

En route Charging Zone: Poland
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ADDITIONAL INFORMATION – 1 – Total costs and unit costs

a) Description of the methodology used for allocating costs of facilities or services between different air navigation services based on the list of facilities and services listed in ICAO Regional Air Navigation Plan, European Region (Doc. 7754), and a description of the methodology used for allocating those costs between different Charging Zones;

For the Baltic Functional Airspace Block Performance Plan for RP2 (BFAB PP RP2) the cost base for en-route charges in Poland consists of cost incurred by the following four organizations:

- **Polish Air Navigation Services Agency (PANSa)** – certified and designated provider of air traffic services and certified provider of CNS services and AIS,
- **Institute of Meteorology and Water Management - National Research Institute (IMWM)** – certified and designated MET services provider,
- **Radom-Meteo** - certified and designated MET services provider for EPRA approach and tower services,
- **Civil Aviation Authority of the Republic of Poland (CAA)** – national supervisory authority.

The en-route cost base includes also EUROCONTROL costs; although the contribution is paid by PANSa, for presentation purpose in the reporting tables the EUROCONTROL costs are included under the NSA costs.

There is one en-route charging zone in Poland (FIR Warszawa).

In the RP1 the cost base for en-route charges in Poland consisted of cost incurred by three organizations listed above – PANSa, IMWM and CAA, as well as the same charging zone was established. However, before the beginning of RP2, different assumptions with regard to the scope of designation of the MET services provider were adopted, which have impacted the presentation of MET costs in the reporting tables. For the RP1 IMWM's designation covered ACC and TMA/CTR of 11 airports. In accordance with assumptions adopted while drafting the BFAB PP RP2, IMWM's designation for the whole RP2 covered only ACC (including SAR and FIS) – as a consequence for the purpose of presentation for the RP2 some MET cost has been shifted from IMWM's reporting table to PANSa's reporting table (see further explanation below).

	RP1	RP2 (initial assumption)
ER	PANSa (ATS, CNS, AIS, SAR coordination) IMWM (MET) CAA (NSA+MS) + EUROCONTROL costs	PANSa (ATS, CNS, AIS, SAR coordination + MET costs) IMWM (MET - limited) CAA (NSA+MS) + EUROCONTROL costs

In 2014 a public tender was published by PANSa for MET services for RP2. However, the tender has not finished positively – no offers meeting the requirements were presented. As a consequence, it was not possible for PANSa to purchase MET services on “commercial” basis and in order to ensure availability of required MET information necessary for air operations after 31.12.2014 Polish Minister responsible for transport had to designate MET SP for the remaining MET services (not covered by the initial designation of IMWM of April 2014), excluding Radom-Sadków (EPRA) airport (as the airport had not yet in January 2015 started commercial operations that require TWR service– start was foreseen before end of 2015), for the year 2015. The designation for the remaining MET information (information that was to be purchased by PANSa following the public tender, excl. EPRA) was granted to IMWM. It has to be underlined that the above resulted from objective circumstances (lack of offers presented during the tendering process). In the following months of 2015 additional analyses were undertaken by PANSa and Polish MoT, which resulted in decision of Minister responsible for transport to designate IMWM for the provision of MET services in TMA/CTR of Polish airports (excluding EPRA and Olsztyn-Mazury (EPSY)) for the period of 2016-2019 (decision issued

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in September 2015). This decision took into account current market conditions in Poland (only one certified MET SP having operational capabilities to provide MET services at Polish airports other than EPRA; EPSY airport was not operationally open in 2015) as well as airspace users' opinions gathered during the consultation meeting held in Poland in May 2015.

In the meantime, in August 2015 Minister responsible for transport designated Radom Meteo sp. z o.o. (Radom Meteo) for the provision of MET services in CTR/TMA at Radom airport for the period 2015-2019. It was needed due to the planned opening of the Radom airport for the commercial operations in September 2015. Radom Meteo was established by the EPRA owners as a special purpose company to provide MET services at EPRA.

As a consequence, for the period 01.01.2015-31.12.2019 IMWM is designated to provide all ER MET services in the Polish airspace, except those related to EPSY and EPRA, while Radom Meteo sp. z o.o. is designated to provide MET services at EPRA until the end of 2019. For EPSY airport for year 2016 Radom Meteo is designated to provide MET services for TMA/CTR (no impact on ER costs and ER reporting tables; all costs connected with ANS at EPSY are allocated to terminal costs, independent on allocation keys used for the purpose of establishing costs in BFAB PP RP2).

To reflect this situation in the charges' reporting tables for RP2 and in order to ensure transparency of information presented in the tables, the ER reporting tables were modified by shifting MET costs related to the extended designation of IMWM from Table 1 for PANSA to Table 1 for IMWM. Also the new reporting tables include dedicated tables for Radom Meteo where costs related to the designation of Radom Meteo were presented (costs shifted from Table 1 for PANSA to Table 1 for Radom Meteo). In PANSA determined costs for 2015 small amount of MET cost – 148 kPLN – was left due to shorter than previously planned period of providing MET services by Radom Meteo (Radom Meteo operational activities started in September, instead of planned April 2015). These unused determined costs are planned to be returned to airspace users in 2017 as other revenues (Table 2 point 5.6) after reduction by the applicable adjustments (inflation adjustment and over/under recoveries from traffic variations to be carried-over).

The following amounts of MET costs were shifted from Table 1 for PANSA to Table 1 for IMWM:

- for year 2015 kPLN 9 560,
- for year 2016 kPLN 10 675,
- for year 2017 kPLN 10 767,
- for year 2018 kPLN 10 737,
- for year 2019 kPLN 10 958,

The following amounts were shifted from Table 1 for PANSA to Table 1 for Radom Meteo:

- for year 2015 kPLN 89,
- for year 2016 kPLN 265,
- for year 2017 kPLN 267,
- for year 2018 kPLN 267,
- for year 2019 kPLN 272,

The amounts shifted from PANSA to IMWM and Radom Meteo were originally (in BFAB PP RP2 dated June 2014) shown in PANSA other operating costs. Following the shift to IMWM Table 1 and Radom Meteo Table 1 the amounts were apportioned among staff cost, other operating cost, depreciation cost and costs of capital, thereby influencing presentation of cost by nature for 2015-2019 in Table 1 for all entities.

It has to be stressed that all the above shifts made between ER tables do not impact the cost-efficiency target from the performance plan for RP2, nor the level of determined costs. They have only impact on the contribution by each entity (shifts between PANSA, IMWM and Radom Meteo) and only in terms of presentation of the figures for the purpose of preparing ER charges reporting tables.

After changes, the institutions covered by ER tables are as follows:

	RP1	RP2 (current)
ER	PANSA (ATS, CNS, AIS, SAR coordination) IMWM (MET) CAA (NSA+MS) + EUROCONTROL costs	PANSA (ATS, CNS, AIS, SAR coordination) Radom Meteo (MET for EPRA*) IMWM (MET – excluding EPRA and EPSY airport) CAA (NSA+MS) + EUROCONTROL costs

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** Radom Meteo's designation for 2016 covers also EPSY but as indicated above, cost of ANS (including MET) services provided at EPSY are 100% allocated to TNC.*

Methodology used for allocating those costs between en route and terminal ANS

I. PANSA

For the purpose of calculating the cost base for the en-route charges, PANSA has taken into consideration costs of facilities listed in the ICAO Regional Navigation Plan (Doc. 7754) reflecting all equipment used for the provision of services.

PANSA, for cost allocation purposes, uses the Services Cost Calculation and Profitability Analysis System built on the basis of Activity Based Costing methodology. The Cost Calculation system is based on a multi-step allocation principle. Some costs, by their origin may be allocated directly to the ER or TNC services.

Other costs, which are not directly linked with the provision of specific services (e.g. human resources or financial staff) are allocated using the allocation keys catalogue which is included in the model. Those keys were constructed in a very precise manner in order to reflect in the best possible way on the distribution of costs borne in operational activity (e.g. air sector capacity, number of operations, staff complement, salary level, power utilization etc.).

Due to objective reasons, PANSA's cost allocation between ER and TNC had to be modified starting from 2015. It results from the fact that following internal optimization in PANSA and related changes in service provision as well as some of previously used allocation keys could not be used any longer.

For the purpose of allocating ANS costs between ER and TNC PANSA uses criteria that reflect clear organizational and operational separation of services in PANSA, which reflects their diversity. The division of costs between ER and TNC is based on airspace structures.

The costs of services provided in the controlled area (CTA), which includes the airways (AWY), and TMA are allocated to ER.

On the other hand, costs related to services provided in CTR (controlled zone) are allocated to TNC.

Costs of APP and ACC units are allocated to ER in total. For TWR units distinction has to be made between airports where a separate APP unit has been established and airports where in fact the TWR unit provides procedural approach services.

In Poland, following operational requirements 4 approach control units have been created for the major airports: Gdańsk, Poznań and Wrocław together, Kraków and Katowice together and Warsaw and Modlin together. At remaining airports, TWR unit provides also APP services. When both APP and TWR services are provided by TWR unit, the cost of the unit is divided between ER and TNC in accordance with the airspace volume ratio (CTR and TMA). For that purpose the following formula is used: $V(CTR) / V(CTR + TMA)$. This formula should be understood as volume of airport controlled area to the total volume of the airport controlled zone and the airport controlled area. For those airports, where a separate APP unit operates, cost of TWR service is allocated to ER only in the part which covers services provided outside CTR boundaries and is limited to services provided to approaching (landing) operations.

Costs of FIS services, as well as SAR coordination, are in total allocated to ER.

The basis for costs allocation of Nav aids is the degree of their use by individual air traffic control units (APP vs. TWR) and reflects use of those Nav aids in different airspace structures (TMA vs. CTR). Allocation of NDBs, VOR/DVORs, DMEs and ILSs takes into account range of these Nav aids, and as a consequence, their possible use in TMA than CTR. Usage of the airport Nav aids for certain flights in different types of airspace is strictly connected with the dimension of the given airspace. Therefore, their cost is split between TWR and APP, and consequently between TNC and ER.

The cost of newly implemented operational system Pegasus 21 is allocated between ER and TNC on the basis of revenues from services provided.

Apart from the costs specified above, allocation of PANSA's costs between ER and TNC remains unchanged as compared with the RP1. Also cost allocation for some Nav aids as described above remains unchanged for the RP2.

Applied to 2014 costs, the change in allocation results in PANSA's costs shift between ER and TNC of about 10,8 million PLN (increase in TNC costs and respective decrease in ER costs). The change has been included in the RP2 determined costs forecast and reference point for the RP2 forecast (2014 starting point) has been modified accordingly when possible cost-efficiency improvements for the RP2 have been analysed. For the actual 2014 costs the same allocation keys are used as were used for the purpose of calculating these costs at the beginning of the RP1.

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At the stage of drafting and approving RP2 PP, due to expiry of designation of IMWM for MET TNC services at 31.12.2014, starting from 01.01.2015 no entity was to be designated for MET TNC services in Poland. As a consequence, the assumption was adopted at that time that MET services will have to be purchased following a public tender organized by PANSa. In result some MET costs were reported in PANSa's ER cost base – according to RP2 performance plan dated June 2014. According to *Guide to Aeronautical Meteorological Services Cost Recovery. Principles and guidance WMO-No. 904* some products which were not covered by IMWM initial designation were allocated to ER (IMWM's designation limited only to ACC (including SAR and FIS)). In result there were some MET ER costs in PANSa's cost base (according to RP2 performance plan dated June 2014). The allocation of MET costs presented in PANSa's cost base was like 40/60 accordingly for ER and TNC. This proportion reflects allocation of MET products as based on Annex II to WMO document No 904. All shifts with regard to ER MET costs that result from IMWM's designation and Radom Meteo' designation for the period 2015-2019 are described above.

II. IMWM

See point h) and i) below.

III. Radom Meteo

For Radom Meteo's determined costs allocation between ER and TNC see point i) below (last paragraph). Actual cost allocation is made on the base of planned allocation of MET costs (ER/TNC as 40/60 in total amount of actual MET costs for Radom Meteo).

IV. CAA

Allocation of CAA's costs between ER and TNC is based on number of personnel (FTEs) executing tasks related to each of those two types of services defined in accordance with article 8.2 and 3 of the Regulation No 391/2013. The methodology, developed during Poland's technical integration with EUROCONTROL CRCO, remains unchanged since 2008.

b) Description of the methodology and assumptions used to establish the costs of air navigation services provided to VFR flights, when exemptions are granted for VFR flights;

I. PANSa

From 2014 PANSa calculates costs of air navigation services provided to VFR flights through marginal cost methodology. As the result, the whole cost is allocated to En-Route. In the reporting tables for the RP1 the determined costs of VFR flights were calculated on the basis of previous methodology, whereby the cost related to VFR includes the costs of following activities: processing flight plans, validation of air traffic, NOTAM coordination and relevant statistics. The methodology of the cost allocation used by PANSa for the calculation of the 2014 cost base is in line with the methodology used for the calculation of TNC and en route costs for the RP2.

II. IMWM

IMWM calculates costs of VFR flights which are exempted from navigation charges using the marginal cost methodology, based on the use of meteorological information contained on IMWM website in the 'aviation' tab. No changes were introduced to the methodology in comparison to the RP1. This cost is calculated as follows:

- From the analysis of Internet connection load by a www.imgw.pl webpage results that it takes 11% of the leased bandwidth.
- 11% of the annual cost of Internet bandwidth = the cost of maintaining the website www.imgw.pl
- The average number of entrances to the sub 'aviation' is 1.76% of all visits to the IMWM website, what after following calculation:
$$1.76\% \times \text{annual cost of maintaining the website}$$
gives an annual cost of maintaining sub 'aviation'.
- We assume that 50% of flights from these entries are subjects to exemptions from navigation charges (50% of the annual cost of maintaining the tab "aviation" = annual marginal cost of flights exempted from navigation charges).

