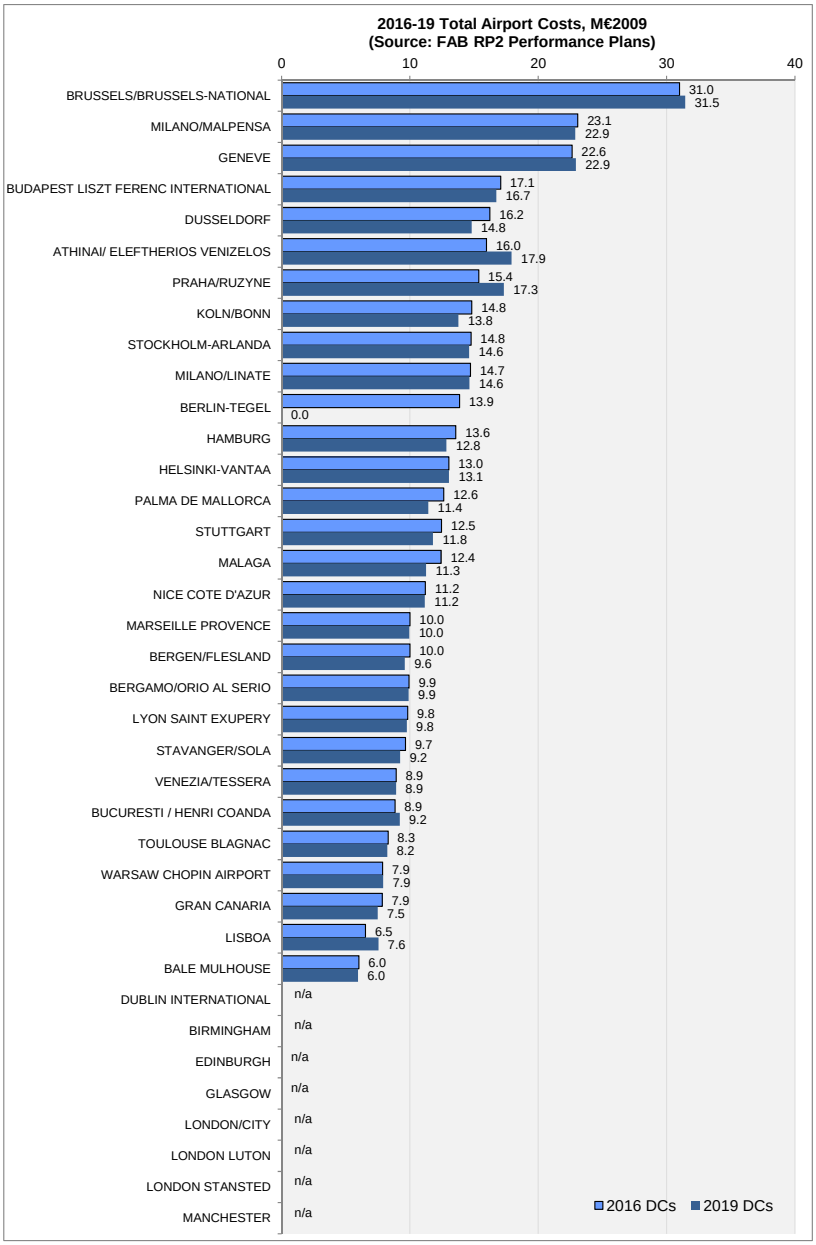


Figure 10: Group 2 Airports total ANS costs 2016 vs 2019

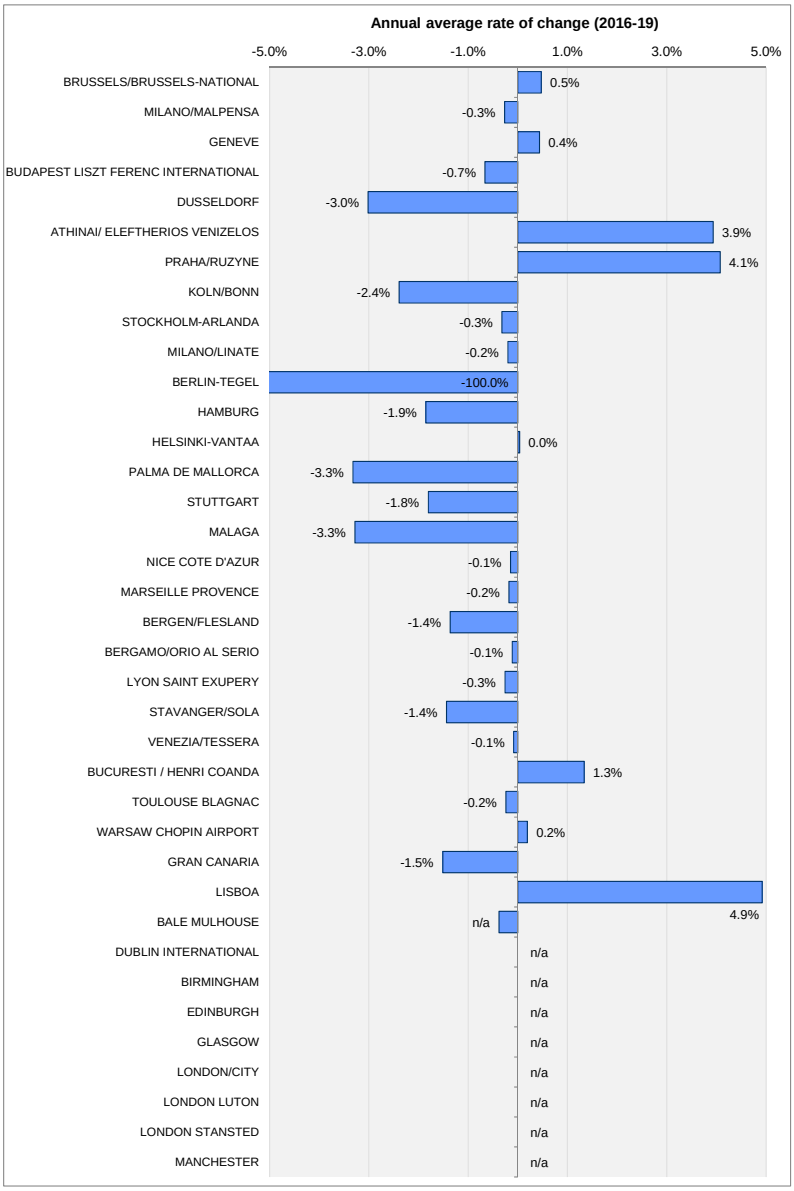


Figure 11: Group 2 Airports total ANS costs CAGR 2016-2019*

