

HIGH LEVEL SUMMARY REPORT ON PRELIMINARY ACE 2016 DATA

IMPORTANT NOTE:

This document comprises preliminary data which are subject to changes before the publication of the final ACE 2016 Benchmarking Report in May 2018

Report
commissioned by
the Performance
Review Commission

Prepared by the EUROCONTROL Performance Review Unit (PRU)

Disclaimer: The Performance Review Unit (PRU) has made every effort to ensure that the information and analysis contained in this document are as accurate and complete as possible. Should you find any errors or inconsistencies we would be grateful if you could please bring them to the PRU's attention. The PRU's e-mail address is pru@eurocontrol.int

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1 **INTRODUCTION**

The ACE benchmarking work is carried out by the Performance Review Commission (PRC) supported by the Performance Review Unit (PRU) and is based on information provided by ANSPs in compliance with Decision No. 88 of the Permanent Commission of EUROCONTROL on economic information disclosure

The data processing, analysis and reporting are conducted with the assistance of the ACE Working Group, which comprises representatives from participating ANSPs, airspace users, regulatory authorities and the Performance Review Unit (PRU). This enables participants to share experiences and gain a common understanding of underlying assumptions and limitations of the data.

This high level summary report presents a preliminary version of the data submitted by 38 Air Navigation Services Providers (ANSPs) in the Specification for Economic Information Disclosure V3.0 for the year 2016.

The objective of this document is to provide a first insight on the level of 2016 cost-effectiveness performance both for the Pan-European system and for individual ANSPs before the release of the ACE 2016 Benchmarking Report, which is planned end of May 2018. The figure below illustrates the timeline for the production of the ACE 2016 Benchmarking report.

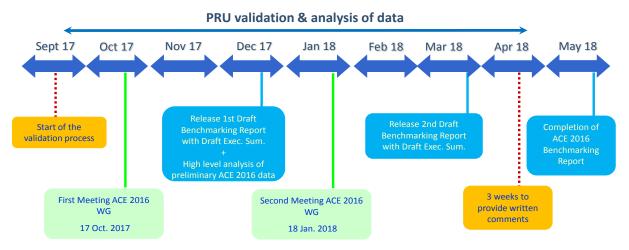


Figure 1-1: Timeline for the production of the ACE 2016 Benchmarking Report

It is important that robust ACE benchmarking analysis is available in a timely manner since several stakeholders, most notably ANSPs' management, regulatory authorities (e.g. NSAs) and airspace users, have a keen interest in receiving the information in the ACE reports as early as possible.

It should be noted that the data presented in this document are still preliminary and not fully validated. These data reflect the information stored in the ACE database on the 16th November 2017. Figure 1-2 shows the status of the ACE data validation process at that time.

DCAC Cyprus	HCAA	M-NAV	ROMATSA	
DFS	HungaroControl	MoldATSA	Sakaeronavigatsia	
DHMI	IAA	MUAC	Skyguide	
DSNA	LFV	NATS	Slovenia Control	
EANS	LGS	NAV Portugal	SMATSA	
ENAIRE	LPS	NAVIAIR	UkSATSE	
ENAV	LVNL	Oro Navigacija		
Croatia Control Finavia		PANSA		
	DFS DHMI DSNA EANS ENAIRE ENAV	DFS HungaroControl DHMI IAA DSNA LFV EANS LGS ENAIRE LPS ENAV LVNL	DFS HungaroControl MoldATSA DHMI IAA MUAC DSNA LFV NATS EANS LGS NAV Portugal ENAIRE LPS NAVIAIR ENAV LVNL Oro Navigacija	

Data validation process already started and being finalised

Figure 1-2: Status of data validation process

This information is therefore subject to changes before the release of the final ACE 2016 Benchmarking Report in May 2018.

Figure 1-3 below shows that 17 ANSPs provided their ACE 2016 data submission on time by the 1st July 2017 and that 27 data submissions were received by the 15th July 2017. Figure 1-3 also indicates that for seven ANSPs the ACE data submission was received more than one month after the deadline.

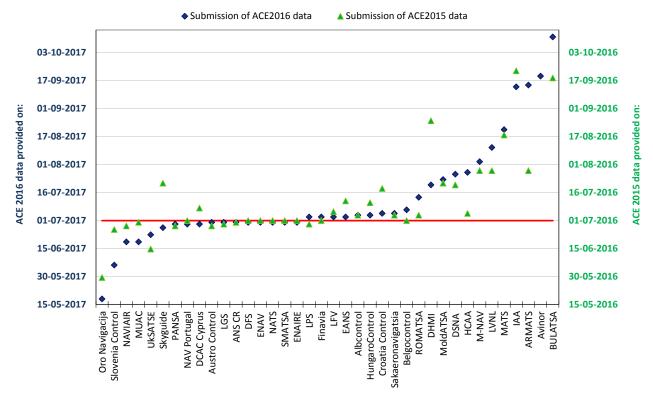


Figure 1-3: Status of ACE 2016 data submission

Clearly, the timescale for the production of the ACE Benchmarking Report is inevitably delayed if data are not submitted on time.