All products dedicated to VFRs are loaded with marginal costs at the same rate.

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III. Radom Meteo

Radom Meteo calculates costs of air navigation services provided to VFR flights based on marginal cost methodology. Radom Meteo does not include any costs of VFR flights in en-route reporting tables.

c) Description and justification of any adjustment beyond the provisions of the International Accounting Standards;

I. PANSA

N/a. PANSA is fully in line with the International Accounting Standards.

II. IMWM

Taking into account the legal basis that states "where, owing to the legal status of the service provider, full compliance with the International Financial Reporting Standards is not possible, the provider shall endeavor to achieve such compliance to the maximum possible extent", IMWM, as a research and development unit established on the basis of the decree No. 338/72 of 30.12.1972, issued by the Council of Ministers operates on the basis of the act dated 25 July 1985 concerning research-development units, and as a consequence uses Polish accounting standards. These standards are to large extent similar to IFRS. IMWM has adjusted the accounting principles to IFRS wherein it is allowed by the Article 10.3 of the Polish Accounting Act of 29 September 2004. This adjustment was implemented to the accounting principles by Chief Executive's in December 30, 2008.

III. Radom Meteo

Radom Meteo has adjusted the accounting principles to IFRS, in consequence Radom Meteo uses the International Accounting Standards. This rule is included in Radom Meteo Accounting Policy.

IV. CAA

The CAA, as a national budgetary unit financed from state budget, is obliged to follow accounting regulations applicable to national administration bodies. As a consequence, the CAA does not apply IAS but follows national regulations regarding budgetary units which are based on cash accounting rules.

No changes in comparison to the RP1 except Radom Meteo (Radom Meteo was not covered by PP in RP1).

d) Description and explanation of the method adopted for the calculation of depreciation costs: historic costs or current costs. When current cost accounting is adopted, provision of comparable historic cost data;

I. PANSA

PANSA uses the historic cost method for the calculation of depreciation costs. No asset revaluation has been included in the asset base for air navigation charges.

II. IMWM

Depreciation of appliances is always calculated from the next month after the takeover is completed. This calculation is done in accordance with expected operating life – in line with the operating life for the specific type of fixed assets as described in the Principles for establishing the cost-base for en route charges and the calculation of the unit rates - using the straight-line method and refers to historic cost of fixed assets depreciated and intangible and legal assets.

III. Radom Meteo

Radom Meteo uses the historic cost method for the calculation of depreciation costs. No asset revaluation has been included in the asset base for air navigation charges.

IV. CAA

As a budgetary unit, following the national regulations on all public administration bodies, CAA does not calculate depreciation on its assets.

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No changes in comparison to the RP1 except Radom Meteo (Radom Meteo was not covered by PP in RP1).

e) Justification for the cost of capital, including the components of the asset base, the possible adjustments to total assets and the return on equity;

I. PANSA

Assumptions for determining the cost of capital and the return on equity

PANSA determines the cost of capital based on the methodology of The Weighted Average Cost of Capital. It comprises the cost of equity and the cost of debt, weighted by their relative share in a company's capital structure.

PANSA estimates benefit from equity finance using the Capital Asset Pricing Model (CAPM). According to CAPM, Agency's cost of equity is equal to a market risk-free rate of return, plus a premium above the risk free rate to reflect the relative riskiness of the company and its investments.

Initial BFAB PP RP2– dated June 2014

When calculating cost of equity for the RP2 the following assumptions have been taken initially into consideration by PANSA:

1. risk free rate of return (4,42%) equal to long term government bond yields reported by Eurostat for month of January 2014 for Poland¹,
2. the equity risk premium (4,80%) representing the excess return over the risk free rate assumed on the Damodaran approach basis,
3. equity beta (0,515) measuring the correlation between the riskiness of an asset and that of the overall market. Estimated value is in line with equity beta's assumed by other providers for the RP1 and equity beta's assumed by regulated entities in a number of industries.

As far as PANSA does not plan to use debt financing in the whole RP2, the cost of debt has been assumed at 0,0% level.

It has to be noted that the WACC used for calculation of the cost of capital in the reporting tables was equal not to 8,43% (pre-tax rate) but 6,63% (post-tax rate). Additionally, for 2017-2019 the WACC has been further reduced by the CAA in order to ensure consistency of the Polish determined unit cost with the EU-wide cost-efficiency target for the RP2, similarly as it was done in RP1 for 2014. As a consequence, PANSA's cost of capital for the RP2 is lower than allowed under the charging scheme provisions and reflects Polish commitment to reaching the EU-wide cost-efficiency target for the RP2.

After the consultation process preceding the RP2 PANSA took a good note of airspace users' and CAA's expectations and has decreased the cost of capital also for years 2015-2016. For the final cost base the following assumptions were used:

1. the RoE for 2015-2016 was reduced – lower risk-free rate was assumed (instead of 4,42% used before currently 4,03% is applied which reflects average interest on bonds in 2013),
2. modified asset beta (0,4 instead of previously used 0,5015).

As a consequence, the cost of capital was lowered, in accordance with users' expectations.

ANSP/Entity: PANSA	RP2 PP					
	Underlying assumptions for an "efficient" WACC	For the determined cost of capital				
		2015 D	2016 D	2017 D	2018 D	2019 D
Assumptions for the Cost of Capital (WACC) in nominal terms						
Capital structure (% debt)	60%	0,0%	0,0%	0,0%	0,0%	0,0%
Corporate tax rate %	19,0%	19,0%	19,0%	19,0%	19,0%	19,0%

¹ <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=teimf050&plugin=1>

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Risk free rate % (nominal)	4,03%	4,03%	4,03%	4,03%	4,03%	4,03%
Market (equity) risk premium % (after tax)	4,80%	4,80%	4,80%	4,80%	4,80%	4,80%
Asset beta	0,40	0,40	0,40	0,40	0,40	0,40
Debt beta	0,00	0,00	0,00	0,00	0,00	0,00
Equity beta	0,89	0,40	0,40	0,40	0,40	0,40
Return on Equity % (after tax)	8,29%	5,95%	5,95%	5,95%	5,95%	5,95%
Return on Equity % (pre tax) - T1 3.6	10,23%	7,35%	7,35%	7,35%	7,35%	7,35%
Debt risk premium %	1,52%	1,92%	1,92%	1,92%	1,92%	1,92%
Interest on debt % (pre tax) - T1 3.7	5,55%	5,95%	5,95%	5,95%	5,95%	5,95%
WACC % (pre tax) - T1 3.5	7,42%	7,35%	7,35%	7,35%	7,35%	7,35%

ANSP/Entity: PANSÁ	Notional "efficient" WACC in RP2	Determined cost of capital in RP2
Capital structure (% debt)	60%	0%
Corporate tax rate %	19%	
Risk free rate % (nominal)	4,03% - explanation for the assumptions above	
Market / risk premium % (after tax)		4,8%
Asset beta	0,4	0,4
Debt beta	0	0
Debt risk premium %	Difference between interest on debt (%pre tax) and risk free rate (% nominal)	

The level of the cost of capital of PANSÁ for years 2017-2019 has been reduced by the CAA as compared to the assumptions presented in the above table to 5,88% in 2017, 3,82% in 2018, 3,77% in 2019. This reflected Poland's commitment to reaching the local target consistent with EU-wide target.

Revised BFAB PP RP2 for 2017-2019 – dated October 2016

For the purposes of revised BFAB PP RP2 cost of capital for 2017-2019 was estimated using efficient model suggested by Steer Davies Gleave (SDG). It aims to reflect business risk born by PANSÁ, including exposure to traffic and cost risk sharing.

ANSP/Entity: PANSÁ	2017-2019 Revised PP			
Assumptions for the Cost of Capital (WACC) in nominal terms	Revised underlying assumptions for an "efficient" WACC	For the determined cost of capital		
		2017 D	2018 D	2019 D
Capital structure (% debt)	60,0%	60,0%	60,0%	60,0%
Corporate tax rate %	19,0%	19,0%	19,0%	19,0%
Risk free rate % (nominal)	3,03%	3,03%	3,03%	3,03%
Market (equity) risk premium % (after tax)	6,59%	6,59%	6,59%	6,59%
Asset beta	0,40	0,40	0,40	0,40
Debt beta	0,00	0,00	0,00	0,00
Equity beta	0,886	0,886	0,886	0,886

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Return on Equity % (after tax)	8,87%	8,87%	8,87%	8,87%
Return on Equity % (pre tax) - T1 3.6	10,95%	10,95%	10,95%	10,95%
Debt risk premium %	2,68%	2,68%	2,68%	2,68%
Interest on debt % (pre tax) - T1 3.7	4,63%	4,63%	4,63%	4,63%
WACC % (pre tax) - T1 3.5	7,81%	7,81%	7,81%	7,81%

With regard to the revised rate of cost of capital calculation the following assumptions were adopted:

- cost of capital rate meant as pre-tax weighted average cost of capital (WACC),
- efficient capital structure (debt %/equity %) = 60%/ 40%,
- current (1H 2016) indicators taken into account to estimate rate of ROE using CAPM model,

PANSA estimates rate of 7.81% as weighted average ROE pre-tax (10.95%) and interest on debt pre-tax (5.71%). Change of approach from “WACC vanilla” to “WACC pre-tax” allows PANSA to reclaim tax liabilities, which previously were not included in cost base directly. This approach would be in line with PANSA net profit.

Adoption of SDG efficient model of debt financing structure at the level of 60% has two effects on WACC. One is taking into account more cost effective debt (5.71%) and lowers the share of Equity (10.95%). Second is the influence on Asset Beta level reshifting Equity Beta to the level of 0.886.

Indicators adopted to estimation of cost of capital rate using CAPM model concern risk free rate and market risk premium. Risk free rate (3.03%) is equal to ten year government bonds reported by Eurostat for Poland as of end of February 2016. Market risk free premium assumed as 6.59% is equal to arithmetic average of 2 market risk free premium estimated values: calculated by Damodoran (7.98%) and Fernandez-IESE Business School (5.20%). It is in line with SDG recommendation.

The increase in interest on debt from 0% to 5.71% using the above assumptions together with “Debt beta” of 0% enable establishing debt risk premium at the level of 2.68%.

The final level of cost of capital of PANSA for 2019 has been reduced to 1,38% to reflect Poland’s commitment to ensure adequate contribution of Poland to the EU-wide target (negative DUC trend over RP2). As a consequence, 2019 WACC for PANSA is below risk-free rate.

Justifications for the actual cost of capital

ANSP/Entity: PANSA		RP2				
Cost of Capital (WACC) in nominal terms		2015 A	2016 A	2017 A	2018 A	2019 A
Capital structure (% debt)		0,0%	<...>	<...>	<...>	<...>
Return on Equity % (pre tax) - T1 3.6		5,95%	5,95%	5,88%	3,82%	3,77%
Interest on debt % (pre tax) - T1 3.7		0,0%	<...>	<...>	<...>	<...>
WACC % (pre tax) - T1 3.5		5,95%	<...>	<...>	<...>	<...>
Explanation of the differences between Planned and Actual (Year 2015):						
Interest on debt (%):	As far as PANSA did not use debt financing, the cost of debt had been assumed at 0,0% level					
Capital structure (% debt):	There is no difference between planned and actual capital structure					

Asset base

Initial BFAB PP RP2 – dated June 2014

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ANSP/Entity: PANSA	RP2 PP
Components of the asset base	
3.1 Net book val. fixed assets	The average net book value of fixed assets for en-route services provision has been taken into account with the assumption that 85% of planned capex will be realized in the whole RP2. As a consequence, the asset base is lower than presented earlier for the purpose of consultation with stakeholders, which takes into account users' comments and expectations.
3.2 Adjustments total assets	n/a
3.3 Net current assets	The calculation of the level of net current assets follows methodology recommended by the CRCO when auditing PANSA's cost base in 2010 and takes into account only the assets that are necessary to perform ANS, and as a consequence excludes interest bearing items.
3.4 Total asset base	The increase in the total asset base is a result of planned investments (information on the investment plan is provided in subsequent part of this Plan). This is mainly due to the increase of the technological level, functionality of the ATM system and the development of CNS / ATM infrastructure.

Average asset base (PLN '000)	2015D	2015A	2016D	2017D	2018D	2019D
Net book val. fixed assets	667 037	672 558	692 675	717 722	779 482	800 198
Adjustments total assets	0	0	0	0	0	0
Net current assets	34 494	27 046	64 493	88 428	99 603	102 661
Total asset base	701 531	699 604	757 168	806 150	879 085	902 859

Revised BFAB PP RP2 for 2017-2019 – dated October 2016

ANSP/Entity: PANSA	RP2 PP (revised – 2017-2019)
Components of the asset base	
3.1 Net book val. fixed assets	The average net book value of fixed assets for en-route services provision has been taken into account. For the purposes of revised PP the net book value of fixed asset has been calculated taking into account the assumption that starting from 2017 the revised (increased) investment plan will be fully realized (at 100% of the revised investment plan).
3.2 Adjustments total assets	n/a
3.3 Net current assets	The calculation of the level of net current assets follows methodology recommended by the CRCO when auditing PANSA's cost base in 2010 and takes into account only the assets that are necessary to perform ANS, and as a consequence excludes interest bearing items. Following revised cost base, the net current assets have been also adjusted to reflect actual demand for working capital necessary to perform ANS.
3.4 Total asset base	The increase in the total asset base is a result of planned investments (information on the investment plan is provided in subsequent part of this Plan). This is mainly due to the increase of the technological level, functionality of the ATM system and the development of CNS / ATM infrastructure.