**Note: Berlin Tegel is scheduled to cease operations by 2019.*

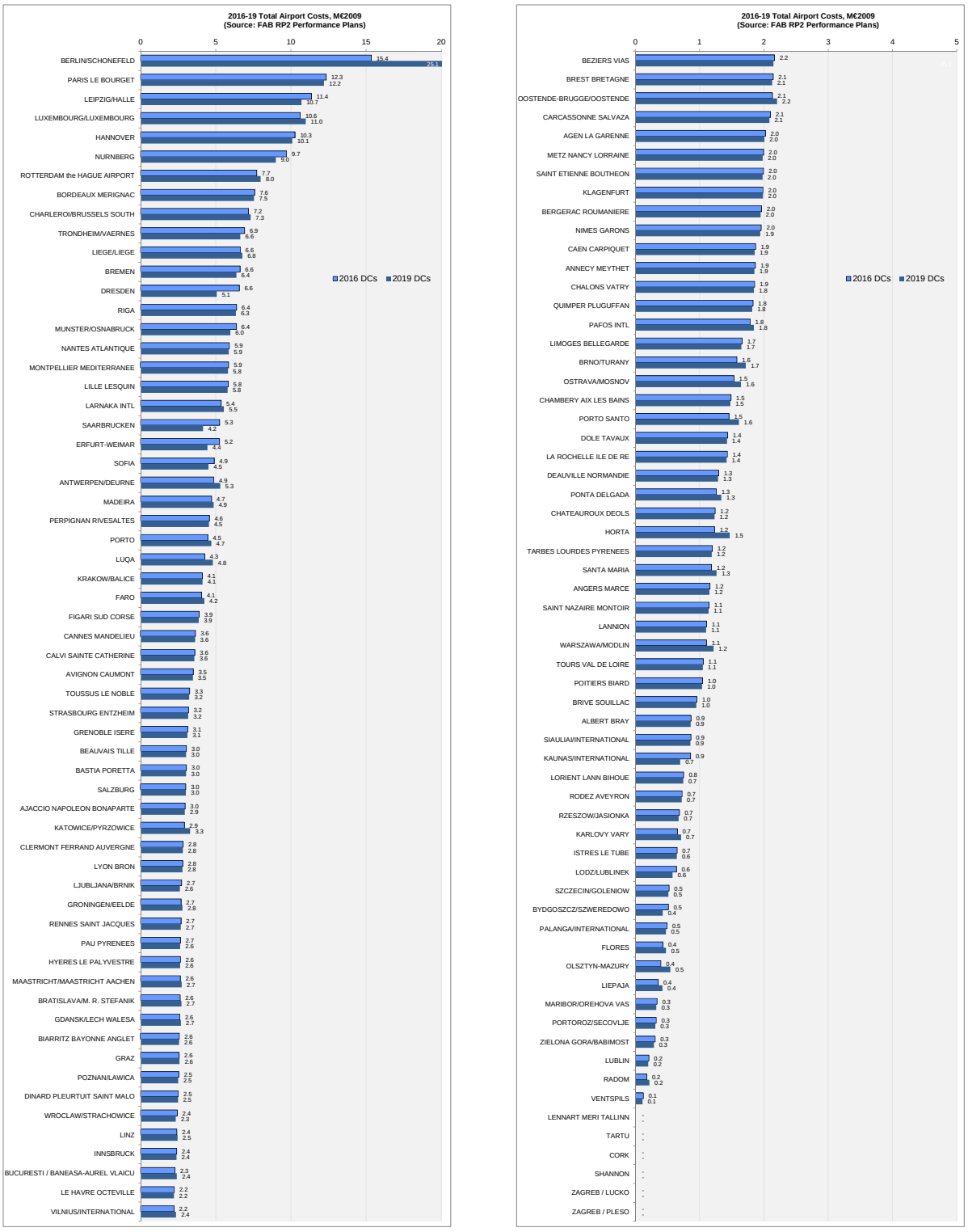


Figure 12: Group 3 Airports total ANS costs 2016 vs 2019

N.B. Scale is not common between left and right for legibility.