The remainder of this report is organised as follows:

- Section 2: Provides an overview of the status of ACE 2016 data submissions;
- Section 3: Provides a high level presentation of 2016 revenues, costs and staff data;
- **Section 4:** Presents a <u>preliminary analysis</u> of economic cost-effectiveness at Pan-European and ANSP level;
- **Section 5:** Presents a <u>preliminary analysis</u> of financial cost-effectiveness at Pan-European and ANSP level, and underlying components.

2 HIGH LEVEL REVENUES, COSTS AND STAFF DATA

This section provides a <u>preliminary</u> presentation of high level revenues, costs and staff data provided in ANSPs ACE 2016 data submissions.

Total ANS revenues in 2016 were €9 362M. Almost all en-route revenue comes from the collection of en-route charges (96.4%, see left pie chart). The proportion is lower for terminal revenues (68.7%, see right pie chart), as additional income may directly come from airport operators (22.2% e.g. through a contractual arrangement between the ANSP and the airport operator).

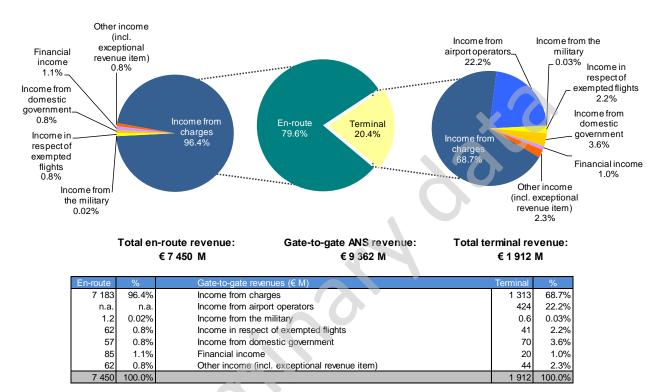
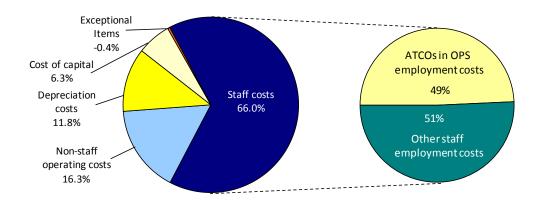


Figure 2-1: Breakdown of gate-to-gate ANS revenues, 2016

From a methodological point of view, the ACE Benchmarking analysis focuses on the specific costs of providing gate-to-gate ATM/CNS services which amounted to €7 978M in 2016. Operating costs (including staff costs, non-staff operating costs and exceptional cost items) accounted for some 82% of total ATM/CNS provision costs, and capital-related costs (depreciation and cost of capital) represented some 18%.



Total ATM/CNS provision costs:

€7978 M

	En-route		Terminal		Gate-to-gate	
	€M	%	€M	%	€M	%
Staff costs	4 074	65.1%	1 190	69.2%	5 264	66.0%
ATCOs in OPS employment costs	2 000	n/appl	594	n/appl	2 594	n/appl
Other staff employment costs	2 074	n/appl	596	n/appl	2 670	n/appl
Non-staff operating costs	1 010	16.1%	286	16.7%	1 297	16.3%
Depreciation costs	786	12.6%	160	9.3%	945	11.8%
Cost of capital	414	6.6%	89	5.2%	504	6.3%
Exceptional Items	-25	-0.4%	-7	-0.4%	-32	-0.4%
Total ATM/CNS provision costs	6 259	100.0%	1 719	100.0%	7 978	100.0%

Figure 2-2: Breakdown of gate-to-gate ATM/CNS provision costs at Pan-European system level, 2016

The Pan-European ANSPs employed some 55 360 staff¹. Some 17 877 staff (32%) were ATCOs working on operational duty, split between ACCs (56%) and APP/TWR facilities (44%). On average, 2.1 additional staff are required for every ATCO in OPS in Europe.