Revised average asset base (PLN '000)	2017D	2018D	2019D
Net book val. fixed assets	933 808	1 071 160	1 175 637
Adjustments total assets	0	0	0
Net current assets	100 129	110 979	101 409
Total asset base	1 033 937	1 182 139	1 277 046

II. IMWM

Assumptions for determining the cost of capital and the return on equity

To calculate cost of capital the following pattern is used in the IMWM:

Cost of capital = (Average net value of fixed assets and possible adjustments of all assets determined by national regulatory body, currently operationally exploited or built, used by an institution serving air navigation + average net value of current assets, excluding interests, necessary for air navigation service) x weighted average of debt interest rate and of return on equity

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IMWM follows EUROCONTROL Principles rule according to which only these assets can be calculated within the equity which operating period is expected to begin before the end of the year for which the cost calculation is made.

For the RP2 the following values have been used.

ANSP/Entity: IMWM	RP2 PP					
Assumptions for the Cost of Capital (WACC) in nominal terms	Underlying assumptions for an "efficient" WACC	For the determined cost of capital				
		2015 D	2016 D	2017 D	2018 D	2019 D
Capital structure (% debt)	60%	0,0%	0,0%	0,0%	0,0%	0,0%
Corporate tax rate %	19,0%	19,0%	19,0%	19,0%	19,0%	19,0%
Risk free rate % (nominal)	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%
Market (equity) risk premium % (after tax)	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Asset beta	0,00	0,00	0,00	0,00	0,00	0,00
Debt beta	0,00	0,00	0,00	0,00	0,00	0,00
Equity beta	1,00	N/A	N/A	N/A	N/A	N/A
Return on Equity % (after tax)	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%
Return on Equity % (pre tax) - T1 3.6	4,94%	4,94%	4,94%	4,94%	4,94%	4,94%
Debt risk premium %	1,52%	1,11%	1,11%	1,11%	1,11%	1,11%
Interest on debt % (pre tax) - T1 3.7	5,52%	5,11%	5,11%	5,11%	5,11%	5,11%
WACC % (pre tax) - T1 3.5	5,29%	4,94%*	4,94%*	4,94%*	4,94%*	4,94%*

* For the purpose of establishing air navigation charges cost base, IMWM uses post-tax ROE. As a consequence values used in the reporting tables are lower than ones presented in the table above.

Justifications for the actual cost of capital

ANSP/Entity: IMWM	RP2				
Cost of Capital (WACC) in nominal terms	2015 A	2016 A	2017 A	2018 A	2019 A
Capital structure (% debt)	25,51%	<...>	<...>	<...>	<...>
Return on Equity % (pre tax) - T1 3.6	4,00%	4,00%	4,00%	4,00%	4,00%
Interest on debt % (pre tax) - T1 3.7	2,37%	<...>	<...>	<...>	<...>
WACC % (pre tax) - T1 3.5	3,58%	<...>	<...>	<...>	<...>
Explanation of the differences between Planned and Actual (Year 2015):					
Interest on debt (%):	In 2015 the actual interest on debt for bank loan on AWOS investment amounts to 2,37%				
Capital structure (% debt):	The difference between planned and actual capital structure results from different assumptions taken into account when BFAB RP2 PP was prepared than actual situation (debt financing was not planned).				

En route Charging Zone: Poland Reference Period 2 (2015-2019)

In the above table the actual indicators applied to the calculation of cost of capital in the year 2015 are presented.

Asset base

ANSP/Entity: IMWM	RP2 PP
Components of the asset base	
3.1 Net book val. fixed assets	Average accounting net value of fixed assets was calculated on the basis of actually involved fixed assets, which serve meteorological services for civil aviation and on the basis of all planned purchases of fixed assets for above mentioned purposes.
3.2 Adjustments total assets	n/a
3.3 Net current assets	<p>Average net value of working assets</p> <ul style="list-style-type: none"> net working assets- working assets excluding short-term liabilities average net value of working assets was calculated in the following way: (net working assets at the beginning of the year + net working assets at the end of the year) : 2 <p>Working assets are all amounts due on account of the agreement for meteorological services for civil aviation calculated at the end of financial year. Taking into account the fact that there is a monthly settlement cycle, at the end of the year stays only a December installment, namely 1/12 part of the amount written in the agreement.</p> <p>Short-term liabilities - accepted at an average index level resulting from the division of short term liabilities by working assets.</p>
3.4 Total asset base	There is no increase in the total asset base. No investments are planned within the scope of IMWM's limited designation.

ANSP/Entity: IMWM	RP2 – Actual 2015
Components of the asset base	
3.1 Net book val. fixed assets	<p>Due to the fact that the value of determined costs of MET services in RP2, including depreciation and costs of capital, as well as the indicators, were administratively defined and allocated to types of navigation charges, it seems pointless to refer to differences arising between determined and actual costs of IMWM.</p> <p>The actual costs of capital and the above presented indicators were significantly affected in 2015 by two factors:</p> <ul style="list-style-type: none"> Implementation of investment related to purchasing of AWOS systems for 7 airports. Bank loan on funding the AWOS investment.
3.2 Adjustments total assets	
3.3 Net current assets	
3.4 Total asset base	

Average asset base	2015D	2015 A	2016D	2017D	2018D	2019D
Net book val. fixed assets	860	1 181	773	652	454	289
Adjustments total assets	0	0	0	0	0	0
Net current assets	1 460	1 072	1 516	1 539	1 555	1 585
Total asset base	2 320	2 253	2 289	2 192	2 009	1 874

III. Radom Meteo

Assumptions for determining the cost of capital and the return on equity

Justifications for the actual cost of capital

As mentioned above in point a), during preparation of BFAB PP RP2 and calculation of determined cost, MET costs related to services provided in TMA/CTR of EPRA were calculated as one value of total MET costs without apportioning among staff/ other operating/ depreciation/ cost of capital due to the assumption of purchasing these services on a market basis.

Wherein Radom Meteo for years 2015-2019 does not plan return on equity and any debt financing so no assumptions were adopted for the purpose of calculating cost of capital for RP2. Also for actual values for 2015 due to no planned return on equity and debt financing in 2015, the actual cost of capital is equal to 0,00 PLN.

IV. CAA

CAA does not calculate the cost of capital and does not include it in its cost base.

(f) total costs per airport for each airports with fewer than 70 000 IFR air transport movements

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per year, when these are provided in a consolidated way in the reporting table;

Not applicable to en-route Charging Zones

g) Definition of the criteria used to allocate costs between terminal and *en route* services for each airport within the scope of this Regulation;

Not applicable to en-route Charging Zones

h) Breakdown of the meteorological costs between direct costs and 'MET core costs' defined as the costs of supporting meteorological facilities and services that also serve meteorological requirements in general. These include general analysis and forecasting, surface and upper-air observation networks, meteorological communication systems, data processing centres and supporting core research, training and administration;

Methodology of separating the costs of meteorological services for aviation in IMWM

Determination of the share of costs of meteorological services for civil aviation provided by IMWM in total MET costs is based on separation of direct costs of such services and on separation of MET core costs.

Methodology of direct costs of meteorological services determination.

The separation of direct costs of meteorological services for aviation from the total MET costs consists in defining the costs of services, facilities and systems used exclusively to provide meteorological services for aviation. IMWM defines these costs in accordance with ICAO Doc. 9161 "Manual on air navigation services economics" and WMO Publication No 904 "Guide to aeronautical meteorological services cost recovery. Principles and guidance", Annex 1, as the costs of: Meteorological Watch Office, Aerodrome Meteorological Offices - only the part of the costs related to services for aviation, Aeronautical Meteorological Stations, telecommunication system which serve aviation, systems of aerodrome meteorological measuring devices, and costs of administrative support (including training) directly serving the aviation. Such defined direct costs include:

1. gross payments including: personal and impersonal wages, company's award fund contribution, social insurance contribution, company's social benefit fund contribution, and others; this cost is proportional to the amount of employees rendering meteorological services for civil aviation;

These group of costs are qualified as the staff costs.

The other groups of the direct costs of meteorological service for aviation are:

2. indirect costs proportional to remuneration fund and remuneration-related expenditures;
3. materials and equipment spare parts: office tools, printers ink, equipment purchase including purchase of equipment at airports, electricity, heat, computers, full equipment of the workplaces;
4. third party services: specialized software service (LEADS, nsMHS, METAR2010, DEDAL, PROMET), renovation, check-ups, maintenance (computers, copiers, plotters, etc.), data communication network service (servers, routers) used by Meteorological Offices, and Aeronautical Meteorological Stations for meteorological services for civil aviation;
5. telecommunication: costs of maintaining communication between headquarters and Meteorological Watch Office, between Meteorological Offices and PANSA (AFTN network) and Aeronautical Meteorological Stations; satellite communication SADIS; fees for fixed-line telephones and mobile phones directly connected with meteorological services for civil aviation;
6. business trips inside and outside the country directly connected with meteorological services for civil aviation;
7. trainings and conferences: periodical meteorological training in respect of international European standards; enhancing qualifications trainings, inner audit costs connected with Quality Management System; other trainings connected with the service provision;
8. lease of premises and meteorological ground on the premises of airports - leasing according to signed agreements;
9. usage of automatic weather observation systems (AWOS) for the needs of meteorological services for civil aviation, including: trainings for the service workers, relevant business trips, the costs directly connected with AWOS maintenance and the cost of measuring equipment modernization.

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The above costs, point 2 to 9 constitute other operating costs of meteorological services for aviation.

Methodology of determining the share of meteorological services for aviation costs in core MET costs.

According to ICAO Doc. 9161 "Manual on air navigation services economics" and WMO no 904 "Guide on aeronautical meteorological services cost recovery. Principles and guidance" MET core systems are defined as systems, facilities and services not only used for meteorological services for aviation but also for the public. These are as follows:

- Generally forecasting system
- Numerical weather forecast system
- Telecommunication infrastructure
- Hydrological-meteorological stations network
- Aerology observations system
- Meteorological radars and discharging detection systems
- Satellite data receiving system
- Historical database
- Systems supervision

Core MET costs are costs of maintenance of the above listed systems in this part which was included within total MET costs and on the basis of the methodology presented above.

The share of costs of most MET core systems in aviation costs was calculated in accordance with procedures defined in ICAO Doc. 9161 "Manual on air navigation services economics" and WMO no 904 "Guide on aeronautical meteorological services cost recovery. Principles and guidance", point 3.10 (d), namely: in proportion of all employees working for aeronautical meteorology to employees working for National Hydrological-Meteorological Service. The number of employees working for aeronautical meteorology was determined on the basis of dividing National Hydrological-Meteorological Service into HYDRO Service and MET Service.

This methodology was applied in order to determine the share of costs of the following core systems:

- Generally forecasting system
- Numerical weather forecast system
- Hydrological-meteorological stations network
- Aerology observation system
- Satellite data receiving system
- Historical database
- Systems supervision

The share of costs of telecommunication systems in aviation costs was determined analogously to the methodology which determines the share of MET costs (total MET costs) in National Hydrological-Meteorological Service. The methodology is defined in ICAO Doc. 9161 and WMO no 904 point 3.10 (c), namely it is based on the analysis of the size of computer network flow in IMWM.

i) Description of the methodology used for allocating total MET costs and MET core costs to civil aviation and between Charging Zones;

Methodology for division of costs of MET services to civil aviation into costs of particular products

The methodology for determining the cost of various aviation products is based on an assessment of the percentage contribution of the working time of one post per day in the manufacture of products for meteorological service to civil aviation. The basis of the methodology is the assessment of involvement of different organizational units, directly producing aeronautical products such as the Meteorological Watch Office (MBN), Meteorological Offices (BPM) and the Aerodrome Meteorological Stations (LSM) units and indirectly involved in the protection of civil aviation. The measure of this commitment is the amount of time required to manufacture a particular product.

The share of work of the units indirectly involved is assigned to each product, and contribution of the Central Measuring Equipment Laboratory, was assigned only to products that are based on measuring instruments.

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A detailed description of the methodology used to determine the costs of products is as follows:

1. A catalogue of basic classes of meteorological products has been defined. It was prepared by IMWM in order to provide meteorological services to civil aviation in 2012-2014 and 2015-2019. This catalogue is based on ICAO Annex 3, WMO Publication No. 904.
2. Daily work tables were constructed for the Meteorological Watch Office and individual meteorological offices, and for aerodrome meteorological stations. These tables describe the average time it takes to produce various aeronautical meteorological products in specific classes in the consecutive hours of the day, in different organizational units.
3. On the base of obtaining percentage of product workload, partial product cost has been calculated which is a product of the following elements:
 - Number of posts;
 - Labor consumption of the products;
 - Annual amount of salaries per post.

The term workload is understood as the amount of work needed or used for the implementation and monitoring of a single product that is expressed as a percentage of working time to the entire time.

4. Cost share of other groups (service, AWOS, materials, external services, delegations, telecommunications, SADIS, trainings, rentals, infrastructure, depreciation, cost of capital) has been established - on the basis of dedicated work at each cost group to manufacture the product. This share has been added to the partial cost of the product. In this way, an annual cost of developing each of the products ordered by PANSa has been achieved. The sum of the individual products gives us an annual cost of MET services to civil aviation.

