Performance Plan

Poland

Fourth Reference Period (2025-2029)

Status:	Draft performance plan (Art. 12 of IR 2019/317)
Date of issue:	30 September 2024

Table of Contents

STRUCTURE AND PURPOSE

TABLE OF CONTENT

SIGNATORIES

1 INTRODUCTION
- 1.1 THE SITUATION
- 1.2 TRAFFIC FORECASTS
- 1.3 STAKEHOLDER CONSULTATION
- 1.4 LIST OF AIRPORTS SUBJECT TO THE PERFORMANCE AND CHARGING REGULATION
- 1.5 SERVICES UNDER MARKET CONDITIONS
- 1.6 FAB PROCESS
- 1.7 SIMPLIFIED CHARGING SCHEME

2 INVESTMENTS
- 2.0 SUMMARY OF INVESTMENTS
- 2.1 INVESTMENTS ANSP

3 PERFORMANCE TARGETS AT LOCAL LEVEL
- 3.1 SAFETY TARGETS
  - *3.1.1 Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs*
- 3.2 ENVIRONMENT TARGETS
  - *3.2.1 Environment KPI #1: Horizontal en route flight efficiency (KEA)*
- 3.3 CAPACITY TARGETS
  - *3.3.1 Capacity KPI #1: En route ATFM delay per flight*
  - *3.3.2 Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight*
  - *3.3.3 ATCOs planning and training*
- 3.4 COST-EFFICIENCY TARGETS
  - *3.4.1 Cost-efficiency KPI #1: Determined unit cost (DUC) for en route ANS*
  - *3.4.2 Cost-efficiency KPI #2: Determined unit cost (DUC) for terminal ANS*
  - *3.4.3 Cost allocation - ATSP/CNSP*
  - *3.4.4 Cost allocation - METSP*
  - *3.4.5 Cost allocation - NSA*
  - *3.4.6 Determined costs assumptions*
  - *3.4.7 Pension assumptions*
  - *3.4.8 Interest rate assumptions for loans financing the provision of air navigation services*
  - *3.4.9 Additional determined costs related to measures necessary to achieve the en route capacity targets*
  - *3.4.10 Restructuring costs*
- 3.5 ADDITIONAL KPIS / TARGETS
- 3.6 INTERDEPENDENCIES AND TRADE-OFFS

4 CROSS-BORDER INITIATIVES AND SESAR IMPLEMENTATION
- 4.1 CROSS-BORDER INITIATIVES AND SYNERGIES AT ANSP LEVEL
- 4.2 DEPLOYMENT OF SESAR COMMON PROJECT
- 4.3 CHANGE MANAGEMENT

5 TRAFFIC RISK SHARING ARRANGEMENTS AND INCENTIVE SCHEMES
- 5.1 TRAFFIC RISK SHARING PARAMETERS
- 5.2 CAPACITY INCENTIVE SCHEMES
  - *5.2.1 Capacity incentive scheme - Enroute*
  - *5.2.2 Capacity incentive scheme - Terminal*
- 5.3 OPTIONAL INCENTIVES

6 IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 MONITORING OF THE IMPLEMENTATION PLAN

6.2 NON-COMPLIANCE WITH TARGETS DURING THE REFERENCE PERIOD

7 ANNEXES

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)

ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)

ANNEX C. CONSULTATION

ANNEX D. LOCAL TRAFFIC FORECASTS

ANNEX E. INVESTMENTS

ANNEX F. BASELINE VALUES (COST-EFFICIENCY)

ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING

ANNEX H. RESTRUCTURING MEASURES AND COSTS

ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES

ANNEX J. OPTIONAL KPIs AND TARGETS

ANNEX K. OPTIONAL INCENTIVE SCHEMES

ANNEX L. JUSTIFICATION FOR SIMPLIFIED CHARGING SCHEME

ANNEX M. COST ALLOCATION

ANNEX N. CROSS-BORDER ANS

ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS

ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS

ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS

ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS

ANNEX S. INTERDEPENDENCIES

ANNEX T. OTHER MATERIAL

ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE

ANNEX V. CONSISTENCY OF INVESTMENTS WITH ATM MASTER PLAN

ANNEX Y. RESPONSES TO COMPLETENESS VERIFICATION

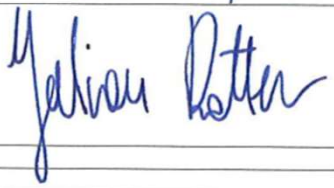
ANNEX Z. CORRECTIVE MEASURES*

** Only as per Article 15(6) of the Regulation*

Signatories

Performance plan details	
State name	Poland
Status of the Performance Plan	Draft performance plan (Art. 12 of IR 2019/317)
Date of issue	
Date of adoption of Draft Performance Plan	
Date of adoption of Final Performance Plan	30 September 2024

We hereby confirm that the present performance plan is consistent with the scope of Implementing Regulation (EU) No 2019/317 pursuant to Article 1 of Regulation (EU) No 2019/317 and Article 7 of Regulation (EC) No 549/2004.

Name, title and signature of representative	
On behalf of the Minister of Infrastructure - Secretary of State Maciej Lasek	
Acting Director General of Civil Aviation Authority of the Republic of Poland Julian Rotter	
Additional comments	

Document change record		
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Draft	05 August 2024	Version for stakeholders consultations.
Final version	30 September 2024	Final version of the Draft Performance Plan (Art. 12 of IR 2019/317)

SECTION 1: INTRODUCTION

1.1 The situation

1.1.1 - List of ANSPs and geographical coverage of services
1.1.2 - Other entities in the scope of the Performance and Charging Regulation as per Article 1(2) last para.
1.1.3 - Charging zones (see also 1.4-List of Airports)
1.1.4 - Other general information relevant to the plan

1.2 - Traffic Forecasts

1.2.1 - En route
1.2.2 - Terminal

1.3 - Stakeholder consultation

1.3.1 - Overall outcome of the consultation of stakeholders on the performance plan
1.3.2 - Specific consultation requirements of ANSPs and airspace users on the performance plan
1.3.3 - Consultation of stakeholder groups on the performance plan

1.4 - List of airports subject to the performance and charging Regulation

1.4.1 - Airports as per Article 1(3) (IFR movements ≥ 80 000)
1.4.2 Other airports added on a voluntary basis as per Article 1(4)

1.5 - Services under market conditions

1.6 - Process followed to develop and adopt a FAB Performance Plan

1.7 - Establishment and application of a simplified charging scheme

1.7.1 - Scope of the simplified charging scheme
1.7.2 - Conditions for the application of the simplified charging scheme

Annexes of relevance to this section

ANNEX C. CONSULTATION
ANNEX D. LOCAL TRAFFIC FORECASTS
ANNEX L. JUSTIFICATION FOR SIMPLIFIED CHARGING SCHEME
ANNEX Y. RESPONSES TO COMPLETENESS VERIFICATION

1 - INTRODUCTION

1.1 - The situation

NSA(s) responsible for drawing up the Performance Plan	Polish Civil Aviation Authority acting as NSA

1.1.1 - List of ANSPs and geographical coverage and services

Number of ANSPs	5

ANSP name	Services	Type of entity	Geographical scope
PANSA	ANSP (ATS,CNS, AIS, SAR coordination)	ATSP/CNSP	Flight Infromation Region Warszawa, all airports concerned.
IMWM	MET	METSP	Flight Infromation Region Warszawa (excluding EPRA TMA and CTR, EPSY TMA and CTR/ATZ, EPBY TMA and CTR/ATZ, EPZG TMA and CTR and EPSC TMA and CTR).
Airport Meteo Sp. z o.o.	MET	METSP	EPRA: TMA and CTR.
Warmia i Mazury Sp. z o.o.	MET, ATS (AFIS), CNS (COM)	ATSP/CNSP	MET: EPSY TMA, CTR and ATZ; AFIS: EPSY ATZ; COM for TWR EPSY (outside WiM cost bases, included in PANSA costs base under other operating costs) and AFIS EPSY.
Port Lotniczy Bydgoszcz S.A.	ATS (AFIS), MET	ATSP/CNSP	MET: EPBY TMA, CTR and ATZ; AFIS: EPBY ATZ.

Remarks:
At the moment of preparing the draft Performance Plan no MET provider is designated for EPSC TMA and CTR and EPZG TMA and CTR for RP4.
IMWM has an adequate certificate for service provision at EPZG and EPSC while Airport Meteo Sp. z o.o. has a certificate for EPZG.
Regardless of the process of designating the above-mentioned locations, the costs of providing services were included in the IMWM cost bases on a provisional basis.

Cross-border arrangements for the provision of ANS services*

** To be reported in the performance plan: any cross-border area or group of adjacent cross-border areas of a size above 500 km^2, unless the area or group of areas concerned has fewer than 7,500 controlled flight movements on average per year*

Number of cross-border area(s) where the ANSP(s) of the Member State provide(s) services in another State's charging zone(s)	1

Cross-border service provision in the charging zone(s) of another State		
ANSP Name	Name of the cross-border area(s)	Charging zone in which services are provided
PANSA	SOUTH OF DESEN	PRAHA FIR – delegation of ATC from LKAA ACC to EPWW ACC and APP EPKK

Number of cross-border area(s) where ANSP(s) from another State provide(s) services in the charging zone(s) covered by the performance plan	3

Cross-border service provision in the charging zone(s) covered by the performance plan		
ANSP Name	Name of the cross-border area(s)	Charging zone in which services are provided
LFV Group Air Navigation Services (ATCC Malmö)	MIDSEA AREA RÖNNE SOUTH	FIR EPWW
ANS of the Czech Republic (ACC Praha)	WEST of OKX SOUTH of KŁODZKO	FIR EPWW
Austro Control GmbH via DFS Deutsche Flugsicherung GmbH	CTR HERINGSDORF	FIR EPWW

1.1.2 - Other entities in the scope of the Performance and Charging Regulation as per Article 1(2) last para.

Number of other entities	2

Entity name	Domain of activity	Rationale for inclusion in the Performance Plan
Civil Aviation Authority of the Republic of Poland (NSA)	Supervision	Only the part of Polish CAA's budget attributable to activities on supervision of Air Navigation Service Providers related to NSA & partially MS obligations are included in the costs bases for air navigation charges. This is in line with Polish Aviation Act and EU Single European Sky Regulations.
EUROCONTROL	Other/Network	Part of EUROCONTROL budget attributable to Poland's cost base.

1.1.3 - Charging zones (see also 1.4-List of Airports)

En-route	Number of en-route charging zones	1

En-route charging zone 1	Poland

Terminal	Number of terminal charging zones	2

Terminal charging zone 1	Poland - EPWA
Terminal charging zone 2	Poland - Others

1.1.4 - Other general information relevant to the plan

Relevant local circumstances with high significance for performance target setting
Poland is a frontline State and especially since 2022 the conditions in which performance of PANSA is provided have been heavily affected by geopolitical developments in Eastern Europe (war in Ukraine, tense relationship with Russia and Belarus). The expectation from PANSA have been also increased. The war in Ukraine and the closure of the airspace beyond PL eastern border strongly impacted traffic flows and traffic levels (especially in the en-route area) in FIR Warszawa. Poland experienced huge drop in overflights, the level of which is still 38% below 2019 value (Jan-May 2024), affecting total volume of traffic (which is currently ca. 18% below 2019). Historically, the overflights were performed mostly with larger aircraft and on longer routes, generating the highest number of ER SU – the geopolitical situation in the region has led to larger drop in ER SU (currently ca. 22%) than in IFR MVS. Unlike in other parts of Europe, the number of SU in PL remains much below 2019 level, what has a direct impact on the cost-efficiency indicators. Therefore a dedicated, adjusted approach has to be adopted when analysing the long-term DUC trend for Poland, in line with the declaration of the European Commission during the RP4 Union-wide targets setting process. It needs to be emphasised that the ratio of traffic representing pure transit traffic in FIR Warszawa has diminished, while the share of traffic to/from Poland (evolving traffic) has increased, making the traffic complexity higher. This change in the traffic structure also negatively impacted PANSA revenues from en-route charges (historically, transit traffic generated the largest number of SU and thereby revenues). At the same time, operational challenges became higher as the geopolitical situation affected on the one hand the airspace availability in Poland for civil traffic (significant part of the airspace along Poland’s eastern border is reserved for MIL traffic) as well as increased complexity. Being EU/NATO/NM border State has always led to lower traffic predictability (out-of-area traffic), which required application of measures to mitigate greater volatility of unregulated civil and military traffic and necessitated use of customized solutions in the area of ATM and flow management. Past experience shows that EU/NM border states experience higher volatility in terms of traffic levels, what results in greater difficulty in traffic forecasting (possible lower reliability of forecasting, especially under the current circumstances) – therefore PL should be prepared for serving traffic even above STATFOR high forecasts. With the war in Ukraine the unpredictability and volatility further increased. These elements are expected to impact capacity indicator for RP4. There is also a risk that any unpredictable development of the political tensions in the region or unpredictable individual events in the proximity of PL eastern border may generate additional restrictions and related delays. The current situation also necessitates close cooperation and coordination with the military at various levels. Due to the proximity of war, the scope of military exercises in FIR Warszawa can also be expected to be higher. The military aspect may be also expected to significantly impact

performance in terms of new technologies used by the military like e.g. F35 fighters (as a frontline State, Poland may be specifically impacted, even if the idea of North Sea is materialized). It also has to be clearly indicated that the war-related conditions lasting over 2 years are impacting the fatigue of the PANSA staff, especially operational and technical team.
The distorted (due to the closure or much limited availability of the airspace beyond the eastern European Union border) traffic flows also have a direct negative impact on the local environmental performance (HFE indicators) – for further information see Annex P to draft RP4 PP.
The unpredictability of further development of the geopolitical situation and especially the network needs require PANSA to be ready for the traffic recovery. According to a scenario prepared by NM for Poland (and the region bordering on Russia/Belarus/Ukraine), a return to the traffic flows from before the outbreak of the war (from 2019) would significantly affect the volume of traffic in FIR Warszawa. PANSA simulation done on the basis of the NM scenario shows that a return to traffic flows from 2019 could mean an increase in IFR MVS at the end of RP4 by up to 25% vs. 2019. These developments, which are expected to take place over longer run (also RP5), require appropriate operational preparation by PANSA to limit or eliminate the negative aspects of the potential rapid increase in traffic. This impacts the cost-efficiency indicator in RP4 – the costs planned for RP4 and the resulting DUC cannot be reduced as this would negatively impact PANSA current complex service provision and especially readiness to serve traffic once it fully recovers and further increases and would lead to significant distortions in the European network. The necessary readiness for traffic increase requires maintenance and further increase in the number of ATCOs over the RP4 timeframe. It also mandates continuation of investments increasing flexibility in capacity delivery, based on data exchange and reliability of CNS infrastructure in RP4. This includes also investments related to new ATM system (iTEC). These investments require also increase in ATSEP personnel to implement and maintain them, as well as training. PANSA understanding is (based on the consultations with the NM) that this is the right way to provide reliable and safe air navigation services for the short and medium-term perspective, as reducing the ATCO number and investments would lead only to immediate and long lasting deterioration of ATS in Poland, directly impacting the civil traffic and also civil-military abilities at this particular moment (incl. e.g. also Rzeszów Airport) and directly affecting the future of PANSA. Consideration must be given to the observed increased GNSS interferences (jamming and spoofing) in the Polish airspace. This requires maintenance and development of ground-based NAV systems (ILS/DME, DME/DME and VOR/DME at non precision approaches) and continuous monitoring & adjustments of the PBN Transition Plan for Poland.

For information on macroeconomic and labour market conditions impacting RP4 target setting - please see Annex R.

Additional information
Not aplicable

1.2 - Traffic Forecasts

1.2.1 - En route

En route Charging zone 1 | **Poland**

En route traffic forecast | STATFOR February 2024 (Base)

STATFOR February 2024 (Base)	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	627	697	747	783	816	841	867	888	3,5%
IFR movements (yearly variation in %)		11,2%	7,1%	4,8%	4,3%	3,0%	3,1%	2,5%	
En route service units (thousands)	3 129	3 537	3 823	4 039	4 216	4 358	4 506	4 630	3,9%
En route service units (yearly variation in %)		13,0%	8,1%	5,7%	4,4%	3,4%	3,4%	2,8%	

Local Forecast	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	627	697	747	786,289	823,038	852,920	881,905	910,842	4,1%
IFR movements (yearly variation in %)		11,2%	7,1%	5,3%	4,7%	3,6%	3,4%	3,3%	
En route service units (thousands)	3 129	3 537	3 823	4 065	4 255	4 425	4 590	4 757	4,5%
En route service units (yearly variation in %)		13,0%	8,1%	6,3%	4,7%	4,0%	3,7%	3,6%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
Own elaboration based on EUROCONTROL data. Specific local factors justifying not using the STATFOR base forecasts are provided in Annex D.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

1.2.2 - Terminal

Terminal Charging zone 1 | **Poland - EPWA**

Terminal traffic forecast | STATFOR February 2024 (Base)

STATFOR February 2024 (Base)	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	72	83	88	93	97	100	102	104	3,6%
IFR movements (yearly variation in %)		14,3%	6,0%	6,3%	4,5%	2,5%	2,6%	2,0%	
Terminal service units (thousands)	83	99	106	112	118	122	125	128	3,9%
Terminal service units (yearly variation in %)		18,7%	6,8%	5,8%	5,5%	3,0%	2,9%	2,4%	

Local Forecast	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	72	83	88	93,596	98,182	101,224	104,155	107,117	4,1%
IFR movements (yearly variation in %)		14,3%	6,0%	6,8%	4,9%	3,1%	2,9%	2,8%	
Terminal service units (thousands)	83	99	106	112	119	123	127	131	4,5%
Terminal service units (yearly variation in %)		18,6%	6,9%	6,4%	5,9%	3,7%	3,2%	3,2%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
Own elaboration based on EUROCONTROL data. Specific local factors justifying not using the STATFOR base forecasts are provided in Annex D.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

Terminal Charging zone 2	**Poland - Others**
Terminal traffic forecast	STATFOR February 2024 (Base)

STATFOR February 2024 (Base)	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	119	134	146	152	160	166	172	177	4,0%
IFR movements (yearly variation in %)		13,0%	8,8%	4,5%	5,4%	3,5%	3,6%	3,0%	
Terminal service units (thousands)	141	160	177	186	197	204	213	220	4,4%
Terminal service units (yearly variation in %)		13,3%	10,8%	5,0%	6,0%	3,8%	4,3%	3,2%	

Local Forecast	2022A	2023A	2024	2025	2026	2027	2028	2029	CAGR 2024-2029
IFR movements (thousands)	119	134	145,672	152,812	161,612	168,159	174,735	181,265	4,5%
IFR movements (yearly variation in %)		13,0%	8,8%	4,9%	5,8%	4,1%	3,9%	3,7%	
Terminal service units (thousands)	141	162	177	187	198	207	217	225	4,9%
Terminal service units (yearly variation in %)		15,3%	8,9%	5,4%	6,4%	4,4%	4,5%	4,0%	

Specific local factors justifying not using the STATFOR base forecasts (provide justification below or refer to Annex D for more detailed explanation)
Own elaboration based on EUROCONTROL data. Specific local factors justifying not using the STATFOR base forecasts are provided in Annex D.

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives and ANSPs concerned on the rationale for not using the STATFOR base forecasts.

1.3 - Stakeholder consultation

1.3.1 - Overall outcome of the consultation of stakeholders on the performance plan

Description of main points raised by stakeholders and explanation of how they were taken into account in developing the performance plan
The consultation process-was organized in line with the Article 10(4) and Article 24(2) of the Regulation No 2019/317. It comprised written consultation and a consultation meeting on 26th August 2024. During the consultation the priorities and requirements of the performance plan were discussed, including main assumptions, local circumstances, traffic forecast, targets in all 4 KPAs as well as investments. Discussion was open, the meeting gave participants the opportunity to present their opinions and express their expectations. It also gave the opportunity to propose changes to the draft performance plan. There was also opportunity to provide further written comments after the consultation meeting. The targets in the areas of safety, environment, capacity and cost-efficiency are in line with EU-wide targets, as well as the incentive scheme is consistent with EU Regulation 2019/317 laying down a performance and charging scheme in the single European Sky. More infromation concerning the consultation is attached in Annex C. Consultation.

1.3.2 - Specific consultation requirements of ANSPs and airspace users on the performance plan

Topic of consultation	Applicable	Results of consultation
Establishment of determined costs included in the cost base for charges	Yes	The proposed cost bases were presented in the draft Performance Plan and at the consultation meeting. CAA took into account the AUs feedback, verified the cost bases in terms of the justification of the costs included and better efficiency.
New and existing investments, and in particular new major investments, including their expected benefits	Yes	During the consultation meeting the information on the scope of the major investments, main functionalities planned to be implemented and benefits expected in each of the key performance areas were presented to stakeholders. The consultation meeting gave the opportunity to all stakeholders to ask additional questions concerning the implementation of the investments. In general, no negative opinions regarding investments proposed in the draft RP4 perormance plan were expressed. More information about consultation of major investment is presented under sheet 2.1 Investments_ANSP#1.
Charging policy	Yes	The charging policy in RP4 will be in line with Regulation 2019/317. The details about adjustments were presented in Annexes A (reporting tables for charging zones). No modulation of charges is planned to be implemented. CAA has not received any negative feedback on this topic, although there were requests from AUs to partly lift or modify the timing of some adjustments. In response to those comments, decision was taken to extend the period of recovering adjustment stemming from article 29(5) from 5 to 6 years. As regards other adjustments, written explanation was provided to AUs.
Maximum financial advantages and disadvantages for the mandatory incentive scheme on capacity	Yes	For both en-route and terminal capacity incentive schemes equal advantages and disadvantages were set: - max bonus - 1% of Determined Cost; - max penalty - 1% of Determined Cost.
Symmetric range ("dead band") for the purpose of the mandatory incentive scheme on capacity	Yes	Dead Band was set to ensure that slight deviations in ATFM delays around the pivot value will not lead to the application of extensive penalties or bonuses. In case of Poland the value of the Dead Band is: +/- 20% for en-route capacity; +/- 20% for terminal capacity.
Where applicable, decision to modulate performance targets for the purpose of pivot values to be used for the mandatory incentive scheme on capacity	Yes	Pivot values to be used for mandatory incentive scheme on capacity will be modulated: For en-route - the modulation will be based both on priciples taking into account significant and unforeseen changes in traffic (Netwok Operations Plan) and on delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual (modulation A+B). For terminal - limited to delays causes related to ATC (ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual).
Establishment or modification of charging zones	Yes	Poland has decided to maintain the current configuration of terminal charging zones (two TCZ). The decision upon its establishment was taken by the Polish Ministry of Infrastructure and delivered to EC. This decision was taken following a separate, dedicated connsultation process with the AUs condicted by PANSA in Q1 2024.
Where applicable, values of the modulated parameters for the traffic risk sharing mechanism	No	CAA does not plan to modulate the traffic risk sharing mechanism parameters.

Where applicable, decision to apply the simplified charging scheme	No	CAA does not plan to implement simplified charging scheme.
Where applicable, decision to diverge from the STATFOR base forecast	Yes	For details, see Annex D.

1.3.3 - Consultation of stakeholder groups on the performance plan

#1 - ANSPs	
Stakeholder group composition	Polish Air Navigation Services Agency (ATS, CNS, AIS, SAR coordination provider), Warmia i Mazury Sp. z o.o. (AFIS, COM, MET provider), Port Lotniczy Bydgoszcz S.A. (AFIS, MET provider), Airport Meteo Sp. z o.o. (MET provider) and the Institute of Meteorology and Water Management - National Research Institute (MET provider).
Dates of main meetings / correspondence	The official consultation on-line meeting was held on 26 August 2024. Moreover, exchange of information in a day to day working contacts with ANSPs was conducted.
Main issues discussed	During the consultation meeting the main issues discussed with stakeholders focused on the local target values for KPAs of Safety, Environment, Capacity and Cost Efficiency. The significant part of the discussion was concentrated on establishment of non-discriminatory, transparent and effective incentive scheme in the KPA of capacity. The main issues discussed: 1. KPA Safety targets, 2. KPA Environment. The influence of the geopolitical situation on the performance plan, especially impact of the conflict in Ukraine and military activity in FIR Warszawa, 3. KPA Capacity targets including en-route and terminal targets, 4 KPA Cost Efficiency, 5. Incentive scheme, 6. Investments, 7. ATCO training.
Actions agreed upon	ANSPs will make every effort to fulfil their obligations and meet targets in all performance areas. For details please see annex C.
Points of disagreement and reasons	KPA SAFETY: PANSA stated that the target in the Effectiveness of Safety Management (EoSM)/ Safety Risk Management (level C in 2025) is too ambitious. In their opinion the achievable level in 2025 should be level B. On the other hand Airspace Users proposed to make safety targets more challenging for all ATS providers. During discussion it was stated and understood by all the participants that the main reason for new targets for KPA Safety are changes introduced in the Effectiveness of Safety Management (EoSM) questionnaire and higher level of requirements. INCENTIVE SCHEME: PANSA proposed to establish the incentive scheme for the en-route capacity, taking into account the modulation of pivot value based on both: (a) significant and unforeseen changes in traffic (Network Operations Plan) and (b) limited to delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual (modulation A+B). When defining pivot value limited to ATC delays only, PANSA suggested that the “O” delays from 2022-2024 should not be considered and in consequence the pivot value could be the reference value decreased by delays related mostly to weather.
Final outcome of the consultation	1. For ANSPs Port Lotniczy Bydgoszcz S.A. and Warmia i Mazury Sp. z o.o. the safety performance targets for the four Safety objectives: (1) Safety policy and objectives, (2) Safety assurance, (3) Safety promotion, (4) Safety culture in the year 2028 were defined on level C. 2. PL CAA decided to keep level C for PANSA for the Safety objective – Safety Risk Management in 2025, as presented in the draft performance plan. 3. Capacity incentive scheme mechanism for en-route was adopted according to PRB opinion. 4. The CAA instructed all ANSPs to revise their costs downwards. Special attention was paid to the verification of detailed costs by nature, the cost of capital as well as excluding a higher share of costs from ANS cost bases in case of the three “small ANSPs” following an analysis of the operations of these entities.

Additional comments
Not aplicable.

#2 - Airspace Users	
Stakeholder group composition	IATA, LOT Polish Airlines, Lufthansa Group, Ryanair, Qatar Airways, SAS
Dates of main meetings / correspondence	The official consultation on-line meeting was held on 26 August 2024. Airspace Users were invited to submit further questions in writing. IATA and Lufthansa made such submissions following the consultations meeting.
Main issues discussed	During the consultation meeting the main issues discussed with stakeholders focused on the local target values for KPAs of Safety, Environment, Capacity and Cost Efficiency. A significant part of the discussion concentrated on the establishment of non-discriminatory, transparent and effective Incentive Scheme in the KPA od Capacity. The main issues discussed: 1. KPA Safety targets, 2. KPA Environment. The influence of the geopolitical situation on the performance plan, especially influence of the conflict in Ukraine and military activity in FIR Warszawa. 3. KPA Capacity targets including en-route and terminal targets. 4. KPA Cost Efficiency. 5. Incentive Scheme.
Actions agreed upon	For details please see annex C.
Points of disagreement and reasons	KPA SAFETY: Airspace Users (IATA) indicated that the level of targets is not ambitious, especially when taking into account that the air navigation service providers (ANSPs) were informed about these changes in advance. Polish CAA provided explanation and rationale of the Safety Targets for RP4. Polish CAA agreed to take into account some of the Airspace Users remarks. KPA CAPACITY (en-route): IATA expressed doubts concerning the level of en-route capacity targets for Poland in RP4. In IATA's opinion targets are less ambitious than in RP3. Especially the targets in 2025 (0.24 min/flight) and 2026 (0.18 min/flight) are not demanding and do not pose any challenge to PANSA. In Polish CAA opinion, the target are in line with the EU-wide targets for RP4 and should be kept. Furthemore, during the bilateral meeting on 14 May 2024, PRB assessed the national target as satisfactory and agreed to use the proposed reference values as en-route targets in the KPA Capacity. Moreover, these targets will be subject to modulation in accordance with the trend presented in the NOP, which in fact means their annual verification. KPA CAPACITY (terminal): PLL LOT Polish Airlines representative asked why was a single target for terminal capacity adopted at the national level. Why was it not broken down into two charging zones or even individual airports? Polish CAA explained that air traffic control (ATC) services are provided in Poland by just one ANSP for all 15 airports being subject to the performance plan. Setting targets for every single charging zone or particular airport would increase workload without any added value and as mentioned before there is only one entity providing ATC. In effect PL CAA rejected the proposal. However, such proposal may be considered while setting terminal capacity targets in the future. KPA COST EFFICIENCY: Lufthansa set out a proposal to split the 2nd TNC charging zone into three zones. It was explained that for RP4 the decision has already been made by the Polish Minister of Infrastructure and it will be binding over the whole RP4. IATA suggested to keep the STATFOR base traffic forecast instead of the local one pointing out the consequences of the latter approach. CAA reassured airspace users that traffic development is under constant review and forecasts will be adjusted if needed. PANSA explained that the proposed local forecast is currently considered as the most realistic scenario and the rationale for adopting it was given by the CAA during the consultation meeting.

