HIGH LEVEL SUMMARY REPORT ON PRELIMINARY ACE 2017 DATA

IMPORTANT NOTE:

This document comprises preliminary data which are subject to changes before the publication of the final ACE 2017 Benchmarking Report in May 2019
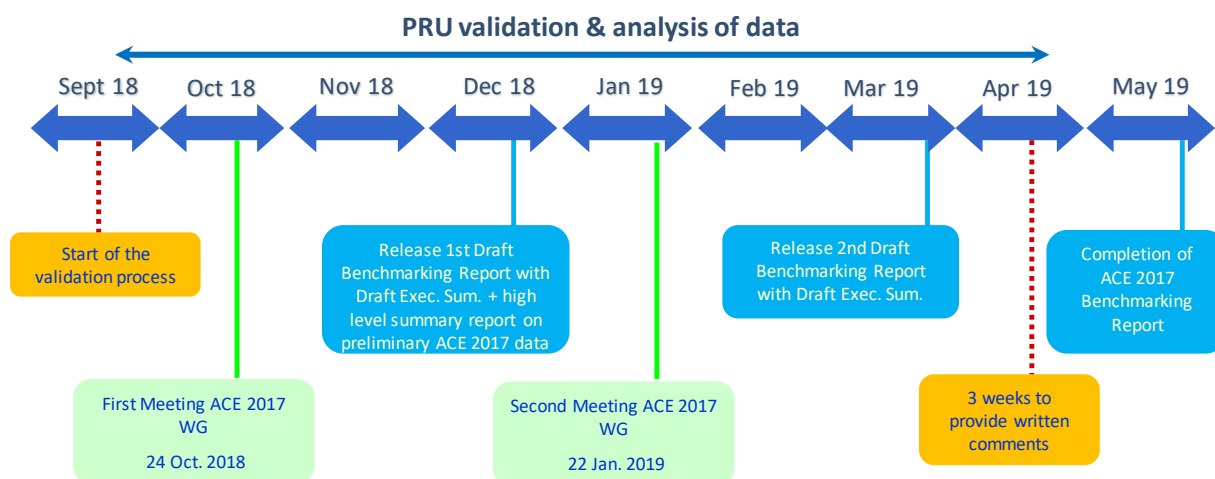
Disclaimer:

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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 establish 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 2017.

The objective of this document is to provide a first insight on the level of 2017 cost-effectiveness performance both for the Pan-European system and for individual ANSPs before the release of the ACE 2017 Benchmarking Report, which is planned end of May 2019. The figure below illustrates the timeline for the production of the ACE 2017 Benchmarking Report.

Figure 1-1: Timeline for the production of the ACE 2017 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 30 November 2018. Figure 1-2 shows the status of the ACE data validation process at the end of December 2018.
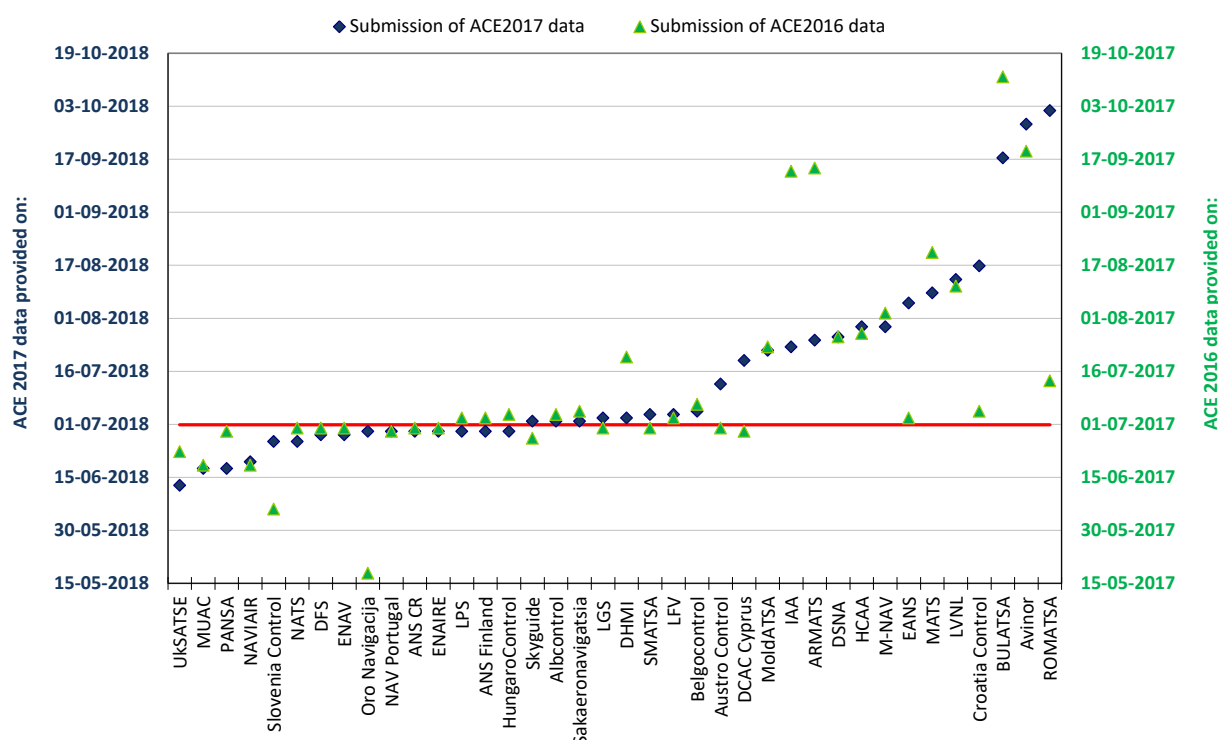
Albcontrol	Croatia Control	HCAA	M-NAV	ROMATSA
ANS CR	DCAC Cyprus	HungaroControl	MoldATSA	Sakaeronavigatsia
ANS Finland	DFS	IAA	MUAC	Skyguide
ARMATS	DHMI	LFV	NATS	Slovenia Control
Austro Control	DSNA	LGS	NAV Portugal	SMATSA
Avinor	EANS	LPS	NAVIAIR	UkSATSE
Belgocontrol	ENAIRE	LVNL	Oro Navigacija	
BULATSA	ENAV	MATS	PANSA	