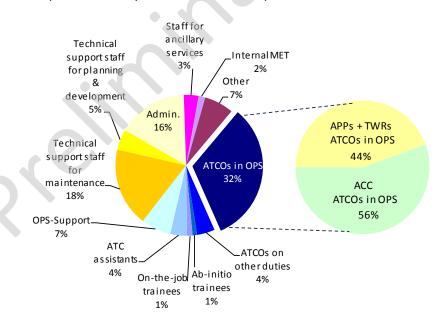


Figure 2-3: Breakdown of ANSPs total ANS staff at Pan-European system level, 2016

 1 At the time of writing this report Belgocontrol had not yet submitted data on the breakdown of total ANS staff.

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3 ECONOMIC COST-EFFECTIVENESS

This section provides a <u>preliminary analysis</u> of economic cost-effectiveness at Pan-European and ANSP level.

EUROPEAN SYSTEM LEVEL

The PRC introduced in its ACE Benchmarking Reports the concept of economic cost-effectiveness. This indicator is defined as gate-to-gate ATM/CNS provision costs plus the costs of ground ATFM delays for both en-route and airport, all expressed per composite flight-hour. This economic performance indicator is meant to capture trade-offs between ATC capacity and costs².

Figure 3-1 analyses the changes in economic cost-effectiveness between 2011 and 2016 at Pan-European system level. The left-hand side of Figure 2.6 shows the changes in unit economic costs, while the right-hand side provides complementary information on the year-on-year changes in ATM/CNS provision costs, composite flight-hours and unit costs of ATFM delays.

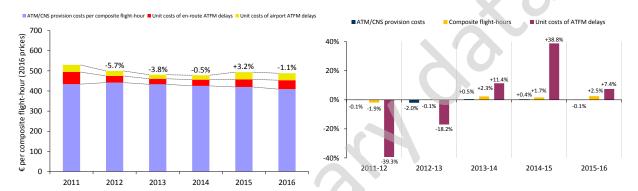


Figure 3-1: Trend of unit economic costs at Pan-European system level, 2011-2016 (real terms)³

Between 2011 and 2016, economic costs per composite flight-hour decreased by -1.6% p.a. in real terms. Over this period, ATM/CNS provision costs remained close to their 2011 level (-0.3% p.a.) while the number of composite flight-hours slightly increased (+0.9% p.a.). Although the unit costs of ATFM delays reduced by -3.8% p.a. on average over the period, the sharp decreases observed in 2012 (-39.3%) and 2013 (-18.2%) were followed by consecutive increases in 2014 (+11.4%), 2015 (+38.8%) and 2016 (+7.4%).

In 2016, composite flight-hours rose by +2.5% while ATM/CNS provision costs remained fairly constant (-0.1%). As a result, unit ATM/CNS provision costs reduced by -2.6% in 2016. In the meantime, the unit costs of ATFM delays increased by +7.4% and therefore unit economic costs decreased by -1.1% compared to 2015. However, it is important to note that as of April 2016 the Network Manager (NM) introduced a new methodology to improve the accuracy of ATFM delays calculation⁴. This change

² See Annex 2 of the ACE 2015 Benchmarking Report for more information on the methodology used to compute composite flight-hours and economic costs.

³ Sakaeronavigatsia is excluded from the trend analysis provided in this section since no data is available prior to 2015 for this ANSP.

⁴ ANSPs noticed that the use of the Ready Message (REA) - whilst attempting to improve punctuality for aircraft – could result in artificial changes to the computed ATFM delay for individual flights and for the ANSP that has requested the regulation. The ANSPs brought this to the attention of the Network Management Board (NMB). The ANSPs, together with the airspace users and the Network Manager reviewed the existing situation and developed a more accurate process which avoids artificial changes to the computed ATFM delay when a REA message is used. The more accurate process was presented to the NMB and approved in March 2015 for implementation with NM software release 20.0 on April 04 2016. More information on this adjustment is available at: http://ansperformance.eu/references/methodology/ATFM delay calculation.html.

resulted in substantially less ATFM delays compared to those computed using the old methodology. If computed according to the old methodology, the unit costs of ATFM delays would rise by +20.2% in 2016 and unit economic costs would be +0.8% higher than in 2015 (instead of -1.1% lower when the new methodology is used to compute 2016 ATFM delays).

Further analysis on the impact of the new ATFM delays calculation methodology on the unit economic costs will be available in the ACE 2016 Benchmarking Report.

ANSP LEVEL

The economic cost-effectiveness indicator at Pan-European level is €488 per composite flight-hour, and, on average, the unit costs of ATFM delays represent some 16% of the unit economic costs.