	IATA expressed concerns about forecast actuals of 2024 and the baseline value, indicating the costs are worryingly high and pose a risk of not meeting the CEF target of RP3. These concerns were supported by Lufthansa. Moreover, it was pointed out Annex F was not distributed which made it difficult to track differences between the actuals of 2024 and the baseline value. Both CAA and PANSA explained that the figures were not final and were expected to be revised downwards. Lufthansa expressed its concerns regarding the expected cost and charges development during RP4. The focus was on 2025 unit rates. PANSA explained that the increase in 2025 unit rates derives not only from evolution of costs, but largely also from the application of adjustment mechanisms stemming directly from Regulation 2019/317. Detailed explanation of the mechanisms was provided together with the information that it is considered to extend the timeframe for recovery mechanism referred to in article 29(5) of Regulation 2019/317 to 6 years, which would result in lowering the 2025 unit rates as compared to earlier submissions. When explaining the costs planned for RP4 the main cost drivers were discussed and upwards pressures on costs were also presented. The impact of traffic volume and complexity on charges was also discussed. IATA expressed its concerns that some provisions indicated in the documentation could have been counted twice or have not been discounted as exceptional items as it looked like it was going to be the case. PANSA confirmed that any costs related to any provisions are not counted twice. Lufthansa enquired about staff costs including the share of ATCOs development in time and staff cost increases at a rate of 2% more than the inflation rate. PANSA explained that ATCOs make up for ca. 30% of total staff and the plan is to increase this share up to ca. 32%. Higher-than-inflation staff cost growth rate was attributed to salaries increases lagging behind inflation rate in previous years as well as the need to increase staff numbers. Lufthansa was seeking explanation of certain operating cost categories developments including repair costs, leasing costs and communication costs. PANSA explained that repair costs are forecast based on individual repair plans and two major repair cost items are related to the inspection aircraft, UPS devices and other. Leasing costs are related to investment processes at PANSA. Telecommunication costs are most likely linked to the contingency center in Poznan. Both IATA and Lufthansa enquired about exceptional items. PANSA explained that there is a linking error in the tables and PANSA does not plan any exceptional items. Lufthansa enquired about the additional costs of measures necessary to achieve the capacity targets for RP4 by nature by ANSP. PANSA explained these costs are included in the determined costs and are only disclosed for additional transparency. These are not additional costs justifying deviation from the DUC trends (DUC trends are to be met without the need to refer to costs related to capacity).
	INCENTIVE SCHEME: IATA raised concerns why were different incentive scheme mechanisms introduced for en-route and terminal capacity? Polish CAA provided explanation on this situation. IATA raised the question concerning the symmetry of the incentive mechanism (bonus / penalty). IATA indicated that it is unfair to Airspace Users to gratify the ANSP for doing its job, especially as it causes additional costs, the targets set for RP4 are "generous" and the traffic forecast already considers a capacity buffer. According to IATA, the incentive mechanism should therefore be limited to penalty part and the maximum compensation if the target is not met, with the simultaneous removal of the bonus. In Polish CAA opinion, there is no direct provision in Regulation 2019/317 requiring the symmetrical application of the penalties and incentives in relation to ANSPs. However, taking into account fair and equal treatment of both parties, i.e. both ANSPs and Airspace Users, the symmetric design of the financial penalties and rewards in terms of both en-route and terminal capacity should be implemented. The financial advantage or disadvantage from those incentive schemes shall be calculated as a 1 % of the determined costs of year n of PANSA and recovered from (reimbursed to) airspace users through an increase (reduction) of unit rate respectively in year n+2.
Final outcome of the consultation	Despite critical comments concerning some of the proposals presented in the draft Performance Plan, both service providers and Airspace Users are ready to cooperate to provide safe and efficient air traffic. The recovery of the aviation sector especially in the face of difficult geopolitical situation needs close cooperation, mutual understanding and continuation of endeavours providing conditions to achieve performance targets in RP4. 1. For ANSPs Port Lotniczy Bydgoszcz S.A. and Warmia i Mazury Sp. z o.o. the safety performance targets for the four Safety objectives: (1) Safety policy and objectives, (2) Safety assurance, (3) Safety promotion, (4) Safety culture in the year 2028 were defined on level C. 2. PL CAA decided to keep level C for PANSA for the Safety objective – Safety Risk Management in 2025, as presented in the draft performance plan. 3. Capacity incentive scheme mechanism for en-route was adopted according to PRB opinion; for terminal services it was kept as presented in the draft Performance Plan. 4. PLL LOT proposal to split the target for terminal capacity into two charging zones or even individual airports was rejected. 5. Symmetry in penalty and bonus for en-route and terminal capacity incentive schemes was kept as proposed in the draft Performance Plan. 6. Actuals of 2024 will be revised and the CAA is pushing ANSPs to reduce both the actuals of 2024 and give up baseline value adjustments that were initially requested. 7. Determined costs for RP4 will be scrutinized. CAA will exercise pressure on all ANSPs to reduce their costs.

Additional comments
Not aplicable.

#3 - Professional staff representative bodies	
Stakeholder group composition	Not applicable
Dates of main meetings / correspondence	Not applicable
Main issues discussed	Not applicable
Actions agreed upon	Not applicable
Points of disagreement and reasons	Not applicable
Final outcome of the consultation	Not applicable

Additional comments
Not applicable

#4 - Airport operators	
Stakeholder group composition	Katowice Airport, Warsaw Modlin Airport, Gdańsk Airport, Łódź Airport, Rzeszów Airport, Szczecin-Goleniów Airport, Wrocław Airport
Dates of main meetings / correspondence	The official consultation on-line meeting was held on 26 August 2024.
Main issues discussed	During the consultation meeting the main issues discussed with stakeholders were focused on the local targets values for KPAs of Safety, Environment, Capacity and Cost Efficiency.
Actions agreed upon	None.
Points of disagreement and reasons	No issues were raised.
Final outcome of the consultation	Airport operators raised no issues neither during the consultation meeting, nor in writing before or after the meeting.

Additional comments
Not applicable.

#5 - Airport coordinator	
Stakeholder group composition	Not applicable
Dates of main meetings / correspondence	Not applicable
Main issues discussed	Not applicable
Actions agreed upon	Not applicable
Points of disagreement and reasons	Not applicable
Final outcome of the consultation	Not applicable

Additional comments
Not applicable

#6 - Other (specify)	
Stakeholder group composition	Representatives of PRB, Ministry of Infrastructure, Ministry of Defence
Dates of main meetings / correspondence	The official consultation on-line meeting was held on 26 August 2024.
Main issues discussed	During the consultation meeting the main issues discussed with stakeholders were focused on the local targets values for KPAs of Safety, Environment, Capacity and Cost Efficiency.
Actions agreed upon	Not applicable
Points of disagreement and reasons	Not aplicable
Final outcome of the consultation	The information concerning the Polish Performance Plan for RP4 was taken.

Additional comments
Not applicable.

1.4 - List of airports subject to the performance and charging Regulation

1.4.1 - Airports as per Article 1(3) (IFR movements ≥ 80 000)

ICAO code	Airport name	Charging Zone	IFR air transport movements			
			2021	2022	2023	Average
EPWA	Lotnisko Chopina w Warszawie	Poland - EPWA	94 666	144 737	165 434	134 946

1.4.2 Other airports added on a voluntary basis as per Article 1(4)

Number of airports	14		
ICAO code	Airport name	Charging Zone	Additional information
EPKK	Kraków-Balice	Poland - Others	Average IFR movements 2021 - 2023: 52000
EPGD	Gdańsk im. Lecha Wałęsy	Poland - Others	Average IFR movements 2021 - 2023: 37200
EPKT	Katowice-Pyrzowice	Poland - Others	Average IFR movements 2021 - 2023: 34250
EPWR	Wrocław-Strachowice	Poland - Others	Average IFR movements 2021 - 2023: 25000
EPPO	Poznań-Ławica	Poland - Others	Average IFR movements 2021 - 2023: 20600
EPRZ	Rzeszów-Jasionka	Poland - Others	Average IFR movements 2021 - 2023: 11300
EPSC	Szczecin-Goleniów	Poland - Others	Average IFR movements 2021 - 2023: 4550
EPBY	Bydgoszcz	Poland - Others	Average IFR movements 2021 - 2023: 3300
EPMO	Warszawa/Modlin	Poland - Others	Average IFR movements 2021 - 2023: 18600
EPLL	Łódź	Poland - Others	Average IFR movements 2021 - 2023: 3750
EPLB	Lublin	Poland - Others	Average IFR movements 2021 - 2023: 2850
EPZG	Zielona Góra-Babimost	Poland - Others	Average IFR movements 2021 - 2023: 950
EPRA	Lotnisko Warszawa-Radom	Poland - Others	Average IFR movements 2021 - 2023: 350
EPSY	Olsztyn-Mazury	Poland - Others	Average IFR movements 2021 - 2023: 1350

Additional comments
In Poland only Warsaw Chopin airport (EPWA) has more than 80.000 IFR movements per year, so the Implementing Regulation 2019/317 directly applies to this airport. In addition, based on the decision of the Minister of Infrastructure, Poland acted in line with the Article 1.4. of the Regulation 2019/317, so it was decided to apply the provisions of the Regulation to the terminal ANS at fourteen regional airports (EPKK, EPGD, EPKT, EPWR, EPPO, EPRZ, EPSC, EPBY, EPMO, EPLL, EPLB, EPZG, EPRA and EPSY) with fewer than 80.000 IFR movements per year, as they are part of the Terminal Charging Zone 2.

1.5 - Services under market conditions

Number of services under market conditions	0

1.6 - Process followed to develop and adopt a FAB Performance Plan

Description of the process
Not applicable

1.7 - Establishment and application of a simplified charging scheme

Is the State intending to establish and apply a simplified charging scheme for any charging zone/ANSP?	No

SECTION 2: INVESTMENTS

2.0 - Summary of investments

2.1 - Investments - PANSA

- 2.1.1 - Summary of investments
- 2.1.2 - Detail of new major investments
- 2.1.3 - Other new and existing investments

2.2 - Investments - IMWM

- 2.2.1 - Summary of investments
- 2.2.2 - Detail of new major investments
- 2.2.3 - Other new and existing investments

2.3 - Investments - Airport Meteo Sp. z o.o.

- 2.3.1 - Summary of investments
- 2.3.2 - Detail of new major investments
- 2.3.3 - Other new and existing investments

2.4 - Investments - Warmia i Mazury Sp. z o.o.

- 2.4.1 - Summary of investments
- 2.4.2 - Detail of new major investments
- 2.4.3 - Other new and existing investments

2.5 - Investments - Port Lotniczy Bydgoszcz S.A.

- 2.5.1 - Summary of investments
- 2.5.2 - Detail of new major investments
- 2.5.3 - Other new and existing investments

Annexes of relevance to this section

ANNEX E. INVESTMENTS

NOTE: The requirements as per Annex II, 2.2.(c) are addressed in item 4.1.3

2.0 - Summary of Investments

PANSA

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)					
				2025	2026	2027	2028	2029
New major investments for RP4 (Table A)	377 201 433	275 473 000	Average NBV	12 610 092	77 966 089	177 755 652	232 888 889	235 219 191
			Depreciation	161 932	1 619 074	3 701 800	17 936 726	22 682 672
			Cost of leasing	0	0	0	0	0
Other new investments for RP4 (below 5M€) (Table B)	286 072 659	266 288 127	Average NBV	19 829 748	67 450 217	133 281 297	191 831 734	213 509 691
			Depreciation	344 083	3 622 980	9 243 760	16 534 825	22 041 546
			Cost of leasing	0	0	0	0	0
Major investments from RP3 (Tables C + D)	1 419 070 992	646 417 856	Average NBV	453 948 963	524 484 280	619 011 001	745 707 566	830 215 756
			Depreciation	31 759 865	40 976 903	46 988 219	48 731 190	53 734 295
			Cost of leasing	0	0	0	0	0
Existing investments from previous reference periods (Table E)	292 596 383	139 431 998	Average NBV	836 852 249	788 940 261	730 790 063	664 188 451	595 005 185
			Depreciation	101 535 882	102 040 417	91 076 544	89 252 933	84 691 702
			Cost of leasing	11 867 581	12 772 019	12 222 370	11 511 178	11 362 156
Total for the ANSP in RP4	**2 374 941 467**	**1 327 610 981**	Average NBV	**1 323 241 053**	**1 458 840 846**	**1 660 838 013**	**1 834 616 639**	**1 873 949 823**
			Depreciation	**133 801 761**	**148 259 373**	**151 010 323**	**172 455 674**	**183 150 215**
			Cost of leasing	**11 867 581**	**12 772 019**	**12 222 370**	**11 511 178**	**11 362 156**

IMWM

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)					
				2025	2026	2027	2028	2029
New major investments for RP4 (Table A)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Other new investments for RP4 (below 5M€) (Table B)	26 361 000	26 361 000	Average NBV	0	2 988 225	6 887 175	9 123 125	11 129 075
			Depreciation	0	1 524 550	2 048 550	3 204 550	4 043 550
			Cost of leasing	0	0	0	0	0
Major investments from RP3 (Tables C + D)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Existing investments from previous reference periods (Table E)	24 135 942	24 135 942	Average NBV	6 415 613	5 093 318	3 232 306	1 850 350	906 409
			Depreciation	3 137 562	2 197 028	1 524 996	1 238 917	648 964
			Cost of leasing	0	0	0	0	0
Total for the ANSP in RP4	**50 496 942**	**50 496 942**	Average NBV	**6 415 613**	**8 081 543**	**10 119 481**	**10 973 475**	**12 035 484**
			Depreciation	**3 137 562**	**3 721 578**	**3 573 546**	**4 443 467**	**4 692 514**
			Cost of leasing	**0**	**0**	**0**	**0**	**0**

Airport Meteo Sp. z o.o.

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)					
				2025	2026	2027	2028	2029
New major investments for RP4 (Table A)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Other new investments for RP4 (below 5M€) (Table B)	2 244 208	2 170 490	Average NBV	119 377	464 727	1 330 327	1 727 628	1 415 400
			Depreciation	10 355	80 808	195 584	312 228	312 228
			Cost of leasing	0	0	0	0	0
Major investments from RP3 (Tables C + D)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Existing investments from previous reference periods (Table E)	655 042	633 526	Average NBV	464 011	341 469	219 820	105 825	12 159
			Depreciation	122 543	122 543	118 251	112 242	49 704
			Cost of leasing	0	0	0	0	0
Total for the ANSP in RP4	**2 899 250**	**2 804 016**	Average NBV	**583 388**	**806 196**	**1 550 148**	**1 833 454**	**1 427 559**
			Depreciation	**132 897**	**203 351**	**313 835**	**424 471**	**361 932**
			Cost of leasing	**0**	**0**	**0**	**0**	**0**

Warmia i Mazury Sp. z o.o.

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)					
				2025	2026	2027	2028	2029
New major investments for RP4 (Table A)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Other new investments for RP4 (below 5M€) (Table B)	2 625 000	1 571 786	Average NBV	327 302	270 990	231 835	202 969	1 137 381
			Depreciation	93 216	105 746	90 423	92 083	105 874
			Cost of leasing	0	0	0	0	0
Major investments from RP3 (Tables C + D)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Existing investments from previous reference periods (Table E)	5 913 238	4 131 506	Average NBV	2 315 227	1 910 671	2 758 617	2 031 590	1 386 730
			Depreciation	476 493	456 596	743 875	715 098	531 559
			Cost of leasing	0	0	0	0	0
Total for the ANSP in RP4	**8 538 238**	**5 703 292**	Average NBV	**2 642 529**	**2 181 661**	**2 990 452**	**2 234 559**	**2 524 111**
			Depreciation	**569 709**	**562 342**	**834 298**	**807 182**	**637 432**
			Cost of leasing	**0**	**0**	**0**	**0**	**0**

Port Lotniczy Bydgoszcz S.A.

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)					
				2025	2026	2027	2028	2029
New major investments for RP4 (Table A)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Other new investments for RP4 (below 5M€) (Table B)	3 520 709	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	Average NBV	291 814	354 359	244 634	173 361	137 157
			Depreciation	74 704	130 619	125 290	63 926	43 345
			Cost of leasing	0	0	0	0	0
Major investments from RP3 (Tables C + D)	0	0	Average NBV	0	0	0	0	0
			Depreciation	0	0	0	0	0
			Cost of leasing	0	0	0	0	0
Existing investments from previous reference periods (Table E)	73 957 415	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	Average NBV	6 923 287	6 170 803	5 636 981	5 209 959	4 793 288
			Depreciation	772 622	689 257	431 801	420 743	414 484
			Cost of leasing	0	0	0	0	0
Total for the ANSP in RP4	**77 478 124**	**0**	Average NBV	**7 215 102**	**6 525 162**	**5 881 615**	**5 383 321**	**4 930 445**
			Depreciation	**847 326**	**819 876**	**557 091**	**484 670**	**457 829**
			Cost of leasing	**0**	**0**	**0**	**0**	**0**

2.1 - Investments - PANSA

Complementary information may be provided in ***ANNEX E***

2.1.1 - Investments from RP4

Table A - Number of new major investments (i.e. above 5 M€) for RP4	5

Ref. #	Name of new major investments (i.e. above 5 M€) for RP4	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
					2025	2026	2027	2028	2029			En route*	Terminal*
A1	IL430502_Integrated_TWR_System	109 180 000	20 580 000	Average NBV	0	0	0	4 673 292	14 316 542	10	2028,2029, after RP4	33%	67%
				Depreciation	0	0	0	158 417	1 135 083				
				Cost of leasing	0	0	0	0	0				
A2	IR470208_Virtualisation_of_ANS	43 000 000	43 000 000	Average NBV	4 000 000	23 500 000	41 000 000	41 612 500	38 375 000	10/20	2028	34%	66%
				Depreciation	0	0	0	2 775 000	3 700 000				
				Cost of leasing	0	0	0	0	0				
A3	IT480904_AV_Recording	38 121 433	24 993 000	Average NBV	8 610 092	16 366 089	18 445 652	20 085 102	17 585 802	10	2025, 2026, 2027, after RP4	75%	25%
				Depreciation	161 932	1 619 074	1 921 800	2 499 300	2 499 300				
				Cost of leasing	0	0	0	0	0				
A4	IZ440609_Replacement_VCS_System_Warszawa	88 000 000	88 000 000	Average NBV	0	33 000 000	77 000 000	85 800 000	80 666 667	15	2028	89%	11%
				Depreciation	0	0	0	4 400 000	5 866 667				
				Cost of leasing	0	0	0	0	0				
A5	IL440512_New_Warsaw_Tower_Solutions	98 900 000	98 900 000	Average NBV	0	5 100 000	41 310 000	80 717 995	84 275 180	10/12/15/20	2027, 2028	30%	70%
				Depreciation	0	0	1 780 000	8 104 009	9 481 622				
				Cost of leasing	0	0	0	0	0				
Subtotal of new major investments from RP4		**377 201 433**	**275 473 000**	**Average NBV**	**12 610 092**	**77 966 089**	**177 755 652**	**232 888 889**	**235 219 191**				
				Depreciation	**161 932**	**1 619 074**	**3 701 800**	**17 936 726**	**22 682 672**				
				Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

Table B - Other new investments (below 5M€) from RP4

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of other new investments from RP4	**286 072 659**	**266 288 127**	**Average NBV**	19 829 748	67 450 217	133 281 297	191 831 734	213 509 691			80%	20%
			Depreciation	344 083	3 622 980	9 243 760	16 534 825	22 041 546				
			Cost of leasing	0	0	0	0	0				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.1.2 - Investments from RP3

Table C - Number of major investments (i.e. above 5 M€) from RP3 performance plan	12

Ref. #	Name of major investments (i.e. above 5 M€) stemming from RP3 performance plan	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
					2025	2026	2027	2028	2029			En route*	Terminal*
C1	01440701_Campus	404 311 177	379 022 254	Average NBV	28 881 324	56 469 926	144 285 910	273 100 351	369 841 020	40	2028, 2029, after RP4	93%	7%
				Depreciation	0	0	0	200 310	1 945 990				
				Cost of leasing	0	0	0	0	0				
C2	02440701_Communication_systems	70 816 240	0	Average NBV	25 451 788	22 243 394	19 030 875	16 055 116	13 297 005	00/10/15/20	2025, after RP4	98%	2%
				Depreciation	3 185 284	3 232 995	3 193 573	2 758 189	2 758 223				
				Cost of leasing	0	0	0	0	0				
C3	03440701_iTEC	297 462 863	100 790 400	Average NBV	143 622 469	165 269 090	175 175 758	170 635 330	166 844 902	10/15	2026, after RP4	100%	0%
				Depreciation	5 136 065	8 861 094	18 540 428	18 540 428	18 540 428				
				Cost of leasing	0	0	0	0	0				
C4	06440701_VCS_system	65 648 810	20 000 000	Average NBV	15 001 995	23 875 544	22 140 459	20 411 040	18 701 591	15	2025, after RP4	99%	1%
				Depreciation	515 340	1 737 562	1 732 607	1 726 231	1 692 667				
				Cost of leasing	0	0	0	0	0				
C5	21440701_ATM_OPS_Centre_Poznan	92 738 115	0	Average NBV	75 475 968	71 030 606	66 588 249	62 153 608	57 724 161	5-40	2021 - 2023	100%	0%
				Depreciation	4 445 394	4 445 410	4 439 363	4 429 922	4 428 973				
				Cost of leasing	0	0	0	0	0				
C6	IP470701_U-Space_Program	36 172 440	4 309 256	Average NBV	7 984 915	9 097 035	9 693 652	10 189 712	10 556 283	5/10	2024-2029, after RP4	0%	100%
				Depreciation	671 843	983 752	1 136 240	1 313 132	1 465 920				
				Cost of leasing	0	0	0	0	0				
C7	IT170202_Tower_at_the_Central_Hub_Airport	65 625 000	0	Average NBV	0	0	0	0	0	5/15	after RP4	0%	0%
				Depreciation	0	0	0	0	0				
				Cost of leasing	0	0	0	0	0				

C8	IT430803_Radar_PSR/MSSR_Gdańsk	36 151 324	16 784 976	Average NBV	27 672 884	34 947 998	32 885 154	30 822 309	28 759 465	15/20	2025	100%	0%
				Depreciation	171 904	2 062 844	2 062 844	2 062 844	2 062 844				
				Cost of leasing	0	0	0	0	0				
C9	IT430900_Modernization_of_the_ATM_system_2	191 389 499	54 974 952	Average NBV	72 644 535	72 258 285	76 096 368	80 427 153	79 343 899	10/15	2022, 2024-2029	78%	22%
				Depreciation	11 492 924	12 254 529	8 739 611	9 598 819	10 567 689				
				Cost of leasing	0	0	0	0	0				
C10	IT440732_MLAT_system_for_FIR_Warsaw	57 710 507	42 107 707	Average NBV	13 824 503	19 366 014	27 202 054	37 930 898	43 316 786	10	2024, 2026, 2028, 2029	73%	27%
				Depreciation	1 378 425	1 746 263	2 789 364	3 652 949	5 475 273				
				Cost of leasing	0	0	0	0	0				
C11	IR470209_CWP_TWR	10 380 867	6 332 000	Average NBV	5 759 686	8 278 169	7 401 318	6 548 682	5 696 110	10, 15	2025	43%	57%
				Depreciation	393 992	901 153	852 630	852 630	852 496				
				Cost of leasing	0	0	0	0	0				
C12	IT430404_Server_Business_Infrastructure	57 342 556	6 916 017	Average NBV	11 976 914	9 439 146	8 209 309	9 038 651	9 646 998	7	2022, 2023, recurring (2027,	88%	12%
				Depreciation	4 209 762	2 844 121	1 594 380	1 688 556	2 036 613				
				Cost of leasing	0	0	0	0	0				
Subtotal of major investments from RP3 performance plan		**1 385 749 397**	**631 237 563**	**Average NBV**	**428 296 980**	**492 275 206**	**588 709 106**	**717 312 851**	**803 728 221**				
				Depreciation	**31 600 933**	**39 069 723**	**45 081 040**	**46 824 010**	**51 827 116**				
				Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

Table D - Number of major investments (i.e. above 5 M€) added during RP3	1

Ref. #	Name of major investments (i.e. above 5 M€) added during RP3	Year of addition	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
						2025	2026	2027	2028	2029			En route*	Terminal*
D1	IT430804_Radar_PSR/MSSR_Katowice	2021	33 321 596	15 180 293	Average NBV	25 651 983	32 209 074	30 301 894	28 394 715	26 487 535	15/20	2025	100%	0%
					Depreciation	158 932	1 907 180	1 907 180	1 907 180	1 907 180				
					Cost of leasing	0	0	0	0	0				
Subtotal of major investments added during RP3			**33 321 596**	**15 180 293**	**Average NBV**	**25 651 983**	**32 209 074**	**30 301 894**	**28 394 715**	**26 487 535**				
					Depreciation	**158 932**	**1 907 180**	**1 907 180**	**1 907 180**	**1 907 180**				
					Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.1.3 - Existing investments from previous reference periods

Table E - Existing investments from previous RPs

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of existing investments from previous RPs	**292 596 383**	**139 431 998**	**Average NBV**	**836 852 249**	**788 940 261**	**730 790 063**	**664 188 451**	**595 005 185**			81%	19%
			Depreciation	**101 535 882**	**102 040 417**	**91 076 544**	**89 252 933**	**84 691 702**				
			Cost of leasing	**11 867 581**	**12 772 019**	**12 222 370**	**11 511 178**	**11 362 156**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.1.4 - Detail of new major investments for RP4 from table A

NOTE: Section 1.3 (Stakeholder Consultation) should include details on the consultation with airspace users' representatives on new major investments.

Name of new major investment 1	***IL430502_Integrated_TWR_System***	Reference #	***A1***	Total value of the asset		***109 180 000***
Main category of the investment	New ATM system	Overhaul of existing ATM system	Other ATM	CNS	Infrastructure	Ancilliary	Other
	x			x	*x*		
Description of the asset	The investment, covering intangible assets and supporting facilities, aims at integration of the existing systems operating independently and other new systems (planned to be implemented in the future) within one system (integration, processing and display of data from various sources). Depending of the needs and available sources (sensors) of data existing at particular TWR location, the system will include information coming from TMA/APP sectors, wake information, stand and gate management applications, data link applications, information transferred from systems like: Arrival Manager (AMAN), system providing routing, guidance and surveillance of aircraft and vehicles, Electronic Flight Strips (EFS), METEO systems, ATFM applications, Airport CDM (or Advanced ATC TWR). The system will provide data exchange necessary for ATCO/FIS work with technical and operational infrastructure. It will further enable data sharing externally (initially data exchange with airports, later on with the Network Manager) as well as integration of manned and unmanned aircraft operations around airports. Integrated TWR system will be complementary to the new ATM System (iTEC). This project will also provide a new flight strip system, a new ATM (radar) system dedicated to TWRs and A-SMGCS for airports with the highest volume of the traffic. The concept of the system is in line with the Integrated Tower Working Position (ITWP; Eurocontrol; 15-09-2020). This project does not include elements and components related to the Warsaw Digital Tower project (previously the costs were included in this task). The following main functionalities are planned: • Data integration and standardisation - creation of universal data centre, gathering data from various sources and in different format, • Allowing data exchange with dependant systems and external systems, • Data availability independent of location (cloud solutions) enabling data replication and increased redundancy, • Flexibility of ATCO interface configuration, based on unified data for all ATC units, • Improved resilience to cybersecurity threats – improved data protection.						