▮ Data validation process already started and being finalised

Figure 1-2: Status of 2017 data validation process

The data contained in this report is therefore subject to changes before the release of the final ACE 2017 Benchmarking Report in May 2019.

Figure 1-3 below shows that 15 ANSPs provided their ACE 2017 data submission on time by the 1st July 2018 and that, in total, 24 data submissions were received by the 15th July 2018. 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 2017 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 a high level presentation of 2017 revenues, costs and staff data;
- **Section 3:** Presents a preliminary analysis of economic cost-effectiveness at Pan-European and ANSP level;
- **Section 4:** Presents a preliminary analysis 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 2017 data su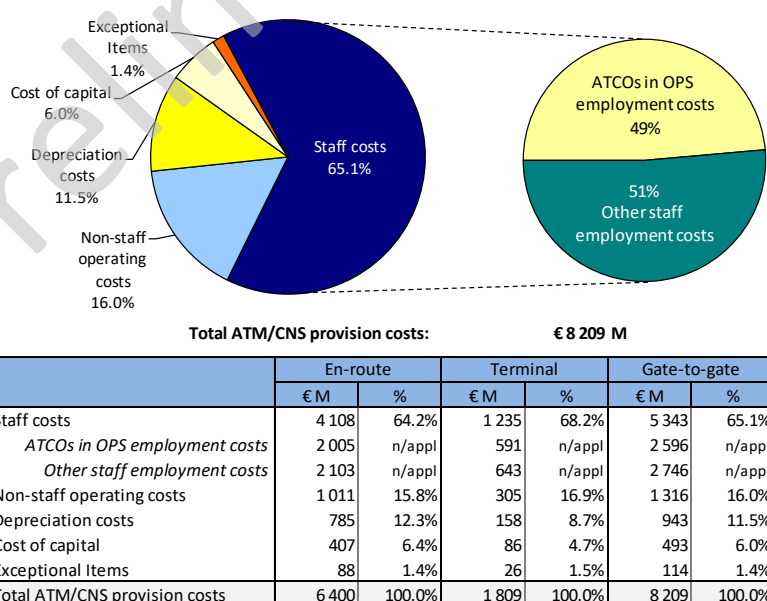bmissions. Total ANS revenues in 2017 were €9 633M. Almost all en-route revenue comes from the collection of en-route charges (96.0%, see left pie chart). The proportion is lower for terminal revenues (67.6%, see right pie chart), as additional income may directly come from airport operators (22.9% e.g. through a contractual arrangement between the ANSP and the airport operator).

En-route	%	Gate-to-gate revenues (€ M)	Terminal	%
7 393	96.0%	Income from charges	1 304	67.6%
n.a.	n.a.	Income from airport operators	442	22.9%
1.2	0.02%	Income from the military	0.6	0.03%
60	0.8%	Income in respect of exempted flights	43	2.2%
53	0.7%	Income from domestic government	45	2.4%
93	1.2%	Financial income	19	1.0%
104	1.4%	Other income (incl. exceptional revenue item)	74	3.8%
7 705	100.0%		1 928	100.0%

Figure 2-1: Breakdown of gate-to-gate ANS revenues, 2017

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 €8 209M in 2017. Operating costs (including staff costs, non-staff operating costs and exceptional cost items) accounted for some 83% of total ATM/CNS provision costs, while depreciation costs and the cost of capital represented some 17%.
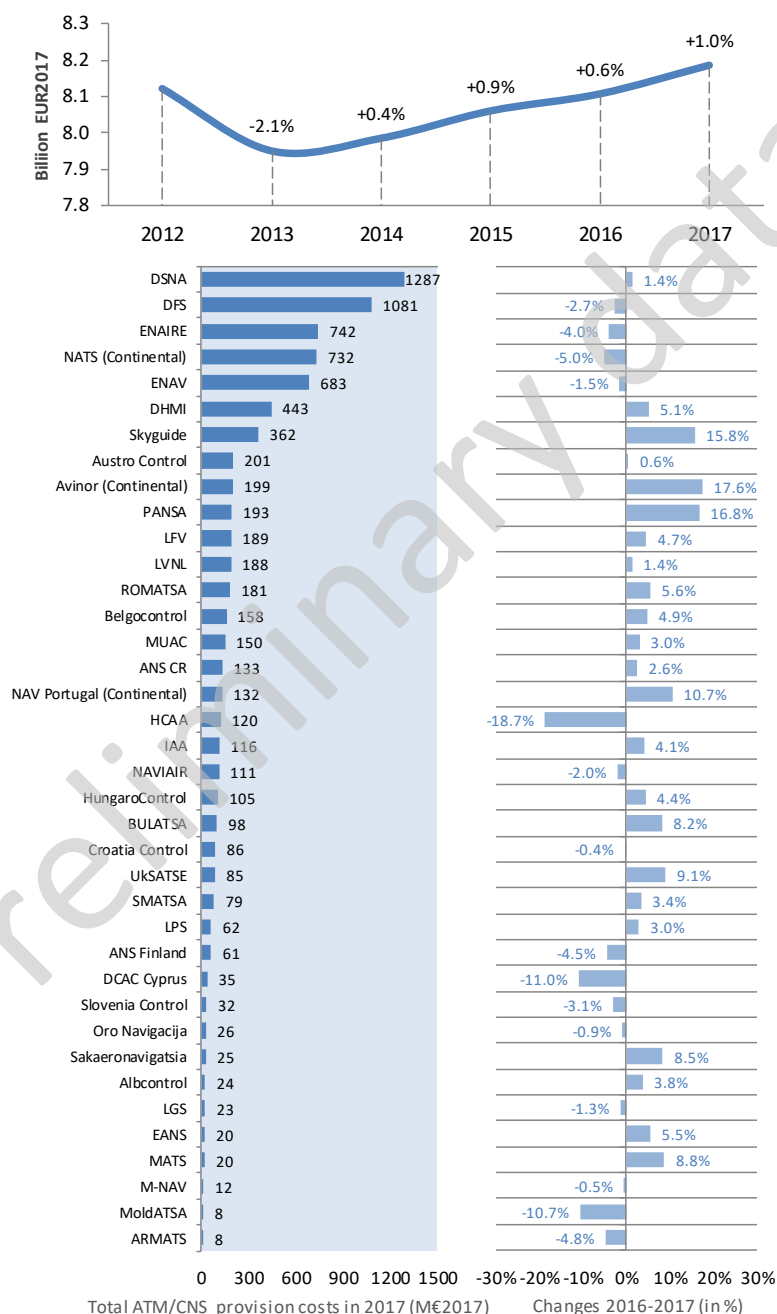