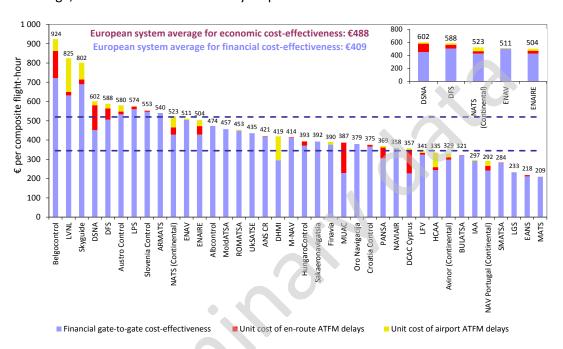


Figure 3-2: Economic gate-to-gate cost-effectiveness⁵, 2016

More details on the changes in ATFM delays⁶ for individual ANSPs will be provided in the ACE 2016 Benchmarking Report.

⁶ The ATFM delays analysed in this ACE Benchmarking Report do not comprise changes due to the Post Operations Performance Adjustment Process. This process allows operational stakeholders to notify national and European authorities of issues that relate to ATFM delay measurement, classification and assignment. The minutes of ATFM delays resulting from this process would lead to different unit economic costs figures for some ANSPs. For instance, if the Post-Ops changes would be taken into account, ENAIRE 2016 unit economic costs would amount to €498 instead of €504. Detailed information on this process is available on the Network Manager website at the following link: http://www.eurocontrol.int/publications/post-operations-performance-adjustment-process.

⁵ ENAIRE 2016 ATM/CNS provision costs comprise costs relating to ATM/CNS infrastructure shared with the military authority (€16.6M), which are charged to civil airspace users. It should be noted that these costs, which are borne by the Spanish Air Force (Ministry of Defence), as well as the corresponding revenues, are not passing through ENAIRE Accounts from 2014 onwards.

4 FINANCIAL COST-EFFECTIVENESS

This section provides a <u>preliminary analysis</u> of financial cost-effectiveness at Pan-European and ANSP level.

EUROPEAN SYSTEM LEVEL

In 2016, composite flight-hours increased (+2.5%) while ATM/CNS provision costs remained fairly constant (-0.1%) and as a result unit ATM/CNS provision costs reduced by -2.6%.



Figure 4-1: Changes in unit ATM/CNS provision costs, 2011-2016 (real terms)

Figure 4-2 shows the analytical framework which is used in the ACE analysis to break down the financial cost-effectiveness indicator into basic economic drivers. These key drivers include:

- a) ATCO-hour productivity
 (0.84 composite flight-hours per ATCO-hour);
- b) ATCO employment costs per ATCO-hour (€112); and,
- c) support costs per unit output (€276).

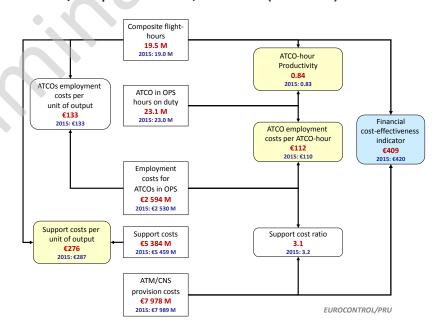


Figure 4-2: ACE performance framework, 2016 (real terms)

Figure 4-3 below shows that in 2016, ATCO employment costs per ATCO-hour (+2.0%) rose at the same pace as ATCO-hour productivity (+2.0%), and as a result ATCO employment costs per composite flight-hour remained mostly unchanged (-0.01%). In the meantime, unit support costs fell by -3.8% since support costs decreased (-1.4%) while the number of composite flight-hours increased (+2.5%). As a result, in 2016 unit ATM/CNS provision costs reduced by -2.6% at Pan-European system level.

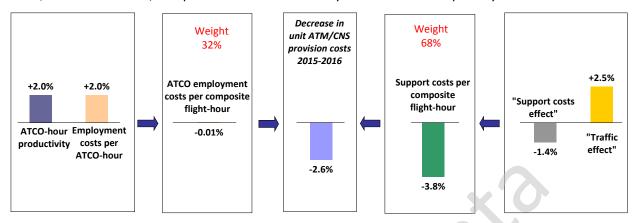


Figure 4-3: Breakdown of changes in unit ATM/CNS provision costs, 2015-2016 (real terms)

It should be noted that the observed reduction in support costs (-1.4%) is affected by the fact that an exceptional negative amount was reported by DFS in 2016 (-62.0 M€ while a figure of -€1.3M was recorded in 2015). This substantial amount is made of two main components: a) IFRS transition costs (€50.5M), and (b) a negative amount (-€112.5M) reflecting a contribution of the German State in DFS equity for the year 2016. If the contribution from the German State would not be taken into account then the Pan-European system support costs would be in the same order of magnitude (-0.2%) as in 2015 instead of -1.4% lower. Further details on the impact of the State intervention on DFS cost-effectiveness performance will be provided in the ACE 2016 Benchmarking Report.