Is the investment mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? If yes please provide description/reference	No				
For investments in new ATM systems and major overhauls of ATM systems, information on the consistency of the investment with the European ATM Master Plan		European ATM Master Plan: AOP04.1; A-SMGCS Surveillance Service (former ICAO Level 1); AOP04.2; A-SMGCS RMCA (former ICAO Level 2); AOP14.1; Remote Tower Services; PJ.02-W2-21.1 SDO #01 – Alerts for reduction of collision risks on taxiways and runways; SDO#02 - Optimising airport and TMA environmental footprint; SDO#04 - Increased automation support; SDO #08 Service-oriented delivery model (data driven and cloud based)			
Level of impact of the investment	Network level				
	Local level	Yes			
Quantitative impact per KPA		Safety	Environment	Capacity	Cost Efficiency
		Significant	Significant	Major	Significant
Results of the consultation of airspace users' representatives		The justification for the investment and the scope of the task were presented to AUs during the draft RP4 PP consultation process, including during the consultation meeting on August 26. Also information on allocation between en-route and terminal services was provided. No specific comments with respect to this investment were made. In written comments and questions provided after the consultation meeting, AUs asked for some additional explanation regarding the timeline and strategy for investments related to airports. As regards this investment project, it was clarified that the investment is planned to be implemented in stages – up to 2033.			
Joint investment / partnership	No	If yes, please provide reference to joint project and/or indicate reference to cross-border initiatives			

Name of new major investment 2	***IR470208_Virtualisation_of_ANS***		Reference #	***A2***	Total value of the asset		***43 000 000***	
Main category of the investment	New ATM system	Overhaul of existing ATM system	Other ATM	CNS	Infrastructure	Ancilliary	Other	
			x		*x*			
Description of the asset	PANSA is implementing a series of measures to modernize and streamline operations and to facilitate continued growth in aviation. The virtualisation project comprises Remote Tower that will initially be deployed at the Modlin Airport with the Remote Towers Centre in Warsaw. Thanks to the Remote Tower technology, air traffic at the Modlin Airport will be supervised in a technologically modern way from the PANSA headquarters in Warsaw. Remote Tower is a solution that includes cameras and sensors located at the airport that send signals in real time to the air traffic control center (Remote Tower Center).Through the Remote Tower Center, air traffic can be managed just like from a traditional tower. Remote technology provides higher scalability compared to conventional solutions, and also allows air traffic control for more than one airport to be carried out within one infrastructure. Provision of Aerodrome Control Service or Aerodrome Flight Information Service for more than one aerodrome by a single ATCO from a remote location (i.e., not from a control tower local of any of the aerodromes). As part of remote control, air traffic controllers serving Modlin Airport will benefit from: –> high resolution video panoramas, with the ability to rotate, tilt and zoom the image, –> thermal imaging technology enabling observation at night and in difficult weather conditions, –> digital technology that significantly improves controllers' situational awareness and enables quick, informed decisions to improve safety and operational efficiency, –> additional information integrated with the panoramic view of the controlled aerodrome, e.g. meteorological data and radar information. The goal of this investment is to facilitate improved and more efficient operations at the airport. The Remote Tower concept is changing the provision of Air Traffic Services (ATS) in a way that it is more service tailored, dynamically positioned and available when needed, enabled by digital solutions replacing the need for controllers and tower buildings being located at aerodromes. The Remote Tower concept has changed the provision of Air Traffic Services (ATS) in a way that it is more service tailored, dynamically positioned and available when and where needed, enabled by digital solutions replacing the physical presence of ATCOs and control towers at aerodromes.							

Is the investment mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? If yes please provide description/reference	No				
For investments in new ATM systems and major overhauls of ATM systems, information on the consistency of the investment with the European ATM Master Plan		European ATM Master Plan: AOP14.1; Remote Tower Services SDO #01 – Alerts for reduction of collision risks on taxiways and runways; SDO#02 - Optimising airport and TMA environmental footprint; SDO #06 - Virtualisation of operations;			
Level of impact of the investment	Network level				
	Local level	Yes			
Quantitative impact per KPA		Safety	Environment	Capacity	Cost Efficiency
		Significant	Negligeable	Negligeable	Significant
Results of the consultation of airspace users' representatives		The justification for the investment and the scope of the task were presented to AUs during the draft RP4 PP consultation process, including during the consultation meeting on August 26. Also information on allocation between en-route and terminal services was provided. No specific comments with respect to this investment were made. In written comments and questions provided after the consultation meeting, AUs asked for some additional explanation regarding the timeline and strategy for investments related to airports. As regards this investment project, it was clarified that the investment is planned to be implemented operationally in 2027. Some questions on this investment were also asked during the written consultation on 2023 actuals - what is the status of implementation of the remote tower concept that should in principle reduce the requirement for ATCO. In written answers it was explained that the investment was at the tender stage and was planned to be executed over 2024-2027. It was also explained that currently EPMO ATC was provided from temporary location and remote tower concept was found to be most cost-effective solution for this issue. It should not be considered as a factor leading to reduction in number of ATCOs as operational requirements in EPMO are unchanged. Remote TWR is perceived as an alternative way to provide air traffic control services different from traditional tower control. The rTWR project aims to introduce digital means of transmitting images and sounds to provide tower control for the EPMO airport, replacing traditional visual observation conducted from the Remote Tower Control Center (RTC) in Warsaw. The ATS provided in this manner will not have a negative impact on airspace users and will fulfil all the functions of the service provided by a traditional tower. An important aspect of the project is the economic benefit, characterised by the flexible use of operational staff and a reduction in the operating costs of the provided service. This is assuming the development of technology towards the so-called multiple airport or multiple mode operation, which involves the control of more than one airport at the same time from a single position by the same ATC controller. It was clarified that only possible future implementations (Multiple Airport Remote Tower concept) may allow for personnel reduction.			
Joint investment / partnership	No	If yes, please provide reference to joint project and/or indicate reference to cross-border initiatives			

Name of new major investment 3	***IT480904_AV_Recording***	Reference #	***A3***	Total value of the asset		***38 121 433***	
Main category of the investment	New ATM system	Overhaul of existing ATM system	Other ATM	CNS	Infrastructure	Ancilliary	Other
					x		*x*
Description of the asset	The project covers technical facilities and intangible assets - new Audio/ Video - Recording System (AV-REC) for voice and video recording for the operational purpose with new network infrastructure (IP) enabling integration of all audio and visual data recording at locations where such synchronisation is currently not provided. System allowing for recording of voice communication at ATCO workstation and ATM system display with synchronised voice and vision, facilitating data analysis by safety team and technical personnel, meeting requirements of ICAO Annex 10. -> Voice recording – Modlin, Wrocław, Zielona Góra, Szczecin, Łódź, Radom, Modlin, Lublin, Rzeszów, Bydgoszcz, Poznań (TWR), -> Audio/Video recording for APP and FIS in Poznań and ATC Centre in Poznań , Gdańsk, Katowice, Krakow, new ATC centre in Warsaw. The following main functionalities are planned: -> ATM system screens registration (VIDEO) -> Voice corespondency rigistration (AUDIO) -> Voice and Video integration to facilitate the investigation of air traffic incidents and technical issues -> Integration of additional positions in connection with the growing air traffic and technical infrastructure development.						
Is the investment mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? If yes please provide description/reference	Yes	Common Requirements for providers of ATM/ANS & other ATM Network functions & their oversight. Realization of Reg. 2017/373 - provision ATS.OR.460 Background communication and aural environment recording (as amended by Reg. 2020/469).					
For investments in new ATM systems and major overhauls of ATM systems, information on the consistency of the investment with the European ATM Master Plan	none						

Level of impact of the investment	Network level				
	Local level	Yes			
Quantitative impact per KPA		Safety	Environment	Capacity	Cost Efficiency
		Significant	N/A	N/A	Significant
Benefits for airspace users and results of the consultation of airspace users' representatives		Safety: -> Increasing the level of safety due to system unification in FIR Warsaw with respect of cybersecurity and ensuring audio and video recording in operational centres in FIR Warszawa -> Maintaining level of safety in connection with increasing air traffic through possible analysis of all (potential) irregularities and occurrences and reducing risk of future potential incidents. -> Supporting occurrence investigation and safety cases analysis through voice and video records of CWPs; improved investigation due to larger database and unified data format -> meeting requirements of ICAO Annex 10. Cost Efficiency: -> Lower costs of maintenance and technical reviewing resulting from system unification in FIR Warszawa. -> Ensuring local and central management of system and database. -> Possibly lower maintenance costs resulting from unified and modern systems instead of various, largely outdated, systems. Lower workload related to data read-outs and analysis during incident investigations. The justification for the investment and the scope of the task were presented to AUs during the draft RP4 PP consultation process, including during the consultation meeting on August 26. Also information on allocation between en-route and terminal services was provided. No specific comments with respect to this investment were made.		
Joint investment / partnership	No	If yes, please provide reference to joint project and/or indicate reference to cross-border initiatives			

Name of new major investment 4	***IZ440609_Replacement_VCS_System_Warszawa***		Reference #	***A4***	Total value of the asset		***88 000 000***	
Main category of the investment	New ATM system	Overhaul of existing ATM system		Other ATM	CNS	Infrastructure	Ancilliary	Other
					X			*X*
Description of the asset	The project covers replacement VCS system (technical devices) for ATC Center in Warsaw adapted to the new communication infrastructure. The project consists of replacing the system equipment at air traffic controllers' stations, integrating all available communication systems. The following main functionalities are planned: -> reaplacement of the main VCS system in Warsaw -> iIntegration of aeronautical communication networks (radio and fixed) with access from all ATCO workstations -> recording of all communication at ATCO workplace – required for occurrence investigation -> contingency system -> technical work stations and system configuration stations -> exchange of central units of the system							
Is the investment mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? If yes please provide description/reference	No							

For investments in new ATM systems and major overhauls of ATM systems, information on the consistency of the investment with the European ATM Master Plan		European ATM Master Plan: COM11.1 Voice over Internet Protocol (VoIP) in En-Route + COM11.2 Voice over Internet Protocol (VoIP) in Airport/Terminal SDO #08 Service-oriented delivery model (data driven and cloud based); SDO#09 - CNS optimisation, modernisation and resilience			
Level of impact of the investment	Network level				
	Local level	Yes			
Quantitative impact per KPA		Safety	Environment	Capacity	Cost Efficiency
		Negligeable	N/A	Negligeable	N/A
Results of the consultation of airspace users' representatives		The justification for the investment and the scope of the task were presented to AUs during the draft RP4 PP consultation process, including during the consultation meeting on August 26. Also information on allocation between en-route and terminal services was provided. No specific comments with respect to this investment were made.			
Joint investment / partnership	No	If yes, please provide reference to joint project and/or indicate reference to cross-border initiatives			

Name of new major investment 5	***IL440512_New_Warsaw_Tower_Solutions***		Reference #	***A5***	Total value of the asset		***98 900 000***	
Main category of the investment	New ATM system	Overhaul of existing ATM system		Other ATM	CNS	Infrastructure	Ancilliary	Other
				x		*x*		*x*
Description of the asset	There is an indisputable need to implement a new TWR solution for EPWA to ensure ATS service continuity and to support increased capacity in line with the airport expansion planned by the airport operator. To this end, different solutions have been considered by PANSA, including “conventional” new TWR building or a digital TWR solution. All those solutions are to include necessary visual system to support the work of ATCOs. ATCOs providing ATS services at Warsaw airport with solutions implemented by visual system will use: -> high-definition video panorama, with the ability to rotate, tilt and zoom, -> thermal imaging technology that allows observation at night and in difficult weather conditions, -> digital technology that greatly improves controllers' situational awareness and enables quick, informed decisions to improve safety and operational efficiency, -> additional information integrated into the panoramic view of the controlled airport, such as meteorological data and radar information. This project includes also elements and components related to the Integrated TWR System dedicated for TWR EPWA (in the earlier draft of the RP4 PP these were included in the Integrated TWR system). Due to the timing of works on the RP4 PP input, this submission (in terms of financial calculations) has been based on assumption of implementation of Digital Tower solution. However, currently the solution subject to the lowest implementation risk (considering also the timing of the implementation) seems to be “conventional new TWR building with chosen digital solution”. Any potential differences in investment costs are to be settled under the respective cost exempt from cost-risk sharing provisions. The investment is aimed at increasing the efficiency of airport operations and implementation of safety nets. New TWR solution is needed to support capacity increase at the airport in line with the airport operator’s plans. The current TWR does not provide the opportunity to implement new solutions and requires an upgrade, which is not possible without relocating operational personnel. The launch of the new solution will allow TWR EPWA to maintain continuous operations with the traffic increase.							
Is the investment mandated by a SES Regulation (i.e. PCP/CP1/Interoperability)? If yes please provide description/reference	No							

For investments in new ATM systems and major overhauls of ATM systems, information on the consistency of the investment with the European ATM Master Plan		none			
Level of impact of the investment	Network level				
	Local level	Yes			
Quantitative impact per KPA		Safety	Environment	Capacity	Cost Efficiency
		Significant	Negligeable	Significant	Significant
Results of the consultation of airspace users' representatives		The draft RP4 PP submitted for consultation with stakeholders in August 2024 assumed “conventional” TWR to be built. The possibility of replacing TWR Warszawa as a new “conventional” tower with Warsaw Digital Tower was indicated at the consultation meeting on the draft RP4 PP which took place on August 26, 2024. At that meeting it was explained that a prompt solution to replace the current Warsaw Tower is needed and the rTWR concept seems to be the most flexible and effective solution. There were no specific questions regarding this investment tasks. But in their written comments and questions provided after the consultation meeting, AUs asked for some additional explanation regarding the timeline and strategy for investments related to airports. As regards this investment project, it was clarified that for this investment different options were still being considered and no final decision has been taken yet.			
Joint investment / partnership	No	If yes, please provide reference to joint project and/or indicate reference to cross-border initiatives			

2.1.5 - Details on other new investments for RP4 from table B

Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period
Execution of other investments (not listed under the major investments above), which are include in the scope of RP4 PP, is important in order to meet Agency's ongoing needs, particularly operational needs to ensure continuity of services and maintain safety. Planned investments will support the achievement of Strategic Deployment Objectives (SDOs) or aim to maintain continuity of business operations/services. Other new investments over RP4 will complement all PANSA activities conected with implementation of PANSA's strategy to transform the organization to be ready for the challenges arising from the development of the Single European Sky. The investments are intended to support PANSA in optimizing its CNS infrastructure (radars, ILS/DME systems, ATIS, DME equipment and radio communication sites). Some of the planned infrastructure investments are the replacement of depleted equipment, the improvement of radionavigation coverage in FIR EPWW, and changes caused by the need to eliminate technological debt. In addition, investments related to the ongoing maintenance of facilities and ICT infrastructure, as well as IT business systems will be realized. The planned investments will have the greatest impact on the capacity area, enabling the operational needs of airspace users to be met in a situation of anticipated growth and increased complexity in air traffic. Selected new other investments are shown in the table below.

Ref. #	Name of other new investments for RP4	Master Plan reference (if any)	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Description
						2025	2026	2027	2028	2029	
B1	IR470212_Development of EFES PL System (Upgrade EFES System)	CP1/SDP: AF2.3	10 000 000	10 000 000	Average NBV	3 000 000	7 750 000	9 033 333	8 066 667	7 066 667	The task consists of virtualizing the servers of the central system, replacing the hardware at each location, providing new functionality and concluding a maintenance contract.
					Depreciation	0	500 000	933 333	1 000 000	1 000 000	
					Cost of leasing	0	0	0	0	0	
B2	IR470213_TCT upgrade	ATM MP/LSSIP: FCM06; CP1/SDP: AF4.3 AF5.5	5 300 000	5 300 000	Average NBV	400 000	1 550 000	3 050 000	4 425 000	4 550 000	The goal of the investment is to enhance the company's existing local Traffic Complexity Tool with additional data sources - data from the ATM Pegasus system, VFR and MIL traffic data from the Traffic system, military zone data from the CAT system and interactive forecasting of convective phenomena.
					Depreciation	0	0	0	250 000	1 000 000	
					Cost of leasing	0	0	0	0	0	

2.2 - Investments - IMWM

Complementary information may be provided in ***ANNEX E***

2.2.1 - Investments from RP4

Table A - Number of new major investments (i.e. above 5 M€) for RP4	0

Table B - Other new investments (below 5M€) from RP4

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of other new investments from RP4	**26 361 000**	**26 361 000**	**Average NBV**	**0**	**2 988 225**	**6 887 175**	**9 123 125**	**11 129 075**			54%	46%
			Depreciation	**0**	**1 524 550**	**2 048 550**	**3 204 550**	**4 043 550**				
			Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.2.2 - Investments from RP3

Table C - Number of major investments (i.e. above 5 M€) from RP3 performance plan	0
Table D - Number of major investments (i.e. above 5 M€) added during RP3	0

2.2.3 - Existing investments from previous reference periods

Table E - Existing investments from previous RPs

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of existing investments from previous RPs	**24 135 942**	**24 135 942**	**Average NBV**	**6 415 613**	**5 093 318**	**3 232 306**	**1 850 350**	**906 409**			51%	49%
			Depreciation	**3 137 562**	**2 197 028**	**1 524 996**	**1 238 917**	**648 964**				
			Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.2.4 - Detail of new major investments for RP4 from table A

Not applicable

2.2.5 - Details on other new investments for RP4 from table B

Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period
Investments planned until 2029 are important and necessary for the proper and reliable functioning of the MOLC process. The reliability and the highest level of quality of aviation services provided by IMWM-PIB gives it the opportunity to be designated by the competent Minister as an institution providing air navigation services in the Polish airspace. IMWM conducted a detailed analysis of the investment plan for 2025-2029 and updated it. First of all, the activities necessary for the development and technological progress of the services, the most urgent needs of operational and service personnel, as well as the possibilities of implementing a given investment independently of the Institute were taken into account.

Ref. #	Name of other new investments for RP4	Master Plan reference (if any)	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Description
						2025	2026	2027	2028	2029	
B1	Modernization of AWOS, purchase of visibility sensors with current weather sensors		1 000 000	1 000 000	Average NBV		400 000	700 000	500 000	300 000	Adaptation of currently used AWOS systems to the latest technology. After 10 years of operation, new technical solutions appear. Currently used devices are maintained at a high level of operation and service and provide reliable protection. Purchase of new generation devices together with the currently implemented modernization of the MetConsole will ensure the adaptation of AWOS systems to the latest standards of meteorological services at airports.
					Depreciation		200 000	200 000	200 000	200 000	
					Cost of leasing						
B2	AWOS modernization purchase of ceilometers		2 500 000	2 500 000	Average NBV		1 000 000	1 750 000	1 250 000	750 000	Adaptation of currently used AWOS systems to the latest technology. After 10 years of operation, new technical solutions appear. Currently used devices are maintained at a high level of operation and service and provide reliable protection. Purchase of new generation devices together with the currently implemented modernization of the MetConsole will ensure the adaptation of AWOS systems to the latest standards of meteorological services at airports.
					Depreciation		500 000	500 000	500 000	500 000	
					Cost of leasing						

B3	Construction and commissioning of automated weather obserwation systems AWOS at EPKK		2 500 000	2 500 000	Average NBV			1 125 000	2 125 000	1 875 000	investment transferred from 2025 to 2026 in accordance with information from EPKK from the letter MPL/PI/IPO/421-6/25/21 of February 19, 2024. commencement of works, i.e. construction of a new runway 3rd quarter of 2025, completion 4th quarter 2027
					Depreciation			250 000	250 000	250 000	
					Cost of leasing						
B4	AWOS modernization purchase of visibility meters with current weather sensors		4 500 000	4 500 000	Average NBV				1 800 000	3 150 000	Adaptation of currently used AWOS systems to the latest technology. After 10 years of operation, new technical solutions constantly appear. Currently used devices are maintained at a high level of operation and service and provide reliable protection. Purchase of new generation devices, together with the modernization of MetConsole that was implemented in 2024, will ensure the adaptation of current AWOS systems to the latest standards for the provision of meteorological services at airports.(18 pieces).
					Depreciation				900 000	900 000	
					Cost of leasing						
B5	AWOS modernization purchase of visibility meters with current weather sensors + background luminance		4 500 000	4 500 000	Average NBV					1 800 000	Adaptation of currently used AWOS systems to the latest technology. After 10 years of operation, new technical solutions constantly appear. Currently used devices are maintained at a high level of operation and service and provide reliable protection. Purchase of new generation devices, together with the modernization of MetConsole that was implemented in 2024, will ensure the adaptation of current AWOS systems to the latest standards for the provision of meteorological services at airports.(18 pieces).
					Depreciation					900 000	
					Cost of leasing						
B6	Purchase of AWOS system in Katowice		2 500 000	2 500 000	Average NBV						Purchase of AWOS system - in the case of EPKT where the construction of a new runway is planned by the airport owner
					Depreciation						
					Cost of leasing						

2.3 - Investments - Airport Meteo Sp. z o.o.

Complementary information may be provided in ***ANNEX E***

2.3.1 - Investments from RP4

Table A - Number of new major investments (i.e. above 5 M€) for RP4	0

Table B - Other new investments (below 5M€) from RP4

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of other new investments from RP4	**2 244 208**	**2 170 490**	**Average NBV**	**119 377**	**464 727**	**1 330 327**	**1 727 628**	**1 415 400**			41.4%	58.6%
			Depreciation	**10 355**	**80 808**	**195 584**	**312 228**	**312 228**				
			Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.3.2 - Investments from RP3

Table C - Number of major investments (i.e. above 5 M€) from RP3 performance plan	0
Table D - Number of major investments (i.e. above 5 M€) added during RP3	0

2.3.3 - Existing investments from previous reference periods

Table E - Existing investments from previous RPs

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of existing investments from previous RPs	**655 042**	**633 526**	**Average NBV**	**464 011**	**341 469**	**219 820**	**105 825**	**12 159**			41.4%	58.6%
			Depreciation	**122 543**	**122 543**	**118 251**	**112 242**	**49 704**				
			Cost of leasing	**0**	**0**	**0**	**0**	**0**				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.3.4 - Detail of new major investments for RP4 from table A

Not applicable

2.3.5 - Details on other new investments for RP4 from table B

Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period
The majority of planned investments are planned in order to replace or modernize currently used and exhausted equipment. Some new investment are planned for easing the comfort of work of weathermen or in order to minimize the currently incurred higher costs of an alternative solutions.

Ref. #	Name of other new investments for RP4	Master Plan reference (if any)	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Description
						2025	2026	2027	2028	2029	
B1	Office equipment for Aerodrome Meteorological Office	-	102 867	99 488	Average NBV	75 963	87 052	77 103	67 154	57 205	Essential equipment for AMO at EPRA, continuation of the RP3 investment realised in reduced scope.
					Depreciation	7 462	9 949	9 949	9 949	9 949	
					Cost of leasing	0	0	0	0	0	
B2	AWOS - Backup sensors (Emergency system)	-	39 887	38 577	Average NBV	29 455	33 755	29 897	26 039	22 182	Essential in case of the main AWOS failure risk materialization.
					Depreciation	2 893	3 858	3 858	3 858	3 858	
					Cost of leasing	0	0	0	0	0	
B3	IT Equipment (Computers for measurment and	-	157 449	152 277	Average NBV	6 345	137 049	106 594	76 139	45 683	Investment necessary for the efficient operational activity of the technical personnel.
					Depreciation	0	30 455	30 455	30 455	30 455	
					Cost of leasing	0	0	0	0	0	
B4	Service car for AWOS at EPRA maintenance	-	104 966	101 518	Average NBV	4 230	91 366	71 063	50 759	30 455	Service car of a larger size for AWOS technical maintenance.
					Depreciation	0	20 304	20 304	20 304	20 304	
					Cost of leasing	0	0	0	0	0	
B5	Company car for moving at the EPRA airport restricted areas	-	83 973	81 214	Average NBV	3 384	73 093	56 850	40 607	24 364	Since 2023 the restricted areas of the EPRA airport cannot be entered by private cars of the by authorized personnel. Company car is needed instead of currently costly rental agreement.
					Depreciation	0	16 243	16 243	16 243	16 243	
					Cost of leasing	0	0	0	0	0	
B6	AWOS - Sensors replacement	-	918 190	888 029	Average NBV	0	37 001	843 628	754 825	666 022	Replacement is necessary for the proper AWOS functioning after over 10 years of exploatation.
					Depreciation	0	0	88 803	88 803	88 803	
					Cost of leasing	0	0	0	0	0	
B7	Arrays and network equipment	-	134 276	129 866	Average NBV	0	5 411	116 879	90 906	64 933	Modernization of the exploited equipment.
					Depreciation	0	0	25 973	25 973	25 973	
					Cost of leasing	0	0	0	0	0	
B8	Software (Synoptic support software, Data analysis and	-	503 455	486 918	Average NBV	0	0	20 288	438 226	340 842	Essential software for the work of weathermen and preparation of reports in line with the expectations of its users).
					Depreciation	0	0	0	97 384	97 384	
					Cost of leasing	0	0	0	0	0	
B9	Lightning discharge detector	-	199 145	192 603	Average NBV	0	0	8 025	182 973	163 713	Investment needed for the safety of MET service provision.
					Depreciation	0	0	0	19 260	19 260	
					Cost of leasing	0	0	0	0	0	

2.4 - Investments - Warmia i Mazury Sp. z o.o.

Complementary information may be provided in ***ANNEX E***

2.4.1 - Investments from RP4

Table A - Number of new major investments (i.e. above 5 M€) for RP4	0

Table B - Other new investments (below 5M€) from RP4

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of other new investments from RP4	**2 625 000**	**1 571 786**	**Average NBV**	327 302	270 990	231 835	202 969	1 137 381			MET: 49.2% AFIS: 0% COM: 0%	MET: 50.8% AFIS: 100% COM: 100%
			Depreciation	93 216	105 746	90 423	92 083	105 874				
			Cost of leasing	0	0	0	0	0				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.4.2 - Investments from RP3

Table C - Number of major investments (i.e. above 5 M€) from RP3 performance plan	0

Table D - Number of major investments (i.e. above 5 M€) added during RP3	0

2.4.3 - Existing investments from previous reference periods

Table E - Existing investments from previous RPs

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of existing investments from previous RPs	**5 913 238**	**4 131 506**	**Average NBV**	2 315 227	1 910 671	2 758 617	2 031 590	1 386 730			MET: 49.2% AFIS: 0% COM: 0%	MET: 50.8% AFIS: 100% COM: 100%
			Depreciation	476 493	456 596	743 875	715 098	531 559				
			Cost of leasing	0	0	0	0	0				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.4.4 - Detail of new major investments for RP4 from table A

Not applicable

2.4.5 - Details on other new investments for RP4 from table B

Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period
New investments in RP4 include continuation of the RP3 investment plan, replacement of the exhausted equipment, TWR building expansion, software and IT equipment purchase.

Ref. #	Name of other new investments for RP4	Master Plan reference (if any)	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Description
						2025	2026	2027	2028	2029	
B1	New MET investments	-	695 000	688 453	Average NBV	250 775	192 337	148 561	107 519	387 853	Including: MET software for development, analysis, archiving and visualization of MET data; lighting detector, array disks, TWR building expansion (partially)
					Depreciation	75 119	79 246	56 339	56 958	65 874	
					Cost of leasing	0	0	0	0	0	
B2	New AFIS investments	-	360 000	360 000	Average NBV	0	0	0	15 000	355 500	Including: TWR building expansion (partially)
					Depreciation	0	0	0	0	9 000	
					Cost of leasing	0	0	0	0	0	
B3	New COM investments	-	1 570 000	523 333	Average NBV	76 527	78 653	83 274	80 450	394 028	Including: JOTRON Antenna replacement, measuring devices, radiotelephoines replacement, purchase of specialized tools, replacement of computers - part I, server disks, TWR building expansion (partially), replacement of work equipment - furniture, replacement of air conditioners, replacement of computers - part II
					Depreciation	18 097	26 500	34 083	35 125	31 000	
					Cost of leasing	0	0	0	0	0	

2.5 - Investments - Port Lotniczy Bydgoszcz S.A.

Complementary information may be provided in ***ANNEX E***

2.5.1 - Investments from RP4

Table A - Number of new major investments (i.e. above 5 M€) for RP4	0

Table B - Other new investments (below 5M€) from RP4

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of other new investments from RP4	3 520 709	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	**Average NBV**	291 814	354 359	244 634	173 361	137 157			0.00%	100.00%
			Depreciation	74 704	130 619	125 290	63 926	43 345			40.19%	59.81%
			Cost of leasing	0	0	0	0	0				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.5.2 - Investments from RP3

Table C - Number of major investments (i.e. above 5 M€) from RP3 performance plan	0

Table D - Number of major investments (i.e. above 5 M€) added during RP3	0

2.5.3 - Existing investments from previous reference periods

Table E - Existing investments from previous RPs

	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Lifecycle (Amortisation period in years)	Planned date of entry into operation	Allocation (%)*	
				2025	2026	2027	2028	2029			En route*	Terminal*
Subtotal of existing investments from previous RPs	73 957 415	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	**Average NBV**	6 923 287	6 170 803	5 636 981	5 209 959	4 793 288			0.00%	100.00%
			Depreciation	772 622	689 257	431 801	420 743	414 484			40.19%	59.81%
			Cost of leasing	0	0	0	0	0				

** En route/Terminal allocation within the scope of the Regulation. The total % En route+terminal should be equal to 100%.*

2.5.4 - Detail of new major investments for RP4 from table A

Not applicable

2.5.5 - Details on other new investments for RP4 from table B

Overall description and justification of the costs nature and benefits of other new and existing investments in fixed assets planned over the reference period
The majority of costs is stemming from the speeded-up, delayed investments planed for RP3 and currently planned to be executed in the last moths of 2024. Among the most significant are: TWR EPBY modernization and added investment concerning service car for electrical engineers for AWOS maintenance. As for RP4, the most important investment is AWOS modernization after 10 years of its use. The rest of minor investments allocated to MET and AFIS consist of especially new MET software and replacement of exhauseted IT equipment used for performing air navigation services.