Total ATM/CNS provision costs: € 8 209 M

	En-route		Terminal		Gate-to-gate	
	€ M	%	€ M	%	€ M	%
Staff costs	4 108	64.2%	1 235	68.2%	5 343	65.1%
ATCOs in OPS employment costs	2 005	n/appl	591	n/appl	2 596	n/appl
Other staff employment costs	2 103	n/appl	643	n/appl	2 746	n/appl
Non-staff operating costs	1 011	15.8%	305	16.9%	1 316	16.0%
Depreciation costs	785	12.3%	158	8.7%	943	11.5%
Cost of capital	407	6.4%	86	4.7%	493	6.0%
Exceptional Items	88	1.4%	26	1.5%	114	1.4%
Total ATM/CNS provision costs	6 400	100.0%	1 809	100.0%	8 209	100.0%

Figure 2-2: Gate-to-gate ATM/CNS provision costs at Pan-European system level[1], 2017

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[1] At the time of writing this report, EANS had not yet submitted data on staff costs for ATCOs in OPS.

In 2017, the five largest ANSPs (ENAIRE, ENAV, DFS, DSNA and NATS) bear some 55% of total Pan-European gate-to-gate ATM/CNS provision costs, while the five smallest ANSPs account for less than 1% (see bottom left part of Figure 2-3 below).

Between 2012 and 2017, ATM/CNS provision costs remained relatively stable (+0.2% p.a.) at Pan-European system level (see top chart of Figure 2-3). After a decrease in 2013 (-2.1%), ATM/CNS provision costs slightly rose until 2017 (+0.7% p.a.). As shown in the bottom right part of Figure 2-3, the +1.0% increase in ATM/CNS costs observed for the Pan-European system in 2017 masks different trends amongst the 38 ANSPs. More details on the changes in ANSPs ATM/CNS provision costs in 2017 will be available in the final ACE 2017 Benchmarking Report.
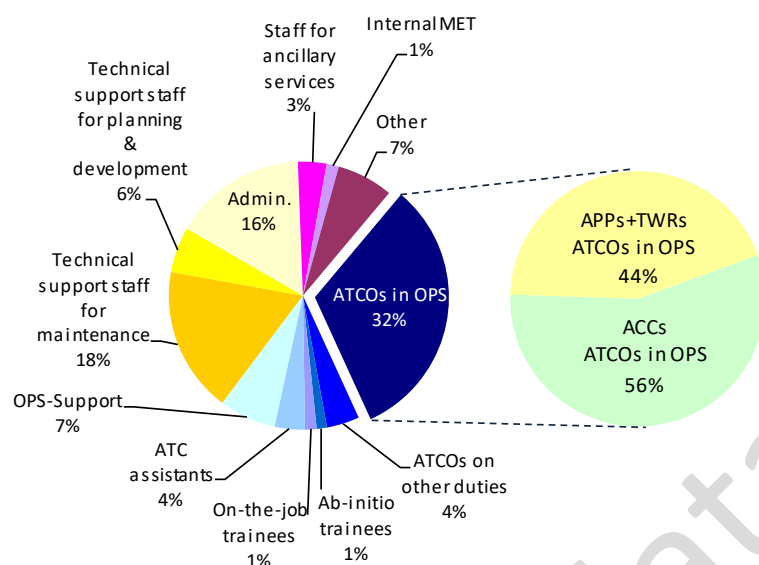
Trends in ATM/CNS provision costs at Pan-European system (2012-2017)