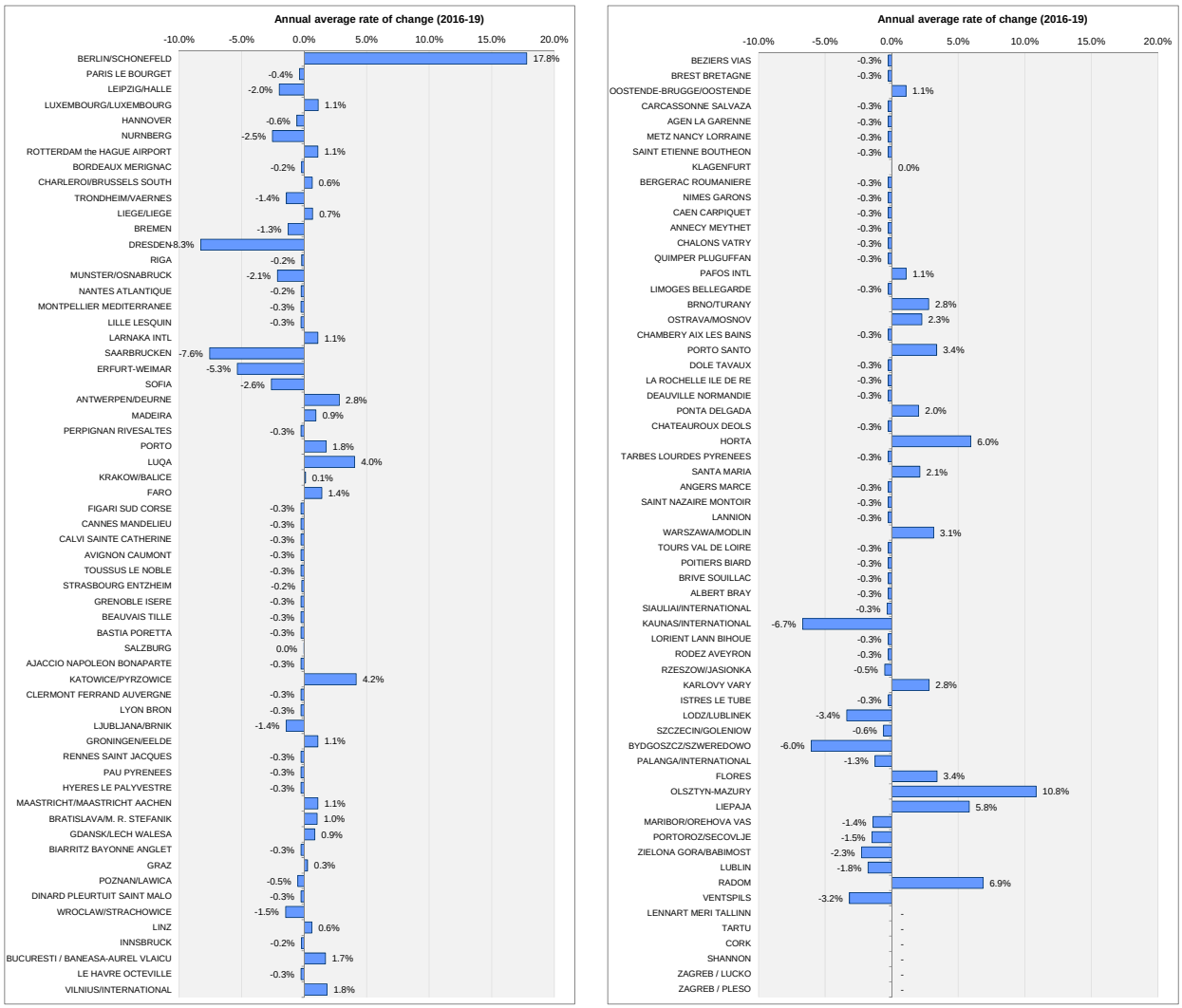


Figure 13: Group 3 Airports total ANS costs CAGR 2016-2019

Airports with more than 225,000 IFR air transport movements				
ICAO code	Airport name	State	2014 ATFM arrival delay per flight	2015 National Target
LFPG	PARIS CHARLES DE GAULLE	France	0.28	0.60
EDDF	FRANKFURT MAIN	Germany	1.30	0.65
EGLL	LONDON HEATHROW	United Kingdom	1.89	0.98
EHAM	AMSTERDAM/SCHIPHOL	Netherlands	1.89	2.00
EDDM	MUNCHEN	Germany	0.51	0.65
LEMD	MADRID BARAJAS	Spain	0.16	0.80
LIRF	ROMA/FIUMICINO	Italy	0.32	0.90
LEBL	BARCELONA	Spain	0.47	0.80
LSZH	ZURICH	Switzerland	2.71	2.18
LOWW	WIEN-SCHWECHAT	Austria	0.83	1.88
EGKK	LONDON GATWICK	United Kingdom	0.69	0.98
EKCH	KOEBENHAVN / KASTRUP	Denmark	0.04	0.11
ENGM	OSLO/GARDERMOEN	Norway	0.79	0.60
LFPO	PARIS ORLY	France	0.87	0.60
Count:	14			

Table 4: Local operational targets for airports with more than 225,000 IFR air transport movements