Ref. #	Name of other new investments for RP4	Master Plan reference (if any)	Total value of the asset (capex or contractual leasing value) (in **national currency**)	Value of the assets allocated to ANS in the scope of the performance plan (in **national currency**)	Elements for the calculation of the determined costs of investments (net book value (NBV), depreciation and cost of leasing) (in **national currency**)						Description
						2025	2026	2027	2028	2029	
B1	AWOS modernization (MET)	-	184 000	179 676	Average NBV	149 279	103 197	49 294	4 651	0	AWOS modernization is essential after 10 years of exploitation (entered into operation in 2016).
					Depreciation	49 411	53 903	53 903	22 460	0	
					Cost of leasing	0	0	0	0	0	
B2	Other minor investments (MET)	-	3 336 709,08 (as a total B2+B3)	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	Average NBV	102 409	185 516	134 671	112 976	93 544	Other investments allocated to MET costs.
					Depreciation	20 411	66 676	59 552	27 318	28 778	
					Cost of leasing	0	0	0	0	0	
B3	Other minor investments (AFIS)	-	3 336 709,08 (as a total B2+B3)	Various - PL Bydgoszcz uses i.a. dynamic allocation keys	Average NBV	40 126	65 646	60 669	55 734	43 613	Other investments allocated to AFIS costs.
					Depreciation	4 882	10 040	11 835	14 148	14 567	
					Cost of leasing	0	0	0	0	0	

SECTION 3: PERFORMANCE TARGETS AND MEASURES FOR THEIR ACHIEVEMENT

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

3.3.3 - ATCO Planning

3.4 - Cost-efficiency targets

3.4.1 - Cost-efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #x

3.4.2 - Cost-efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #x

3.4.3 - Cost allocation ATSP/CNSP

ATSP/CNSP #x

3.4.4 - Cost allocation METSP

METSP #x

3.4.5 - Cost allocation NSA

3.4.6 - Determined costs assumptions

ANSP #x

3.4.7 - Pension assumptions

3.4.8 - Interest rate assumptions for loans financing the provision of air navigation services

3.4.9 -Additional determined costs related to measures necessary to achieve the en route capacity targets

3.4.10 - Restructuring costs

3.5 - Additional KPIs / Targets

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

3.6.2 - Interdependencies and trade-offs between capacity and environment

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

3.6.4 - Other interdependencies and trade-offs

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX M. COST ALLOCATION
ANNEX J. OPTIONAL KPIs AND TARGETS
ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS
ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS
ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS
ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE

SECTION 3.1: SAFETY KPA

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety national performance targets

b) Justifications for the local safety performance targets

c) Main measures put in place to achieve the safety performance targets

Annexes of relevance to this section

ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS

3 - PERFORMANCE TARGETS AT LOCAL LEVEL

3.1 - Safety targets

3.1.1 - Safety KPI #1: Level of Effectiveness of Safety Management achieved by ANSPs

a) Safety performance targets

	Number of Air Traffic Service Providers	3				
		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
PANSA	Safety policy and objectives	B	C	C	C	C
	Safety risk management	C	C	C	C	D
	Safety assurance	B	C	C	C	C
	Safety promotion	C	C	C	C	C
	Safety culture	B	B	C	C	C
	Additional comments					

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
Port Lotniczy Bydgoszcz S.A.	Safety policy and objectives	B	B	B	C	C
	Safety risk management	C	C	C	C	D
	Safety assurance	B	B	B	C	C
	Safety promotion	B	B	B	C	C
	Safety culture	B	B	B	C	C
	Additional comments					

		2025	2026	2027	2028	2029
		Target	Target	Target	Target	Target
Warmia i Mazury Sp. z o.o.	Safety policy and objectives	B	B	B	C	C
	Safety risk management	C	C	C	C	D
	Safety assurance	B	B	B	C	C
	Safety promotion	B	B	B	C	C
	Safety culture	B	B	B	C	C
	Additional comments					

b) Justifications for the local safety performance targets

There is no inconsistency between local and Union-wide safety targets.

** Refer to Annex O, if necessary.*

c) Main measures put in place to achieve the local safety performance targets

- enhancing proactive methods of identifying safety hazards;

- creating a dedicated unit for hazard identification and SMS development to integrate all safety management-related activities in one place with common database of hazards, safety risks, safety recommendation and requirements;

- integration of corporate risk management within the safety management department;

- dedicated training on various safety management tools and methodologies for safety personnel;

- providing expert advisory and training on safety management with top level experts;

- improving the effectiveness of reactive methods of hazard identification and risk management by increasing operational experts' involvement in safety investigations. Using SOAM in incident investigation as a standard and introducing regular refresher trainings for safety personnel;

- verification of the risk matrix used for safety management;

- introduction of Bow-Tie risk management methodology with software support and training of safety personnel;

- development of Safety Performance Indicators in cooperation with research centers experienced in the field to provide reliable and useful indicators including trends, considering operational, technical and human factors. Reporting and monitoring the values of selected Leading SPIs in live mode using dedicated tools;

- introducing periodic safety culture surveys once every three years in cooperation with Eurocontrol and a research center with experience in such surveys conducted for various EU ANSPs, implementation of Eurocontrol tool CARMA ARM (Compliance and Regulation Management Application – Aviation Regulation Management);

- increasing the role of local unit's safety experts in hazard identification and safety assessments;

- revising all safety management procedures and guidance materials to make them as clear as possible and more usable in everyday work;

- revising just culture policy to improve its effectiveness.

** Refer to Annex O, if necessary.*

SECTION 3.2: ENVIRONMENT KPA

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) Environment national performance targets

b) Justifications for the local environment performance targets

c) Main measures put in place to achieve the environment performance targets

Annexes of relevance to this section

ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS

3.2 - Environment targets

3.2.1 - Environment KPI #1: Horizontal en route flight efficiency (KEA)

a) National environment performance targets

	2025	2026	2027	2028	2029
National reference values	4,51%	4,49%	4,47%	4,45%	4,43%

	2025	2026	2027	2028	2029
	Target	Target	Target	Target	Target
National targets	4,51%	4,49%	4,47%	4,45%	4,43%

b) Justifications for the local environment performance targets

There is no inconsistency between local and Union-wide environment targets.
Detailed justifications for the local environment performance targets: see Annex P.

** Refer to Annex P, if necessary.*

c) Main measures put in place to achieve the local environment performance targets

FRA (POLFRA, from FL095, 24H) was implemented by PANSA in Warszawa FIR in February 2019, which was further expanded in one common cross-border FRA area with Lithuania named Baltic FRA. In the same step Polish-Slovakian boundary was opened for flight planning to allow crossborder FRA operations between Baltic FRA and SEEFRA. Over RP3 further improvements were also implemented to support AFUA, including AMC Poland - FMP Warszawa coordination procedures and new technologies. Additional measures were taken to support horizontal flight efficiency in 2022, following the outbreak of the war in Ukraine. A large number of RAD restrictions remain suspended since 2020.
Further details on the measures already implemented were provided in annual performance monitoring reports.

Further measures planned for 2024+ include:

- Implementation of cross-border FRA operations between Poland and Czech Republic and between Poland and Sweden (planned implementation in Q42024);

- Implementation of cross-border FRA operations between Poland and Ukraine – due to the war in Ukraine the project was suspended without new date of implementation (previously planned for 2025), however after end of the war in Ukraine the project is planned to be renewed, hopefully before 2029);

- Implementation of FRA operations to TMAs with upper limit above FL195 (planned implementation in RP4);

- Implementation of cross-border FRA operations between Poland and Germany (planned implementation in 2027/2028);

- Development of new operational procedures between AMC Poland/ FMP Warszawa/ NM – management of dynamic RAD. The task is connected with development of CAT system. The system's upgrade and implementation is planned for 1Q2025.

Please also see the measures planned to be implemented to support en-route capacity performance – although these are not directly aimed at improving environmental performance, indirectly they can support horizontal flight efficiency through limiting capacity constraints that could have an impact on the routes.

** Refer to Annex P, if necessary.*

SECTION 3.3: CAPACITY KPA

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight
- a) National capacity performance targets
- b) Justifications for the local en route capacity performance targets
- c) Main measures put in place to achieve the local en route capacity performance targets

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight
- a) National capacity performance targets
- b) Justifications for the local terminal capacity performance targets, including contribution to the improvement of the European ATM network performance
- c) Main measures put in place to achieve the local terminal capacity performance targets

3.3.3 - ATCO planning
- a) ATCOs in the scope of the performance plan
- b) ATCO planning at ACC level
- c) ATCO training

Annexes of relevance to this section

ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS

3.3 - Capacity targets

3.3.1 - Capacity KPI #1: En route ATFM delay per flight

a) National capacity performance targets

	2025	2026	2027	2028	2029
National reference values	0,24	0,18	0,15	0,13	0,13

	2025	2026	2027	2028	2029
	Target	Target	Target	Target	Target
National targets	0,24	0,18	0,15	0,13	0,13

b) Justifications for the local en route capacity performance targets

There is no inconsistency between National reference values and National targets.
Detailed justifications for the local capacity performance targets: see Annex Q.

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the local en route capacity performance targets

The main measures planned to be implemented over RP4 include:

- Continuation of reorganisation of ACC Warszawa sector configuration - three layer division - Step 2 and 3 (sector groups TC and BD) – currently planned operational implementation in 2026.
- Increased number of GAT ACC sectors possible to be opened, in line with the current capacity plan in NOP/LSSIP (this represents the maximum technical and organizational capability – the actual number of sectors open will depend on traffic demand (traffic level and structure/flows):
  - 2025 – 14,
  - 2026, 2027 – 16,
  - 2028, 2029 – 17.
- Continued training of air traffic controllers, both for ACC and APP, aimed to keep and further increase the number of ATCOs.
- Operational implementation of DRAD.
- Development of advanced toot to support air traffic flow and capacity management.
- Adjustments to sector shapes and configuration to take into account observed and anticipated traffic flows.
- Further development of dynamic airspace management system.
- Flexible roster responding to traffic complexity and week/weekend demand.
- Ongoing adaptation of the air traffic management system to operational needs and preparation for implementation on new ATM system in RP5.
- Implementation of backup OPS system solution in Poznań ATC Center.
- Continued investments in infrastructure (CNS) and technology allowing maintenance and optimisation of airspace structures and optimisation of coverage in the Polish airspace as well as supporting contingency – current investment plan is described under investment part of this PP.
- Reduction of additional time in TMA by changing the radar separation minimum from 5 NM to 3 NM in the entire TMA as well as implementation of partial RECAT-EU to shorten the spacing both for arrivals and departures between upper heavy and upper medium categories.
- Post-ops analysis and business intelligence initiatives.

** Refer to Annex Q, if necessary.*

3.3.2 - Capacity KPI #2: Terminal and airport ANS ATFM arrival delay per flight

a) National capacity performance targets

	2025	2026	2027	2028	2029
	Target	Target	Target	Target	Target
National targets	0,06	0,08	0,08	0,16	0,08
Additional comments	The target is based on the local forecast. The local forecast is based on the analysis of historical data and assumptions valid at the time of preparing the draft of Performance Plan. The delay rate forecast has been prepared taking into account the BASE scenario as well as the HIGH scenario of the STATFOR forecast of February 2024. The target covers all causes of delays, including ATC, non-ATC and the Weather. The incentive mechanism will calculate the delay causes attributable to the ANSP related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual. For details please see Annex I.				

Airport level	***EPWA-Lotnisko Chopina w Warszawie***	0,06	0,06	0,12	0,34	0,14
	Airport contribution to national targets					
	EPKK-Kraków-Balice	0,06	0,04	0,04	0,04	0,04
	Airport contribution to national targets					
	EPGD-Gdańsk im. Lecha Wałęsy	0,13	0,11	0,10	0,05	0,02
	Airport contribution to national targets					
	EPKT-Katowice-Pyrzowice	0,01	0,01	0,01	0,01	0,01
	Airport contribution to national targets					
	EPWR-Wrocław-Strachowice	0,01	0,01	0,01	0,01	0,01
	Airport contribution to national targets					
	EPPO-Poznań-Ławica	0,03	0,03	0,03	0,03	0,03
	Airport contribution to national targets					
	EPRZ-Rzeszów-Jasionka	0,38	1,04	0,38	0,38	0,37
	Airport contribution to national targets					
	EPSC-Szczecin-Goleniów	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPBY-Bydgoszcz	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPMO-Warszawa/Modlin	0,02	0,02	0,02	0,02	0,02
	Airport contribution to national targets					
	EPLL-Łódź	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPLB-Lublin	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPZG-Zielona Góra-Babimost	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPRA-Lotnisko Warszawa-Radom	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					
	EPSY-Olsztyn-Mazury	0,00	0,00	0,00	0,00	0,00
	Airport contribution to national targets					

b) Justifications for the local terminal capacity performance targets, including contribution to the improvement of the European ATM network performance

See annex Q.

** Refer to Annex Q, if necessary.*

c) Main measures put in place to achieve the local terminal capacity performance targets

Regarding airspace the measures mostly focus on reducing the additional time in TMA by changing the radar separation minimum from 5 NM to 3 NM in the entire TMA as well as implementation of partial RECAT-EU to shorten the spacing both for arrivals and departures between upper heavy and upper medium categories (referred to also in the part related to en-route capacity).

For airport operations:

- For EPWA:
  - the key focus is on revalidation of A-CDM and using TCT (fast time simulations) to minimalize impact of landside's WIP on traffic capacity and delays caused, while implementation of DCL allows reorganisation of responsibilities within TWR operations in order to improve GND traffic flow,
  - new TWR and A-SMGCS with high system integration are key enablers in maintaining acceptable capacity performance indicators while increasing EPWA capacity,
  - based on declarations of airport authority, forecasted capacity increase is an important factor considered in ATCOs training plan with additional working positions taken into account.
- For other airports where radar control is provided, SMAS (limited version of A-SMGCS) is planned to be implemented, which is expected to improve traffic flow at those airports and can positively impact delay levels.
- A number of replacement and development investments is planned to be implemented (especially with regard to CNS and ATC systems/tools) to allow for uninterrupted provision of air navigation services – current investment plan is described under investment part of this PP.
- Where necessary and justified, increase in TWR ATCO numbers is planned to allow for uninterrupted provision of ATC.

** Refer to Annex Q, if necessary.*

3.3.3 - ATCO planning and training

PANSA

a) ATCOs in the scope of the performance plan

ATCOs in the scope of the performance plan		Actual	Forecast	Planned				
		2023	2024	2025	2026	2027	2028	2029
Number of ATCO in OPS (year-end FTEs) employed by the ANSP (for services within the scope of the performance plan)	ACC	177,2167	178,9667	183,9667	191,9667	200,9667	207,9667	212,2167
	APP	141	145,95	153,95	165,95	173,95	180,95	185,95
	TWR	258,4333	264,0166	287,0166	296,1166	308,1166	322,1166	329,1166

Number of ATCOs in OPS (year-end FTEs) allocated to the en route cost base(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Number of ATCO on other duties (year-end FTEs) employed by the ANSP	23,65	24,45	24,45	24,45	24,45	24,45	24,45

b) ATCO planning at ACC level

	Actual	Forecast	Planned				
Warsaw (EPWW ACC)	2023	2024	2025	2026	2027	2028	2029
Number of additional ATCOs in OPS planned to start working in the OPS room (FTEs)	9	5	7	11	12	11	11
Number of ATCOs in OPS planned to stop working in the OPS room (FTEs)	9,7833	3,25	2	3	3	4	6,75
Number of ATCOs in OPS planned to be operational at year-end (FTEs)	177,2167	178,97	183,9667	191,9667	200,9667	207,9667	212,2167

Additional comments
The numbers presented in the above table a) (division into ACC, APP and TWR) represent number of ATCOs (FTEs) who work in the given unit (ACC, APP and TWR respectively). They do not consider work performed by ATCO for a given service (e.g. when ATCO working in TWR unit performes APP service). PANSA does not allocate ATCO FTEs to types of services (ER, TNC, non-ANS). The element that is allocated to services are costs. Staff costs are allocated to resources, which then are allocated through a multistep approach, using the dedicated EPM tool, to types of services.

c) ATCO Training

ATCO trainees of the ANSP	Actual	Forecast	Planned				
	2023	2024	2025	2026	2027	2028	2029
Number of trainees planned to enter the training program(s) during the year.	93	81	89	96	94	68	80
Number of trainees expected to complete the training program(s) during the year based on statistical estimates.	11	17	42	38	40	40	35
Number ATCO trainees at year end.	121	143	151	159	163	135	128

The values in line "Number ATCO trainees at year end." are totals at the given year's end of PRU categories 3 (Ab-initio trainees) and 4 (On-the-job trainees).

The figures presented in the above table regarding ATCOs, especially in lines Number of trainees planned to enter the training program(s) during the year and Number ATCO trainees at year end are estimates at end August 2024. The figures will be adjusted on ongoing basis to the actual needs to support achievement of the assumed number of ATCOs in OPS at the end of RP4.

Description of the training process, including details on the average failure rate and the process used to allocate newly qualified ATCOs between ACC, APP and TWR positions.

Traffic trainees participate in initial training, consisting of two courses: basic training and rating training.

Basic training:

Basic training is divided into a theoretical part, including 374 lessons (1 lesson unit = 45 min) and a practical part, which includes 12 to 15 exercises. Basic training for candidates for flight information service officers is theoretical training, lasting 329.5 lessons. Monitoring the level of knowledge of training participants periodically (tests), and after the theoretical part - in the form of an oral knowledge test and exam - for candidates for On-the-job Trainees. During the practical training, students' competence is monitored on an ongoing basis, during each training session on the simulator or part-task trainer (PTT). After the practical part it is checked in the form of an assessment - for candidates for On-the-job Trainees. Completing the training with a positive result is a requirement to start rating training.

Rating training:

The rating training is also divided into a theoretical and a practical part. The duration of theoretical training (1 lesson = 45 min) depends on its type, as follows:

- aerodrome control rating (ADC): 87 lesson units,
- aerodrome control surveillance rating endorsement (SUR): 7 lesson units,
- approach control procedural rating (APP): 89 lesson units,
- approach control surveillance rating (APS): 91,5 lesson units,
- area control surveillance rating (ACS): 73.5 lesson units.

The practical part of qualification training depends on its type, in accordance with below:

- aerodrome control rating (ADC): from 90 to 120 exercises,
- aerodrome control surveillance rating endorsement (SUR): from 10 to 13 exercises,
- approach control procedural rating (APP): from 35 to 47 exercises,
- approach control surveillance rating (APS): from 115 to 150 exercises,
- area control surveillance rating (ACS): from 170 to 220 exercises.

The level of knowledge and skills of trainees is monitored on an ongoing basis, during each simulator training session, and periodically (by analyzing training progress). After completing the practical part, an assessment is conducted, and after the theoretical part an exam takes place.

The process of assigning candidates to units is a two-stage process. The first stage is the assignment of candidates to specific services (TWR, APP or ACC), which is carried out on the basis of predisposition testing during initial training - in accordance with the needs of the Operations Office of PANSA.

The second stage is the assignment to the specific units, which takes place during the rating training based on the assessment of the candidates' training progress, in consultation with the Operations Office, taking into account the current needs and possibilities of training in the unit in terms of its effectiveness.

For the purposes of developing an employment plan for ATS personnel in RP4, the following training effectiveness was adopted.

Success rate of initial training (A)	
ACC	82%
APP	72%
TWR	75%

Success rate of unit training (B)	
ACC	62%
APP	52%
TWR	60%

Total success rate (A) x (B)	
ACC	51%
APP	37%
TWR	45%

SECTION 3.4: COST-EFFICIENCY KPA

3.4 - Cost-efficiency targets

3.4.1 - Cost-efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #x

a) RP4 cost-efficiency performance targets

b) Information on the baseline values for the determined costs and the determined unit costs

c) Detailed justifications for the adjustments to the baseline values

d) Justification of the consistency of the local cost-efficiency performance targets with the Union-wide targets

e) Where a deviation from the Union-wide performance targets is observed, please indicate if the NSA considers those deviations to be necessary and proportionate

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS

g) Verification by the NSA

3.4.2 - Cost-efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #x

a) RP4 cost-efficiency performance targets

b) Information on the baseline values for the determined costs and the determined unit costs

c) Detailed justifications for the adjustments to the baseline values

d) Justifications for the local terminal cost-efficiency performance targets, including contribution to the improvement of the European ATM network performance

e) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

f) Verification by the NSA

3.4.3 - Cost Allocation ATSP/CNSP

ATSP/CNSP #x

a) Summary of services provided

b) Allocation of costs by segment

c) Allocation of costs related to the provision of approach services

d) Description of other services and activities outside the scope of the performance plan and their financing

e) Changes in cost allocation methodology

f) Verification by the NSA

3.4.4 - Cost Allocation METSP

METSP #x

a) Summary of services provided

b) Allocation of costs by segment

c) Breakdown of determined meteorological costs between direct and core costs and allocation between en route and terminal services

d) Meteorological direct costs and allocation across charging zone(s)

e) Meteorological core costs and allocation across charging zone(s)

f) Changes in cost allocation methodology

g) Verification by the NSA

3.4.5 - Cost allocation NSA

a) Supervision costs

b) Search and rescue costs (if reported as part of the NSA costs)

c) Changes in cost allocation methodology

d) Verification by the NSA

3.4.6 - Determined costs assumptions

ANSP #x

3.4.6.1 - Operating costs

3.4.6.2 - Capital costs

3.4.6.3 - Costs for VFR exempted flights

3.4.6.4 - NSA verification

3.4.7 - Pension assumptions

3.4.7.1 Total pension costs

3.4.7.2 Assumptions for the "State" pension scheme

3.4.7.3 Assumptions for the occupational "Defined contributions" pension scheme

3.4.7.4 Assumptions for the occupational "Defined benefits" pension scheme

3.4.8 - Interest rate assumptions for loans financing the provision of air navigation services

3.4.9 - Additional determined costs related to measures necessary to achieve the en route capacity targets

a) Overall description of the measures necessary to achieve the en-route capacity targets for RP4, which induce additional costs

b) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP4

c) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP4 by nature by ANSP

d) Demonstration that the deviation from the Union-wide targets is exclusively due to the additional determined costs related to measures necessary to achieve the performance targets in capacity

3.4.10 - Restructuring costs

3.4.10.1 Restructuring costs from previous reference periods to be recovered in RP4

3.4.10.2 Restructuring costs planned for RP4

Annexes of relevance to this section

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)

ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)

ANNEX F. BASELINE VALUES (COST-EFFICIENCY)

ANNEX H. RESTRUCTURING MEASURES AND COSTS

ANNEX M. COST ALLOCATION

ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS

ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE

3.4 - Cost-efficiency targets

3.4.1 - Cost-efficiency KPI #1: Determined unit cost (DUC) for en route ANS

En Route Charging Zone #1 - Poland

a) RP4 cost-efficiency performance targets

En route charging zone Name of the CZ	Baseline 2019 2019 B	Baseline 2024 2024 B	RP4 cost-efficiency targets (determined 2025-2029) 2025 D	 2026 D	 2027 D	 2028 D	 2029 D	2029D vs. 2019B (CAGR)	2029D vs. 2024B (CAGR)
Total en route costs in nominal terms (in national currency)	888 327 162	1 146 945 578	1 207 086 948	1 275 630 684	1 331 965 004	1 391 674 064	1 442 776 437	5,5%	4,7%
Total en route costs in real terms (in national currency at 2022 prices)	**1 046 090 203**	**1 018 345 243**	**1 034 774 320**	**1 065 731 242**	**1 088 106 734**	**1 116 743 445**	**1 136 000 690**	0,9%	2,2%
Total en route costs in real terms (in EUR2022) [1]	223 528 801	217 600 252	221 110 821	227 725 703	232 506 904	238 626 003	242 740 896	0,9%	2,2%
YoY variation				3,0%	2,1%	2,6%	1,7%		
Total en route Service Units (TSU)	4 959 376	3 822 730	4 064 619	4 255 413	4 425 489	4 590 250	4 756 768	-0,5%	4,5%
YoY variation				4,7%	4,0%	3,7%	3,6%		
Real en route unit costs (in national currency at 2022 prices)	**210,93**	**266,39**	**254,58**	**250,44**	**245,87**	**243,29**	**238,82**	1,4%	-2,2%
Real en route unit costs (in EUR2022) [1]	45,07	56,92	54,40	53,51	52,54	51,99	51,03	1,4%	-2,2%
YoY variation				-1,6%	-1,8%	-1,1%	-1,8%		

National currency	**PLN**
[1] Average exchange rate 2022 (1 EUR=)	**4,68**
Forecast inflation index 2024 - Base 100 in 2022	**116,46**

b) Information on the baseline values for the determined costs and the determined unit costs

En route charging zone Name of the CZ	Baseline 2019 2019 B	Baseline 2024 2024 B	Actuals 2019 2019 A	Forecast 2024 2024 F	2019 Baseline adjustments	2024 Baseline adjustments
Total en route costs in nominal terms (in national currency)	888 327 162	1 146 945 578	836 485 578	1 148 944 683	51 841 584	-1 999 106
Total en route costs in real terms (in national currency at 2022 prices)	**1 046 090 203**	**1 018 345 243**	**993 644 689**	1 020 217 506	52 445 514	-1 872 263
Total en route costs in real terms (in EUR2022) [1]	223 528 801	217 600 252	212 322 232	218 000 318	11 206 570	-400 066
Total en route Service Units (TSU)	4 959 376	3 822 730	4 971 806	3 822 730	-12 430	0

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2019 baseline value for the determined costs

Number of adjustments	5

Adjustment #1	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
1	PANSA	ANSP	Cost of capital	49 059 170	49 059 170	10 482 975
Description and justification of the adjustment						
For details, see Annex F.						

Adjustment #2	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
2	Other ANSP	MET	Staff	952 597	1 176 387	251 371
Description and justification of the adjustment						
For details, see Annex F.						

Adjustment #3	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
3	Other ANSP	MET	Other operating	1 618 129	1 998 269	426 991
Description and justification of the adjustment						
For details, see Annex F.						

Adjustment #4	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
4	Other ANSP	MET	Depreciation	200 643	200 643	42 873
Description and justification of the adjustment						
For details, see Annex F.						

Adjustment #5	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
5	Other ANSP	MET	Cost of capital	11 045	11 045	2 360
Description and justification of the adjustment						
For details, see Annex F.						

Total adjustments to the 2019 baseline value for the determined costs	**Costs nominal NC**	**Costs real NC**	**Costs EUR2022**
	51 841 584	**52 445 514**	**11 206 570**

c.2) Adjustments to the 2019 service units

Impact of transition to actual route flown	Actual service units (M2)	Coefficient M2/M3	Source	Actual service units (M3)	Service units adjustment
	4 971 806	-0,25%	CRCO correction factor May 2019 (on 12 months)	4 959 376	-12 430

Other adjustment to the 2019 service units	No

Total adjustments to the 2019 service units	-12 430

c.3) Adjustments to the 2024 baseline value for the determined costs

Number of adjustments	18

Adjustment #1	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
1	IMWM	MET	Staff	-177 982	-152 826	-32 656
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #2	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
2	IMWM	MET	Other operating	-383 759	-329 518	-70 412
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #3	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
3	IMWM	MET	Depreciation	193 731	193 731	41 397
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #4	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
4	IMWM	MET	Cost of capital	38 523	38 523	8 232
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #5	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
5	AM	MET	Staff	11 825	10 154	2 170
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #6	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
6	AM	MET	Other operating	13 464	11 561	2 470
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #7	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
7	AM	MET	Depreciation	1 062	1 062	227
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #8	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
8	AM	MET	Cost of capital	2 197	2 197	469
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #9	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
9	PLB	MET	Staff	-24 429	-20 976	-4 482
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #10	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
10	PLB	MET	Other operating	-8 945	-7 681	-1 641
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #11	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
11	PLB	MET	Depreciation	-3 134	-3 134	-670
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #12	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
12	PLB	MET	Cost of capital	-743	-743	-159
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #13	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
13	WIM	MET	Staff	-72 030	-61 850	-13 216
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #14	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
14	WIM	MET	Other operating	-255 576	-219 453	-46 893
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #15	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
15	WIM	MET	Depreciation	-14 974	-14 974	-3 200
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #16	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
16	WIM	MET	Cost of capital	-4 762	-4 762	-1 018
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #17	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
17	NSA	ISA/EUROCONTRO	Staff	-968 692	-968 692	-206 990
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Adjustment #18	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
18	NSA	ISA/EUROCONTRO	Other operating	-344 884	-344 884	-73 695
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Total adjustments to the 2024 baseline value for the determined costs	**Costs nominal NC**	**Costs real NC**	**Costs EUR2022**
	-1 999 106	**-1 872 263**	**-400 066**

c.4) Adjustments to the 2024 service units

Other adjustment to the 2024 service units	No

d) Justification of the consistency of the local en route cost-efficiency performance targets with the Union-wide targets

For details, see Annex R.