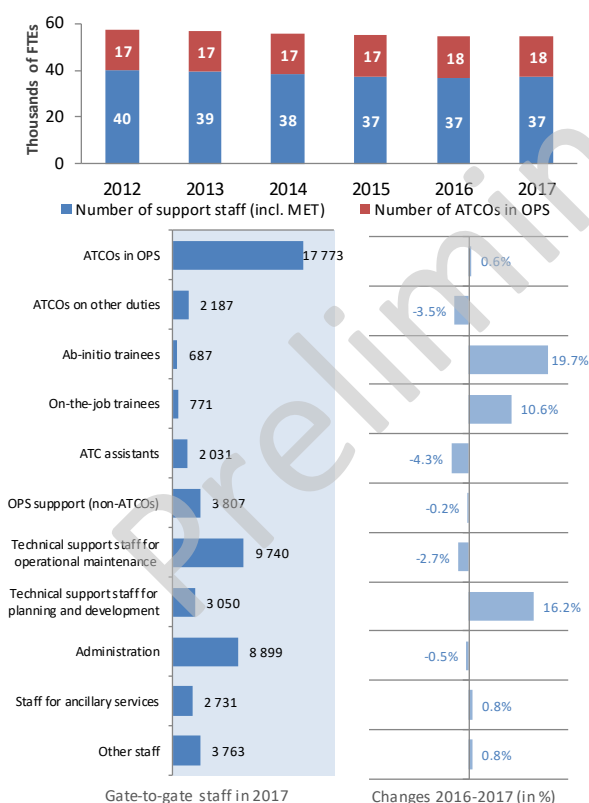**Figure 2-3: Changes in ATM/CNS provision costs[2], 2012-2017 (real terms)**

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[2] Sakaeronavigatsia is excluded from the trend analysis provided in the top chart of Figure 2-3 since no data is available prior to 2015 for this ANSP.

The Pan-European ANSPs employed some 55 440 staff[3] in 2017. Some 17 773 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 2-4: Breakdown of ANSPs total ANS staff at Pan-European system level, 2017

Figure 2-5: Total ANS staff per staff category and changes, 2016-2017

Between 2012 and 2017, the number of ANS staff employed by ANSPs reduced by -0.9% p.a. (some 2 600 FTEs).

After four years of consecutive reductions, the total staff number rose by +0.5% (+284 FTEs) in 2017. This mainly reflects increases in the following staff categories:

- ATCOs in OPS (+110 FTEs or +0.6%);
- Ab-initio trainees (+113 FTEs or +19.7%);
- On-the-job trainees (+74 FTEs or +10.6%);

On the other hand, decreases are observed for ATCOs on other duties (-79 FTEs or -3.5%) and ATC assistants (-92 FTEs or -4.3%). Administrative staff (-0.5%), OPS support staff (-0.2%) and staff for ancillary services (+0.8%) remained close to 2016 levels.

It is understood that the antagonistic changes observed in technical support staff for operational maintenance (-268 FTEs) and for planning (+426 FTEs) partly reflect the reallocation of staff in ANSPs submissions between these two categories.

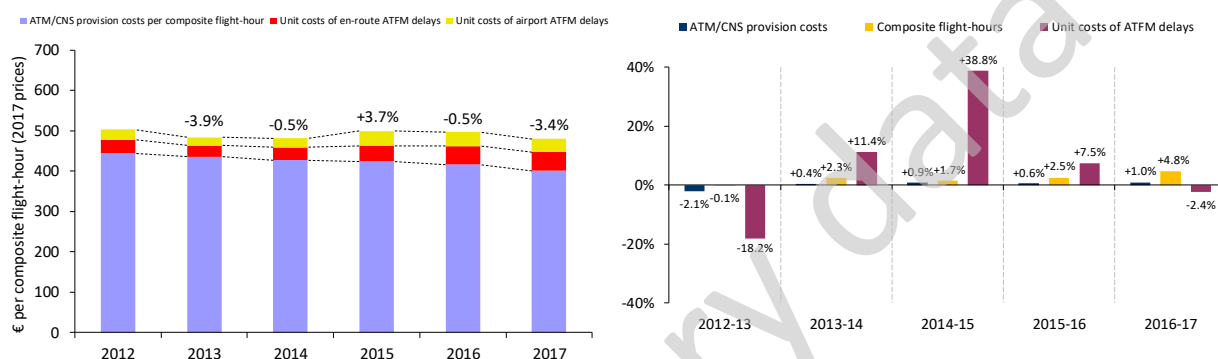[3] At the time of writing this report, Belgocontrol had not yet submitted data on the breakdown of total ANS staff.

3 ECONOMIC COST-EFFECTIVENESS

This section provides a preliminary analysis 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 costs[4].

Figure 3-1 analyses the changes in economic cost-effectiveness between 2012 and 2017 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, 2012-2017 (real terms)[5]

Between 2012 and 2017, economic costs per composite flight-hour decreased by -1.0% p.a. in real terms. Over this period, ATM/CNS provision costs remained close to their 2012 level (+0.2% p.a.) while the number of composite flight-hours increased (+2.2% p.a.). At the same time, the unit costs of ATFM delays increased by +5.8% p.a. on average over the period.

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 calculation[6]. This change resulted in substantially less ATFM delays compared to those computed using the old methodology. If 2016 and 2017 ATFM delays were computed according to the old methodology, then in 2017 the unit economic costs would be -2.3% lower than in 2012 (instead of -4.7% as shown in Figure 3-1).

In 2017, composite flight-hours rose faster (+4.8%) than ATM/CNS provision costs (+1.0%). As a result, unit ATM/CNS provision costs reduced by -3.6%. In the meantime, the unit costs of ATFM delays decreased by -2.4% and therefore unit economic costs decreased by -3.4% compared to 2016.

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[4] See Annex 2 of the ACE 2016 Benchmarking Report for more information on the methodology used to compute composite flight-hours and economic costs.

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

[6] Further details on the change in ATFM delay calculation methodology and its impact on the trend and the level of gate-to-gate economic costs are provided on p. 16 of the ACE 2016 Benchmarking Report.