For the RP2, due to assumption of limited scope of IMWM's designation, a list of MET products was prepared that divides all MET products into those delivered under initial designation dated April 2014 (ACC+SAR+FIS) and others. This list has been prepared following detailed analyses by IMWM, PANSa and CAA as was also consulted with Ministry of Infrastructure and Development as the body designating MET providers. Following this definition of products (division in two parts) and based on cost of each product delivered by IMWM the value of ER costs for IMWM was calculated. This value includes direct costs related to those products covered by designation as well as part of core costs (defined as described in letter h) above).

As indicated in letter a) above, ER costs include also part of MET costs that according to preliminary assumptions was to be purchased by PANSa following a public tender. As described above, the allocation of MET costs presented in PANSa's cost base is like 40/60 accordingly for ER and TNC. This proportion reflects allocation of MET products as based on Annex II to WMO document No 904. The value of MET costs in PANSa's cost bases according to RP2 performance plan dated June 2014 was calculated on the basis of historic data on these costs (actual data for 2013 and forecast for 2014), inflationary assumptions as well as PANSa's experience from public tenders that were taking place before the date of submission of the performance plan for RP2. These costs also reflect possible increase in MET costs that results from purchase and installation of new AWOS system at Polish airports – this installation needs to take place urgently as the systems currently used are outdated and cannot be used any longer. Full cost of AWOS was originally included in the PANSa's cost bases – RP2 performance plan dated June 2014 – and is allocated to ER and TNC respectively based on the product methodology presented above. All shifts with regard to ER MET costs that result from IMWM's designation for the period 2015-2019 described above (see point a) have no impact on the total amount of determined MET costs for RP2 and for the allocation between ER and TNC.

As the result, the full costs of the en-route MET services are included in the reporting tables of IMWM.

j) Nineteen months before the start of a reference period, description of the reported forecast costs and traffic;

Not applicable for this submission

k) Description of the reported actual costs and the difference from the determined costs, for

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each year of the reference period;

I. PANSA

RP2 Monitoring – Year 2015			
ANSP: PANSA*			
Cost details `000	2015 Actual	2015	
		Determined*	Difference
Staff	392 059	400 532	-8 473
Other operating costs	64 146	93 596	-29 450
Depreciation	50 033	53 396	-3 363
Cost of capital	41 626	41 741	-115
Exceptional items	0	0	0
Total costs	547 865	589 265	-41 400

**Determined costs for 2015 include also the amount of kPLN 148 (for unused Radom Meteo's part of determined costs described above), however, these costs (after adjustments stemming from the Charging Regulation) will be returned to airspace users in 2017 as other revenues.*

Staff Costs – Actual 2015 ER staff costs are lower by 2,1% compared to determined costs included in the RP2 PP. This slight percentage decrease is a result of the reduction in Full Time Equivalent (FTE), deriving mostly from significant number of employees using their rights to retirement, as well as from revision of the Employment Plan. The above mentioned increase in the number of employees using their rights to retirement has the most significant impact on the changes of remuneration costs as well as the costs of social security and other benefits and retirement and jubilee benefits. Unused holiday accrual decreased mostly as a result of improved Human Resources Management. Amounts of claims and litigations are currently immaterial, but indicate initial consequences of staff members' claims resulting with labour court judgments from March 2016 in favour of the claimants.

Other operating costs – The main impact on operating costs are factors, over which PANSA has limited control. They include written off receivables which were unforeseen during preparation of RP2 PP. There was no Income foreseen on non-air navigation services, while actual Income on operating activity in Other segment generated revenue, which partially decreased other operating costs. PANSA managed to reduce costs of Insurance due to lower insurance price offered in public tender process, what should be perceived as one-time drop of insurance costs. Lower execution of other operating costs is also the result of undertaken cost-saving across a range of PANSA spending. Other items of lower costs were: materials, energy, IT services and telecommunication services, costs of MET in EPRA, consulting fees and business trips.

Depreciation – In terms of capital spending, PANSA realized over 100% of values planned for 2015. Lower than expected in RP2 PP depreciation costs, related to the lower than expected in BFAB PP RP2 value of assets accepted for use, due to the extension of the investment process and delay of projects finalization of a few investments.

Cost of Capital – The actual cost of capital is lower than planned by 0,3%. It was determined by applying the same rate of return (5,95%) as it was approved in the performance plan with the update of the average value of total asset base. While the average net book value of fixed assets stayed almost as planned (increase by kPLN 5 521), the average value of net current asset fallen by kPLN 7 448. This was due to savings made in execution of other operating costs and staff costs.

II. IMWM

RP2 Monitoring – Year 2015			
ANSP: IMWM*			
Cost details `000	2015 Actual	2015	
		Determined	Difference
Staff	6 208	6 653	-445
Other operating costs	14 186	16 889	-2 703
Depreciation	89	397	-308
Cost of capital	81	93	-35

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Exceptional items	0	0	0
Total costs	20 565	24 032	-3 467

In the above table the IMWM performance of costs of the MET services provided in 2015 is shown. Due to the fact, that the value of determined costs for MET service in RP2 was to a large extent administratively defined and allocated to types of navigation charges and types of costs, the comparison and explanation of differences between determined and actual costs of IMWM is not fully possible and justified.

The actual costs of IMWM in 2015 were significantly affected by two external factors. The first one is the high uncertainty regarding duration and the scope of IMWM designation. For terminal MET services for 2016-2019 the Institute was designated in September 2015, and due to this late designation some actions, like purchasing of equipment and facilities (eg. computer equipment, software updates, furnishings) renovations, as well as training of the personnel, could not be fully realized. A direct impact on the current implementation of costs had also actual inflation rate for 2015, which was monitored over the whole year (impact on costs and on value of the inflation adjustment).

The most important information, relating to the performance of costs by nature in 2015, is listed below:

Staff costs – Another year when the salary of IMWM' staff, including personnel of MOLC (Meteorological Services for Civil Aviation) did not increase (staff remunerations are frozen). The slight reduction in the number of employees in aeronautical weather observation systems (AWOS) service in 2015 were seen.

Other operating costs – The main costs influencing the overall execution of IMWM's other operating costs are the costs of data purchase from PANSA's AWOS system and airports' AWOS systems. In 2015 a further significant increase in this cost item took place. Additionally, the costs of maintenance of aerodrome stations and grounds rental increased in 2015.

Depreciation – The depreciation of two AWOS systems (owned by IMWM) located in Kraków and Katowice started to be calculated in 2015.

Cost of capital – Amount of the calculated cost of capital – actual value for 2015 – is affected by the investment in the AWOS systems.

III. Radom Meteo

RP2 Monitoring – Year 2015			
ANSP: Radom Meteo			
Cost details `000	2015 Actual	2015	
		Determined	Difference
Staff	26	56	-30
Other operating costs	34	31	3
Depreciation	4	2	2
Cost of capital	0	0	0
Exceptional items	0	0	0
Total costs	64	89	-25

As mentioned above in point a), during preparation of BFAB PP RP2 and calculation of determined cost, MET costs related to services provided in TMA/CTR of EPRA were calculated as one value of total MET costs without apportioning among staff/ other operating/ depreciation/ cost of capital due to the assumption of purchasing these services on a market basis. However, for the purposes of reporting and monitoring of costs the Radom Meteo has made a breakdown of the amount for 2015D into cost types.

Staff costs – for 2015 costs lower than planned, due to different actual structure of employees involved than previously planned and lower average salary.

Other operating costs – in part include initial charge associated with the start of operational activity as MET service provider for ANS.

Depreciation – depreciation results from purchases of fixed assets.

Cost of capital – this cost item was not planned.

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IV. CAA + EUROCONTROL

For the CAA comparison of determined costs and actual figures is presented in the table below.

CAA en-route costs	2015A	2015D	Difference
Total (nominal 000 PLN)	6 238	6 466	-228
staff	4 195	4 148	47
other operating costs	2 043	2 318	-275

Lower CAA's 2015 ER costs execution is the result of lower total budget of the CAA than assumed when performance plan for RP2 was drafted. Also the expenditures on external services were significantly lower than planned (costs of repairs, health, translation services and services including execution expertise, analysis and opinion). The said lower expenditures on external services as well as other optimization of costs execution impacted the level of CAA ANS costs.

With regard to total state costs (CAA+EUROCONTROL) actual figures are slightly higher than determined costs, what results from higher EUROCONTROL costs being consequence of minor differences in the level of the exchange rates (planned vs. actual) and minor higher execution of costs for EUROCONTROL in EUR. Actual EUROCONTROL figures were provided by EUROCONTROL Secretariat to members of the Enlarged Committee by email dated 15.06.2016 (kEUR 10 243)) and the PLN/EUR average exchange rate as sent by EUROCONTROL² by email on 12.01.2016 (4,18072 PLN/EUR) was used. The Eurocontrol costs are regarded as uncontrollable costs for RP2.

CAA+EUROCONTROL en-route costs	2015A	2015D	Difference
Total (nominal 000 PLN)	49 063	48 694	369
Staff	4 195	4 148	47
other operating costs	44 868	44 546	322

EUROCONTROL costs	2015A	2015D	Difference 2015A- 2015D
Total EUR (nominal 000)	10 243	10 112	131
Exchange rate	4,18072	4,176	-
Total PLN (nominal 000)	42 825	42 228	597

I) Description of the reported actual service units and the differences both against the forecast and compared with the figures provided by EUROCONTROL, as appropriate, for each year of the reference period;

For the purpose of establishing costs and unit rates for the RP2 (BFAB PP RP2 version from June 2014) STATFOR SU forecast has been used – base scenario (Eurocontrol Flight Movements and Service Units Seven-Year Forecast: 2014-2020, February 2014). Actual SU for 2015 are based on actual EUROCONTROL/CRCO data.

One of the major factors influencing lower SU execution in 2015 was the reduction of the long-haul wide-body aircraft operations within the Polish airspace, as the originally expected intercontinental movements shifted to the alternative routes via southbound FIRs, after part of the Ukrainian airspace was closed due to political unrest and shooting down of the MH17.

Year	Forecasted Total Service Unit (STATFOR, FEB 2014)	Actual Total Service Unit (Eurocontrol)	Difference
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² Average of the daily „Closing Rate” calculated by Reuters based on daily BID rates for the period 01/01-31/01.

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1	2	3	(3/2)
2015	4 362 840	3 880 013	-11,07%
2016	4 544 000		
2017	4 699 000		
2018	4 861 000		
2019	5 039 000		

The actual situation as regards traffic level deviates significantly from the STATFOR forecast dated February 2014. For 2015 actual traffic, expressed in SUs, was 11,07% below the forecast assumed in the PP. The actual number of en-route SUs was also lower than the figure for the respective period of 2014. These adverse conditions were visible from second half of 2014 as a consequence of the air crash in Ukraine. Escalation of the crisis resulted in closing the eastern part of Ukrainian airspace and avoidance of the rest of the Ukrainian airspace by airlines, which significantly changed traffic flows (reduction of the long-haul wide-body aircraft operations within the Polish airspace). The above differences have a significant negative impact on revenues of PANSA, the main ATS provider in Poland, who is subject to the traffic risk sharing mechanism, and over RP2 poses a significant challenge in terms of PANSA liquidity and sustainability of its operations. Although the traffic risk is limited by the risk-sharing mechanism, differences in revenues can be recovered only 2 years after the actual loss in revenue. The changes in traffic are related to external circumstances that were unforeseeable at the time of adoption of the PP in June 2014 and are insurmountable and beyond control of Polish ANSPs, NSA or Minister responsible for transport. It has to be stressed that negative impacts observed in 2015 are expected to continue all over the RP2. This discrepancy in the level of service units for 2015 activates the alert mechanism as described in Article 19 of the Performance Regulation (No 390/2013).

Revised BFAB PP RP2 for 2017-2019 – dated October 2016

For the purposes of revised PP and for establishing unit rates for 2017-2019 STATFOR SU forecast has been adopted – base scenario (Eurocontrol Flight Movements and Service Units Seven-Year Forecast: 2016-2022, September 2016).

Year	Forecasted Total Service Unit (STATFOR, FEB 2014)	Forecasted Total Service Unit (STATFOR, SEP 2016)	Difference
1	2	3	(3/2)
2017	4 699 000	4 299 929	-8,49%
2018	4 861 000	4 419 000	-9,09%
2019	5 039 000	4 560 000	-9,51%

After changes stemming from PP revision, the SU forecast for RP2 is as follows (including information about actual SU for 2015):

Year	Forecasted Total Service Unit (STATFOR, FEB 2014)	Actual Total Service Unit (Eurocontrol)	Difference
1	2	3	(3/2)
2015	4 362 840	3 880 013	-11,07%
2016	4 544 000		
Year	Forecasted Total Service Unit (STATFOR, SEP 2016)	Actual Total Service Unit (Eurocontrol)	Difference

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Reference Period 2 (2015-2019)

1	2	3	(3/2)
2017	4 299 929		
2018	4 419 000		
2019	4 560 000		

m) Every year of the reference period, the difference between the investments of the air navigation service providers recorded in the Performance Plans and the actual spending, as well as the difference between the planned date of entry into operation of these investments and the actual situation.

I. PANSA

In 2015 PANSA realised investment expenditures in the total amount of 168,5 M PLN against the originally planned in RP2 PP investment in the total amount of 167,9 M PLN (however, these two figures are not fully comparable as PANSA in 2015 executed also investments that were not planned in BFAB PP RP2). During 2015 the Agency conducted thorough analysis of the investment process as a whole resulting with the constatation that this area did not function properly which has been indicated by the execution level from previous years. After the review considering the necessity of the target achievement set in RP2 PP the Agency decided to adapt the investment plan and adjust it to PANSA's needs and possibilities.