** Refer to Annex R, if necessary.*

e) Where a deviation from the Union-wide performance targets is observed, please indicate if the NSA considers those deviations to be necessary and proportionate under:

Additional costs of measures necessary to achieve the capacity targets for RP4	Yes	Detailed in part 3.4.9 of the performance plan
Restructuring costs planned for RP4	No	

f) Main measures put in place to achieve the targets for determined unit cost (DUC) for en route ANS

PANSA, after the approval of new Remuneration Scheme by Minister of Infrastructure, introduced updated employment regulation to achieve higher efficiency of operations. It is based (as it must be based) on the "crisis" regulation of 2022. The new one has significant positive impact on number of ATCOs in subsequent years and reduces the number of needed operational staff starting from 2026 by ca. 10% comparing to the needs resulting from the previous regulation of 2022.
The newly implemented ongoing recruitment process (instead of ca. 2 calls yearly) and more careful selection process are expected to positively impact the training of new ATCOs. There is already a huge interest (2500 applications), more staff is engaged in the selection process with the new approaches defined by the new HR (previously HR was not involved as it should be). What is more, we consider an additional course to be added in the process, however this requires detailed assessment of the simulators and OJT capacity. All the above is expected to finally allow PANSA to limit significantly the overtimes and delays and be ready for the traffic recovery.
Staffing and capacity issues have been also addressed by extremely flexible rostering schemes in ACC.

Additionally, PANSA has introduced a number of cost cutting initiatives (rationalization of administrative staff and higher requirement on quality and competencies) including new systems and processes, which are expected to enable reduction in administrative personnel. Also close cooperation with military authorities (Cyber Command) was initiated, which should enable limiting costs related to cybersecurity and especially enhance PANSA ability to be cyber-secure.

PL Bydgoszcz: ANSP will continue to constantly monitor its financial situation and cost execution levels, in order to minimize them and fulfil operational obligations to the AUs.

Airport Meteo: Constant monitoring of actual costs in relation to the determined, continuous search for savings.

Warmia i Mazury: Constant searching for savings and internal monitoring of all expenses will be continued in RP4.

** Refer to Annex R, if necessary.*

g) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.2 - Cost-efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #1 - Poland - EPWA

a) RP4 cost-efficiency performance targets

Terminal charging zone Name of the CZ	Baseline 2024 2024 B	RP4 cost-efficiency targets (determined 2025-2029) 2025 D	 2026 D	 2027 D	 2028 D	 2029 D	2029D vs. 2024B (CAGR)
Total terminal costs in nominal terms (in national currency)	**75 920 554**	**80 996 425**	87 685 466	95 140 478	104 646 548	109 863 616	7,7%
Total terminal costs in real terms (in national currency at 2022 prices)	**66 565 941**	**68 278 847**	**71 820 028**	**76 416 955**	**83 699 362**	**86 421 622**	5,4%
Total terminal costs in real terms (in EUR2022) [1]	14 223 825,95	14 589 840,09	15 346 520,52	16 328 792,92	17 884 899,47	18 466 592,63	5,4%
YoY variation				6,4%	9,5%	3,3%	
Total terminal Service Units (TNSU)	105 692	112 418	119 030	123 394	127 349	131 456	4,5%
YoY variation			5,9%	3,7%	3,2%	3,2%	
Real terminal unit costs (in national currency at 2022 prices)	**629,81**	**607,37**	**603,38**	**619,29**	**657,25**	**657,42**	0,9%
Real terminal unit costs (in EUR2022) [1]	134,5780754	129,7825259	128,9303415	132,330526	140,440267	140,4770989	0,9%
YoY variation			-0,7%	2,6%	6,1%	0,0%	

National currency	**PLN**
1 Average exchange rate 2022 (1 EUR=)	**4,68**
Forecast inflation index 2024 - Base 100 in 2022	**116,46**

b) Information on the baseline values for the determined costs and the determined unit costs

Terminal charging zone Name of the CZ	Baseline 2024 2024 B	Forecast 2024 2024 F	2024 Baseline adjustments
Total terminal costs in nominal terms (in national currency)	75 920 554	75 536 596	383 957
Total terminal costs in real terms (in national currency at 2022 prices)	**66 565 941**	66 188 753	377 188
Total terminal costs in real terms (in EUR2022) [1]	14 223 826	14 143 228	80 598
Total terminal Service Units (TNSU)	105 692	105 692	0

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2024 baseline value for the determined costs

Number of adjustments	4

Adjustment #1	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
1	IMWM	MET	Staff	12 422	10 666	2 279
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #2	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
2	IMWM	MET	Other operating	35 469	30 456	6 508
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #3	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
3	NSA	NSA/EUROCONTROL	Staff	247 831	247 831	52 957
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Adjustment #4	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
4	NSA	NSA/EUROCONTROL	Other operating	88 235	88 235	18 854
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Total adjustments to the 2024 baseline value for the determined costs	**Costs nominal NC**	**Costs real NC**	**Costs EUR2022**
	383 957	**377 188**	**80 598**

c.2) Adjustments to the 2024 service units

Adjustment to the 2024 service units	No

d) Justifications for the local terminal cost-efficiency performance targets, including contribution to the improvement of the European ATM network performance

For details, see Annex R.

** Refer to Annex R, if necessary.*

e) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

PANSA, after the approval of new Remuneration Scheme by Minister of Infrastructure, introduced updated employment regulation to achieve higher efficiency of operations. It is based (as it must be based) on the "crisis" regulation of 2022. The new one has significant positive impact on number of ATCOs in subsequent years and reduces the number of needed operational staff starting from 2026 by ca. 10% comparing to the needs resulting from the previous regulation of 2022.
The newly implemented ongoing recruitment process (instead of ca. 2 calls yearly) and more careful selection process are expected to positively impact the training of new ATCOs. There is already a huge interest (2500 applications), more staff is engaged in the selection process with the new approaches defined by the new HR (previously HR was not involved as it should be). What is more, we consider an additional course to be added in the process, however this requires detailed assessment of the simulators and OJT capacity. All the above is expected to finally allow PANSA to limit significantly the overtimes and delays.

Additionally, PANSA has introduced a number of cost cutting initiatives (rationalization of administrative staff and higher requirement on quality and competencies) including new systems and processes, which are expected to enable reduction in administrative personnel. Also close cooperation with military authorities (Cyber Command) was initiated, which should enable limiting costs related to cybersecurity and especially enhance PANSA ability to be cyber-secure.

** Refer to Annex R, if necessary.*

f) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/3172	Yes

3.4.2 - Cost-efficiency KPI #2: Determined unit cost (DUC) for terminal ANS

Terminal Charging Zone #2 - Poland - Others

a) RP4 cost-efficiency performance targets

Terminal charging zone Name of the CZ	Baseline 2024 2024 B	RP4 cost-efficiency targets (determined 20254-2029) 2025 D	 2026 D	 2027 D	 2028 D	 2029 D	2029D vs. 2024B (CAGR)
Total terminal costs in nominal terms (in national currency)	**235 573 869**	**250 483 926**	260 980 898	264 579 728	275 881 594	283 430 604	3,8%
Total terminal costs in real terms (in national currency at 2022 prices)	**207 391 129**	**212 627 184**	**215 576 560**	**213 141 800**	**218 521 307**	**220 182 757**	1,2%
Total terminal costs in real terms (in EUR2022) [1]	**44 315 385**	**45 434 227**	46 064 450	45 544 190	46 693 685	47 048 703	1,2%
YoY variation			1,4%	-1,1%	2,5%	0,8%	
Total terminal Service Units (TNSU)	176 947	186 533	198 418	207 212	216 533	225 172	4,9%
YoY variation			6,4%	4,4%	4,5%	4,0%	
Real terminal unit costs (in national currency at 2022 prices)	**1 172,05**	**1 139,89**	**1 086,48**	**1 028,62**	**1 009,18**	**977,84**	-3,6%
Real terminal unit costs (in EUR2022) [1]	250,44	243,57	232,16	219,80	215,64	208,95	-3,6%
YoY variation			-4,7%	-5,3%	-1,9%	-3,1%	

National currency	**PLN**
1 Average exchange rate 2022 (1 EUR=)	**4,68**
Forecast inflation index 2024 - Base 100 in 2022	**116,46**

b) Information on the baseline values for the determined costs and the determined unit costs

Terminal charging zone Name of the CZ	Baseline 2024 2024 B	Forecast 2024 2024 F	2024 Baseline adjustments
Total terminal costs in nominal terms (in national currency)	235 573 869	233 958 721	1 615 149
Total terminal costs in real terms (in national currency at 2022 prices)	**207 391 129**	205 896 054	1 495 075
Total terminal costs in real terms (in EUR2022) [1]	44 315 385	43 995 917	319 468
Total terminal Service Units (TNSU)	176 947	176 947	0

c) Detailed justifications for the adjustments to the baseline values

c.1) Adjustments to the 2024 baseline value for the determined costs

Number of adjustments	18

Adjustment #1	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
1	IMWM	MET	Staff	165 560	142 160	30 377
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #2	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
2	IMWM	MET	Other operating	348 290	299 062	63 904
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #3	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
3	IMWM	MET	Depreciation	-193 731	-193 731	-41 397
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #4	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
4	IMWM	MET	Cost of capital	-38 523	-38 523	-8 232
Description and justification of the adjustment						
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.						

Adjustment #5	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
5	AM	MET	Staff	-11 825	-10 154	-2 170
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #6	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
6	AM	MET	Other operating	-13 464	-11 561	-2 470
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #7	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
7	AM	MET	Depreciation	-1 062	-1 062	-227
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #8	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
8	AM	MET	Cost of capital	-2 197	-2 197	-469
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #9	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
9	PLB	MET	Staff	24 429	20 976	4 482
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #10	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
10	PLB	MET	Other operating	8 945	7 681	1 641
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #11	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
11	PLB	MET	Depreciation	3 134	3 134	670
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #12	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
12	PLB	MET	Cost of capital	743	743	159
Description and justification of the adjustment						
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.						

Adjustment #13	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
13	WiM	MET	Staff	72 030	61 850	13 216
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #14	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
14	WiM	MET	Other operating	255 576	219 453	46 893
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #15	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
15	WiM	MET	Depreciation	14 974	14 974	3 200
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #16	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
16	WiM	MET	Cost of capital	4 762	4 762	1 018
Description and justification of the adjustment						
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM.						

Adjustment #17	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
17	NSA	NSA/EUROCONTROL	Staff	720 861	720 861	154 034
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Adjustment #18	Entity name	Entity type	Nature	Costs nominal NC	Costs real NC	Costs EUR2022
18	NSA	NSA/EUROCONTROL	Other operating	256 648	256 648	54 841
Description and justification of the adjustment						
Based on labor intensity analysis cost allocation keys (values) were adjusted.						

Total adjustments to the 2024 baseline value for the determined costs	**Costs nominal NC**	**Costs real NC**	**Costs EUR2022**
	1 615 149	**1 495 075**	**319 468**

c.2) Adjustments to the 2024 service units

Adjustment to the 2024 service units	No

d) Justifications for the local terminal cost-efficiency performance targets, including contribution to the improvement of the European ATM network performance

For details, see Annex R.

** Refer to Annex R, if necessary.*

e) Main measures put in place to achieve the targets for determined unit cost (DUC) for terminal ANS

PANSA, after the approval of new Remuneration Scheme by Minister of Infrastructure, introduced updated employment regulation to achieve higher efficiency of operations. It is based (as it must be based) on the "crisis" regulation of 2022. The new one has significant positive impact on number of ATCOs in subsequent years and reduces the number of needed operational staff starting from 2026 by ca. 10% comparing to the needs resulting from the previous regulation of 2022.
The newly implemented ongoing recruitment process (instead of ca. 2 calls yearly) and more careful selection process are expected to positively impact the training of new ATCOs. There is already a huge interest (2500 applications), more staff is engaged in the selection process with the new approaches defined by the new HR (previously HR was not involved as it should be). What is more, we consider an additional course to be added in the process, however this requires detailed assessment of the simulators and OJT capacity. All the above is expected to finally allow PANSA to limit significantly the overtimes and delays.

Additionally, PANSA has introduced a number of cost cutting initiatives (rationalization of administrative staff and higher requirement on quality and competencies) including new systems and processes, which are expected to enable reduction in administrative personnel. Also close cooperation with military authorities (Cyber Command) was initiated, which should enable limiting costs related to cybersecurity and especially enhance PANSA ability to be cyber-secure.

PL Bydgoszcz: ANSP will continue to constantly monitor its financial situation and cost execution levels, in order to minimize them and fulfil operational obligations to the AUs.

Airport Meteo: Constant monitoring of actual costs in relation to the determined, continuous search for savings.

Warmia i Mazury: Constant searching for savings and internal monitoring of expenses will be continued in RP4.

** Refer to Annex R, if necessary.*

f) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/3172	Yes

3.4.3 - Cost allocation ATSP/CNSP - PANSA

Complementary information may be provided in ANNEX M

a) Summary of services provided

Air navigation services provided		Description of the services provided by the concerned entity
ATS/ATM	Yes	PANSA provides the following ATS servces in FIR Warszawa: area control service, approach control service and aerodrome control service. TWR ATS are provided at 15 airports (all covered by the scope of the RP4 PP). PANSA does not provide TWR services outside FIR Warszawa. PANSA also provides en-route FIS service, but does not provide AFIS. Under its certificate, PANSA also provides ATFM and ASM.
Communication	Yes	Under its certificate, PANSA provides aeronautical mobile service (air-ground communication) and aeronautical fixed service (ground-ground communication).
Navigation	Yes	Currently, PANSA operates DVOR/DME, DME and ILS/DME systems.
Surveillance	Yes	PANSA operates primary (PSR) and secondary radars (MSSR), as well as multilateration MLAT systems.
Search and rescue	Yes	PANSA provides coordination of SAR - ARCC is located at PANSA HQ and is operated jointly by PANSA and the military for the purpose of integrated civil-military SAR coordination.
Aeronautical Information	Yes	PANSA prepares and distributes aeronautical information (AIP, NOTAM, AIC, maps) and under its certificate provides preflight information services.
Meteorological services	No	
Services to OAT	No	
Cross-border ATS	No	

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) as last amended and a description of the methodology used for allocating those costs between different charging zones.
See annex M "Cost allocation methodology".

b) Allocation of costs by segment

ANSP costs by segments (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	1 088 311	1 153 457	1 208 684	1 266 468	1 316 133
Determined costs for terminal charging zone(s) in the scope of the performance plan	278 508	294 114	304 084	323 128	334 998
Forecasted costs for terminal services at airports outside the scope of the performance plan	n/a	n/a	n/a	n/a	n/a

Description of the criteria used to allocate costs between terminal and en route services in accordance with Article 22(5), including at airports outside the scope of the performance plan
See annex M "Cost allocation methodology".

c) Allocation of costs related to the provision of approach services

Allocation of costs related to approach services (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Total determined costs for approach services	n/a	n/a	n/a	n/a	n/a
Determined costs for approach services allocated to the en route charging zone(s)	n/a	n/a	n/a	n/a	n/a
Determined costs for approach services allocated to the terminal charging zone(s) within the scope of the performance plan	n/a	n/a	n/a	n/a	n/a

Description of the methodology used for establishing approach costs and allocating them between en route and terminal services, including the distance from the relevant airport(s) used for allocating approach costs and description of the operational requirements on the basis of which that distance has been defined
Information not required by applicable law. In line with legal requirements, PANSA allocates costs to en-route services and terminal services and does not identify separately costs related to types of ATC units.

d) Description of other services and activities outside the scope of the performance plan and their financing

Based on the description of the services provided under item a) above, describe the nature of the activities outside the scope of the performance plan, the related costs and the arrangements in place to finance them as well as the methodology used by the NSA to ensure that these amounts are excluded from the cost bases charged to airspace user

Terminal ANS at airports (outside the scope of the performance plan)	No
Services to OAT	No
Other ANS	No
Non ANS	Yes

If yes, description of the nature of activities (products and/or services) performed and the relevant markets/customers
Sale of radar data to Polish Airports - includes the sale of data from the Pegasus 21 air traffic control system and data on flight operations to PPP airport systems; the contract is valid until the end of 2025 and will be extended Sale of meteorological data to the Institute of Meteorology and Water Management - includes providing the meteorological functionality of the only Automatic Meteorological Parameter Measurement System (AWOS) maintained by PANSA at Warsaw Chopin Airport. The contract is valid only for 2024, in the years 2025-2029 the revenues from this are not included due to the planned discontinuation of this service. ADQ training provided for Polish airports - training for data providers for aviation information products on AIS/AIM related issues (introductory / refresher training). Air inspection of airport ground facilities (LUN) - carried out in Poland for airports and abroad (Oro Navigacija) based on concluded contracts. Sale of IT services - concerns the commercialization of the Agency's proprietary solutions in the field of ATM and UTM; the first revenues are planned to be received in 2025; potential clients: domestic and foreign airports.

e) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	No
For details see annex M "Cost allocation methodology".	

f) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.3 - Cost allocation ATSP/CNSP - Warmia i Mazury Sp. z o.o.

Complementary information may be provided in ANNEX M

a) Summary of services provided

Air navigation services provided		Description of the services provided by the concerned entity
ATS/ATM	Yes	AFIS: EPSY ATZ
Communication	Yes	COM: TWR EPSY (outside Warmia i Mazury cost base) and AFIS EPSY
Navigation	No	
Surveillance	No	
Search and rescue	No	
Aeronautical Information	No	
Meteorological services	Yes	MET: EPSY TMA, CTR and ATZ
Services to OAT	No	
Cross-border ATS	No	

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) as last amended and a description of the methodology used for allocating those costs between different charging zones
Warmia i Mazury's MET services are the only ANS allocated between en-route and terminal charging zones. Apart from that, Warmia i Mazury's accounting policy bases on synthetic accounts in accordance with the applicable accounting regulations and analytical accounts based on the organizational structure of Warmia i Mazury. Warmia includes direct costs and indirect costs, which division is caluclated with specific allocation keys. For details, please see Annexes A and B.

b) Allocation of costs by segment

ANSP costs by segments (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	2 157	2 310	2 349	2 413	2 404
Determined costs for terminal charging zone(s) in the scope of the performance plan	4 052	4 255	4 636	4 741	4 689
Forecasted costs for terminal services at airports outside the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

Description of the criteria used to allocate costs between terminal and en route services in accordance with Article 22(5), including at airports outside the scope of the performance plan
MET services are allocated 48.8% to en-route, 50.3% to terminal and 0.9% are deducted from the cost bases. AFIS services are allocated 100% to terminal. COM costs are allocated 66.7% to TWR EPSY (provided by PANSA; outside Warmia i Mazury cost bases) and 33.3% to AFIS (and then 100% terminal). For details, please see Annexes A and B.

c) Allocation of costs related to the provision of approach services

Allocation of costs related to approach services (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Total determined costs for approach services	0	0	0	0	0
Determined costs for approach services allocated to the en route charging zone(s)	0	0	0	0	0
Determined costs for approach services allocated to the terminal charging zone(s) within the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

Description of the methodology used for establishing approach costs and allocating them between en route and terminal services, including the distance from the relevant airport(s) used for allocating approach costs and description of the operational requirements on the basis of which that distance has been defined
Warmia i Mazury does not provide APP services - the ATS services (AFIS) and supporting them CNS (COM) services are allocated in 100% to terminal.

d) Description of other services and activities outside the scope of the performance plan and their financing

Based on the description of the services provided under item a) above, describe the nature of the activities outside the scope of the performance plan, the related costs and the arrangements in place to finance them as well as the methodology used by the NSA to ensure that these amounts are excluded from the cost bases charged to airspace user

Terminal ANS at airports (outside the scope of the performance plan)	No

Services to OAT	No

Other ANS	Yes

If yes, description of the nature of the services provided and the geographical scope
Warmia i Mazury provides COM services at EPSY Airport, which are allocated only in 1/3 to the Warmia i Mazury's cost base, in line with its allocation to the provided AFIS services (based on TWR/AFIS total time of services ratio). The 2/3 of COM costs are linked to TWR services at EPSY provided by PANSA and therefore are outside the Warmia i Mazury's cost base.
If yes, description of the arrangements for the financing of the services provided
Warmia i Mazury receives funding through the B2B agreement with PANSA on negotiated terms. Warmia i Mazury believes that these costs are included in PANSA PP RP4 cost bases.

Non ANS	Yes
If yes, description of the nature of activities (products and/or services) performed and the relevant markets/customers	
In case of MET services, Warmia i Mazury does not record other revenues, yet part of the labour of MET staff and appliances for preparing data and information for the use of EPSY Airport Operator - therefore, 0.9% of MET costs are deducted from the cost bases.	

e) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	Yes
The values of cost allocation keys were adjusted in order to better reflect labour intensity of individual products provided by WIM. This included introduction of the 'Other' segment in MET costs, deducted from the cost bases. These changes were reflected in the base line value. Additionally, the following changes in cost allocation were introduced: - slightly adjust the cost allocation of handling VFR flights to achieve a coherent approach between its identification in every type of provided services, - implement some low-level changes concerning the allocation of the indirect costs. The two above-mentioned slight changes have not been included as adjustments to baseline values as their impact is marginal. For details, please see Annex A and B.	

f) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.3 - Cost allocation ATSP/CNSP - Port Lotniczy Bydgoszcz S.A.

Complementary information may be provided in ANNEX M

a) Summary of services provided

Air navigation services provided		Description of the services provided by the concerned entity
ATS/ATM	Yes	AFIS: EPBY ATZ
Communication	No	COM equipment for AFIS provision at EPBY is rented from PANSA.
Navigation	No	
Surveillance	No	
Search and rescue	No	
Aeronautical Information	No	
Meteorological services	Yes	MET: EPBY TMA, CTR and ATZ
Services to OAT	No	
Cross-border	No	

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) as last amended and a description of the methodology used for allocating those costs between different charging zones
PL Bydgoszcz provides only MET services, which are allocated between en-route and terminal charging zones and AFIS at EPBY airport, allocated fully to terminal. Costs are allocated either directly (weathermen, AFISOs, special assets) or indirectly, based on the internal allocation keys. For details, please see the Annexes A and B (additional information to the reporting tables).

b) Allocation of costs by segment

ANSP costs by segments (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	2 048	2 214	1 902	1 910	1 931
Determined costs for terminal charging zone(s) in the scope of the performance plan	5 562	5 692	5 246	5 279	5 249
Forecasted costs for terminal services at airports outside the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

Description of the criteria used to allocate costs between terminal and en route services in accordance with Article 22(5), including at airports outside the scope of the performance plan
ATS (AFIS) services are allocated in 100.00% to terminal. MET services are allocated to en-route (39.25%), terminal (58.40%) and outside the cost-bases (2.35%). For details, please see the Annexes A and B (additional information to the reporting tables).

c) Allocation of costs related to the provision of approach services

Allocation of costs related to approach services (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Total determined costs for approach services	0	0	0	0	0
Determined costs for approach services allocated to the en route charging zone(s)	0	0	0	0	0
Determined costs for approach services allocated to the terminal charging zone(s) within the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

Description of the methodology used for establishing approach costs and allocating them between en route and terminal services, including the distance from the relevant airport(s) used for allocating approach costs and description of the operational requirements on the basis of which that distance has been defined
PL Bydgoszcz does not provide approach (APP) services. ATS services provided by this ANSP (AFIS) are allocated 100% to terminal.

d) Description of other services and activities outside the scope of the performance plan and their financing

Based on the description of the services provided under item a) above, describe the nature of the activities outside the scope of the performance plan, the related costs and the arrangements in place to finance them as well as the methodology used by the NSA to ensure that these amounts are excluded from the cost bases charged to airspace user

Terminal ANS at airports (outside the scope of the performance plan)	No
Services to OAT	No
Other ANS	No
Non ANS	Yes

If yes, description of the nature of activities (products and/or services) performed and the relevant markets/customers
Part of MET activities is devoted to prepare meteorological data and information for the internal purposes of the EPBY Airport Operator. Due to its internal nature, no revenue in this regard is being recorded, yet ANSP identifies 'Other' segment to which 2.35% of all MET costs are being allocated, i.e. outside cost bases. For details about en-route / terminal / other cost allocation, please see Annex A and B.

e) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	Yes
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.	

f) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.4 - Cost allocation METSP - IMWM

Complementary information may be provided in ANNEX M

a) Summary of services provided

Description of the services provided by the meteorological service provider, the geographical scope and the different users for which the services are provided
The Institute of Meteorology and Water Management - PIB has been providing meteorological services in the Polish airspace for many years. The Institute provides meteorological services for Civil Aviation so called "MOLC process", under which tasks related to the protection of the Polish sky 24/7 are carried out all year round. In the MOLC process, we provide services to the Polish Air Navigation Services Agency (PANSA), 12 Airport Operators in Poland (financing outside the Performance Plan), the National Aircraft Accident Investigation Commission (according to NAtional Acts)and a number of other recipients of aviation products (financing outside the Performance Plan). IMWM-PIB has been designated by the Minister of Infrastructure as the institution providing air navigation services in FIR Warsaw.On April 21, 2020, the Civil Aviation Authority, after conducting an inspection as part of ongoing supervision, granted the Institute the ATM/ANS Service Provider Certificate No. PL-07-01/2007 for an indefinite period. 2 Meteorological Forecast Offices in Warsaw and Cracow (including Meteorological Watch Office) and 12 Airport Meteorological Stations (EPWA, EPSC, EPGD, EPPO, EPWR, EPGD, EPLL, EPRZ, EPKT, EPZG,EPMO, EPLB) have been certified. As a national designated service we provide the following services: 1)in the uncontrolled space of the FIR Warsaw flight information area, 2) throughout the Warsaw FIR flight information area for flight purposes search and rescue, 3) throughout the FIR Warsaw flight information area to carry out tasks of the Meteorological Watch Office, 4) in the entire Warsaw FIR flight information area for the control service area (ACC), 5) in controlled areas of airports and airport hubs (TMA) for the approach control service (APP) – EPWA, EPKK, EPGD, EPPO, EPSC, EPRZ, EPLL, EPZG, EPLB, 6) in airport control zones (CTR) for the airport control service (TWR) – EPWA, EPGD, EPKK, EPPO, EPSC, EPWR, EPRZ, EPKT, EPLL, EPZG, EPMO, EPLB.

*regarding EPSC and EPZG designation process is ongoing.

b) Allocation of costs by segment

Meteorological ANS costs (direct + core) by segments (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	45 828	47 089	48 187	49 788	50 771
Determined costs for terminal charging zone(s) in the scope of the performance plan	32 088	32 772	33 522	34 721	35 441
Forecasted costs for terminal services at airports outside the scope of the performance plan	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

c) Breakdown of determined meteorological costs between direct and core costs and allocation between en route and terminal services

Description of the meteorological costs and of the methodology for allocating these costs between direct costs and the costs of supporting meteorological facilities and services that also serve meteorological requirements in general ('MET core costs')
Methodology of separating the costs of meteorological services for civil 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 only to provide meteorological services for civil 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, Meteorological Forecasting Office in Cracow - only the part of the costs related to services for aviation, Aeronautical Meteorological Stations, telecommunication system which serve aviation, automated weather observing systems, 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 number of stuff working in meteorological services for civil aviation. These group of costs are qualified as staff costs. The other groups of the direct costs of meteorological service for civil aviation are: 2)indirect costs proportional to remuneration fund and remuneration-related expenditures; 3)materials and equipment: office tools, printers' ink, equipment purchase including purchase of equipment at airports, electricity, heating, computers; 4)third party services: specialized software service (LEADS, AMHS, 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; 5)telecommunication: costs of maintaining communication between headquarters and Meteorological Watch Office, between Meteorological Offices and PANSA (AFTN network) and Aeronautical Meteorological Stations; SADIS communication system; fees for fixed-line telephones and mobile phones; 6)business trips inside and outside the country; 7)trainings and conferences: periodical meteorological training in respect of international European standards; enhancing qualifications trainings,

inner audit costs connected with Quality and Safety Management Systems; 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 automated 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.