ANSP LEVEL

The economic cost-effectiveness indicator at Pan-European level is €480 per composite flight-hour, and, on average, the unit costs of ATFM delays represent some 16% of the unit economic costs.
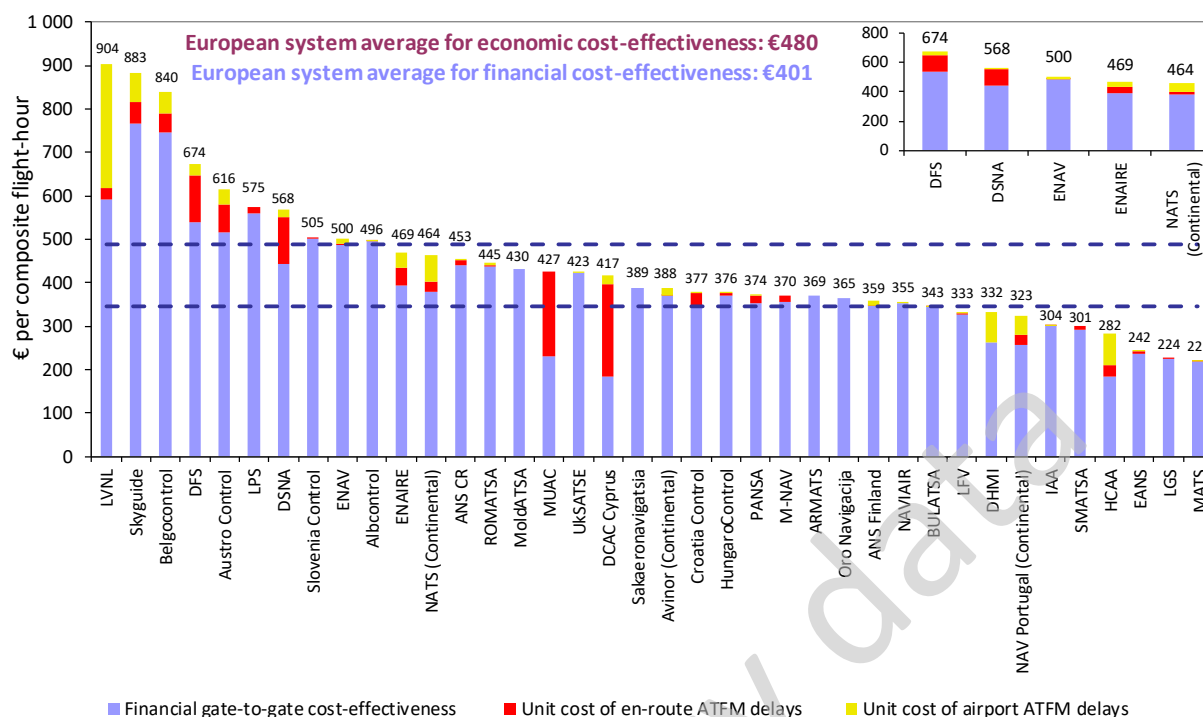

Figure 3-2: Economic gate-to-gate cost-effectiveness[7], 2017

More details on the changes in ATFM delays[8] for individual ANSPs will be provided in the ACE 2017 Benchmarking Report.

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[7] For ENAIRE, the ATM/CNS provision costs reported in 2017 comprise costs relating to ATM/CNS infrastructure shared with the military authority (€15.9M), 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.

[8] The ATFM delays analysed in this ACE Benchmarking Report do not comprise changes due to the Post Operations Performance Adjustment Process. 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.

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 2017, composite flight-hours increased faster (+4.8%) than ATM/CNS provision costs (+1.0%) and as a result unit ATM/CNS provision costs reduced by -3.6%.
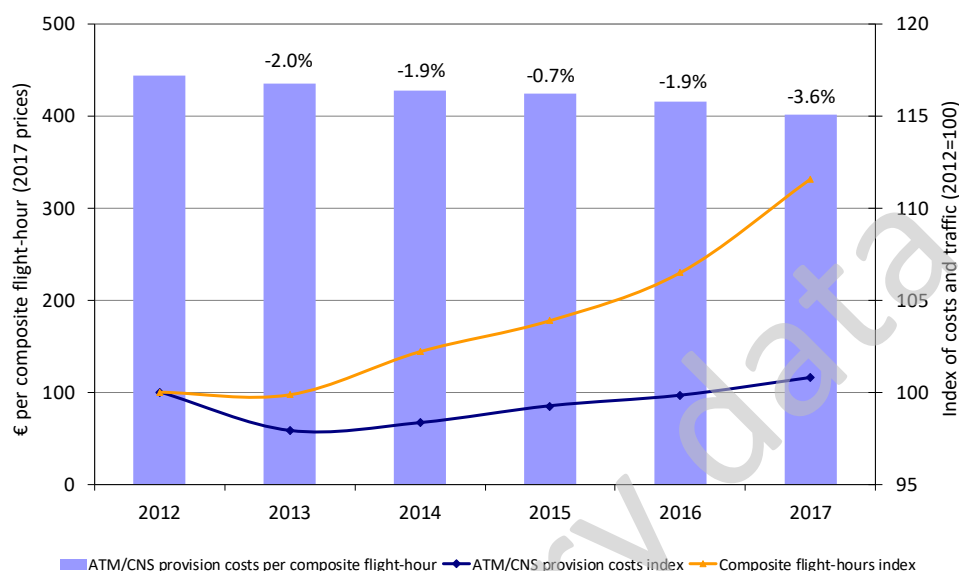

Figure 4-1: Changes in unit ATM/CNS provision costs, 2012-2017 (real terms)