Airports with between 70,000 and 225,000 IFR air transport movements				
ICAO code	Airport name	State	2014 ATFM arrival delay per flight	2015 National Target
EBBR	BRUSSELS/BRUSSELS-NATIONAL	Belgium	0.88	n/a
EDDL	DUSSELDORF	Germany	0.39	0.65
ESSA	STOCKHOLM-ARLANDA	Sweden	0.27	0.35
LSGG	GENEVE	Switzerland	1.50	2.18
EFHK	HELSINKI-VANTAA	Finland	0.19	0.13
LIMC	MILANO/MALPENSA	Italy	0.01	0.90
LEPA	PALMA DE MALLORCA	Spain	0.93	0.80
EDDT	BERLIN-TEGEL	Germany	0.44	0.65
EGCC	MANCHESTER	United Kingdom	0.07	0.98
EIDW	DUBLIN INTERNATIONAL	Ireland	0.05	0.18
LGAV	ATHINAI/ ELEFTHERIOS VENIZELOS	Greece	0.00	0.10
LPPT	LISBOA	Portugal	0.63	0.60
EGSS	LONDON STANSTED	United Kingdom	0.08	0.98
EDDH	HAMBURG	Germany	0.28	0.65
EPWA	WARSAW CHOPIN AIRPORT	Poland	0.32	0.00
LFMN	NICE COTE D'AZUR	France	0.32	0.60
LKPR	PRAHA/RUZYNE	Czech Republic	0.19	0.25
EDDK	KOLN/BONN	Germany	0.02	0.65
EDDS	STUTTGART	Germany	0.08	0.65
LFLL	LYON SAINT EXUPERY	France	0.06	0.60
LIML	MILANO/LINATE	Italy	0.01	0.90
EGPH	EDINBURGH	United Kingdom	0.01	0.98
LFML	MARSEILLE PROVENCE	France	0.20	0.60
LEMG	MALAGA	Spain	0.02	0.80
GCLP	GRAN CANARIA	Spain	0.03	0.80
EGGW	LONDON LUTON	United Kingdom	0.05	0.98
ENBR	BERGEN/FLESLAND	Norway	0.56	0.60
LFBO	TOULOUSE BLAGNAC	France	0.09	0.60
LHBP	BUDAPEST LISZT FERENC INTERNATIONAL	Hungary	0.00	0.05
EGBB	BIRMINGHAM	United Kingdom	0.03	0.98
LIPZ	VENEZIA/TESSERA	Italy	0.11	0.90
LROP	BUCURESTI / HENRI COANDA	Romania	0.00	0.00
EGPF	GLASGOW	United Kingdom	0.00	0.98
ENZV	STAVANGER/SOLA	Norway	0.31	0.60
LIME	BERGAMO/ORIO AL SERIO	Italy	0.00	0.90
LFSB	BALE MULHOUSE	France	0.23	0.60
EGLC	LONDON/CITY	United Kingdom	1.35	0.98
Count:	37			

Table 5: Local operational targets for airports between 70,000-225,000 IFR air transport movements

The table below shows the local operational targets for Group 3 airports, < 70,000 IFR air transport movements.