The two following pages provide information on the level of ATCO-hour productivity, ATCO employment costs per ATCO-hour and unit support costs for each individual ANSP.

ANSP LEVEL

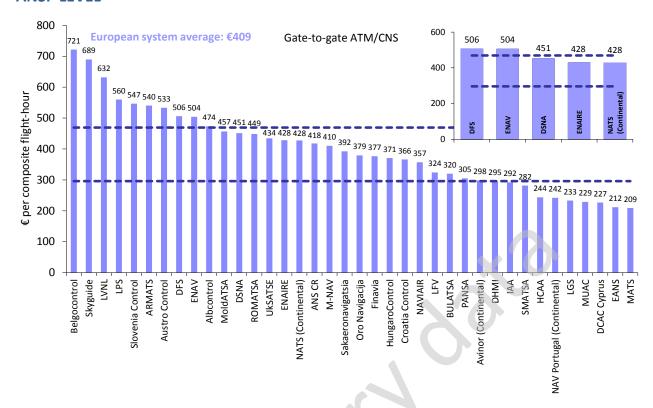


Figure 4-4: Financial gate-to-gate cost-effectiveness, 2016

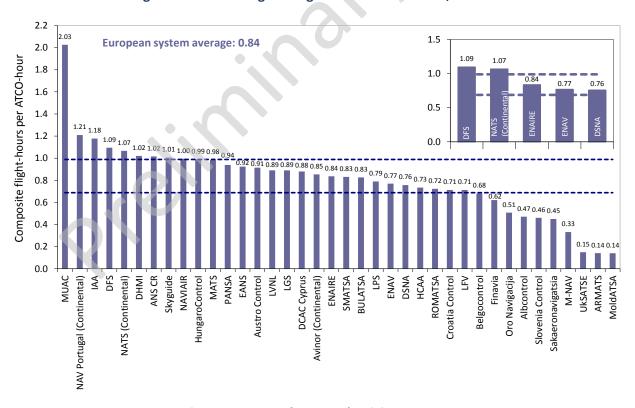


Figure 4-5: ATCO-hour productivity, 2016

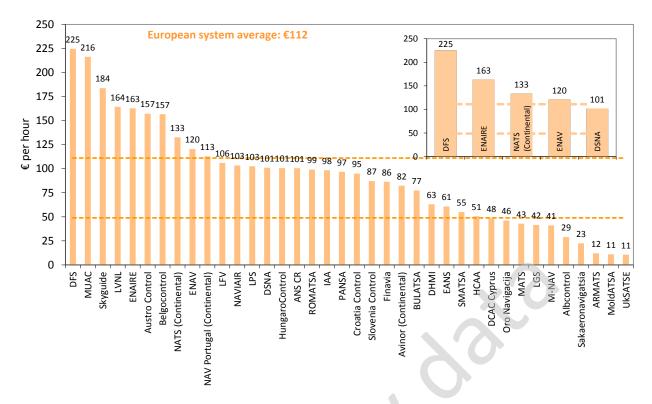


Figure 4-6: Employment costs per ATCO-hour, 2016

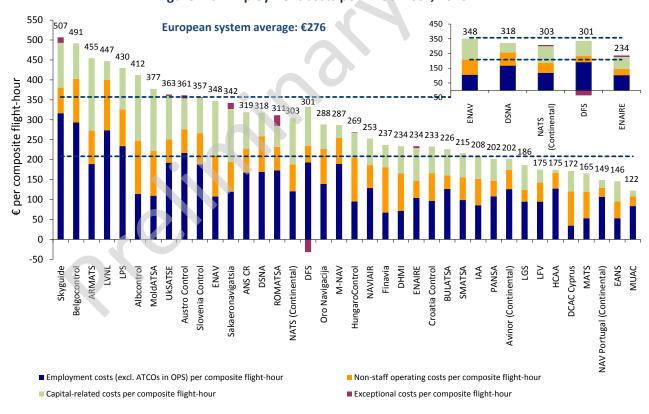


Figure 4-7: Breakdown of support costs per composite flight-hour, 2016

A more detailed analysis of the changes in cost-effectiveness, ATCO-hour productivity, ATCO employment costs per ATCO-hour and unit support costs will be available in the final ACE 2016 Benchmarking Report.