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 (0.88 composite flight-hours per ATCO-hour);

b) ATCO employment costs per ATCO-hour (€112); and,

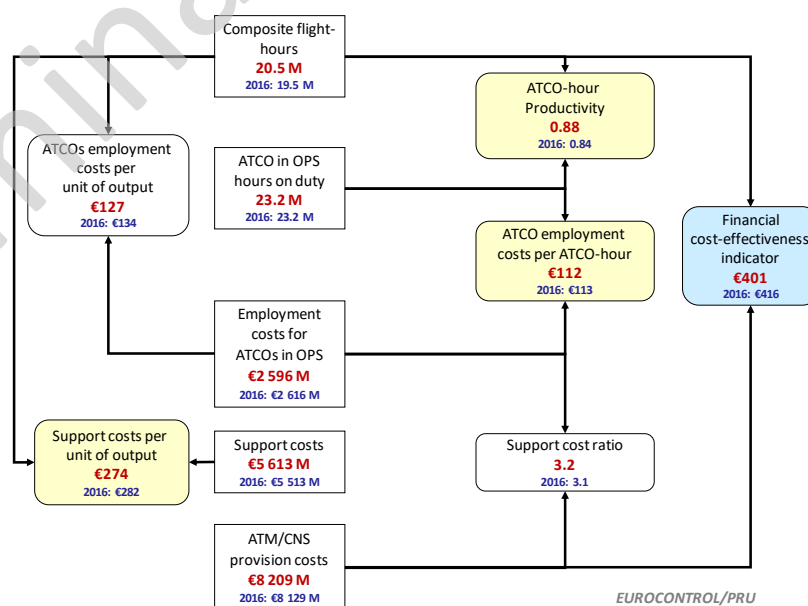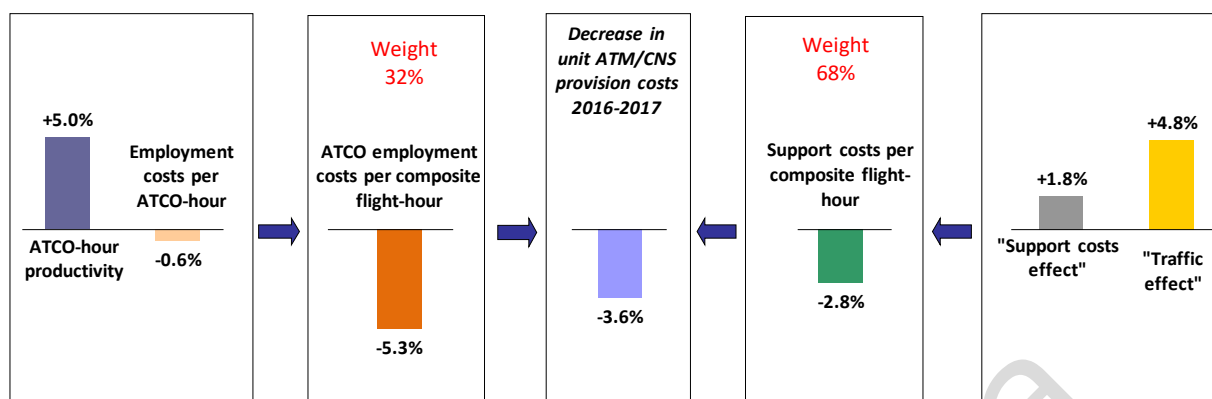c) support costs per unit output (€274).

Figure 4-2: ACE performance framework, 2017 (real terms)

Figure 4-3 below shows that in 2017, ATCO-hour productivity (+5.0%) rose while ATCO employment costs per ATCO-hour reduced (-0.6%). As a result, ATCO employment costs per composite flight-hour substantially decreased (-5.3%). In the meantime, unit support costs fell by -2.8% since the number of composite flight-hours increased faster (+4.8%) than support costs (+1.8%). As a result, in 2017 unit ATM/CNS provision costs reduced by -3.6% at Pan-European system level.

Figure 4-3: Breakdown of changes in unit ATM/CNS provision costs, 2016-2017 (real terms)