The above costs, points 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 civil aviation but also for the public. These are as follows:
- General 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 based on the methodology presented above.

d) Meteorological direct costs and allocation across charging zone(s)

Total determined direct meteorological costs allocated to the charging zones within the scope of the performance plan (in nominal terms in '000 national currency)		2025	2026	2027	2028	2029
En route charging zone 1	Poland	31 533	32 359	33 102	34 339	34 936
Terminal charging zone 1	Poland - EPWA	2 285	2 341	2 398	2 455	2 490
Terminal charging zone 2	Poland - Others	20 470	20 814	21 275	22 179	22 612
Total forecasted costs for the concerned entity		**54 289**	**55 515**	**56 775**	**58 974**	**60 039**

Description of the items included in the meteorological direct costs and methodology used to allocate these costs in the scope of the performance plan, as well as across charging zone(s).

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.

e) Meteorological core costs and allocation across charging zone(s)

Total determined core meteorological costs allocated to the charging zones within the scope of the performance plan (in nominal terms in '000 national currency)		2025	2026	2027	2028	2029
En route charging zone 1	Poland	14 295	14 729	15 085	15 449	15 835
Terminal charging zone 1	Poland - EPWA	148	153	156	160	164
Terminal charging zone 2	Poland - Others	9 185	9 464	9 692	9 926	10 174
Total forecasted costs for the concerned entity		**23 627**	**24 346**	**24 933**	**25 535**	**26 174**

Description of the items included in the meteorological core costs and methodology used to allocate these costs to civil aviation, including the proportion of meteorological core costs included in the scope of the plan as compared to total meteorological costs incurred by the entity, as well as across 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 Forecasting Office in Cracow (BPM) and the Aeronautical Meteorological Stations (LSM) 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. 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 2025-2029. This catalogue is based on ICAO Annex 3, WMO Publication No. 904. 2)Daily work tables were constructed for the Meteorological Watch Office and Meteorological Forecasting Office in Cracow, and for Aeronautical 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; •Labour 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 cost of each 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.

f) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	Yes
Cost allocation keys (values) were slightly adjusted in order to better reflect the operational characteristics of MET services provision.	

g) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.4 - Cost allocation METSP - Airport Meteo Sp. z o.o.

Complementary information may be provided in ANNEX M

a) Summary of services provided

Description of the services provided by the meteorological service provider, the geographical scope and the different users for which the services are provided
Airport Meteo provides MET services at EPRA airport (CTR and TMA). ANSP is almost fully devoted to perform MET services, all of which are included in the scope of PP RP4. The marginal share of Airport Meteo's activity is dedicated for delivery of meteorological data to Airport Operators and consulting services - the costs associated with these activities are deducted from the cost bases (allocation to segment 'Other'). For further details, please see Annexes A and B (Additional information).

b) Allocation of costs by segment

Meteorological ANS costs (direct + core) by segments (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	1 208	1 247	1 357	1 442	1 422
Determined costs for terminal charging zone(s) in the scope of the performance plan	1 713	1 769	1 924	2 045	2 017
Forecasted costs for terminal services at airports outside the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

c) Breakdown of determined meteorological costs between direct and core costs and allocation between en route and terminal services

Description of the meteorological costs and of the methodology for allocating these costs between direct costs and the costs of supporting meteorological facilities and services that also serve meteorological requirements in general ('MET core costs')
Airport Meteo does not identify the MET core costs as its activity is only dedicated to civil aviation, therefore 100% of costs are concerned as direct. Then, the total costs are divided into en-route (40.00%), terminal (56.72%) and other (3.28%) - outside the cost bases. Allocation is based on criteria set in renowned guidances (ICAO 9161, WMO 904) and internal analysis of relative labour intensity of preparing MET products and performed actions. For further details, please see Annex A and B (Additional information).

d) Meteorological direct costs and allocation across charging zone(s)

Total determined direct meteorological costs allocated to the charging zones within the scope of the performance plan (in nominal terms in '000 national currency)		2025	2026	2027	2028	2029
En route charging zone 1	Poland	1 208	1 247	1 357	1 442	1 422
Terminal charging zone 1	Poland - EPWA	0	0	0	0	0
Terminal charging zone 2	Poland - Others	1 713	1 769	1 924	2 045	2 017
Total forecasted costs for the concerned entity		**2 922**	**3 016**	**3 281**	**3 487**	**3 439**

Description of the items included in the meteorological direct costs and methodology used to allocate these costs in the scope of the performance plan, as well as across charging zone(s).
For details, please see point c).

e) Meteorological core costs and allocation across charging zone(s)

Total determined core meteorological costs allocated to the charging zones within the scope of the performance plan (in nominal terms in '000 national currency)		2025	2026	2027	2028	2029
En route charging zone 1	Poland	0	0	0	0	0
Terminal charging zone 1	Poland - EPWA	0	0	0	0	0
Terminal charging zone 2	Poland - Others	0	0	0	0	0
Total forecasted costs for the concerned entity		**0**	**0**	**0**	**0**	**0**

Description of the items included in the meteorological core costs and methodology used to allocate these costs to civil aviation, including the proportion of meteorological core costs included in the scope of the plan as compared to total meteorological costs incurred by the entity, as well as across charging zones.
For details, please see point c).

f) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	Yes
Cost allocation keys (values) were adjusted in order to better reflect the operational characteristics of MET services provision. This included a higher share of costs being excluded from the ANS cost bases.	

g) Verification by the NSA

Confirmation by the NSA that the data and information included in this section have been verified in accordance with Art. 22(7) of IR 2019/317	Yes

3.4.5 - Cost allocation - NSA

Complementary information may be provided in ANNEX M

a) Supervision costs

Description of the supervision activities performed by the NSA(s), the underlying assumptions used to estimate the related determined costs and the main factors explaining the variations of these costs over the reference period
The NSA of Poland exercises supervision over vast majority of aspects of civil aviation in Poland. This includes the supervision of ANS providers. Based on labor intensity analysis in all the departments FTEs are allocated to ANS supervision activities. The ratio of FTEs involved in ANS supervision to the total number of FTEs is the allocation key used to determine the costs reflected in the cost bases. The costs allocated to the cost bases can fluctuate either because of underlying costs fluctuations or the discrepancies between the determined and actual ratio of ANS-FTEs to the total number of FTEs at the CAA Poland.

Description of the methodology used to allocate NSAs supervision costs between en route and terminal as well as across different charging zones
The allocation of NSA's supervision costs between en-route and terminal as well as across different charging zones is based on the involvement of each of the CAA's organizational units into activities linked within the en-route and terminal supervision, measured in FTEs, taking into account the average salary in the NSA office.

b) Search and rescue costs (if reported as part of the NSA costs)

Description and underlying assumptions for search and rescue costs and main factors explaining the variations over the reference period
not applicable

Total search and rescue costs for the entity providing search and rescue services (in nominal terms in '000 national currency)	2025	2026	2027	2028	2029
Determined costs for en route charging zone(s) in the scope of the performance plan	0	0	0	0	0
Determined costs for terminal charging zone(s) in the scope of the performance plan	0	0	0	0	0
Forecasted search and rescue costs outside the scope of the performance plan	**0**	**0**	**0**	**0**	**0**

Description of the methodology used to allocate search and rescue costs to civil aviation and in the scope of the performance plan, including the proportion of search and rescue costs included in the scope of the plan as compared to total search and rescue costs incurred by the entity
not applicable

Description of the methodology used to allocate search and rescue costs to civil aviation between en route and terminal as well as across different charging zones
not applicable

c) Changes in cost allocation methodology

Are there changes in the cost allocation criteria with respect to the previous reference period? If yes, please provide the description and justification of the changes and impact(s) on the determined costs and/or baseline.	Yes
Based on labor intensity analysis cost allocation keys (values) were adjusted. The methodology itself remained unchanged.	

d) Verification by the NSA

Confirmation by the NSA that the data and information included in this section comply with the requirements of Article 15(2) Regulation (EC) No 550/2004 and with IR 2019/317.	Yes

3.4.6 - Determined costs assumptions - PANSA

3.4.6.1 - Operating costs

a) Staff costs

Number of entries	3

#	Staff costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Remuneration	Gross remuneration and addtional payments to employees, including overtime payments and bonuses	En-route charging zones	460 620	570 763	577 943	622 560	658 167	692 047	719 292
			Terminal charging zones	119 477	147 153	146 650	157 067	164 336	171 129	177 234
2	Social charges	Employer contributions to staff pensions and social security scheme and other cost concerning employees benefits	En-route charging zones	105 493	130 741	140 875	151 038	159 417	166 990	174 396
			Terminal charging zones	29 544	36 502	38 777	41 209	43 091	44 731	46 602
3	Other staff related costs or benefits	Provision for claims sought in litigation, compensations pertaining to employee matters, provision for unused holiday, retirement benefits and other cost concerning employees	En-route charging zones	48 027	2 004	2 636	2 669	2 636	2 204	2 223
			Terminal charging zones	12 578	582	761	766	751	627	621
Total staff costs			**En-route charging zones**	**614 139**	**703 509**	**721 454**	**776 266**	**820 219**	**861 241**	**895 911**
			Terminal charging zones	**161 599**	**184 237**	**186 188**	**199 042**	**208 178**	**216 487**	**224 456**

Accounting provisions included in total staff costs	See details in part d) below	En-route charging zones	27 419	-47 984	-27 663	-3 136	-40	-473	-465
		Terminal charging zones	7 233	-13 928	-7 983	-900	-11	-135	-130

Assumptions underlying the determined pension costs and expected evolution over Reference Period 4 (for Main ANSP please refer to tab 3.4.7)	See table 3.4.7	En-route charging zones	72 958	89 744	96 350	103 096	108 930	114 495	119 573
		Terminal charging zones	20 433	23 138	24 448	26 010	27 198	28 312	29 463

Description of the main factors explaining the planned variations of staff costs over the reference period
The evolution of PANSA staff costs over RP4 is driven mostly by the following main factors: - inflation and the need to provide for competitiveness of PANSA's position on the labor market; over RP3 Poland experienced high inflation (much above forecasted in the RP3 PP) what led to increase in staff costs as compared to the RP3 PP costs in nominal terms in the last years of RP3 and constitute the basis for RP4 calculations; according the provisions of the PANSA Remuneration Regulations applicable for RP4, basic salaries are subject to an annual indexation by the inflation rate, with respective impact on other staff costs items that are linked to the basic salaries, - employment plan, which foresees increases in in the groups of air traffic controllers (to achieve the required airspace capacity) and technical support employees (necessary strengthening of technical services, in particular IT, in light of the need to implement and develop new technologies).

b) Other operating costs

Number of entries	7

#	Other operating costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Materials	Fuel, spare parts, low value items and office materials, office supplies, books, food, household chemicals.	En-route charging zones	5 843	11 924	9 335	10 340	9 803	9 987	10 520
			Terminal charging zones	1 674	3 003	2 377	2 771	2 584	2 548	2 703
2	Energy	Utility costs of electricity, heating, water, gas.	En-route charging zones	34 724	36 527	24 216	25 050	25 820	27 137	28 732
			Terminal charging zones	7 908	8 774	5 684	5 950	6 167	6 448	6 415
3	Repair cost	Repair of buildings, machines, vehicles.	En-route charging zones	6 257	5 230	14 170	9 305	10 938	8 246	8 264
			Terminal charging zones	1 946	1 691	4 578	3 056	3 604	2 710	2 712
4	External services	Rent and lease, Security services, IT services, Air navigation services, Technical services, Training expenses, Consultancy, Legal ans audit services, Strategic technical and financial advisory and other. PANSA follows EC recommendations and presents lease payments under this cost category (or in external services below - depending on the subject of the contract).	En-route charging zones	54 261	82 695	107 808	105 634	108 001	111 738	116 879
			Terminal charging zones	15 270	22 386	30 298	30 560	30 058	30 939	31 740
5	Taxes and charges	Real estate tax, State Fund for the Rehabilitation of the Disabled, license fees, non-deductible VAT, internet fees, stamp duties customs duties, court, notary and handling fees. PANSA follows EC recommendations and presents lease payments under this cost category (or in repairs above - depending on the subject of the contract).	En-route charging zones	6 130	7 953	8 195	8 864	9 405	9 915	10 508
			Terminal charging zones	1 781	2 247	2 382	2 564	2 703	2 844	2 966
6	Business trips	Travel and accomodation expenses related to business and training trips, mileage allowance.	En-route charging zones	7 105	9 712	10 199	10 431	10 796	11 021	11 297
			Terminal charging zones	2 218	3 460	3 616	3 701	3 806	3 892	3 989

7	Other operating costs	Insurance, gain/losses on sale/disposal of FA, operational ex-rate differences, catering services, membership fees, payments for untimely performance of a contract and other operating cost.	En-route charging zones	9 887	16 636	10 570	10 614	11 325	11 616	12 093
			Terminal charging zones	4 971	4 613	3 235	3 242	3 444	3 535	3 688
Total other operating costs			**En-route charging zones**	**124 206**	**170 676**	**184 494**	**180 238**	**186 087**	**189 662**	**198 295**
			Terminal charging zones	**35 769**	**46 173**	**52 171**	**51 844**	**52 365**	**52 916**	**54 213**

Accounting provisions included in total other operating costs		Provision for PANSA costs resulting from court cases initiated by suppliers against PANSA.	En-route charging zones	-369	0	0	0	0	0	0
			Terminal charging zones	-126	0	0	0	0	0	0

Costs for ground-ground communication services		Rental costs for terrestrial lines, data transmission services, and access to the data transmission network.	En-route charging zones	5 997	11 145	9 003	10 896	12 425	13 823	15 950
			Terminal charging zones	1 711	3 235	2 598	3 127	3 542	3 933	4 456
Costs for air-ground communication services via terrestrial link		Cost for access to the data transmission services. For en-route: ATN-VDL2 DLS (SITA + ARINC); For Terminal: DCL service. Actual 2023 costs also include part of the cost from 2022, but invoices were issued and paid in 2023.	En-route charging zones	1 513	1 162	1 607	1 668	1 720	1 764	1 816
			Terminal charging zones	429	321	464	479	490	502	507
Costs for air-ground communications services via satellite link		Currently IRIS pre-commercial flights (currently no cost)	En-route charging zones	0	0	0	0	0	0	0
			Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other operating costs over the reference period
In case of energy cost, the planned costs of purchasing electricity are expected to decrease due to the planned change in the method of purchasing electricity through a company that has a license to purchase energy on the Polish Power Exchange on the Day Ahead Market (DAM). This solution will enable real energy costs to be incurred (i.e. at the costs for a given day). Based on information from the market, in preparation for the tender, the value of the order was estimated and on this basis, financial resources were planned for individual years in the plan for 2024-2029. PANSA estimates that purchasing energy on the DAM market should allow to save approximately 40% of electricity purchase costs. In terms of other elements of operating costs, the changes are influenced by the increase in the costs of maintaining facilities, inspections and maintenance of devices related to the increase in prices as well as related to the increase in investments, including the costs of training related to the systems. In addition, the cost of training is influenced by the extension of ATSEP qualifications, the costs related to the language competence program and the restoration of TRM training for air traffic controllers. Consulting and support services in the field of technologies related to the SESAR program (including SWIM), development and implementation of IT systems and applications also have an impact. In terms of renovations (repairs), the cost of overhauling both aircraft engines for the inspection aircraft and the costs of battery replacement and renovation of emergency power generators in PANSA buldings and facilities, have a significant impact on the change in costs.

c) Exceptional items

Number of entries	0

Accounting provisions included in total exceptional items		En-route charging zones							
		Terminal charging zones							

Description of the main factors explaining the planned variations of other exceptional items over the reference period
At the stage of drafting the draft RP4 PP PANSA does not foresee exceptional items.

d) Accounting provisions

Number of entries	2

#	List of provisions included in the determined cost (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Value of the provision at end 2023	Forecast	Determined				
					2024	2025	2026	2027	2028	2029
1	Pensions and related benefits	Provision for employee benefits. Benefit belongs to an employee who retired after reaching the retirement age, for workers who stopped working due to annuity and for worker's family in the cases of his/her deaths.The provision does not include jubilee award benefit. The valuation of provision is done annually by independent actuary.	En-route charging zones	11 910	107	737	766	729	296	307
			Terminal charging zones	3 336	31	213	220	208	84	86
2	Court cases	Provisions for court cases initiated by employees who were affected by reduction of base salaries, who were stopped from working during COVID (described as furloughs) and other court cases regarding the employees.	En-route charging zones	86 806	-48 091	-28 400	-3 902	-769	-769	-772
			Terminal charging zones	19 898	-13 959	-8 196	-1 120	-219	-219	-216
Total accounting provisions			**En-route charging zones**	**98 716**	**-47 984**	**-27 663**	**-3 136**	**-40**	**-473**	**-465**
			Terminal charging zones	**23 234**	**-13 928**	**-7 983**	**-900**	**-11**	**-135**	**-130**

3.4.6.2 - Investment costs

a) Depreciation costs

Method adopted for the calculation of the depreciation cost (point 1.3 of Table 1):	Historical
If current cost accounting is applied, equivalent historical cost accounting figures have to be provided in Annex E in order to allow for comparison	

b) Cost of capital

Description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity
The evolution of the level of cost of capital over RP4 is related to increasing value of asset base, especially fixed assets, deriving from investments. The level of WACC applied takes into account expectations of EC/PRB expressed in Feb 2022 during the assessment of the draft RP3 PP. It assumes that WACC rate is calculated based on cap on the value of cost of capital and RoE is a mathematical result of WACC equation, expected actual capital structure and the level of interest on debt.

Cost of capital assumptions	Description of each item
NBV fixed assets	The average net book value of fixed assets is calculated taking into account the intangible assets and the tangible assets (in operation and under construction). It should be emphasized that leased assets are excluded from average asset base calculation. Also to avoid potential double counting, capitalisation of interest costs (related to investment credit) is excluded from the calculation of fixed assets base (the related cost of debt financing is taken into account in the calculation of interest rate on debts). The average considers level of fixed assets at the beginning and at the end of each year.
Adjustments total assets	Not applicable.
Net current assets	The value of net current assets is calculated taking into account approach recommended by CRCO when auditing PANSA's cost base in 2010 and applied since then, which is also consistent with EUROCONTROL Principles. It assumes that only assets that are necessary to provide ANS are taken into account. Planned current assets required to provide air navigation services are calculated taking into consideration latest available (for the year preceding the calculation) credit period associated to the payment of invoices (credit from customers and credit suppliers and staff). Methodology applied guarantees exclusion of interest bearing items.
Cost of capital %	The % value of cost of capital represents the WACC rate calculated using the approach described on the other lines of this table.
Return on equity	In stage 1, in order to properly reflect financial risk incurred when providing air navigation services PANSA applies CAPM methodology for establishing theoretical return on equity. Assumptions taken into account to determine RoE rate for RP4: capital structure – expected actual capital structure, corporate tax rate – 19%, risk free rate % (nominal) - 5.58% - an average of the latest available yield of 10 years Polish government bonds rate reported by Eurostat is used (Aug 2024 publication for the period Feb 2024-July 2024), equity risk premium % (after tax) – 5.82% - an average of equity risk premium estimated for Poland by Damodaran (5.84% as per Jan 2024 submission) and Fernandez IESE Business School study (5.80% as per Mar 2024 submission). ERP estimated in such way applies for the whole RP4, asset beta is 0.4. The asset beta assumed takes into consideration estimates made by SDG for efficient cost of capital for RP2 (a range of 0.3 to 0.5). It is consistent with assumptions used for RP2 and RP3 PP and reflects financial risk of running ANSP business, equity beta - different value for every year of RP4 as a product of estimated asset beta, corporate tax rate and assumed real capital structure. In stage 2, the value of RoE is capped in line with expectation of EC/PRB from Feb 2022 to reflect the ATSP exposure to the traffic risk sharing mechanism.
Average interest on debts	Average interest on debts is calculated taking into account effective annual interest rates calculated based on: - the agreed investment credit received from Bank Gospodarstwa Krajowego (BGK); - planned new operating credit facility and investment credit, both planned to be received from BGK; - funds made available by the Eurocontrol Member States through the establishment of the Volontary Temporary Solidarity Fund which decrease total average effective interest rate. Average interest on debts calculation was performed taking into account costs already incurred till July 2024 and these forecasted to the end of repayment periods. It should be noted that PANSA as a public legal entity is obliged to use financial products offered by this state-owned bank (BGK) only.
Share of financing through equity	It takes under consideration the expected actual capital structure.

3.4.6.3 - Costs for VFR exempted flights

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 in accordance with Article 31(3), 31(4) and 31(5)
Cost of air navigation services provided for VFR flights is calculated through a marginal cost methodology. Being covered by the State budget, costs of VFR flights are deducted from the en-route determined costs. The methodology applied for RP4 has not changed compared to previous reference period.

3.4.6.4 - NSA verification

Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the determined costs of the ANSP with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification
In August, after the CAA received the actuals of all ANPS for 1H2024 an analysis was done in order to verify the validity of 2024A forecast submitted for the draft performance plan. A series of issues was detected which were communicated to respective ANSPs which were comunicated to the ANSP with requests for explanations and/or instructions to adjust their forecast of 2024A downwards. The CAA instructed the ANSP to revise their RP4 costs downwards. Special attention was paid to the verification of detailed costs by nature.

3.4.6 - Determined costs assumptions - IMWM

3.4.6.1 - Operating costs

a) Staff costs

Number of entries	1

#	Staff costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Renumeration		En-route charging zones	11 269	12 275	15 006	15 446	15 923	16 343	16 488
			Terminal charging zones	7 580	8 183	10 372	10 676	11 006	11 296	11 397
Total staff costs			**En-route charging zones**	**11 269**	**12 275**	**15 006**	**15 446**	**15 923**	**16 343**	**16 488**
			Terminal charging zones	**7 580**	**8 183**	**10 372**	**10 676**	**11 006**	**11 296**	**11 397**

Accounting provisions included in total staff costs	To the accounting provisions included in total staff costs belong: retirement and disability benefits and anniversaries	En-route charging zones	185	280	251	177	227	409	149
		Terminal charging zones	137	309	251	189	207	256	120

Assumptions underlying the determined pension costs and expected evolution over Reference Period 4 (for Main ANSP please refer to tab 3.4.7)	The methodology of calculating pension and pension contributions paid by the employer for employees at IMWM is based on suitable articles of the Act on the social insurance system of 13th October 1998. The sum total of the pension and pension contribution paid by the employer is 9,76% plus 6,5% equal to 16,26% of the contribution basis.	En-route charging zones	1 513	1 521	1 717	1 779	1 830	1 876	1 923
		Terminal charging zones	1 009	1 014	1 187	1 229	1 265	1 297	1 329

Description of the main factors explaining the planned variations of staff costs over the reference period
The main factors that can explain the planned variations of staff costs are related to the level of wages in IMWM and the level of the average wage in Poland.

b) Other operating costs

Number of entries	1

#	Other operating costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Other operating costs		En-route charging zones	24 463	26 466	28 820	29 189	29 820	30 524	31 225
			Terminal charging zones	14 061	17 644	19 920	20 175	20 611	21 098	21 582
Total other operating costs			**En-route charging zones**	**24 463**	**26 466**	**28 820**	**29 189**	**29 820**	**30 524**	**31 225**
			Terminal charging zones	**14 061**	**17 644**	**19 920**	**20 175**	**20 611**	**21 098**	**21 582**

Accounting provisions included in total other operating costs	N/A	En-route charging zones								
		Terminal charging zones								
Costs for ground-ground communication services		En-route charging zones								
		Terminal charging zones								
Costs for air-ground communication services via terrestrial link		En-route charging zones								
		Terminal charging zones								
Costs for air-ground communications services via satellite link		En-route charging zones								
		Terminal charging zones								

Description of the main factors explaining the planned variations of other operating costs over the reference period
The main factors that can explain the planned variations of other operating costs are related to the level of inflation in Poland that affects costs of: gas, energy, fuel prices and services.

c) Exceptional items

Number of entries	0

Accounting provisions included in total exceptional items	N/A	En-route charging zones								
		Terminal charging zones								

Description of the main factors explaining the planned variations of other exceptional items over the reference period
N/A

d) Accounting provisions

Number of entries	0

#	List of provisions included in the	Description of the composition of	Charging zones	Value of the	Forecast	Determined

a) Depreciation costs

Method adopted for the calculation of the depreciation cost (point 1.3 of Table 1):	Historical
If current cost accounting is applied, equivalent historical cost accounting figures have to be provided in Annex E in order to allow for comparison	

b) Cost of capital

Description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and 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 air navigation service provider + 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. IMWM follows EUROCONTROL Principles 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 and equipment introduced during the year will be included only in proportion.

Cost of capital assumptions	Description of each item
NBV 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.
Adjustments total assets	N/A
Net current assets	Average net value of working assets -net working assets – it is a difference between receivables for the provision of air navigation services, which have their source in the cost base, and liabilities for the provision of these services, taking into account their turnover cycles in days. -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; -working assets are average receivables under the agreement for the meteorological services for civil aviation for a given year; , taking into account their turnover cycles in days. Turnover cycle is 21 days. -short-term liabilities - average short-term liabilities under the agreement for the meteorological services for civil aviation at the end of year n-1, i.e. at the beginning of year n and at the end of year n; taking into account their turnover cycles in days. The turnover cycle of liabilities related to personnel costs is minus 3 days. The turnover cycle of liabilities related to other operating costs is 19 days.
Cost of capital %	
Return on equity	Interest rate on equity for the years 2025-2029 - adopted at the level of 5%. The value was calculated as the average value of 10-year bonds in 2019 (as a stable year) in the amount of 2,70% and the value of 10-year bonds for the completed year 2023 in the amount of 7,25%.
Average interest on debts	-Interest rate on the loan in the years 2024-2026 to finance the purchase of AWOS systems: 6,46%; -Interest rate of the planned loan in 2025-2030 to finance the purchase of the investment: 6,46% (estimated based on the current loan); -Interest rate of the planned loan in 2027-2032 to finance the purchase of the investment, 6,46% (estimated based on the current loan) -Interest rate of the planned loan in 2025-2029 to finance current activities, 6,35% (estimated based on the current loan)
Share of financing through equity	Calculated as the ratio of equity to total capital employed.

3.4.6.3 - Costs for VFR exempted flights

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 in accordance with Article 31(3), 31(4) and 31(5)
IMWM calculates costs of VFR flights which are exempted from navigation charges using the marginal cost methodology. This methodology is based on the number of visits users make to two most frequently visited IMWM websites which are: www.imgw.pl and www.pogodynka.pl which further direct the user to the tab concerning aviation information (awiacja.imgw.pl). This cost is calculated as follows: -The analysis of the Internet connection load through the www.imgw.pl website shows that it occupies 11% of the rented capacity. -11% of the annual cost of Internet bandwidth equal to the cost of maintaining the website www.imgw.pl and www.pogodynka.pl. -The average number of entrances to the awiacja.imgw.pl tab is 1,76% of all the visits to the IMWM websites, what after following calculation: 1,76% multiplied by annual cost of maintaining the websites gives an annual cost of maintaining awiacja.imgw.pl tab. -We assume that 50% of flights from these entries are subjects to exemptions from navigation charges (50% of the annual cost of maintaining the awiacja.imgw.pl tab equal to annual marginal cost of flights exempted from navigation charges). All products dedicated to VFRs are loaded with marginal costs at the same rate.

3.4.6.4 - NSA verification

Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the determined costs of the ANSP with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification
In August, after the CAA received the actuals of all ANPS for 1H2024 an analysis was done in order to verify the validity of 2024A forecast submitted for the draft performance plan. The CAA instructed the ANSP to revise their RP4 costs downwards. Special attention was paid to the verification of detailed costs by nature.

3.4.6 - Determined costs assumptions - Airport Meteo Sp. z o.o.