It is essential to remember that PANSA is subject to the Polish public finance law (including State bill) and any purchases must be done according to the Public procurement law requirements. The multistage public control may cause extension of whole investment process.

The table below shows the degree of execution of PANSA investment plans in 2015 (in PLN): Plan approved in 2014 and included in RP2 PP vs. Plan after adjustments made in May 2015.

	2015 RP2 PP	2015 May 2015 (update)
Value*	167 850 480	177 804 501
Execution of Investment Plan	131 437 591	167 446 749
New investments (not included in the Plan)	37 061 809	1 052 651
Total Execution	168 499 400	168 499 400
% execution of the Plan* (without New investments)	78,3%	94,2%

* Source: PANSA

More information is provided in the FAB Monitoring Report 2015 for capital expenditure (see section 4).

II. IMWM

Investment plans, prepared by IMWM at the beginning of 2014, assumed purchase and installation 7 AWOS systems and the meteorological automated weather stations (MAWS), as a redundancy equipment for AWOS. Due to uncertainty of designation for RP2 in terminal services this plan was cancelled at the beginning of 2015. However, IMWM was finally designated for terminal services for RP2 in September 2015. For RP2 IMWM is planning to buy and install 7 AWOS systems and 7 redundancy automated weather observing systems (AWOS-R) on 6 main Polish airports (Gdańsk, Katowice, Kraków, Warszawa – two systems for Chopin, Wrocław nad Poznań) – investment planned after beginning of RP2. AWOS-R allow to run the operation of CAT I with total failure of AWOS system.

Till the end of April of 2016 IMWM installed and launched 7 AWOS system on airports in Katowice and Kraków in 2015, Wrocław, Szczecin and Łódź on 1st of March 2016, Gdańsk on 31st of March 2016 and Rzeszów on 28th of April 2016.

The costs related to the new investments are allocated in accordance with the methodology adopted by CAA, ie. 40% to ER charges and in 60% to TNC charges.

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The table below shows summary of these plans against the realization.

Name of investment	PLANNED (in '000 PLN)				ACTUAL (in '000 PLN)				Comments
	2015	2016	2017-2019	Total RP2 CAPEX	2015	2016	2017-2019	Total RP2 CAPEX	
AWOS Systems	3 791	13 641	0	17 433	2 813	0	0	-	Lifecycle (depreciation period in years) – 10 <i>*investment realized in 2016</i>
MAWS Systems	125	0	0	125	0	0	0	-	Lifecycle (depreciation period in years) – 5 <u>Investment cancel</u>
Total CAPEX (PP RP2)	3 916	16 091	0	17 558	2 813	0	0	-	
Number of unplanned investments (from update of IMWM investment plan)									
AWOS-R Systems		2 450		2 450					Lifecycle (depreciation period in years) - 5
Total CAPEX (all investments)	3 916	16 091		20 008	2 813				

III. Radom Meteo

Not applicable.

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ADDITIONAL INFORMATION – 2 – Unit rate calculation

a) Description and rationale for establishment of the different Charging Zones, in particular with regard to terminal Charging Zones and potential cross-subsidies between airports;

There is one en-route charging zone in Poland (FIR Warszawa).

b) Description of the policy on exemptions and description of the financing means to cover the related costs;

According to national law (Article 130 (6) of Aviation Act of 3 July 2002) the following flights are exempted from air navigation charges (both en-route and terminal) in Poland:

- performed under Visual Flight Rules (VFR);
- mixed – where a part of the flight is performed under Visual Flight Rules (VFR) and the remaining part is performed under Instrument Flight Rules (IFR) – for the part of the flight performed in the Polish airspace exclusively under VFR rules;
- performed by aircraft of which the maximum take-off weight is less than 2 tons;
- performed exclusively for the transport, on an official mission, of the reigning monarch and his/her immediate family, head of state, head of government and government ministers; in all cases the flight purpose must be confirmed by the appropriate flight status indicator or remark on the flight plan;
- search and rescue, authorized by a competent SAR coordination body;
- military performed by Polish military aircraft or military aircraft of a country where flights performed by Polish military aircraft are exempted from the air navigation charges;
- performed for military purposes and exempted from charges, under international agreements ratified by Poland in statutory way;
- flights performed by ANSP for the purpose of checking or testing equipment.

Costs of providing air navigation services to exempted flights are covered by the State budget – they are financed by the means of budgetary subsidy granted by the minister responsible for transport on the application of designated service provider.

c) Description of the other revenues, if any, broken down between the different categories;

I. PANSA

The income from other sources planned for years 2015-2019 was due to the expected possible payment from the European Union. PANSA applied for the refinancing of the several investments from the Infrastructure and Environment Operational Program. The income from other sources planned for years 2013-2014 was also due to the expected possible payment from the European Union.

For the RP2 it was assumed that starting from 2013 respective depreciation corrections as well as cost corrections related to promotion, feasibility study, training and land purchase (deductions, presented as income from other sources) will contribute to ER cost base in the following years. The realized difference of the 2013-2014 years' other revenues from Union assistance programmes decreases the amounts planned for 2015 and 2016. It should be noted, that any difference in final amounts of revenues in 2015 and forecasted changes in 2016 will be forwarded to year 2017. The following table shows the calculation of the amounts of other revenues from Union assistance programmes which are included in PANSA reporting table 2 in line 5.3.

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	2013	2014	2015	2016	2017	2018	2019	Total
PART 1								
Revenues from Union assistance programmes forecasted for RP1	25 053	21 705						46 758
Revenues from Union assistance programmes actual value	8 380	10 388						18 769
Difference for RP1	16 673	11 316						27 989
Revenues from Union assistance programmes forecasted for RP2			15 234	17 155	16 693	16 275	13 399	78 756
Adjustments from RP1			-15 234	-12 755				-27 989
Revenues from Union assistance programmes forecasted for RP2 after adjustments (values from PP for RP2)			0	4 400	16 693	16 275	13 399	50 767
PART 2								
Revenues from Union assistance programmes revised forecast for RP2 (forecast from Oct 2015)			14 288	18 363	17 672	17 238	14 770	82 331
Difference for RP1 and for year 2015 (Oct 2015)	16 673	11 316	946					28 935
Adjustments from RP1 and from 2015 (Oct 2015)			-15 234	-12 755	-946			-28 935
Revenues from Union assistance programmes forecasted for RP2 after adjustments (Oct 2015) for purposes of calculating UR for 2016 - table 2 for PANSA line 5.3			0	5 608	16 726	17 238	14 770	54 342
PART 3								
Revenues from Union assistance programmes revised forecast for RP2 (forecast from Oct 2016)			12 030	16 972	18 604	21 130	20 938	89 673
Difference for RP1 and for years 2015-2016 (Oct 2016)	16 673	11 316	3 204	1 392				32 584
Adjustments from RP1 and years 2015-2016 (Oct 2016)			-15 234	-12 755	-4 595			-32 584
Revenues from Union assistance programmes forecasted for RP2 after adjustments (Oct 2016) for purposes of calculating UR for 2017 - table 2 for PANSA line 5.3			0	5 608	14 008	21 130	20 938	61 684

In addition, PANSA acquired new source for refinancing depreciation costs – funds from Lubuskie Voivodeship for ILS infrastructure in Zielona Góra airport. The following table shows the calculation of the amounts which are included in PANSA reporting table 2 in line 5.4.

	2015	2016	2017	2018	2019	Total
PART 1						
Revenues from National public funding forecasted for RP2 (values from PP for RP2)	0	0	0	0	0	0
PART 2						
Revenues from National public funding revised forecast for RP2 (forecast from Oct 2015)	11	132	132	132	132	538
Possible adjustment for year 2015 (Oct 2015)	-11					-11

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Adjustments considering preliminary forecast of revenues' execution for 2015 (Oct 2015)			11			11
Revenues from National public funding forecasted for RP2 after adjustments (Oct 2015) for purposes of calculating UR for 2016 - table 2 for PANSA line 5.4	0	132	143	132	132	538
PART 3						
Revenues from National public funding revised forecast for RP2 (forecast from Oct 2016)	0	84	126	126	126	463
Difference for years 2015-2016 (Oct 2016)	0	48				48
Adjustment according to change of actual values and revised forecast (Oct 2016)			-48			-48
Revenues from National public funding forecasted for RP2 after adjustments (Oct 2016) for purposes of calculating UR for 2017 - table 2 for PANSA line 5.4	0	132	79	126	126	463

In PANSA reporting table 2 in line 5.6 as other other revenues the amount of 158 kPLN is included, as amount which is returned to airspace users in 2017 due to shorter period of providing MET services by Radom Meteo than planned (Radom Meteo operational activity started in September, instead of planned April 2015). The calculation of this revenue includes:

- kPLN 148 as a difference between Radom Meteo determined costs for whole 2015 and Radom Meteo determined costs for the period 17.09.2015-31.12.2015,
- kPLN 6 - inflation adjustment for above difference (which reduces the described revenue),
- kPLN 16 - Over/under recoveries from traffic variations n to be carried-over for difference (which increases the described revenue),

II. IMWM

IMWM does not plan for the RP2 any additional income covering the costs of meteorological services for civil aviation, except for expected agreement between PANSA and IMWM, covering these costs. IMWM did not plan any additional income in the RP1 as well. Also, IMWM does not provide the meteorological services for the military aviation and does not plan obtaining any income for such services in years 2015-2019. IMWM exchanges with the military services the results of aviation observations and forecasts, on the no-cost base. In this way the IMWM obtains (in no-cost way) the results of military aviation observations and forecasts, which are used by Institute to perform its services for the civil aviation.

III. Radom Meteo

The income from other sources planned for the years 2015-2019 was due to the expected possible payment from the Port Lotniczy Radom. However in Table 2 for Radom Meteo no amounts are presented as other revenues due to no payment from the Port Lotniczy Radom in 2015 (only factual payments – actual values – will be shown in Table 2 as other revenues).

IV. CAA

There are no revenues from other sources planned for the RP2, also there were no revenues from other sources planned in the RP1. There are no revenues from other sources in 2015.

d) Description and explanation of incentives applied to users of air navigation services;

No incentives are applied on airspace users in Poland.

e) Description and explanation of the modulation of air navigation charges applied.

N/a.

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ADDITIONAL INFORMATION – 3 – Complementary Information

a) Breakdown of the costs of common projects per individual project;

N/a.

b) Description of the amounts resulting from uncontrollable costs factors by nature and by factor, including the rationale and the changes in underlying assumptions;

This information has been provided in the costs exempt report submitted by the NSA in accordance with Article 14 (2) (f) of Regulations 391/2013. This report provided information only with regard to EUROCONTROL costs. However, during works and discussions with the EC and PRB on revised PP also the non-contractual use of land (Branicki claim) have been considered as uncontrollable costs for a whole RP (starting from 1st Jan 2015). Final 2017 charges' cost base tables were modified accordingly showing costs for this claim under uncontrollable costs (see Table 1 for ANSP and Table 3). For the time being the possible differences between determined and actual costs for Eurocontrol and the above mentioned non-contractual use of land are predicted as the uncontrollable costs in 2015.

c) Description of the carry-overs of over- or under-recoveries incurred by Member States up to the year 2011 for en route charges and up to the year 2014 for terminal charges;

The adjustment mechanism resulting from the differences recorded up to 2011 continues to be applied in line with the Charging Regulation. That is why under or over-recoveries incurred prior to the start of the RP1 should be taken into account during establishing unit rates for the RP2.

The table below presents balances of ER under/over recoveries of 2009-2011 that will be added to or deducted from chargeable cost base in the RP2.

Unit rates for 2015 and 2016 was affected by and unit rate for 2017 will be affected by respective over-recoveries as shown in the table below.

<i>Carry-over from</i>	<i>Balance of the year</i>	<i>To 2015</i>	<i>To 2016</i>	<i>To 2017</i>
2009	-21 976	-4 395		
2010	82 278	16 456	16 456	
2011	57 384	11 477	11 477	11 477
Total		23 537	27 932	11 477

d) Description of carry-overs resulting from the traffic risk-sharing mechanism;

The actual 2015 traffic was lower by 11,07% than forecasted in PP for RP2. Therefore, kPLN 39 043, being 70% of revenue lost due to traffic variation above 2% from the forecast and 100% of traffic variation above 10%, has been registered in 2015 in relation to traffic risk-sharing mechanism. The amount of kPLN 39 043, will be carried forward to 2017.

The over/ under-recovery mechanism from previous years, which was subject to the settlement in 2015 in amount of kPLN 23 537, was not completely paid off due to the lower actual number of service units in relation to the amount predicted (by 11,07%). Unsettled part of the adjustment, together with other carry-overs resulting from risk-sharing in 2015 (inflation adjustment, over/ under recoveries from traffic variation) will be included in 2017 cost base for calculation of the UR (see item 3.3 in Reporting Table 2 – kPLN 3 392).

e) Description of carry-overs resulting from the cost sharing mechanism.

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Except for costs listed in letter b above, in 2015 no factors listed in article 14 point 2 letter a) of Regulation No 391/2013 occurred in Poland, hence no other differences relating to uncontrollable costs were identified to be carried over to the RP3. It should be noted that only actual costs for EUROCONTROL for 2015 have been reported as part of the 2015 NSA Report on costs exempt from cost-sharing for en-route. The non-contractual use of land for 2015 will be registered within the 2016 NSA Report on costs exempt from cost-sharing for both en-route and terminal.