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.
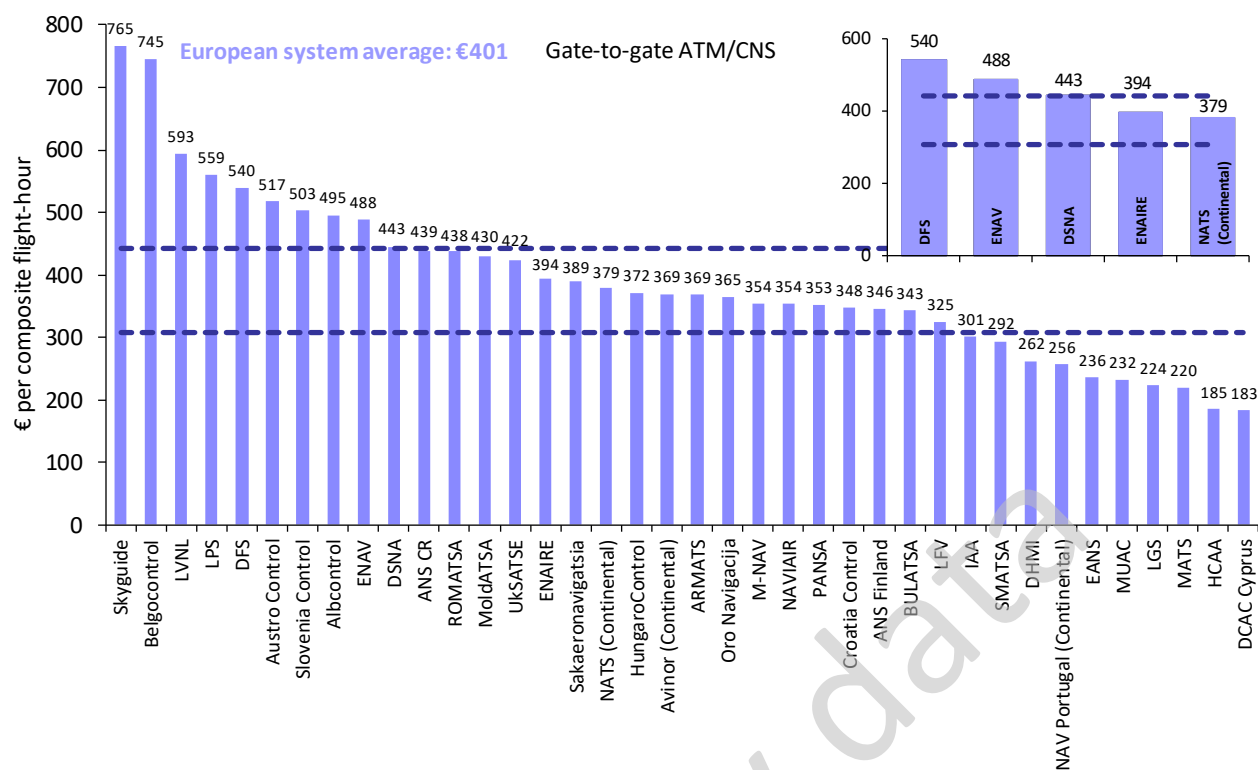
ANSP LEVEL

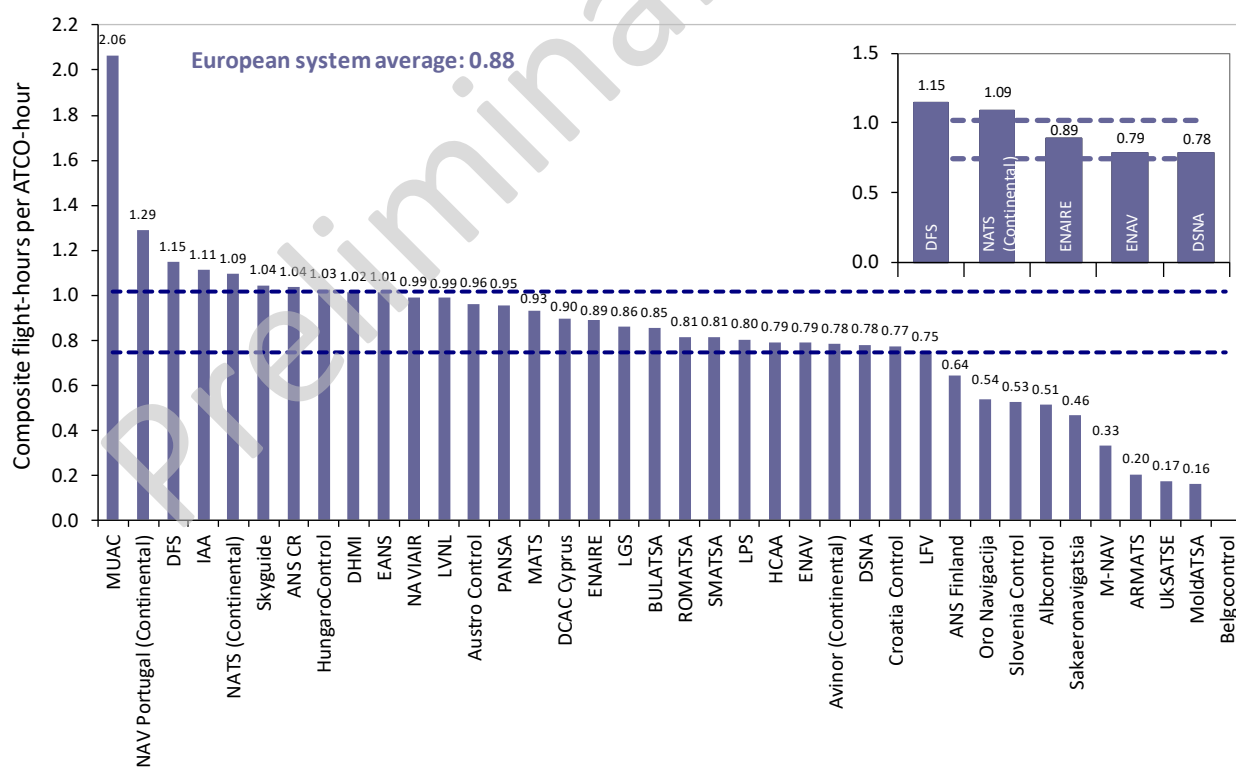**Figure 4-4: Financial gate-to-gate cost-effectiveness, 2017**