3.4.6.1 - Operating costs

a) Staff costs

Number of entries	2

#	Staff costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Renumeration	Salaries, bonuses	En-route charging zones	155	413	666	696	721	741	758
			Terminal charging zones	230	614	944	987	1 023	1 050	1 075
2	Social insurance and benefits	Employer's contribution to social insurance	En-route charging zones	12	13	37	38	40	41	42
			Terminal charging zones	18	19	52	54	56	58	59
Total staff costs			**En-route charging zones**	**167**	**426**	**703**	**734**	**761**	**781**	**800**
			Terminal charging zones	**248**	**633**	**996**	**1 041**	**1 079**	**1 108**	**1 134**

Accounting provisions included in total staff costs	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Assumptions underlying the determined pension costs and expected evolution over Reference Period 4 (for Main ANSP please refer to tab 3.4.7)	Airport Meteo plans that the applicable law in years 2025-2029 will not change with regard to the attributable pension costs.	En-route charging zones	5	8	30	31	32	33	34
		Terminal charging zones	8	12	42	44	46	47	48

Description of the main factors explaining the planned variations of staff costs over the reference period
Airport Meteo identifies main factors that impacts the other operating costs in RP4 - introduction of an increase of weathermen hours on duty at Warszawa-Radom (EPRA) Airport. What is more, weathermen cooperating with Airport Meteo are either hired directly (and then presented in Staff costs) or as external companies (and then presented in Other operating costs as third-party services). Therefore, significant discrepancies between the actual and determined costs may be observed depending on the rostering (of internal and external weathermen), yet the differences should be minimized by the other group. For further details, please see Annexes A and B (Additional information).

b) Other operating costs

Number of entries	4

#	Other operating costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Materials and energy consumption	Media consumption, office supplies and other	En-route charging zones	4	24	9	9	9	9	10
			Terminal charging zones	6	35	12	13	13	13	14

2	Third-party services	Rental of ground, rooms, premises and links, purchase of AWOS data, external meteorological services, law, finance and accounting services, training services, telecomunication and internet services and other	En-route charging zones	308	439	393	362	381	396	383
			Terminal charging zones	458	652	558	513	540	561	543
3	Taxes and fees	National supervisory authority fees, bank fees and other	En-route charging zones	5	17	9	9	9	10	10
			Terminal charging zones	8	26	13	13	13	14	14
4	Other costs	Insurance and other	En-route charging zones	5	5	7	7	7	7	7
			Terminal charging zones	7	8	9	10	10	10	11
Total other operating costs			**En-route charging zones**	**323**	**485**	**417**	**387**	**406**	**422**	**410**
			Terminal charging zones	**479**	**720**	**592**	**548**	**576**	**598**	**582**

Accounting provisions included in total other operating costs	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Costs for ground-ground communication services	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communication services via terrestrial link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communications services via satellite link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other operating costs over the reference period
Airport Meteo identifies main factors that impacts the other operating costs in RP4 - introduction of an increase of weathermen hours on duty at Warszawa-Radom (EPRA) Airport. What is more, the weathermen cooperating with Airport Meteo are either hired directly (and then presented in Staff costs) or as external companies (and then presented in Other operating costs as third-party services). Therefore, significant discrepancies between the actual and determined costs may be observed depending on the rostering (of internal and external weathermen), yet the differences should be minimized by the other group. For further details, please see Annexes A and B (Additional information).

c) Exceptional items

Number of entries	0

Accounting provisions included in total exceptional items	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other exceptional items over the reference period
Not applicable to Airport Meteo.

d) Accounting provisions

Number of entries	0

#	List of provisions included in the	Description of the composition of	Charging zones	Value of the	Forecast	Determined

a) Depreciation costs

Method adopted for the calculation of the depreciation cost (point 1.3 of Table 1):	Historical
If current cost accounting is applied, equivalent historical cost accounting figures have to be provided in Annex E in order to allow for comparison	

b) Cost of capital

Description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity
Cost of capital is the product of WACC rate and the sum of the net book value of fixed assets and net current assets. For further details, please see Annexes A and B (Additional information).

Cost of capital assumptions	Description of each item
NBV fixed assets	Based on average monthly book values of fixed assets.
Adjustments total assets	Not applicable - the values of NBV fixed assets and Net current assets are already presented with the exlusion of the 'Other' segment.
Net current assets	In line with the methodology implemented by the Polish CAA. In order to ensure consistency throughout all ANSPs in Poland, as of RP4 the value of net current assets is calculated taking into account approach recommended by CRCO when auditing PANSA's cost base in 2010 and applied since then, which is also consistent with EUROCONTROL Principles. It assumes that only assets that are necessary to provide ANS are taken into account. Planned current assets required to provide air navigation services are calculated taking into consideration latest available (for the year preceding the calculation) credit period associated to the payment of invoices (credit from customers and credit suppliers and staff). Methodology applied guarantees exclusion of interest bearing items.
Cost of capital %	With respect to the PRB recommendations and Reporting tool for Cost of Capital components RP4. AM has used the Efficient WACC.
Return on equity	With respect to the PRB recommendations and Reporting tool for Cost of Capital components RP4. AM has used the Efficient WACC.
Average interest on debts	Airport Meteo plans to pay all its debts by the end of 2024, therefore no debts are planned for RP4.
Share of financing through equity	As Airport Meteo no longer plans to use debt in RP4, the share of financing through equity in RP4 is equal to 100.00%.

3.4.6.3 - Costs for VFR exempted flights

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 in accordance with Article 31(3), 31(4) and 31(5)
Airport Meteo does not identify the costs incurred solely for handling VFR flights.

3.4.6.4 - NSA verification

Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the determined costs of the ANSP with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification
In August, after the CAA received the actuals of all ANPS for 1H2024 an analysis was done in order to verify the validity of 2024A forecast submitted for the draft performance plan. A series of issues was detected which were communicated to respective ANSPs which were comunicated to the ANSP with requests for explanations and/or instructions to adjust their forecast of 2024A downwards. The CAA instructed the ANSP to revise their RP4 costs downwards. Special attention was paid to the verification of detailed costs by nature, the cost of capital as well as excluding a higher share of costs from ANS cost bases in case of the three "small ANSPs" following an analysis of the operations of these entities.

3.4.6 - Determined costs assumptions - Warmia i Mazury Sp. z o.o.

3.4.6.1 - Operating costs

a) Staff costs

Number of entries	2

#	Staff costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Renumeration	Basic salary, bonuses	En-route charging zones	286	417	357	369	380	389	399
			Terminal charging zones	771	1 250	969	1 004	1 033	1 059	1 085
2	Social insurance, benefits	Employer's contribution to social insurance, other pension schemes required by law	En-route charging zones	56	84	58	60	62	64	65
			Terminal charging zones	152	237	149	154	159	163	167
Total staff costs			**En-route charging zones**	**342**	**502**	**415**	**430**	**442**	**453**	**465**
			Terminal charging zones	**923**	**1 487**	**1 118**	**1 158**	**1 192**	**1 221**	**1 252**
Accounting provisions included in total staff costs		Not applicable	En-route charging zones	0	0	0	0	0	0	0
			Terminal charging zones	0	0	0	0	0	0	0
Assumptions underlying the determined pension costs and expected evolution over Reference Period 4 (for Main ANSP please refer to tab 3.4.7)		Warmia i Mazury does not forsee any changes in the legislation - either local or at the EU level that may impact the level of pension costs in RP4	En-route charging zones	41	68	49	51	52	53	55
			Terminal charging zones	112	184	124	128	132	135	139

Description of the main factors explaining the planned variations of staff costs over the reference period
In general, in RP4, costs are planned to increase with reference to the inflation rate. The significant changes as increase of size of MET duties to two person and one-time expenses are planned for the last year of RP3. For details, please see Annex A and B.

b) Other operating costs

Number of entries	4

#	Other operating costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Materials and energy consumption	Materials, energy and other media, fuel etc.	En-route charging zones	73	99	75	78	80	82	84
			Terminal charging zones	196	310	246	255	262	269	276
2	Third-party services	AWOS data purchase; rental, transport, consulting, law, repair services etc.	En-route charging zones	1 112	1 296	1 263	1 399	1 438	1 504	1 511
			Terminal charging zones	1 061	1 483	1 622	1 774	1 824	1 901	1 916
3	Fees and taxes	Civil Aviation Authority fees, property and land taxes etc.	En-route charging zones	14	11	11	12	12	12	13
			Terminal charging zones	38	24	34	36	37	38	38

4	Other types of costs	Indirect costs, insurances, other than above-mentioned types of costs	En-route charging zones	321	374	183	189	195	200	205
			Terminal charging zones	931	1 200	568	588	605	620	636
Total other operating costs			**En-route charging zones**	**1 520**	**1 780**	**1 533**	**1 678**	**1 725**	**1 798**	**1 813**
			Terminal charging zones	**2 225**	**3 017**	**2 470**	**2 653**	**2 728**	**2 827**	**2 866**

Accounting provisions included in total other operating costs	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Costs for ground-ground communication services	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communication services via terrestrial link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communications services via satellite link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other operating costs over the reference period
In general, in RP4, costs are planned to increase with reference to the inflation rate. One of the most important cost item that significantly rises is the AWOS purchase data form the external owner of the system (included in third-party services). In terms of AFIS and COM, the important part of postponed expenses are planned to be realised in the last year of RP3, as Warmia i Mazury has finally received in April 2024 the navigation charges collected by other entities in years 2020-2023. For details, please see Annexes A and B.

c) Exceptional items

Number of entries	0

Accounting provisions included in total exceptional items	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other exceptional items over the reference period
Not applicable.

d) Accounting provisions

Number of entries	0

#	List of provisions included in the	Description of the composition of	Charging zones	Value of the	Forecast	Determined

a) Depreciation costs

Method adopted for the calculation of the depreciation cost (point 1.3 of Table 1):	Historical
If current cost accounting is applied, equivalent historical cost accounting figures have to be provided in Annex E in order to allow for comparison	

b) Cost of capital

Description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity
Cost of capital is a product of the forecasted values of NBV fixed assets, net current assets and WACC. The NBV of fixed assets was calculated basing on the sum of values of fixed assets less depreciation. In case of net current assets, Warmia i Mazury has taken into account the methodology provided by the Polish CAA. As for WACC, the PRB Reporting tool for Cost of Capital components RP4 has been used. For details, please see Annexes A and B.

Cost of capital assumptions	Description of each item
NBV fixed assets	Sum of values of fixed assets less depreciation.
Adjustments total assets	Not applicable - assets are already allocated to PP only in part that is not financed by any other source.
Net current assets	In line with the methodology implemented by the Polish CAA. In order to ensure consistency throughout all ANSPs in Poland, as of RP4 the value of net current assets is calculated taking into account approach recommended by CRCO when auditing PANSA's cost base in 2010 and applied since then, which is also consistent with EUROCONTROL Principles. It assumes that only assets that are necessary to provide ANS are taken into account. Planned current assets required to provide air navigation services are calculated taking into consideration latest available (for the year preceding the calculation) credit period associated to the payment of invoices (credit from customers and credit suppliers and staff). Methodology applied guarantees exclusion of interest bearing items.
Cost of capital %	Computed with the Efficient WACC methodology provided by the PRB.
Return on equity	In line with PRB recommendations.
Average interest on debts	Not applicable - no debt is planned.
Share of financing through equity	100%, as no debt is planned.

3.4.6.3 - Costs for VFR exempted flights

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 in accordance with Article 31(3), 31(4) and 31(5)
Cost of air navigation services provided for VFR flights is calculated through a marginal cost methodology.

3.4.6.4 - NSA verification

Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the determined costs of the ANSP with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification
In August, after the CAA received the actuals of all ANPS for 1H2024 an analysis was done in order to verify the validity of 2024A forecast submitted for the draft performance plan. A series of issues was detected which were communicated to respective ANSPs which were comunicated to the ANSP with requests for explanations and/or instructions to adjust their forecast of 2024A downwards. The CAA instructed the ANSP to revise their RP4 costs downwards. Special attention was paid to the verification of detailed costs by nature, the cost of capital as well as excluding a higher share of costs from ANS cost bases in case of the three "small ANSPs" following an analysis of the operations of these entities.

3.4.6 - Determined costs assumptions - Port Lotniczy Bydgoszcz S.A.

3.4.6.1 - Operating costs

a) Staff costs

Number of entries	2

#	Staff costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Renumeration	Salaries and bonuses	En-route charging zones	754	936	1 070	1 108	1 140	1 168	1 198
			Terminal charging zones	1 563	2 043	2 469	2 557	2 631	2 698	2 764
2	Social insurance and benefits	Social security, pension schemes, other social benefits	En-route charging zones	185	243	279	291	298	309	315
			Terminal charging zones	347	503	626	654	668	695	706
Total staff costs			**En-route charging zones**	**939**	**1 179**	**1 349**	**1 398**	**1 438**	**1 477**	**1 513**
			Terminal charging zones	**1 911**	**2 546**	**3 095**	**3 211**	**3 299**	**3 393**	**3 470**

Accounting provisions included in total staff costs	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Assumptions underlying the determined pension costs and expected evolution over Reference Period 4 (for Main ANSP please refer to tab 3.4.7)	No law changes in this matter are taken into account	En-route charging zones	119	161	181	188	193	198	203
		Terminal charging zones	225	351	418	433	445	457	468

Description of the main factors explaining the planned variations of staff costs over the reference period
Increase in costs is planned in line with the inflation rate. The implementation of TWR EPBY increases the commitment of other departments of PL Bydgoszcz in ANS (in terms of security, maintenance). Some wage rises are planned to be implemented for the experienced staff. For further details, please see Annex A and B.

b) Other operating costs

Number of entries	3

#	Other operating costs building blocks (in nominal terms in '000 national currency)	Description of the composition of each item	Charging zones	Actual	Forecast	Determined				
				2023	2024	2025	2026	2027	2028	2029
1	Materials and energy	Materials, utilities, renovations, maintenance	En-route charging zones	23	45	22	23	23	24	24
			Terminal charging zones	46	260	76	78	80	82	85
2	Third-party services	B2B contracts with staff, training, telecomunication services, AWOS specialist maintenance, consulting	En-route charging zones	341	292	250	369	135	140	140
			Terminal charging zones	774	855	1 135	1 208	886	911	920
3	Fees and other costs	Fees, taxes, insurance, refunds for business trips	En-route charging zones	128	94	97	99	99	100	100
			Terminal charging zones	275	241	283	281	283	310	283
Total other operating costs			**En-route charging zones**	**492**	**432**	**370**	**490**	**258**	**264**	**265**
			Terminal charging zones	**1 095**	**1 356**	**1 494**	**1 567**	**1 250**	**1 304**	**1 288**

Accounting provisions included in total other operating costs	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Costs for ground-ground communication services	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communication services via terrestrial link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0
Costs for air-ground communications services via satellite link	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other operating costs over the reference period
Increase in costs is planned in line with the inflation rate. The implementation of TWR EPBY causes growth of the costs of third-party services and maintenance. For further details, please see Annex A and B.

c) Exceptional items

Number of entries	0

Accounting provisions included in total exceptional items	Not applicable	En-route charging zones	0	0	0	0	0	0	0
		Terminal charging zones	0	0	0	0	0	0	0

Description of the main factors explaining the planned variations of other exceptional items over the reference period
Not applicable.

d) Accounting provisions

Number of entries	0

#	List of provisions included in the	Description of the composition of	Charging zones	Value of the	Forecast	Determined

a) Depreciation costs

Method adopted for the calculation of the depreciation cost (point 1.3 of Table 1):	Historical
If current cost accounting is applied, equivalent historical cost accounting figures have to be provided in Annex E in order to allow for comparison	

b) Cost of capital

Description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity
Recorded levels of the cost of capital are the product of WACC rate and sum of NBV fixed assets and net current assets. For details, please see information provided below and in Annexes A and B.

Cost of capital assumptions	Description of each item
NBV fixed assets	Yearly averages of monthly averages of net book value fixed assets.
Adjustments total assets	Not applicable - values presented as NBV fixed assets and net current assets in reporting tables are already diminished by any other funding and 'Other' segments.
Net current assets	In line with the methodology implemented by the Polish CAA. In order to ensure consistency throughout all ANSPs in Poland, as of RP4 the value of net current assets is calculated taking into account approach recommended by CRCO when auditing PANSA's cost base in 2010 and applied since then, which is also consistent with EUROCONTROL Principles. It assumes that only assets that are necessary to provide ANS are taken into account. Planned current assets required to provide air navigation services are calculated taking into consideration latest available (for the year preceding the calculation) credit period associated to the payment of invoices (credit from customers and credit suppliers and staff). Methodology applied guarantees exclusion of interest bearing items.
Cost of capital %	Based on PRB's Reporting tool for cost of capital components RP4.
Return on equity	Based on PRB's Reporting tool for cost of capital components RP4.
Average interest on debts	Based on planned interest rate of the loan to be taken.
Share of financing through equity	Based on genuine Equity and Debt ratio.

3.4.6.3 - Costs for VFR exempted flights

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 in accordance with Article 31(3), 31(4) and 31(5)
Cost of air navigation services provided for VFR flights is calculated through a marginal cost methodology.

3.4.6.4 - NSA verification

Findings of the verification by the NSA (under Art. 22(7) of IR 2019/317) of the compliance of the determined costs of the ANSP with the requirements of Article 15(2) of Reg. 550/2004 and Article 22 of IR 2019/317, and where applicable identification of corrections applied to the cost base as a result of this verification
In August, after the CAA received the actuals of all ANPS for 1H2024 an analysis was done in order to verify the validity of 2024A forecast submitted for the draft performance plan. A series of issues was detected which were communicated to respective ANSPs which were comunicated to the ANSP with requests for explanations and/or instructions to adjust their forecast of 2024A downwards. The CAA instructed the ANSP to revise their RP4 costs downwards. Special attention was paid to the verification of detailed costs by nature, the cost of capital as well as excluding a higher share of costs from ANS cost bases in case of the three "small ANSPs" following an analysis of the operations of these entities.

3.4.7 - Pension assumptions

PANSA

3.4.7.1 Total pension costs, including retirement and pre-retirement schemes (in nominal terms in '000 national currency)

Pension costs per segment	2025D	2026D	2027D	2028D	2029D
En-route activity	96 350	103 096	108 930	114 495	119 573
Terminal activity	24 448	26 010	27 198	28 312	29 463
Other activities	2 226	2 293	2 331	2 363	2 436
Total pension costs	123 025	**131 399**	**138 460**	**145 170**	**151 473**

3.4.7.2 Assumptions for the "State" pension scheme (in nominal terms in '000 national currency)

Are there different contribution rates for different staff categories? If yes, how many?	Yes-2

All staff	2025D	2026D	2027D	2028D	2029D
Total pensionable payroll to which this scheme applies	739 843	790 469	834 177	874 913	908 571
Employer % contribution rate to this scheme	16	16	16	16	16
Total pension costs in respect of this scheme	**76 009**	**82 175**	**86 432**	**90 326**	**93 473**
Number of employees the employer contributes for in this scheme	2 238	2 270	2 302	2 302	2 310

Staff employed in special conditions (ATCO, "flying personnel")	2025D	2026D	2027D	2028D	2029D
Total pensionable payroll to which this scheme applies	338 623	431 023	459 247	486 938	509 706
Employer % contribution rate to this scheme	2	2	2	2	2
Total pension costs in respect of this scheme	**2 501**	**2 736**	**2 937**	**3 131**	**3 299**
Number of employees the employer contributes for in this scheme	662	693	724	753	776

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP4

The State pension scheme is defined in the Act of 13 October 1998 on social security scheme. It is a general occupational scheme applicable to all entities/all employees in Poland. The scheme is a Defined Contribution Scheme. This scheme defines level of obligatory contribution of employers to State pension scheme. This pension contribution amounts to 9.76% plus additional 6.5% for disability scheme - totalling 16.26% (employer's contribution only).
Additionally, for staff employed in special conditions (the list of staff categories is defined in Annexes to the Act of 19 December 2008 on bridging pension scheme), under the obligatory State scheme defined in the Act of 19 December 2008 on bridging pension scheme, employer pays 1.5% contribution to bridging pension scheme. In case of PANSA the staff employed in special conditions include personnel operating aircraft used for calibration flights (pilots and mechanics) and ATCOs.
At the moment of drafting the RP4 PP no drafts of proposed changes to the above mentioned national legislation on pensions are available - therefore the draft RP4 PP does not assume any changes in this respect.

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs, separately for retirement and early retirement

For the State Pension Scheme, the costs assume the annual limit of state pension insurance contributions in the amount of PLN 246.489 for 2025, this is the amount of the limit applicable in 2024 increased by the annual inflation rate. In subsequent years, a similar calculation method was used (the limit is verified annually by the State, taking into account the level of average monthly salary in the Polish economy).
The following limits were adopted in RP4:
2025 - 246.489 PLN,
2026 - 258.729 PLN,
2027 - 267.997 PLN,
2028 - 275.769 PLN,
2029 - 282.663 PLN.

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users

As the pension costs related to the State occupational scheme directly depend on the national legislation applicable to all entities, PANSA and the NSA have no control over the evolution of these costs if any change to the national legislation is implemented within RP4.
PANSA possible cost control mechanisms can only relate to the number of employees not exceeding the numbers foreseen in the RP4 PP and assumptions on remuneration level (sticking to the assumptions underlying the RP4 PP).

3.4.7.3 Assumptions for the occupational "Defined contributions" pension scheme (in nominal terms in '000 national currency)

Are there different contribution rates for different staff categories? If yes, how many?	Select

All staff (access for employees on voluntary basis)	2025D	2026D	2027D	2028D	2029D
Total pensionable payroll to which this scheme applies	635 931	664 112	701 307	738 755	781 432
Employer % contribution rate to this scheme	7	7	7	7	7
Total pension costs in respect of this scheme	**44 515**	**46 488**	**49 091**	**51 713**	**54 700**
Number of employees the employer contributes for in this scheme	1 728	1 746	1 759	1 780	1 810

Description on the relevant national pension regulations and pension accounting regulations on which the assumptions are based, as well as information whether changes of those regulations are to be expected during RP4
The occupational pension scheme is based on the Act of 13 October 1998 on employee pension schemes. In case of introducing such scheme, it is necessary to sign a company contract - an agreement concluded by the employer with a representation of employees. Then it is possible for the employer to pay pension contribution to the scheme up to 7% for each employee registered to the scheme. Contribution in PANSA according to the company contract amounts to 7%. Contributions are collected and managed by ALLIANZ. In addition, employees have the right to determine the amount they want to contribute - the sum of additional contributions made by a participant to the scheme during a calendar year may not exceed the amount equivalent to four-and-a-half times the average projected monthly salary in the national economy for a given year. No changes are predicted during the RP4 timeframe.

Description of the assumptions underlying the calculations of pension costs comprised in the determined costs, separately for retirement and early retirement pension schemes
Calculations are made in the same way as in the case of contributions to the State pension scheme, except that there is no limit of contributions.

Describe the actions taken ex-ante to manage the cost-risk (cost increase) associated with this item, as well as the actions taken to limit the impact of the unforeseen change on the costs to be passed on to airspace users
The pension costs related to this scheme are dependent on the number of employees and their salaries. Therefore, similar as in case of the State scheme described above, PANSA possible cost control mechanisms can relate to the number of employees not exceeding the numbers foreseen in the RP4 PP and assumptions on remuneration level (sticking to the assumptions underlying the RP4 PP). In case of unforeseen increase in the level of remuneration or number of staff, which could lead to significant increase in the costs of this pension scheme, PANSA has a possibility to limit the level of contribution or to suspend the scheme for a limited period (as exceptionally done in 2020).

3.4.7.4 Assumptions for the occupational "Defined benefits" pension scheme (in nominal terms in '000 national currency)

Are there different defined benefits schemes applicable? If yes, how many?	No

3.4.8 - Interest rate assumptions for loans financing the provision of air navigation services

PANSA

Select number of loans	3

Interest rate assumptions for loans financing the provision of air navigation services
(Amounts in nominal terms in '000 national currency)

Loan #1		2025D	2026D	2027D	2028D	2029D
Description		Investment credit has been provided by Bank Gospodarstwa Krajowego in the total amount of 550 million PLN. Effective annual interest rate calculated over the whole timeframe of the credit financing taking into account: loan interest at floating rates - which is the total of the WIBOR 3M reference rate and bank's fixed margin of 1.6%, commission on every loan installment disbursement at 0.39% of the amount of the installment concerned, commission on the unused expected maximum value of the arrangement at 1.0%, commission for issuing a State Treasury guarantee at 1.2% of full amount available payable immediately after arrangement conclusion. The arrangement should be repaid until 31st Dec 2033.				
Remaining balance		408 329	351 838	295 347	238 856	182 365
Interest rate %	Variable	6,60%	6,60%	6,60%	6,60%	6,60%
Interest amount		30 719	23 690	18 336	13 786	10 252

Loan #2		2025D	2026D	2027D	2028D	2029D
Description		Investment credit to be provided by Bank Gospodarstwa Krajowego in planned amount of 400 million PLN. Assumed costs analogous to the existing investment credit: effective annual interest rate calculated over the whole timeframe of the credit financing taking into account: loan interest at floating rates - which is the total of the WIBOR 3M reference rate and bank's fixed margin of 1.6%, commission on every loan installment disbursement at 0.39% of the amount of installment concerned, commission on the unused expected maximum value of the arrangement at 1.0%, commission for issuing a State Treasury guarantee at 1.2% of full amount available payable immediately after arrangement conclusion. Expected maximum value of the Arrangement to be available in one tranche in 2025. The arrangement should be repaid until 31 Dec 2035.				
Remaining balance		400 000	360 000	320 000	280 000	240 000
Interest rate %	Variable	5,50%	5,50%	5,50%	5,50%	5,50%
Interest amount		16 663	23 461	18 994	15 155	12 245

Loan #3		2025D	2026D	2027D	2028D	2029D
Description		Operating credit facility to be provided by Bank Gospodarstwa Krajowego with agreed value of the arrangement amounting to 300 million PLN. Assumed costs analogous to the existing operating credit repayable until the end of 2024: effective annual interest rate calculated over the whole timeframe of the credit financing taking into account: loan interest at floating rates - which is the total of the WIBOR 3M reference rate and bank's fixed margin of 0.95%, commission on the loan disbursement at 0.17% of full amount available, loan administration fee (on full amount made available) at 0.1% payable on a quarterly basis. Full amount available during the whole term of credit to be utilised and repaid according to PANSA needs. Final repayment until 31st Dec 2025.				
Remaining balance		0	-	-	-	-
Interest rate %	Variable	7,04%	0,00%	0,00%	0,00%	0,00%
Interest amount		17 446	-	-	-	-

Other loans	2025D	2026D	2027D	2028D	2029D
Description	Funds amounting to 8,4 mln EUR made available by the Eurocontrol Member States through the establishment of the Volontary Temporary Solidarity Fund in order to minimise negative impact of war in Ukraine on the provision of air navigation services. No interest is calculated on the funds made available. The whole amount shall be reimbursed over a 12 month period, in 12 equal instalments,starting from 1st Jan 2025.				
Remaining balance	0				
Average weighted interest rate %	-	-	-	-	-
Interest amount	0				

Total loans	2025D	2026D	2027D	2028D	2029D
Total remaining balance	808 329	711 838	615 347	518 856	422 365
Average weighted interest rate %	8,02%	6,62%	6,07%	5,58%	5,33%
Interest amount	64 829	47 152	37 330	28 941	22 497

3.4.9 - Additional determined costs related to measures necessary to achieve the en route capacity targets

Additional costs of measures necessary to achieve the capacity targets for RP4?	Yes
If yes, number of **en route** charging zones concerned	1

a) Overall description of the measures necessary to achieve the en-route capacity targets for RP4, which induce additional costs

Information on measures planned to be implemented to support achievement of capacity targets is provided in chapter 3.3.1. These include, among others:
- continuation of reorganisation of ACC Warszawa sector configuration - three layer division - Step 2 and 3 (sector groups TC and BD) – currently planned operational implementation in 2026,
- increased number of GAT ACC sectors possible to be opened,
- continuation of training process for new ATCOs (required increase in ATCO numbers as a result of planned airspace changes),
- continued investments in infrastructure (CNS) and technology allowing maintenance and optimisation of airspace structures and optimisation of coverage in the Polish airspace as well as supporting contingency,
- development of advanced tool to support air traffic flow and capacity management,
- post-ops analysis and business intelligence initiatives.

The above mentioned measures will generate additional costs in the areas of staff (ATCOs and ATCO students) as well as investment costs (ca. 71% of CAPEX planned for RP4 is related to capacity KPA).

b) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP4

Number of capacity measures, which induce additional costs	2

PANSA					
Measure #1	2025D	2026D	2027D	2028D	2029D
Associated additional costs (nominal terms in '000 national currency)	4 304	10 299	15 445	23 519	35 106
Description and justification of the additional determined costs of the measure					

ATCO increase

To be able to implement airspace resectorisation, including the three-layer vertical division, some increase in ATCO number is needed. This relates both to ACC ATCOs as well as APP ATCOs. Despite the decrease in traffic following the outbreak of the war in Ukraine, the current number of ATCOs is not sufficient. This results from increased traffic complexity as well as the need to be ready for traffic increase once the war is over. This is the core goal of PANSA to be ready for the network needs. PANSA is still facing insufficient number of ATCOs, what results from difficult labour market in Poland (employee oriented) and tense social situation which took place in 2022, as well as the fact that new recruitments of ATCO students were stopped for two years after the outbreak of the COVID pandemic. The gap of ATCOs needs to be filled to support reaching the capacity targets in last years of RP4 as well as beyond. The very ambitious target of 0.13 min/flight in 2028 and 2029 cannot be met without the planned airspace resectorisation and required increase in ATCO numbers.