All costs for RP1 reported by Poland as uncontrollable costs exempt from cost-risk sharing mechanism were assessed by the PRB and by the EC as eligible. The total amount of uncontrollable costs from RP1 was settled with airspace users in 2016 unit rate.

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ADDITIONAL INFORMATION – 4 – Additional justifications for the RP2 Performance Plan

a) Contribution of the air navigation service providers to the achievement of the performance target

ANSP:	PANSA	Designated for:	ATS
Determined costs for RP2 (by nature)			
1.1 Staff costs			
Composition of the cost item:	Salaries, Contributions to pension and accident insurance and contributions to the Social Fund includes obligatory contributions to pension and accident insurance		
Explanations of the planning assumptions and annual variations in the cost item over RP2:	<p>PANSA is realising "Poland's Regional Planning Concept 2030" published on 27 April 2012 as appendix to the Resolution No 239 of the Council of Ministers dated 13 December 2011.</p> <p>Initial BFAB PP RP2 – dated June 2014</p> <p>The following have a significant influence on Staff costs:</p> <ul style="list-style-type: none">- the increase in planned number of ATCOs in accordance with the document 'Air traffic controllers in PANSA in years 2014-2019', prepared by Personnel Training and Development Office;- increase of licensed ATCOs;- costs of salaries of air traffic controllers, according to the Remuneration Regulations in PANSA, depend on the individual level of experience, complexity of airspace and level of air traffic (<i>however, as proved by court judgements after 2014, assumptions in this regard on which the initial PP was based proved to be wrong</i>);- conducting the Real-time Simulation, involving the ATC staff, as a part of the new airspace and new ATC sectorisation project, planned to be implemented in 2015. <p>Bonus fund was planned on the basis of Remuneration Regulations, which includes incentive bonus system for employees, and is leading to:</p> <ul style="list-style-type: none">- ensure the smooth functioning of PANSA and air traffic safety,- ensure implementation of planned tasks,- improvement of PANSA's economic performance,- improved productivity and quality of work. <p>The bonus fund can be allocated to employees under the conditions such as: the scheduled tasks are realized and the planned PANSA's revenues are achieved.</p> <p>Revised BFAB PP RP2 for 2017-2019 – dated October 2016</p> <p>The following have a significant influence on revised Staff costs:</p> <ul style="list-style-type: none">- the increase in planned number of ATCOs (in comparison with current number) according to the document 'Air traffic controllers in PANSA in years 2015-2020', prepared by Personnel Training and Development Office- costs of salaries of air traffic controllers, according to the Remuneration Regulations in PANSA, depend on the individual level of experience, complexity of airspace and level of air traffic; Especially following adoption of the BFAB PP RP2 developments took place, which impacted the level of the staff costs for RP2. During drafting of BFAB PP RP2, PANSA applied some managerial assumptions on ATCOs remuneration level, which after submission of the BFAB PP RP2 were questioned by number of ATCOs in labour courts. Following the court proceedings PANSA lost the court cases and as a result is required to increase remunerations of some ATCO groups in line with binding internal PANSA's Regulation on Remunerations. This is an element that was not foreseen at the time of BFAB PP RP2 drafting and which results in actual increase of payments to the PANSA staff in RP2. The amount of additional payments is substantial and cannot be made under the current BFAB PP RP2.- conducting the Real-time Simulation, involving the ATC staff, as a part of the new airspace and new ATC sectorisation project, planned to be implemented in 2015. <p>In the second half of 2015 PANSA made a review of the demand for ATC licensed personnel in the years 2015-2020, aligning the personnel demand with the number of operations and averaging seasonal variations. As a result of the revision, an updated planned number of ATC licenses was limited by 100 – from initially planned 717 ATCOs (counted in the number of licensed employees; 709.44 FTE) down to 617 until the end of 2019.</p>		
Description of cost-efficiency improvements planned in RP2:	To make the work of PANSA's employees more efficient and to increase the benefits resulting from increased efficiency, it is necessary to motivate employees for further development. The increased level of staff competence, improvement of their knowledge base and skills, will result in increased productivity and efficient use of resources. There is a need to highlighted that as soon as whole process of implementation new ATM system followed by airspace change will be finished, PANSA will offer sufficient airspace throughput and performance as its contribution to the Network operational performance.		
Main changes compared to RP1 (determined and actual costs):	During the implementation of PEGASUS_21 PANSA had to involve temporarily the staff above the normal work time to ensure adequate human resources in order to fulfill all the tasks.		
1.2 Other operating costs			
Content of the cost item:	Materials, Energy, Taxes and charges, Services (including MET), Other Costs		

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Explanations of the planning assumptions and annual variations in the cost item over RP2:	<p>Initial BFAB PP RP2 – dated June 2014</p> <p>The variations in the level of other operating costs during the RP2 are caused by the necessity of the modernization of CNS/ATM infrastructure and other PANSA's technical infrastructure, as well as increased demand for spare parts and parts repair services due to aging of the technical infrastructure, as well due to the expected increase in prices of materials and repair services (inflationary increase). Another component of operating costs are costs of technical inspections and maintenance of facilities and equipment used by PANSA, telecommunications charges, consultancy services, rents and lease payments for rented office space. The infrastructure modernization performed by PANSA should lead to decrease of the technical maintenance costs of individual systems in the following years. The significant position in the other operating costs constitutes the mandatory insurance costs for annually renewed insurance policies, which cover liability and property. Costs of impairment charges belongs also to this group of costs. Trips are the next position of the operating costs. This item consists of business and training trips.</p> <p>The item of other operating costs preliminary includes also MET costs as described in letter a in Additional information – 1. These costs correspond to costs presented under Table 1 for PANSA in line 2.7 (Meteorological services). Presentation of these costs is in line with article 7.2 of the EC Charging Regulation No 391/2013.</p> <p>Revised BFAB PP RP2 for 2017-2019 – dated October 2016</p> <p>The other operating costs were updated according to the best current knowledge regarding signed agreements with subcontractors, intensified investment activities in infrastructure projects and increased PANSA's international activities related to pan-European or regional aviation initiatives e.g.: Baltic FAB, SESAR DM, SESAR JU, A6 Alliance and B4 consortium. The above mentioned factors directly translate into higher costs of training and business trips. Intensified training activities will be mainly dedicated to:</p> <ol style="list-style-type: none"> 1. air traffic management techniques resulting from vertical split deployment, 2. trainings on the new or replaced ATM/CNS systems purchased abroad, 3. the new human factor trainings for ATM personnel (300 employees) in accordance with Commission Regulation (EU) No 2015/340 which include: Cross Training, Team Resource Management, Critical Incident Stress Management, 4. development of managerial techniques, 5. improved English language competencies (internal policies include, among other, regulations which lay down more efficient English learning in English speaking countries). <p>Higher costs are also assumed for repair services and are related to the need to maintain PANSA's Property Plant and Equipment at the level ensuring undistorted operations. Additionally, increase was observed in cost of materials because of changes to PANSA's Accounting Policy thresholds in qualifying low value assets and licenses as OPEX.</p>
Description of cost-efficiency improvements planned in RP2:	Undertaken and planned investment and development activities are aiming for state of the art alternative but proven technical solutions, ensuring the stable functioning of the Agency in the domains of communication, navigation and surveillance. The planned activity is essential to maintain the quality and safety of the services and enable air traffic growth.
Main changes compared to RP1 (determined and actual costs):	<p>It is assumed that after the implementation of new technical solutions such as: VCS, multilateration, GNSS, relative infrastructure maintenance costs should fall by several percent. However, implementation processes can temporarily increase operating costs. Similar effect should have parallel process of CNS/ATM infrastructure rationalization supported by extended cooperation with neighbouring ANSPs.</p> <p>Increase in these costs in initial BFAB PP RP2 as compared to the RP1 results partly from inclusion of some MET costs. For any comparison between the RP2 and the RP1 MET costs should be deducted (in value presented in line 2.7 (Meteorological services) of PANSA Table 1. However in revised BFAB PP RP2 – dated October 2016 – no MET costs are included in PANSA's costs except small amount – 148 kPLN – which was left due to shorter than previously planned period of providing MET services by Radom Meteo and which will be returned to airspace users in 2017 as other revenues (Table 2 point 5.6) after reduction by the applicable adjustments.</p>
1.3 Depreciation	
Composition of the cost item:	Fixed assets, Investments, Intangible assets
Explanations of the planning assumptions and annual variations in the cost item over RP2:	<p>The rationale for the variations in depreciation is an increase of fixed assets, which value increases as a result of planned investments. This is mainly due to priority projects which are CNS infrastructure and Radar investment projects.</p> <p>In the initial BFAB PP RP2 dated June 2014 PANSA adopted the assumption that 85% of planned capex will be realized in the whole RP2 taking into account i.a. historic data. It has to be underlined that PANSA aims to increase the capability of planned and executed investments and to this end introduced internal changes (including personal, organizational and procedural) that should allow to increase the % of investment realization in the RP2 as compared to the RP1 and before.</p> <p>As actual CAPEX in 2015 and up to date for 2016 proved that PANSA is able to execute CAPEX at much higher level than before 2014, for revised BFAB PP RP2 the assumption of 85% is abolished. Depreciation is calculated assuming 100% of CAPEX spending based on</p>

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	revised investment plan.
Description of cost-efficiency improvements planned in RP2:	PANSA's planned tasks have been harmonized with the company's strategy which was aligned with external strategic plans for the whole European ANS system (e.g. ATM Master Plan). Investments are spread over five-year periods in order to reach the strategic milestones including assumed performance measures and to maintain the unchanged high level of safety. Having taken traffic forecasts (en-route and terminal) into consideration, PANSA had to take a number of actions with the aim to maintain safety, improve capacity and cost-effectiveness parameters as well as to reach environmental goals.
Main changes compared to RP1 (determined and actual costs):	The new investment cycle cumulating with the commissioning of a new ATM system will lead to higher depreciation costs, with the annual depreciation costs systematically higher than in preceding years. Moreover, rebuilding of the ATM system will require the purchasing, upgrading or replacing of many devices. The assumption adopted to calculate depreciation that 85% of planned capex will be realized was not adopted in the RP1 and applies only to determined costs for the RP2.
1.4 Cost of capital	
Composition of the cost item:	See Additional Information 1 point e
Explanations of the planning assumptions and annual variations in the cost item over RP2:	See Additional Information 1 point e
Description of cost-efficiency improvements planned in RP2:	See Additional Information 1 point e
Main changes compared to RP1 (determined and actual costs):	See Additional Information 1 point e
1.5 Exceptional items	
Composition of the cost item:	n/a
Explanations of the planning assumptions and annual variations in the cost item over RP2:	n/a
Determined costs for RP2 (by service)	
Explanations of the annual variations in the cost items over RP2:	The cost of services varies in the same manner as cost by nature. For detail information please see items 1.1 – 1.4
Main changes compared to RP1 (determined and actual costs):	
Additional comments	
<p><u>FAB</u></p> <p>The performance plan takes into account also FAB dimension.</p> <p>In order to achieve benefits from FAB cooperation, both ANSP and FAB Council agreed Baltic FAB Implementation Program (BFAB IP). BFAB IP is more detailed version of plans that were submitted to the EC with the submission documents but also alters some of the project to reflect changing environment and situation in both States. BFAB IP defines three main streams of activities covering all areas related to FAB:</p> <ul style="list-style-type: none"> • Optimization of use of the Baltic FAB airspace; • Optimization of ANS provision and supervision within the Baltic FAB; • Best practice sharing and Baltic FAB Development. <p>Each stream of activities encompasses a set of specific projects with their implementation plans and actions towards optimum use of Baltic FAB airspace, beneficial evolution of ANS provision and supervision models and evolution of relationship with the neighboring FABs and neighboring non-EU countries. BFAB IP has been sent to the EC and is awaiting formal acceptance allowing for the formal start of common projects.</p> <p>Both ANSP in preparation to the IP execution, included in their cost base estimated costs of several projects (for example update of the P_21 system) and expected targets reflect assumption that BFAB IP projects will be executed and will achieve expected results.</p> <p><u>SESAR</u></p> <p>For the RP2 for cost planning PANSA also took into account involvement in SESAR activities. PANSA is fully committed to already commenced and future changes in the air traffic management across Europe. Acknowledging a great importance of SESAR as a very challenging, long term Air Traffic Management modernisation project, PANSA wants to actively participate in the formal structures of SESAR as well as in the implementing projects.</p> <p>PANSA's objective is to participate in the SESAR deployment governance process as well as in the SESAR Joint Undertaking (SJU) as a full member. A full membership in the SJU and in the Deployment Manager will give PANSA a unique opportunity to have a real impact on the future SESAR Deployment Programme and will allow to tailor it best to the needs and expectations of the airspace users. SESAR projects aim to define, develop and deploy a modern and harmonised ATM system and its success is expected to contribute to the increase of the current capacity of systems, reducing ATM costs, reducing negative environmental impact and increasing safety.</p> <p>PANSA plans in BFAB PP RP2 dated June 2014 around 2 million PLN every year in the cost base for the RP2 as its minimum contribution to the SESAR JU. Active participation in the SESAR programme requires the necessary human resources to meet</p>	

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all the requirements. The necessary tasks with regards to the SJU would include in particular management and coordination within PANSa and with the external partners, financial activities including reporting in the consortium, research and development tasks deriving from PANSa participation in the SJU.

Moreover, PANSa has formally expressed the interest in the management and implementation levels of the SESAR deployment governance following the European Commission's call for expressing of interests. In the near future PANSa wants to be further involved in this European modernization programme. PANSa intends to enter an industrial partnerships with European ANSPs and other operational stakeholders in order to prepare a common bid to the European Commission for the function of the SESAR Deployment Manager and, in case of selection, to be well organized to demonstrate the capacity to implement common projects.