Airports with fewer than 70,000 IFR air transport movements				
ICAO code	Airport name	State	2014 ATFM arrival delay per flight	2015 National Target
EVRA	RIGA	Latvia	0.00	0.00
EDDB	BERLIN/SCHONEFELD	Germany	0.01	0.65
EDDV	HANNOVER	Germany	0.00	0.65
EDDP	LEIPZIG/HALLE	Germany	0.00	0.65
LPPR	PORTO	Portugal	0.74	0.60
LFBD	BORDEAUX MERIGNAC	France	0.04	0.60
ELLX	LUXEMBOURG/LUXEMBOURG	Luxembourg	0.08	0.48
LFPB	PARIS LE BOURGET	France	0.45	0.60
ENVA	TRONDHEIM/VAERNES	Norway	0.03	0.60
EDDN	NURNBERG	Germany	0.02	0.65
LFRS	NANTES ATLANTIQUE	France	0.28	0.60
EBCI	CHARLEROI/BRUSSELS SOUTH	Belgium	0.01	n/a
LCLK	LARNAKA INTL	Cyprus	0.01	0.10
LBSF	SOFIA	Bulgaria	0.00	0.00
LPFR	FARO	Portugal	0.13	0.60
EETN	LENNART MERI TALLINN	Estonia	0.00	0.00
EPKK	KRAKOW/BALICE	Poland	0.07	0.00
LDZA	ZAGREB / PLESO	Croatia	0.01	0.05
EDDW	BREMEN	Germany	0.00	0.65
LMML	LUQA	Malta	0.02	0.10
EPGD	GDANSK/LECH WALESA	Poland	0.00	0.00
LFMT	MONTPELLIER MEDITERRANEE	France	0.01	0.60
EBLG	LIEGE/LIEGE	Belgium	0.09	n/a
LJLJ	LJUBLJANA/BRNIK	Slovenia	0.00	0.00
EYVI	VILNIUS/INTERNATIONAL	Lithuania	0.00	0.00
LOWS	SALZBURG	Austria	0.10	1.88
LFST	STRASBOURG ENTZHEIM	France	0.03	0.60
LFOB	BEAUVAIS TILLE	France	0.25	0.60
EPKT	KATOWICE/PYRZOWICE	Poland	0.00	0.00
EDDC	DRESDEN	Germany	0.00	0.65
EHRD	ROTTERDAM the HAGUE AIRPORT	Netherlands	0.00	2.00
EPWR	WROCLAW/STRACHOWICE	Poland	0.00	0.00
EICK	CORK	Ireland	0.00	0.18
LFQQ	LILLE LESQUIN	France	0.21	0.60
EINN	SHANNON	Ireland	0.00	0.18
LPMA	MADEIRA	Portugal	0.04	0.60
EPPO	POZNAN/LAWICA	Poland	0.00	0.00
EDDG	MUNSTER/OSNABRUCK	Germany	0.00	0.65
LZIB	BRATISLAVA/M. R. STEFANIK	Slovakia	0.00	0.00
LOWG	GRAZ	Austria	0.00	1.88
LOWI	INNSBRUCK	Austria	0.16	1.88
LOWL	LINZ	Austria	0.00	1.88
LFRN	RENNES SAINT JACQUES	France	0.00	0.60
EBAW	ANTWERPEN/DEURNE	Belgium	0.00	n/a
LFKJ	AJACCIO NAPOLEON BONAPARTE	France	0.15	0.60

Airports with fewer than 70,000 IFR air transport movements				
ICAO code	Airport name	State	2014 ATFM arrival delay per flight	2015 National Target