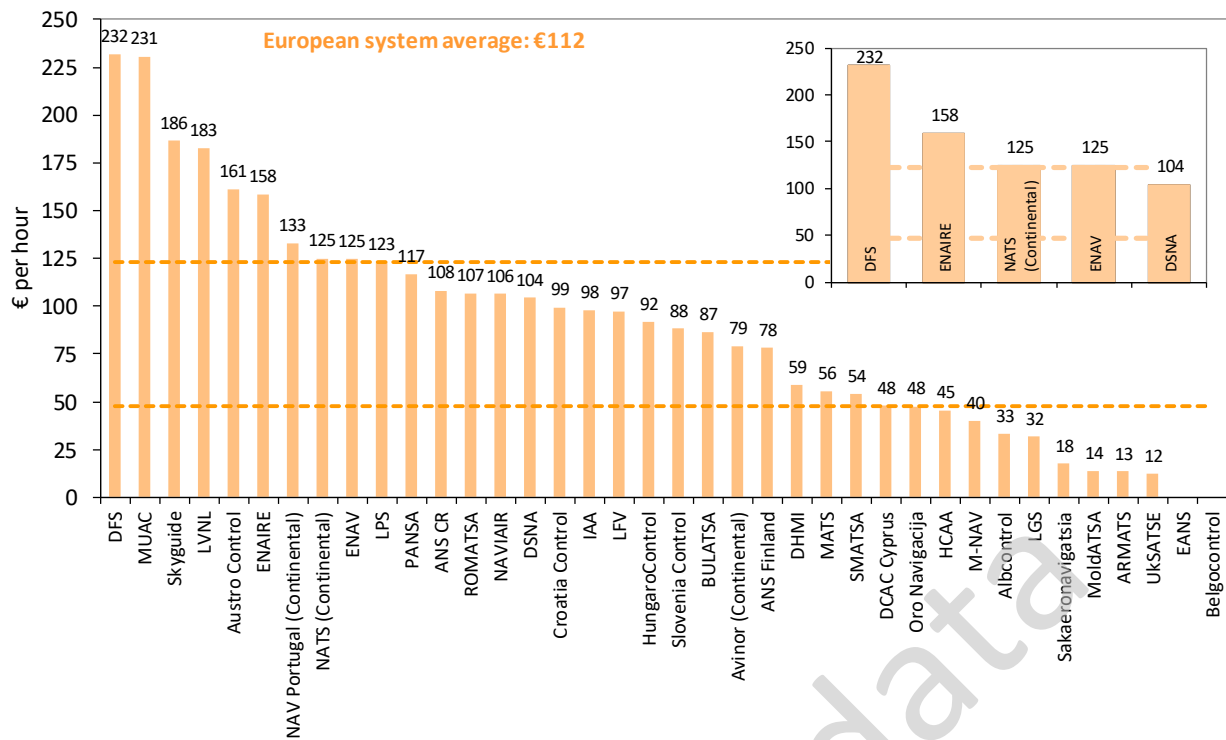**Figure 4-5: ATCO-hour productivity, 2017**

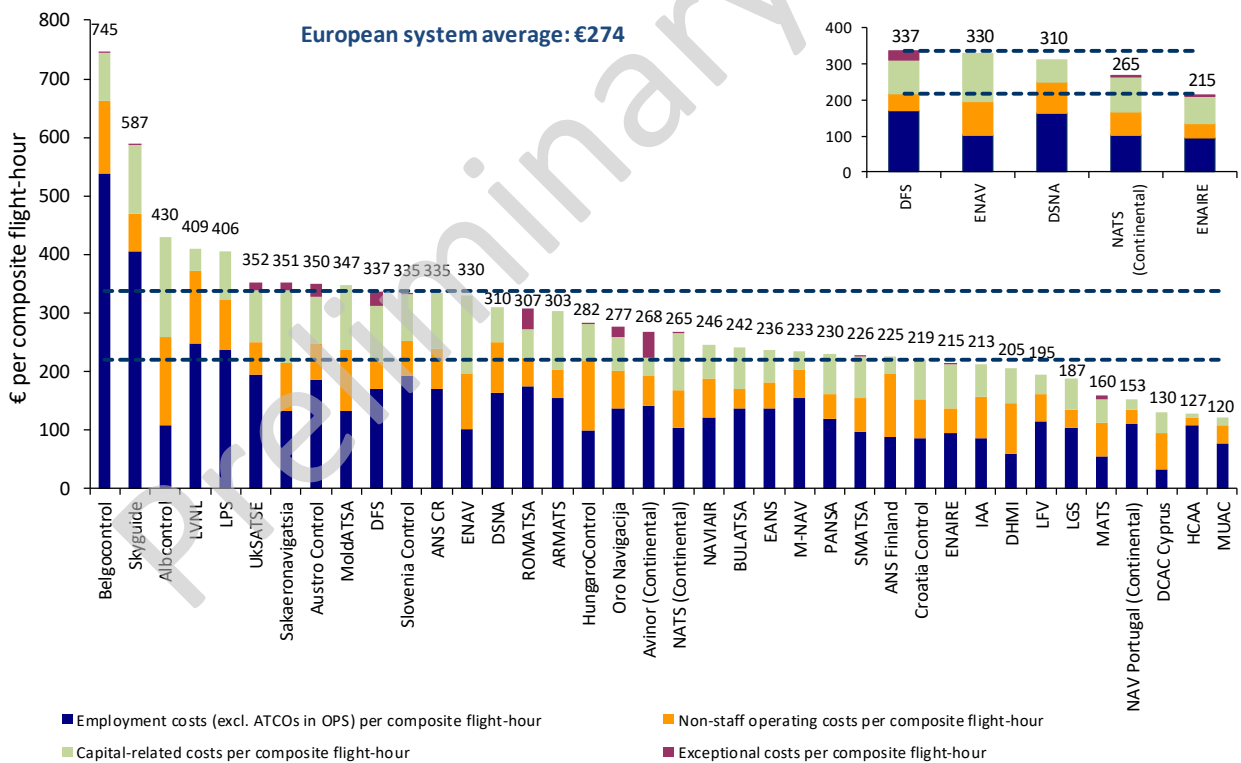**Figure 4-6: Employment costs per ATCO-hour, 2017**

Figure 4-7: Breakdown of support costs per composite flight-hour, 2017

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 2017 Benchmarking Report.