Revised BFAB PP RP2 for 2017-2019 – dated October 2016

PANSa plans additionally ca. 6,5 million PLN every year since 2017 in the cost base for the RP2 as its minimum contribution to the SESAR JU and other research and development activities.

ANSP:	IMWM	Designated for:	MET
Determined costs for RP2 (by nature)			
1.6 Staff costs			
Composition of the cost item:	Gross payments including: personal and impersonal wages, company's award fund contribution, social insurance contribution, company's social benefit fund contribution, and others; this cost is proportional to the amount of employees rendering meteorological services for civil aviation;		
Explanations of the planning assumptions and annual variations in the cost item over RP2:			
Description of cost-efficiency improvements planned in RP2:			
Main changes compared to RP1 (determined and actual costs):	Due to assumption of limited scope of IMWM's designation values of IMWM costs for the RP2 cannot be compared with those of the RP1. Preliminary values for the RP2 cover smaller number of MET products and therefore are lower.		
1.7 Other operating costs			
Content of the cost item:	Indirect costs proportional to remuneration fund and remuneration-related expenditures; materials and equipment spare parts; third party services; telecommunication, business trips inside and outside the country directly connected with meteorological services for civil aviation; trainings and conferences; lease of premises and meteorological ground; relevant part of core costs.		
Explanations of the planning assumptions and annual variations in the cost item over RP2:			
Description of cost-efficiency improvements planned in RP2:			
Main changes compared to RP1 (determined and actual costs):	Again, as in staff costs, due to assumption of limited scope of IMWM's designation values of IMWM costs for the RP2 cannot be compared with those of the RP1. Preliminary values for the RP2 do not include for example AWOS costs as those did not related to the scope of IMWM designation for the RP2.		
1.8 Depreciation			
Composition of the cost item:	Depreciation of fixed assets		
Explanations of the planning assumptions and annual variations in the cost item over RP2:	Depreciation costs include also small items related to fixed assets allocated to ER services within the scope of IMWM's designation for the RP2.		
Description of cost-efficiency improvements planned in RP2:			
Main changes compared to RP1 (determined and actual costs):	Determined costs for the RP1 included also depreciation on AWOS systems that were planned to be purchased by IMWM in the RP1. This investment was, however, not carried out. Preliminary values for the RP2 do not include AWOS systems as those are not related to the scope of IMWM designation for the RP2.		
1.9 Cost of capital			
Composition of the cost item:	See Additional Information 1 point e		
Explanations of the planning assumptions and annual variations in the cost item over RP2:	See Additional Information 1 point e		
Description of cost-efficiency improvements planned in RP2:	See Additional Information 1 point e		
Main changes compared to RP1 (determined and actual costs):	See Additional Information 1 point e		

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1.10 Exceptional items	
Composition of the cost item:	n/a
Explanations of the planning assumptions and annual variations in the cost item over RP2:	n/a
Determined costs for RP2 (by service)	
Explanations of the annual variations in the cost items over RP2:	The cost of services varies in the same manner as cost by nature. For detail information please see items 1.1 – 1.4
Main changes compared to RP1 (determined and actual costs):	Due to assumption of limited scope of IMWM's designation, values of IMWM costs for the RP2 cannot be compared with those of the RP1. Preliminary values for the RP2 cover smaller number of MET products and therefore are lower.
Additional comments	
The level of IMWM costs for the RP2 was estimated by the CAA on the basis on information and documents provided by IMWM, including the business plan provided in April 2014 as well as historic data.	

b) Assumptions underlying the calculation of pension costs comprised in the determined costs, including a description on the relevant national pension regulations and pension accounting regulations in place and on which the assumptions are based, as well as information whether changes of these regulations are anticipated.

Assumption used for the purpose of establishing determined cost values in the PP with regard to the pension contribution level is the contribution rate on the level of 9,76% (in accordance with the Act on Social Security System (OJ 2009 No 205, item 1585, as amended). This applies to all entities covered by the PP as all of them are subject to mandatory national pension scheme. Apart from this national obligatory system, PANSA has introduces additional pension scheme which is described below.

Entity PANSA

On the date 8th April, 2009 on the basis of administrative decision issued by the Polish Financial Supervision Authority the pension scheme of the PANSA employees pension scheme (hereinafter referred as to the "Scheme") was registered in the employees' pension schemes register.

The Scheme is structured as a group life insurance agreement with an insurance capital fund. The Scheme has been established based on the Employees Pensions Scheme Act, 20th April, 2004 (Journal of Laws of 2004, no 116, item 1207, as amended) and results from two agreements, concluded on 26th May, 2008. The first one was signed by PANSA and trade unions established and operating within a structure of PANSA (hereinafter referred as to the "Company Agreement"). The second one was concluded between PANSA and the insurance company acting as a fund manager (hereinafter referred as to the "Management Agreement"). Both agreements have been concluded for indefinite period.

Pursuant to the provisions stipulated in both agreements, PANSA is obliged to pay basic insurance premium. After registration of the Scheme in the respective register, PANSA acting as the employer is obligated to transfer the insurance premium to the insurance company.

The legal basis to establish the Scheme and to pay and transfer basic insurance premium result from an arrangement with trade unions operating within structure of PANSA (such arrangements shall be treated as an internal law), as well as from the provisions of the international public law (international conventions joined by the Republic of Poland) and provisions European and domestic law.

The termination of the functioning of the Scheme is possible under terms stipulated in the Company Agreement and the Management Agreement. Both of the agreements state that termination of the Scheme is possible if the termination arrangement will be agreed by PANSA with employees representation after three months termination period. PANSA may unilaterally terminate the Scheme with 12 months termination notice and only when prior to that date payment of the basic insurance premium has been postponed or the amount of the basic insurance premium has been decreased (pursuant to § 21 sec. 6 point 7 of the Company Agreement).

The following tables include amounts for PANSA as a whole entity. The division between ER and TNC is impossible due to PANSA's accounting record which does not allow for such presentation.

Initial BFAB PP RP2 – dated June 2014

Description of the "Pay-As-You-Go" pension scheme (obligatory national scheme)

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

Pension assumptions for the "Pay-as-you-go" pension scheme					
ANSP/Entity: PANSA	2015 D	2016 D	2017 D	2018 D	2019 D
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency)	19 614 601	20 507 247	20 652 291	21 107 713	21 495 260
% Contribution rate of the ANSP to Pension scheme	0,0976	0,0976	0,0976	0,0976	0,0976
Number of employees contributing	1889	1928	1958	1978	2003
Pension Payments (in nominal terms in national currency)	19 614 601	20 507 247	20 652 291	21 107 713	21 495 260
Number of pensioners	21	19	31	28	19
Pensionable salary (in nominal terms in national currency)	200 971 281	210 120 739	211 601 543	216 271 848	220 242 153

Description of the Defined contributions pension scheme (additional PANSA scheme)

Pension assumptions for the "Defined contributions" pension scheme					
ANSP/Entity: PANSA	2015 D	2016 D	2017 D	2018 D	2019 D
Total pension costs in respect of "Defined contribution" scheme (in national currency)	22 709 844	23 409 045	24 059 723	24 349 524	24 770 547
% Contribution rate of the ANSP to Pension scheme	0,07	0,07	0,07	0,07	0,07
Number of pensionable staff	1517	1517	1517	1517	1517
Pensionable salary (in national currency)	324 423 633	334 414 067	343 708 832	347 849 261	353 864 917

Information only for ER are presented in tables below, but they include only part of information required above.

Pension assumptions for the "Pay-as-you-go" pension scheme					
ANSP/Entity: PANSA	2015 D	2016 D	2017 D	2018 D	2019 D
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) ER	16 308 208	17 139 966	17 261 051	17 593 900	17 936 932
Total pension costs in respect of "Defined contribution" scheme (in national currency) ER	18 881 693	19 565 290	20 108 961	20 296 045	20 670 028

Revised BFAB PP RP2 for 2017-2019 – dated October 2016

Description of the "Pay-As-You-Go" pension scheme (obligatory national scheme)

Pension assumptions for the "Pay-as-you-go" pension scheme			
ANSP/Entity: PANSA	2017 D	2018 D	2019 D
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency)	21 641 715	21 829 506	22 098 307

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

% Contribution rate of the ANSP to Pension scheme	0,0976	0,0976	0,0976
Number of employees contributing	1 963	1 951	1 939
Pension Payments (in nominal terms in national currency)	21 641 715	21 829 506	22 098 307
Number of pensioners	31	27	17
Pensionable salary (in nominal terms in national currency)	222 845 461	224 772 269	227 526 735

Description of the Defined contributions pension scheme (additional PANSA scheme)

Pension assumptions for the "Defined contributions" pension scheme			
ANSP/Entity: PANSA	2017 D	2018 D	2019 D
Total pension costs in respect of "Defined contribution" scheme (in national currency)	27 863 533	28 801 996	30 114 457
% Contribution rate of the ANSP to Pension scheme	0,07	0,07	0,07
Number of pensionable staff	1 596	1 614	1 634
Pensionable salary (in national currency)	453 174 574	469 322 504	489 605 081

Information only for ER are presented in tables below, but they include only part of information required above.

Pension assumptions for the "Pay-as-you-go" pension scheme			
ANSP/Entity: PANSA	2017 D	2018 D	2019 D
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) ER	18 271 057	18 444 933	18 729 603
Total pension costs in respect of "Defined contribution" scheme (in national currency) ER	23 523 838	24 336 368	25 523 757

Entity **CAA**

Costs of pension contribution for CAA are presented in the following table.

Pension assumptions for the "Pay-as-you-go" pension scheme					
ANSP/Entity: CAA	2015 D	2016 D	2017 D	2018 D	2019 D
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) for CAA	2 762 104	2 817 346	2 873 693	2 931 167	2 989 791
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) for ANS (ER+TNC)	512 124	522 006	520 983	528 272	541 470
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) for ER	311 266	317 712	317 089	321 526	330 754
Total pension costs in respect of "Pay as you go" scheme (in nominal terms in national currency) for TNC	200 859	204 294	203 893	206 746	210 716

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

c) Interest rate assumptions for loans financing the provision of air navigation services, including relevant information on loans (amounts, duration, etc.) and explanation for the (weighted) average interest on debt used to calculate the cost of capital pre tax rate and the cost of capital comprised in the determined costs,

Not applicable. No entity plans loans in RP2.

d) If applicable, a description of any significant restructuring planned during the reference period including the level of restructuring costs and a justification for these costs in relation to the net benefits to the airspace users over time;

Not applicable.

e) if applicable, restructuring costs approved from previous reference periods to be recovered

Not applicable for RP1.

f) The level/composition of costs incurred following Article 6(2)(a) and (b) of Implementing Regulation (EU) No 391/2013 and included in the determined costs;

STATE/NSA	Poland (CAA + Eurocontrol costs)
Determined costs for RP2 (by nature)	
1.1 Staff costs	
Content of the cost item:	Staff remuneration (including salaries), social security contributions, Labour Fund contributions, Employee Benefit Fund contributions, medical staff assistance
Explanations of the planning assumptions and annual variations in the cost item over RP2:	<p>For the purpose of staff costs forecasting the following elements were taken into account:</p> <ul style="list-style-type: none"> • most recent CAA ER costs forecast for 2014 (based on the current total CAA budget and staff allocated to ER activities) – used as baseline for the RP2 ANS cost planning, • expected evolution of CAA NSA tasks over each year of the RP2, • assumed changes in the total CAA budget resulting from inflationary increase; it was assumed that total CAA budget after 2015 will increase at lower rate than forecasted inflation (2% p.a.), • assumed work efficiency improvements (see next line of the table).
Description of cost-efficiency improvements planned in RP2:	Cost forecast assumes annual efficiency improvement of 2% as regards ANS staff work efficiency. As a consequence, work efficiency shall be improved by 10% over the whole RP2.
Main changes compared to RP1 (determined and actual costs):	CAA staff cost forecasting methodology remains as used for the RP1.
1.2 Other operating costs	
Content of the cost item:	<p>For CAA costs: purchase of materials, equipment, external services, energy, utilities, rental costs, travel expenses, training costs, international organizations contributions, investment expenditures.</p> <p>Additionally these costs include also Eurocontrol cost base allocated to Poland.</p>
Explanations of the planning assumptions and annual variations in the cost item over RP2:	For CAA: see item 1.1. above – the same assumptions were applied to other operating costs. Additionally for changes in the total CAA budget the planning takes into account necessity to perform investments in order to maintain technical and organizational capacity of CAA tasks execution.
Description of cost-efficiency improvements planned in RP2:	<p>For CAA cost forecast assumes annual efficiency improvement of 2% as regards ANS staff work efficiency. As a consequence, work efficiency shall be improved by 10% over the whole RP2.</p> <p>For Eurocontrol costs they were included in amounts communicated by Eurocontrol converted into national currency (PLN) using exchange rate presented in chapter 1 of the performance plan (macroeconomic forecasts).</p>
Main changes compared to RP1 (determined and actual costs):	Cost forecasting methodology remains as used for the RP1.
1.3 Depreciation	