LFLC	CLERMONT FERRAND AUVERGNE	France	0.00	0.60
LFRB	BREST BRETAGNE	France	0.24	0.60
EHGG	GRONINGEN/EELDE	Netherlands	0.00	2.00
LCPH	PAFOS INTL	Cyprus	0.49	0.10
LFMD	CANNES MANDELIEU	France	0.94	0.60
LFKB	BASTIA PORETTA	France	0.00	0.60
LFBZ	BIARRITZ BAYONNE ANGLET	France	0.00	0.60
EHBK	MAASTRICHT/MAASTRICHT AACHEN	Netherlands	0.00	2.00
LFBP	PAU PYRENEES	France	0.00	0.60
LPPD	PONTA DELGADA	Portugal	0.00	0.60
LFPN	TOUSSUS LE NOBLE	France	0.94	0.60
LRBS	BUCURESTI / BANEASA-AUREL VLAICU	Romania	0.00	0.00
LFTH	HYERES LE PALYVESTRE	France	0.00	0.60
EDDR	SAARBRUCKEN	Germany	0.00	0.65
LOWK	KLAGENFURT	Austria	0.00	1.88
LFKF	FIGARI SUD CORSE	France	0.82	0.60
LFLY	LYON BRON	France	0.00	0.60
LFMP	PERPIGNAN RIVESALTES	France	0.00	0.60
LFBL	LIMOGES BELLEGARDE	France	0.00	0.60
EYKA	KAUNAS/INTERNATIONAL	Lithuania	0.00	0.00
EPRZ	RZESZOW/JASIONKA	Poland	0.00	0.00
LKTB	BRNO/TURANY	Czech Republic	0.00	0.25
LFRH	LORIENT LANN BIHOUE	France	0.00	0.60
LFBT	TARBES LOURDES PYRENEES	France	0.01	0.60
LFLB	CHAMBERY AIX LES BAINS	France	0.55	0.60
EBOS	OOSTENDE-BRUGGE/OOSTENDE	Belgium	0.00	n/a
LKMT	OSTRAVA/MOSNOV	Czech Republic	0.00	0.25
LFBH	LA ROCHELLE ILE DE RE	France	0.00	0.60
LFJL	METZ NANCY LORRAINE	France	0.00	0.60
LFLS	GRENOBLE ISERE	France	1.28	0.60
LFCR	RODEZ AVEYRON	France	0.00	0.60
LFKC	CALVI SAINTE CATHERINE	France	0.26	0.60
LFMV	AVIGNON CAUMONT	France	0.11	0.60
LFMK	CARCASSONNE SALVAZA	France	0.00	0.60
LFBI	POITIERS BIARD	France	0.01	0.60
LFMU	BEZIERS VIAS	France	0.00	0.60
EDDE	ERFURT-WEIMAR	Germany	0.00	0.65
LFRK	CAEN CARPIQUET	France	0.11	0.60
EPSC	SZCZECIN/GOLENIOW	Poland	0.00	0.00
EPBY	BYDGOSZCZ/SZWEREDOWO	Poland	0.00	0.00
EPMO	WARSZAWA/MODLIN	Poland	0.00	0.00
LFBA	AGEN LA GARENNE	France	0.00	0.60
LFBE	BERGERAC ROUMANIERE	France	0.00	0.60
EPLL	LODZ/LUBLINEK	Poland	0.00	0.00
LFMI	ISTRES LE TUBE	France	0.00	0.60
LPHR	HORTA	Portugal	0.00	0.60
LFRD	DINARD PLEURTUIT SAINT MALO	France	0.00	0.60
LFRG	DEAUVILLE NORMANDIE	France	0.00	0.60

Airports with fewer than 70,000 IFR air transport movements				
ICAO code	Airport name	State	2014 ATFM arrival delay per flight	2015 National Target
LFTW	NIMES GARONS	France	0.00	0.60
LFLP	ANNECY MEYTHET	France	0.00	0.60
LFGJ	DOLE TAVAUX	France	0.01	0.60
LFRQ	QUIMPER PLUGUFFAN	France	0.24	0.60
LFOK	CHALONS VATRY	France	0.00	0.60
LFMH	SAINT ETIENNE BOUTHEON	France	0.00	0.60
LFSL	BRIVE SOUILLAC	France	0.00	0.60
LFOT	TOURS VAL DE LOIRE	France	0.00	0.60
LFRZ	SAINT NAZAIRE MONTOIR	France	0.00	0.60
LPAZ	SANTA MARIA	Portugal	0.00	0.60
LPPS	PORTO SANTO	Portugal	0.00	0.60
EYPA	PALANGA/INTERNATIONAL	Lithuania	0.00	0.00
LFLX	CHATEAUROUX DEOLS	France	0.00	0.60
LFOH	LE HAVRE OCTEVILLE	France	0.00	0.60
LKKV	KARLOVY VARY	Czech Republic	0.00	0.25
LFRO	LANNION	France	0.14	0.60
LFAQ	ALBERT BRAY	France	0.26	0.60
LFJR	ANGERS MARCE	France	0.00	0.60
EYSA	SIAULIAI/INTERNATIONAL	Lithuania	0.00	0.00
EETU	TARTU	Estonia	0.00	0.00
LJMB	MARIBOR/OREHOVA VAS	Slovenia	0.00	0.00
LJPZ	PORTOROZ/SECOVLJE	Slovenia	0.00	0.00
LPFL	FLORES	Portugal	0.00	0.60
EPLB	LUBLIN	Poland	0.00	0.00
EPZG	ZIELONA GORA/BABIMOST	Poland	0.00	0.00
EPRA	RADOM	Poland	0.00	0.00
LDZL	ZAGREB / LUCKO	Croatia	0.00	0.05
EVLA	LIEPAJA	Latvia	0.00	0.00
EVVA	VENTSPILS	Latvia	0.00	0.00
EPSY	OLSZTYN-MAZURY	Poland	n/a	0.00
Count:	123			