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

Content of the cost item:	n/a																																																	
Explanations of the planning assumptions and annual variations in the cost item over RP2:	n/a																																																	
Description of cost-efficiency improvements planned in RP2:	n/a																																																	
Main changes compared to RP1 (determined and actual costs):	No changes.																																																	
1.4 Cost of capital																																																		
Content of the cost item:	n/a																																																	
Explanations of the planning assumptions and annual variations in the cost item over RP2:	n/a																																																	
Description of cost-efficiency improvements planned in RP2:	n/a																																																	
Main changes compared to RP1 (determined and actual costs):	No changes.																																																	
1.5 Exceptional items																																																		
Content of the cost item:	n/a																																																	
Explanations of the planning assumptions and annual variations in the cost item over RP2:	n/a																																																	
Determined costs for RP2 (by service)																																																		
Explanations of the annual variations in the cost items over RP2:	See points 1.1 and 1.2 above. All CAA and Eurocontrol costs: Supervision costs cover costs of the CAA, while Eurocontrol costs are presented under Other state costs.																																																	
Main changes compared to RP1 (determined and actual costs):	No changes.																																																	
Additional comments																																																		
For CAA actual 2013 ER costs are lower than assumed in the performance plan for RP1. Current cost forecast for 2014 is also significantly lower than previous forecast presented in the performance plan for RP1. It results mainly from the fact that the CAA total budget is lower than originally assumed. Share of CAA ANS costs, and among them ER and TNC share, remains at a similar level over the whole RP2 – see table below:																																																		
<table><tr><th></th><th>2014*</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th></tr><tr><td>Total CAA ANS costs (ER+TNC)</td><td>10 074 635</td><td>10 638 303</td><td>10 814 305</td><td>10 819 786</td><td>10 943 264</td><td>11 170 883</td></tr><tr><td>% change (n/(n-1))</td><td></td><td>5,59%</td><td>1,65%</td><td>0,05%</td><td>1,14%</td><td>2,08%</td></tr><tr><td>% share in total CAA budget</td><td>18,54%</td><td>18,54%</td><td>18,53%</td><td>18,13%</td><td>18,02%</td><td>18,11%</td></tr><tr><td>CAA ER costs</td><td>6 192 371</td><td>6 465 889</td><td>6 581 989</td><td>6 585 324</td><td>6 660 478</td><td>6 823 678</td></tr><tr><td>% change (n/(n-1))</td><td></td><td>4,42%</td><td>1,80%</td><td>0,05%</td><td>1,14%</td><td>2,45%</td></tr><tr><td>% share in total CAA ANS costs</td><td>61,46%</td><td>60,78%</td><td>60,86%</td><td>60,86%</td><td>60,86%</td><td>61,08%</td></tr></table>			2014*	2015	2016	2017	2018	2019	Total CAA ANS costs (ER+TNC)	10 074 635	10 638 303	10 814 305	10 819 786	10 943 264	11 170 883	% change (n/(n-1))		5,59%	1,65%	0,05%	1,14%	2,08%	% share in total CAA budget	18,54%	18,54%	18,53%	18,13%	18,02%	18,11%	CAA ER costs	6 192 371	6 465 889	6 581 989	6 585 324	6 660 478	6 823 678	% change (n/(n-1))		4,42%	1,80%	0,05%	1,14%	2,45%	% share in total CAA ANS costs	61,46%	60,78%	60,86%	60,86%	60,86%	61,08%
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*current forecast 04.2014																																																		
Increase in CAA budget is necessary to enable the CAA perform its functions, including those related to ANS. It has to be underlined that salaries at the CAA has been frozen (in nominal terms) since 2008. Despite significant increase in ANS related tasks (including performance scheme introduction) the CAA has not been supported by additional FTEs, including such that could allow increase in the level of ANS-related employment. In 2013 the CAA budget has been further reduced by 7% (in nominal terms). Due to budgetary restrictions over the last 2 years (2013-2014) the CAA was not able to include investment expenditures in its budget forecasts, what resulted in lack of new investments, including replacement investments. As a consequence, significant part of currently used equipment, including computer hardware and software,																																																		

En route Charging Zone: Poland Reference Period 2 (2015-2019)

requires modernization and replacement. Therefore it was necessary to plan additional investment expenditure, part of which should be allocated also to ANS, including ER.

Calculation of Eurocontrol costs is based on Eurocontrol budget as presented below. The table presents also the exchange rate used for purpose of performance plan for RP2.

	2015	2016	2017	2018	2019
Eurocontrol total costs (000 EUR)	499 861	522 712	541 906	559 604	577 682
Eurocontrol costs - Poland (000 EUR)*	10 112	10 574	10 962	11 320	11 686
% change (n/(n-1))		4,57%	3,67%	3,27%	3,23%
Poland % share in total EUROCONTROL costs	2,02%	2,02%	2,02%	2,02%	2,02%
PLN/EUR exchange rate	4,18	4,18	4,18	4,18	4,18
Eurocontrol costs - Poland (000 PLN)	42 268	44 199	45 821	47 318	48 847
% change (n/(n-1))		4,57%	3,67%	3,27%	3,23%

*2015-2019 based on 2014 sharing keys.

g) Description of how the amounts resulting from uncontrollable costs factors in RP1 have been taken into account in the planned determined costs for RP2.

As the only actual uncontrollable item for the RP1 is EUROCONTROL contribution, no changes in assumptions were made resulting from the uncontrollable cost factors.

h) Assumptions for costs exempt from cost-sharing (deemed outside the control of the ANSP, Member State or qualified entities concerned) relating to RP2 costs.

Entity/ies concerned:	PANSA, IMWM, CAA
Costs exempt from cost-sharing in RP2 - Costs attributed to each in the Performance Plan, description and assumptions on which these costs are based.	
(i) unforeseen changes in national pensions law, pension accounting law or pension costs resulting from unforeseen financial market conditions	<p>See AI-4 b) for the assumptions</p> <p>As there is not DBO pension scheme in place, only possible changes resulting from national legislation on pensions will be taken into account, that is possible increase or decrease in the percentage contribution (currently 9,76%). The assessment assumes increase of 1 percentage point in the level of pension contribution rate: from 9,76% to 10,76%.</p> <p>I. PANSA</p> <p>Initial BFAB PP RP2 – dated June 2014</p> <p>The share of the costs of the pension contributions in the total staff costs (gross remunerations with all applicable social contributions, Labour Fund and bridge pension scheme) used for the calculation of the determined costs (total ER+TNC) is equal to 4,11% in 2015, 4,09% in 2016. 3,98% in 2017, 3,95% in 2018. 3,90% in 2019.</p> <p>The impact of the change in the pension contribution level would cause changes in the total determined costs of PANSA (ER and TNC) of:</p> <ul style="list-style-type: none"> • PLN 2 002 845 in 2015, • PLN 2 095 260 in 2016, • PLN 2 100 815 in 2017, • PLN 2 147 504 in 2018, • PLN 2 186 799 in 2019. <p>Consequently, the share in the total staff costs would increase up to 4,51 % in 2015, 4,49 % in 2016. 4,37% in 2017, 4,34 % in 2018. 4,28% in 2019.</p> <p>The impact of the possible change in this PANSA's unforeseeable cost on the ER determined costs is presented jointly with the impact of the possible change in the PANSA's costs connected with national taxation law in the AI 4 letter h) point (iv).</p>

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

	<p>Revised BFAB PP RP2 for 2017-2019 – dated October 2016</p> <p>The share of the costs of the pension contributions in the total staff costs used for the calculation of the determined costs: ER revised and terminal is equal to 3,82% in 2017, 3,71% in 2018. 3,61% in 2019.</p> <p>The impact of the change in the pension contribution level would cause changes in the revised en-route determined costs and terminal costs of PANSA of:</p> <ul style="list-style-type: none"> • PLN 2 201 405 in 2017, • PLN 2 221 207 in 2018, • PLN 2 248 556 in 2019. <p>Consequently, the share in the total staff costs would increase up to 4,19% in 2017, 4,08 % in 2018. 3,96 % in 2019.</p> <p>The impact of the possible change in this PANSA's unforeseeable cost on the revised ER determined costs is presented jointly with the impact of the possible change in the PANSA's costs connected with national taxation law in the AI 4 letter h) point (iv).</p> <p style="text-align: center;">II. CAA</p> <p>There will be no impact of changes in the uncontrollable costs on the CAA determined costs for ER costs. This is due to the fact that in accordance with rules and practice applicable to budgetary units, such as the CAA, the total budget is a constant maximum that once established cannot change. In case when due to changes in applicable social security regulations these expenditures form the CAA budget would increase, the CAA would be required to limit other expenditures to as not to increase the level of the total budget.</p>
(ii) significant changes in interest rates on loans, which finance costs arising from the provision of air navigation services	Not applicable. No entity plans taking up a loan.
(iii) unforeseen new cost items not covered in the Performance Plan, but required by law	<p>Revised BFAB PP RP2 for 2017-2019 – dated October 2016</p> <p>Some of PANSA HQ are located at pieces of land that were previously (before WW II) owned by Branicki family. After the WW II land in Poland was to much extent nationalised and had been used for many years for different state purposes, i.a. for airports and related public services. Within 2012 the heirs of the last pre-war owner of said land properties currently used by PANSA have placed initial claims to the courts of general jurisdiction concerning fees for the non-contractual usage of selected plots of land as well as for the compensation due to the deterioration of the land. This process increased substantially in 2014 as the initial claims seemed to end up in judgments favourable to the heirs of pre-WW II owners of land.</p> <p>Currently, payment of the said compensation by PANSA is highly probable, however exact amounts are not yet decided. As the compensation to be paid in the coming years meets criteria defined in IAS37, PANSA needs to make provisions for the compensation. These provisions were not included in other operating costs in the original BFAB PP RP2. As the amounts of payment are not known at this point in time – they will be decided by the court in its judgement, which is currently expected in 2018 – and as the expected court judgement will be based on legal provisions, these costs are regarded as “uncontrollable” (unforeseen new cost items not covered in the performance plan, but required by law) to be recovered after RP2 on the basis of actual payments related to the use of land over the period 01.01.2015-31.12.2019 (RP2). For clarity reasons, the table below provides information on the amounts of the costs included in the determined costs in the revised BFAB PP RP2 and preliminary actual values which will be regarded as “uncontrollable” for 2015.</p>

En route Charging Zone: Poland
Reference Period 2 (2015-2019)

	<p>Table 1. Determined, actual and anticipated costs related to Branicki Family (nominal, '000PLN)</p> <table><tr><td></td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>TOTAL</td></tr><tr><td>ER-determined</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>ER – actual</td><td>2 523*</td><td></td><td></td><td></td><td></td><td>2 523*</td></tr><tr><td>TNC – determined</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>TNC – actual</td><td>553*</td><td></td><td></td><td></td><td></td><td>553*</td></tr><tr><td>Total - determined</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Total – actual</td><td>3 076*</td><td></td><td></td><td></td><td></td><td>3 076*</td></tr></table> <p><i>* preliminary assumptions, based on PANSa own valuation</i></p>		2015	2016	2017	2018	2019	TOTAL	ER-determined	0	0	0	0	0	0	ER – actual	2 523*					2 523*	TNC – determined	0	0	0	0	0	0	TNC – actual	553*					553*	Total - determined	0	0	0	0	0	0	Total – actual	3 076*					3 076*
	2015	2016	2017	2018	2019	TOTAL																																												
ER-determined	0	0	0	0	0	0																																												
ER – actual	2 523*					2 523*																																												
TNC – determined	0	0	0	0	0	0																																												
TNC – actual	553*					553*																																												
Total - determined	0	0	0	0	0	0																																												
Total – actual	3 076*					3 076*																																												
(iv) unforeseen changes in national taxation law	<p>For the purpose of establishing determined cost values in the PP with regard to the property tax, the tax at the level of 2% was used (local regulations). For the purpose of the assessment of unforeseen changes in national taxation law the increase of 1 percentage point of the level of property tax rate was assumed (from 2% to 3%).</p> <p>I. PANSa</p> <p>Initial BFAB PP RP2 – dated June 2014</p> <p>The possible impact of the 1 percentage point change in the property tax rate would cause the increase in the determined costs (ER and TNC) by:</p> <ul style="list-style-type: none">• PLN 665 699 in 2015,• PLN 682 002 in 2016,• PLN 699 423 in 2017,• PLN 717 044 in 2018,• PLN 734 992 in 2019. <p>The table below presents the impact of the possible changes of property tax and pension regulations on PANSa's ER determined costs (000 PLN).</p> <table><tr><td>000 PLN</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td></tr><tr><td>ER</td><td>2 228</td><td>2 326</td><td>2 350</td><td>2 395</td><td>2 445</td></tr></table> <p>Revised BFAB PP RP2 for 2017-2019 – dated October 2016</p> <p>The possible impact of the 1 percentage point change in the property tax rate would cause the increase in the revised determined costs (ER and TNC) by:</p> <ul style="list-style-type: none">• PLN 801 275 in 2017,• PLN 843 024 in 2018,• PLN 887 440 in 2019. <p>The table below presents the impact of the possible changes of property tax and pension regulations on PANSa's ER revised determined costs (000 PLN).</p> <table><tr><td>000 PLN</td><td>2017</td><td>2018</td><td>2019</td></tr><tr><td>ER</td><td>2 571</td><td>2 625</td><td>2 695</td></tr></table>	000 PLN	2015	2016	2017	2018	2019	ER	2 228	2 326	2 350	2 395	2 445	000 PLN	2017	2018	2019	ER	2 571	2 625	2 695																													
000 PLN	2015	2016	2017	2018	2019																																													
ER	2 228	2 326	2 350	2 395	2 445																																													
000 PLN	2017	2018	2019																																															
ER	2 571	2 625	2 695																																															
(v) unforeseen changes in costs or revenues stemming from international agreements	<p>Applicable to EUROCONTROL costs. For assumptions see Additional information 4 point f above.</p>																																																	