Increase in ATCO numbers results in increase in staff costs. For the purpose of calculating the additional costs related to this measure only costs related to employment of new ATCOs (salaries with related additional remuneration elements as well as social security payments) and their employment during the training period (during both, ab-initio training and on-the-job training) were taken into account - where as new ATCO only net increase above planned level at 31.12.2024 from RP3 PP was considered (replacements of ATCO leaving PRU1 were not considered in the calculations). The amounts presented in the table do not include other costs related to the ATCO training process like accommodation, costs related to recruitment of ATCO students, cost of trainers, cost of training materials or infrastructure used for training purposes or indirect costs - therefore the costs presented in the table need to be considered as very conservative.

PANSA					
Measure #2	2025D	2026D	2027D	2028D	2029D
Associated additional costs (nominal terms in '000 national currency)	29 275	49 394	70 831	83 712	94 240
Description and justification of the additional determined costs of the measure					

Execution on investments related to capacity

Maintaining and further increasing ER capacity of FIR Warszawa requires investments in infrastructure and systems necessary to perform ANS by PANSA. Ca. 71% of PANSA RP4 CAPEX is related to the capacity KPA. These investments include, among others, upgrades/changes to ATM system (incl. interoperable iTEC), infrastructure needed to accommodate the new ATM system, construction of new OPS rooms aimed at providing contingency, construction of MSSR Radars and development of radiocommunication stations. They cover both, replacement investments (without which maintaining the capacity provided up-to-date would not be possible) as well as development investments (aimed at further improving capacity, both for the RP4 period and beyond) or projects considered as both replacement and development project (e.g. replacement of an asset or system but with additional functionalities added). It needs to be underlined that some of the NAV aids must remain much longer than previously expected due to the jamming and spoofing reality in the region. More information on investments over RP4 is provided in chapter 2.1.

Execution of those investments results in increase in related costs - depreciation and cost of capital on fixed assets. For the purpose of calculating the values presented in the table above, only costs related to CAPEX planned to be spent over RP4 (from Jan 2025) allocated to ER services were considered - costs related to parts of the projects that started earlier (before end of RP3) were not considered. Again, similar as in the case of staff costs above, the amounts need to be considered as very conservative as they do not include non-capitalised cost elements related to CAPEX execution or putting the assets into operation like costs of business trips, additional training etc.

	2025D	2026D	2027D	2028D	2029D
Total additional costs of measures ('000 national currency)	33 579	59 693	86 275	107 230	129 346

c) Detailed information on the additional costs of measures necessary to achieve the capacity targets for RP4 by nature by ANSP

Additional costs of measures necessary to achieve the capacity targets for RP4 (nominal terms in '000 national currency)

Poland	2025D	2026D	2027D	2028D	2029D
Staff	4 304	10 299	15 445	23 519	35 106
of which, pension costs	627	1 402	2 090	3 144	4 523
Other operating costs					
Depreciation	7 341	20 962	36 350	43 361	50 540
Cost of capital	21 933	28 432	34 480	40 351	43 699
Exceptional items					
Total additional costs of measures	33 579	59 693	86 275	107 230	129 346

Click to select	2025D	2026D	2027D	2028D	2029D
Staff					
of which, pension costs					
Other operating costs					
Depreciation					
Cost of capital					
Exceptional items					
Total additional costs of measures	-	-	-	-	-

	2025D	2026D	2027D	2028D	2029D
Total additional costs of measures ('000 national currency)	33 579	59 693	86 275	107 230	129 346

Additional comments

d) Demonstration that the deviation from the Union-wide targets is exclusively due to the additional determined costs related to measures necessary to achieve the performance targets in capacity

3.4.10 - Restructuring costs

3.4.10.1 Restructuring costs from previous reference periods to be recovered in RP4

Restructuring costs from previous reference periods approved by the European Commission?	No

3.4.10.2 Restructuring costs planned for RP4

Restructuring costs foreseen for RP4?	No

Additional comments

SECTION 3.5: ADDITIONAL KPIS / TARGETS

3.5 Additional KPIs / Targets

Annexes of relevance to this section

ANNEX J. OPTIONAL KPIs AND TARGETS

3.5 - Additional KPIs / Targets

Number of additional KPIs	0

SECTION 3.6: DESCRIPTION OF KPAS INTERDEPENDENCIES AND TRADE-OFFS INCLUDING THE ASSUMPTIONS USED TO ASSESS THOSE TRADE-OFFS

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

- 3.6.1 - Interdependencies and trade-offs between safety and other KPAs
- 3.6.2 - Interdependencies and trade-offs between capacity and environment
- 3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity
- 3.6.4 - Other interdependencies and trade-offs

3.6 - Description of KPAs interdependencies and trade-offs including the assumptions used to assess those trade-offs

3.6.1 - Interdependencies and trade-offs between safety and other KPAs

a) With regard to the over-riding safety objectives, what pressures does your organisation experience in meeting the cost, capacity and environmental KPAs? Describe how you ensure that these pressures do not negatively impact safety within your organisation. Describe the mitigation measures that have been introduced to demonstrate that safety performance has been sustained and what monitoring has been envisaged to measure the effectiveness of those mitigations.
Due to the Russian unprovoked aggression in Ukraine PANSA is facing unprecedented challenges in our airspace. Environmental KPA is even more beyond any control of PANSA than before as traffic flows depend on airspace availability (for further information see Annex P to the draft RP4 PP). The same concerns the capacity at certain periods. Complexity is another factor which is much more complicated than in the peace time. All the above mentioned factors put much more pressure on PANSA. If hypothetically PANSA cut investments and ATCOs number and froze the training (due to much unwanted cost cuts) it might directly influence the safety, eg. much more fatigue, more challenges on individual ATCOs and lack of interoperable tools (like iTEC) resulting in lack of TBO. PANSA mitigation plan is mainly based on implementation (which takes also into account the NM scenarios) of the detailed plan of readiness for traffic recovery. It relies on two major assumptions – to have staff ready to cope with the traffic increase and to invest in line with the ATM Master Plan. The SMS would provide, based on a fatigue study, a constant monitoring of the ATCOs performance and fitness.

b) What are the main assumptions used to assess the interdependencies between safety and other KPAs? Please provide a detailed analysis. Describe the analysis methodology and the data that has been used to assess the interdependencies between safety and other KPAs. What indicators, in addition to those described in the Regulation, are used for monitoring during the reference period to ensure that the targets in the KPAs of capacity, environment, and cost-efficiency are not degrading safety?
For that purpose, PANSA is reinforcing proactive hazard identification by establishing dedicated safety management department. Additional ANSP performance indicators are planned to be developed in cooperation with research centre.

c) Describe the organisation's philosophy for managing competing priorities between the KPAs effectively – for instance delaying programmes to manage competing demands. It is expected that the organisation uses its business risk management processes to assess the consequential risks of the organisation's competing priorities to achieve its business goals.
To assure effective management of competing priorities between safety and capacity PANSA is planning additional tasks for ATCOs (i.e. supporting projects etc.) for off-peak traffic periods (i.e. outside summer time).

d) What trade-offs in safety have been accepted to manage resources shortfalls in realising the organisation's objectives to meet the cost, capacity and environment KPA targets? Have trade-offs restricted the release of staff for safety activities, such as safety training (ATC training excepted), safety surveys, safety audits, safety assessments, safety studies and analyses?
Currently being an ANSP in Poland, with the border with Ukraine, means that the issue of competing priorities is even more challenging than in the peace time. Priorities by their nature indicate a hierarchy. However "one" can be more important than another. The war close to the State border requires that they should be integrated instead (as deeply as possible). Ultimately, we need to assess how all of SES priorities/KPAs can actually work together toward wider goals' achievement. PANSA cannot give up any of its priorities. Environment (as defined currently by the performance indicators) lies largely beyond ANSP control especially as long as there are geopolitical and military restrictions. However capacity and civil/military coordination is a must, safety is a must and all the above mentioned have a given cost. At the end PANSA is required to be ready for the traffic recovery based on the possible NM scenarios. This requires exceptional efforts.

e) Has the State reviewed the ANSP financial and personnel resources that are needed to support safe ATC service provision through safety promotion, safety improvement, safety assurance and safety risk management in line with planned changes that will enable targets in other KPAs to be achieved? Please provide a detailed explanation.
The ANSP financial and personnel resources are reviewed as a part of safety oversight programme. All safety areas are checked by assessment of EoSM presented annually in Monitoring Report. Safety related functional changes are checked during the additional audits.

3.6.2 - Interdependencies and trade-offs between capacity and environment

Several projects (airspace optimisation, route network straightening, DCT and FRA implementation) carried out by PANSA in the past years enabled improvement in HFE KPIs calculated for Polish (and Baltic FAB) airspace. Until 2021, Poland had one of the lowest KEA values in the SES area (since 2021 increase is observed due to external geopolitical developments – see below).

Further improvement of HFE KPIs may cause reduction in capacity and/or throughput of EPWW FIR airspace. In complex airspaces with high demand, capacity is inversely proportional to flight routing efficiency. This is also confirmed by preliminary results of SESAR 2020 PJ06 project which is validating FRA concept in high and very high complexity environments. According to the mentioned results, when FRA is being implemented in complex airspaces with high demand it is necessary to introduce some “structural limitations” (which decrease flight efficiency) in order to maintain capacity, which can be affected by increased complexity (ATCO workload) and increased number of ACC sectors, which are penetrated by flights carried out on shortened routings. This situation will lead to increased regulation implemented on the day of operation. The outcome of these structural limitations is very often less penalising than the cost of ATM regulations. In the initial RP3 PP submitted in 2019 a high level estimation of consequences of possible withdrawal of some “structural limitations” was presented – while (due to changes of traffic volumes and traffic flows) the values now would be different, general direction of possible consequences seems to be still valid.

POLFRA was one of the last significant projects, implemented by PANSA, aimed to optimise flight efficiency (implementation of FRA in FIR EPWW on 28th of February 2019). Based on the above mentioned knowledge and performed analysis, in order not to decrease capacity of ACC Warszawa, POLFRA was implemented together with minimal set of necessary RAD restrictions. All these restrictions were implemented after precise analysis in order to minimise negative impact on users, while at the same time minimizing the risk of occurrence of ATM regulation implemented on the day of operation. After successful implementation of FRA in Warszawa FIR, PANSA immediately started the development of cross-border FRA operations initiatives in order to further optimize the routing possibilities in their airspaces which brought the benefits for both the environment and AUs. In February 2022 PANSA and Oro Navigacija implemented cross-border FRA operations between Lithuania and Poland in the form of common FRA cross-border area named BALTIC FRA with inclusion of cross-border FRA operations between BALTIC FRA and SEE FRA (Poland and Slovakia).

Another example of trade-offs between capacity and environmental targets could be the effect of planned enhanced NM Summer Measures. While at network level these measures are believed to bring positive effects for the level of delays, from the HFE perspective they led to negative effects linked to longer routes. This relationship was recognized also by EASA Management Board Task Force on Airspace Congestion.

Considering all mentioned above, PANSA is constantly trying to improve the HFE KPI values and improve capacity available for AUs. Recently two airspace projects are being developed in order to improve mentioned domains: cross-border FRA implementation projects (focused on HFE) and implementation of additional (third) sector layer in en-route airspace (focused on capacity).

Second step of cross-border FRA implementation project is being developed now by PANSA. In this phase it is planned to implement cross-border FRA operations between:
- Poland and Sweden (between Baltic FRA and DK-SE FAB FRA),
- Poland and Czech Republic (maximum extension of the geographical scope of cross-border FRA operations between Baltic FRA and SEE FRA).
Currently planned date of implementation of the mentioned project is November 2024. Both cross-border FRA projects (first step implemented in 2022 and second planned for 2024) are focused on allowing AUs to plan freely routing via common border between Poland and Czech Republic /Lithuania /Slovakia /Sweden, which will result in shorter, more optimise routings. Although some improvement of HFE could be expected, it also must be underlined that some structural limitations must be also applied in order not to decreases the available capacity. Already in 2018 PANSA noticed that capacity level in south-east part of the Polish airspace is not enough to meet forecasted demand. Thus in 2019 the horizontal split of two ACC sectors was implemented. Although available capacity was increased and the delays were reduced that solution was foreseen as an intermediate step due to some operational constrains which increased complicity in that area. To further improve airspace configuration, minimise additional complexity and further increase available complexity forecasted for RP3 period (including the whole EPWW FIR area) the implementation of third layer of ACC sectors was initiated. The project was divided into four steps. The original plan was to start implementation of the first step in 2021 but due to the COVID-19 pandemic it was postponed to 2023 when the third layer was implemented in EPWWJ and EPWWR sectors. Next steps of this project are planned to be implemented between 2026 and 2029 depending on actual traffic growth. This project, although not directly focused on HFE improvement, also can indirectly contribute to the HFE by further minimisation of probability of delays. Thus AUs will not have to be forced to plan longer routings in order to avoid congested and regulated areas during peak summer periods. Additionally, in March 2020 PANSA has suspended a significant number of RAD restrictions related to the Polish FRA area (POLFRA/Baltic FRA) due to the low level of traffic caused by COVID-19 pandemic and lack of capacity problems. As for June 2024 these restrictions are still being suspended due to ongoing war in Ukraine and significantly increased military/NATO restrictions in eastern part of Warszawa FIR. Depending on war situation in Ukraine and implemented military restrictions their suspension might be

prolongated even until the end of the war. Undertaken actions could benefit in HFE optimisation, however although shorter connections were available, actual decrease of HFE KPIs has not been observed, because of AUs choices which in most cases take into account the cheapest routings, which are not necessarily the shortest ones, or because of some political factors.

Mentioned above ongoing war in Ukraine caused significant increase in military/NATO presence in eastern part of Warszawa FIR causing major restrictions for civil traffic in this region. These restrictions significantly decreased both capacity available for civil traffic and horizontal flight efficiency in eastern Poland.

As it was mentioned at the beginning, capacity is inversely proportional to flight routing efficiency but taking into account outcomes of war in Ukraine on Polish airspace it clearly shows that decreasing the capacity not always allows increase of flight efficiency.

Currently the biggest negative factor on horizontal flight efficiency in Warszawa FIR is the outcome stemming from war in Ukraine and closure of Ukrainian airspace and reciprocal flight sanctions implemented by EU and Russian Federation. Significant improvement of horizontal flight efficiency KPI/PIs in Polish Airspace in only possible when all listed factors disappear.

3.6.3 - Interdependencies and trade-offs between cost-efficiency and capacity

There is a direct and widely recognised trade-off between these two areas. However, this relationship is not linear – the crisis period of 2020–2021 has shown that there is a minimum cost of ensuring service continuity and maintaining required capacity. This was confirmed also by the situation caused by the war in Ukraine, when traffic in Poland fell below the forecasted level measured in SU by more than 25%, but adjusting costs downwards was not possible.

Capacity provision comes at cost. To be able to increase and even to maintain current capacity, ANSPs need financial resources allowing them to ensure availability of ATCOs and infrastructure/ systems – these are the two most visible resources categories related to capacity provision. This also applies to situation, when an ANSP encounters periodic traffic drop but in longer perspective traffic recovery and further traffic increase is expected – at such times, even with lower traffic, infrastructure/ systems must be maintained operational and due consideration needs to be given to ensuring OPS staff availability when traffic recovers. This is the case over RP3 and it will also apply to RP4. It needs to be considered that any project executed with the aim to improve any area of ANSPs' activity is connected with certain costs. An ANSP has to be prepared to resume full operational capabilities once traffic recovers. Having in mind that building operational capacity is a long lasting process (time required for ATCO training and for investments execution), operational capabilities cannot be decreased to a point where it would be impossible to return to the level of service required by the Airspace Users after the downturn. Without required financial resources ANSPs will not be able to ensure availability of ATCOs or technical staff maintaining infrastructure/systems. Similarly, lack of investments in new tools supporting ATCOs, new ATM system and CNS infrastructure would negatively impact provision of additional capacity. This concerns not only ER, but also investments at airports. For additional information on costs of additional capacity over RP4 please also see chapter 3.4.9 of the draft RP4 PP. Relationship between cost-efficiency and capacity can also be measured by so-called economic cost being total of financial costs invoiced to the airspace users and cost of delays. Reductions in ANSP financial costs can lead to significant increase in cost of delays, as a consequence negatively impacting the economic cost - with increasing cost for airspace users.

3.6.4 - Other interdependencies and trade-offs

Past experience of Poland indicates that there is also an interdependency between cost efficiency and environment areas. In case of bordering charging zones with significant differences in unit rates, in times of relatively low fuel costs, aircraft operators might be willing to fly through 'cheaper' charging zones, even when this means longer routes. During RP2 these differences in the level of UR among the States were seen. The airspace users planned their most efficient route (not necessarily the shortest) and then performed flight on the shortest available routes. This practice has an impact also on ANSP overall performance in both costefficiency and environment areas.

It needs to be considered as well that each project executed with the aim to improve any area of ANSPs' activity is connected with certain costs, and then the performance in the cost efficiency area is affected. Initiatives improving widely understood environmental performance (such as the EU Green Deal Agenda) are also cost-related. This rule also applies to the performance in the cost efficiency and safety areas. More demanding and prescriptive targets in the safety area may generate additional costs.

Should additional space be needed for any of the items, please use Annex S.

SECTION 4: CROSS-BORDER INITIATIVES AND SESAR IMPLEMENTATION

4.1 - Cross-border initiatives and synergies

4.1.1 - Cross-border areas where the ANSP provides ANS outside the State's charging zone(s) in the scope of the performance pla
4.1.2 - Planned or implemented cross-border initiatives at the level of ANSPs
4.1.3 - Investment synergies achieved at FAB level or through other cross-border initiatives

4.2 - Deployment of SESAR Common Projects (CP1)

4.3 - Change management

Annexes of relevance to this section

ANNEX N. CROSS-BORDER INITIATIVES
ANNEX V. CONSISTENCY OF INVESTMENTS WITH ATM MASTER PLAN

4.1 - Cross-border initiatives and synergies at the level of the ANSP(s)

4.1.1 - Cross-border areas where the ANSP(s) provide(s) services outside of the State's charging zone(s) in the scope of the performance plan

As indicated in section 1.1.1, the cross-border area(s) reported below are those cross-border areas or groups of adjacent cross-border areas of a size above 500 km2, unless the area or group of areas concerned has fewer than 7,500 controlled flight movements on average per year.

Number of cross-border area(s) where the ANSP(s) of the Member State provide(s) services in another State's charging zone(s)	**1**

Cross-border area(s) #1	**SOUTH OF DESEN**	**Situated in:**	**PRAHA FIR – delegation of ATC from**
Geographical scope of the cross-border area(s)	PANSA provides ATS in part of the PRAHA FIR – delegation of ATC from LKAA ACC to EPWW ACC and APP EPKK – South of DESEN		
Rationale for establishing the cross-border area, including performance benefits	The separate area named SOUTH OF DESEN has been established within the PRAHA FIR in order to reduce the number of coordination for traffic flow along AWY L867, L616 and traffic departing from Kraków (EPKK) and Katowice (EPKT). WARSZAWA ACC (FL285-FL660) and Kraków APP (FL245-FL285) are responsible for the provision of air traffic control and flight information services within this area.		
Size of the cross-border area (km2)	The area is below the thresholds defined in the template of the RP4 PP (thresholds of a size above 500 km^2 and traffic above 7,500 controlled flight movements on average per year). For detailed information on lateral and vertical limits of the respective area, please see AIP POLAND ENR 2.1.3.		
Estimated annual number of flights	The area is below the thresholds defined in the template of the RP4 PP (thresholds of a size above 500 km^2 and traffic above 7,500 controlled flight movements on average per year). For detailed information on lateral and vertical limits of the respective area, please see AIP POLAND ENR 2.1.3.		
Estimated annual number of SUs, if available	The provision of ATS services in the above area does not generate additional costs for PANSA.		

Description of the services provided by the ANSP in the cross-border area					
Annual cost incurred by the ANSP for the provision of services in the cross-border area	2025	2026	2027	2028	2029
	N/A	**N/A**	**N/A**	**N/A**	N/A
Methodology used to estimate/establish these costs					
N/A					
Have these costs been excluded from the determined costs in the scope of the performance plan?					Select
N/A					
Description of the financial arrangements in place to cover these costs					
N/A					
Additional comment					
The provision of ATS services in the above area does not generate additional costs for PANSA.					

4.1.2 - Planned or implemented cross-border initiatives at the level of ANSPs

Number of cross-border initiatives	5

Initiative #1	
Name	Cross-border contingency project
Description	In December 2022 Baltic FAB Council agreed to initiate work on a pilot project addressing possible steps towards regional contingency arrangements. This decision, with full support from the NM, was made recognizing that the geopolitical situation poses a challenge to seamless air transport in the region. Consequently, a cross-border contingency project was launched with the ultimate aim of preparing enablers for delegating ATS among ACCs in different FIRs when a contingency arises, without the need for a permanent delegation. Key actors are PANSA, Oro Navigacija and NM with contributions from NSAs, the military and (as far as possible) UkSATSE. It will consist of generic ATS delegation agreement, FUA/ASM procedures, harmonization of ATS procedures, staffing guidelines, requirements for infrastructure availability for cross-border contingency, and project management. The project will use experience gained by similar initiatives, namely FINEST and ATS over Kosovo.
Expected performance benefits	Main expected benefit would be improved continuity of service in case of contingency situation.
Additional comments	Some developed solutions will be coordinated with technical solutions stemming from DEVICE DSD (iniitiative #4).

Initiative #2	
Name	Enhancement of cooperation with other FABs and cooperation with non-EU countries
Description	The main objective of cooperation is to drive progress towards supporting flight efficiency, cost efficiency and operational consistency in line with Single European Sky performance goals. The initiative is a continuous activity. However, due to geopolitical considerations, and especially the unprovoked Russian invasion of Ukraine which started in February 2022, cooperation with non-EU countries bordering Baltic FAB is frozen. In case of UkSATSE Ukraine is the victim of the aggression, and in case of Belaeronavigatsia and Russian ANSP these two countries are under international sanctions. Oro Navigacija and PANSA formalized their cooperation in search and rescue (SAR) area signing the appropriate agreement in 2018. In 2017 Baltic FAB ANSPs signed memorandum of cooperation (MoC) with Ukrainian ANSP UkSATSE. Under this memorandum, the parties committed themselves to strive for intensive cooperation on aviation infrastructure development and airspace management, particularly in the area of the preparation and development of operating systems for air traffic control and the deployment of Free Route Airspace. The MoC covers cooperation inter alia in the following areas: - Cross border Free Route Airspace; - Implementation and utilisation of GBAS/SBAS; - Deployment and extension of AMHS network; - Coordinated approach to DLS implementation; - Safety and Quality; - Implementation of common requirements applicable to ANSPs at EU level; - Baltic FAB ATM System. However, practical cooperation with UkSATSE is severely limited following the unprovoked invasion of Ukraine by Russian armed forces. After the cessation of hostilities and return of civilian air traffic over Ukraine PANSA and Oro Navigacija intend to resume and possibly intensify collaboration with UkSATSE. In order to support UkSATSE and to pave the way for renewed collaboration after the war, PANSA and UkSATSE signed a Letter of Intent in 2023 focusing on training, operations and infrastructure. The memorandum with Belaeronavigatsia signed by Baltic FAB in 2018 aimed to give a framework for potential future works on operational level, and it covered cooperation in areas of common interest, including cross-border Free Route Airspace and implementation and utilisation of PBN. However, while still formally in force, due to sanctions imposed on Belarus following the unlawful forced landing of a Ryanair flight in Minsk in May 2021 and support given for Russian invasion of Ukraine, cooperation between Baltic FAB ANSPs and Belaeronavigatsia is limited to an operational minimum. Similarly, cooperation with Russian ANSP is limited to an operational minimum following the unprovoked invasion of Ukraine. Baltic FAB is an active member of the InterFAB coordination platform which was formally established in 2015 by representatives of the 9 European FABs. Baltic FAB representatives have been taking part in webinars, workshops and contact point meetings that help coordinate activities of various FABs. Cooperation with other FABs is expected to continue according to needs.
Expected performance benefits	Small benefits in all KPAs could be expected provided that the agreements come into force and are followed by detailed operational and technical arrangements between parties - not yet possible given the geopolitical situation as of 2024.
Additional comments	none

Initiative #3	
Name	Free Route Airspace (FRA) and cross-border FRA
Description	Applicable regulation obliged air navigation service providers to introduce an airspace based on direct routing from 1st January, 2018 and Full-FRA from 1st January, 2022. On the 28th of February, 2019, the Free Route Airspace (FRA) was officially implemented in the Polish airspace. Free Route Airspace in Poland was known as POLFRA. POLFRA was applied 24/7, in whole EPWW FIR above FL095 excluding TMAs in one step. Subsequently, FRA was expanded to cross-border status with Lithuania and Slovakia in February 2022 when POLFRA and Lithuanian FRA were merged into one common FRA area called Baltic FRA. In the same step boundary between Poland and Slovakia was opened to allow cross-border FRA operations between Baltic FRA and SEEFRA. Further extension of cross-border FRA operations is planned between Poland (Baltic FRA), Czech Republic (SEEFRA) and Sweden DK-SE FAB FRA for November 2024. PANSA activities on FRA are aligned with currently applicable Regulation EU (2021/116) on Common Project One (CP1) which repealed the Regulation No 716/2014 – Family AF3, Sub-functionality on Free Route Airspace (3.1.2).
Expected performance benefits	POLFRA (and subsequently BALTIC FRA) has been in operation since the end of February 2019 and positive impact was visible when looking at the shortest constrained route indicator, which improved since March 2019. In general, extension of FRA on cross-border basis with Lithuania and Slovakia (as well as other States/FABs in the future) contributes to the objectives of the performance scheme in the Environment KPA, however, due to the fact that HFE is impacted by a number of external factors beyond control of ANSP (including military activities, weather, political issues) no significant reduction in KEA should be expected, which currently (first since May 2021 and then further since February 2022) is highly influenced by geopolitical developments, now especially due to the war in Ukraine (closure of Ukrainian airspace, EU/Russian Federation sanctions, highly increased national and allied military presence in eastern part of Polish airspace).
Additional comments	none

Initiative #4	
Name	Device DSD
Description	DEVICE project will industrialize an early version of iTEC SkyNex (iSNEX) platform consolidating virtual center and delegation technologies required to materialize the envisaged European AAS. Within the project, at the Lublin Triangle Cluster, PANSA and Oro Navigacija will deploy iTEC SkyNex platforms to demonstrate the feasibility of delivering cross border ADSP/ATSU services and increased contingency resilience through virtualization. Both Poznan and Vilnius Data Centers will gain the possibility to support operations for both Warsaw and Vilnius. Technical evaluations within the project will give answers to how safely separate ADSP and ATSU and build resilience by introduction of contingency ADSP for each ATSU.
Expected performance benefits	Thanks to the project Poznan and Vilnius will be supporting each other as a contingency DC for iSNEX system. With this project PANSA will also start preparation for operational deployment of iSENX Cycle#1 system in Poznan Contingency Center - low to medium in capacity and safety, low in cost-efficiency.
Additional comments	Operational benefits would take effect only after implementation. Link to cross-border contingency project (initiative #1).

Initiative #5	
Name	iTEC Collaboration
Description	Withih iTEC Collaboration PANSA and Oro Navigacija are working hand in hand together with 6 other ANSP and technological partner - Indra over next generation ATM systems supporting all parties involved and ready to be deployed all over the world. With the ongoing project iTEC SkyNex the parties are working every day over definition and development of all functionalities need to provide safe and efficient operations. iSNEX system will be compliant with CP1 regulations and plans for the future development including deployment of all needs defined by cooperating parties. Additionally, thanks to iTEC-Tests, Validation and Planning Project (iTEC-TVP) iTEC-based ATM system requirements and concept of operation (CONOPS) were defined, based on system validation and tests. This Implementation Project will ensure the successful implementation of new PANSA iTEC based ATM system, which together with new operational concepts (e.g. Cross-border FRA) is expected to enable benefits in key performance areas.
Expected performance benefits	After full implementation by all involved European ANSPs (currently 7) significant improvements in all KPAs are expected: Safety, Capacity (improvement by 10%), ANS Cost Efficiency (improvement by 5% concerning ATCO productivity and 10% in terms of technology cost reduction) and Flight Efficiency (improvement by 10% with reference to Flight Efficiency both “in time” and “in fuel”).
Additional comments	Expected benefits were calculated by the iTEC collaboration. For FIR Warszawa, given expected implementation timeframe, any benefits are assumed beyond RP4 horizon.

4.1.3 - Investment synergies achieved at FAB level or through other cross-border initiatives

Details of synergies in terms of common infrastructure and common procurement
Investment synergies achieved at FAB level or through other cross-border initiatives - New joint ATM system developed under the iTEC alliance, - Data sharing related to CNS infrastructure. This could include: • new DME Augustów (replacement of DVOR/DME ‘SUW’; this navaid may be potentially used for instrument procedures or RNAV coverage also on the territory of Lithuania); • existing radar MSSR Gdańsk, data from this radar is shared with Oro Navigacija; new radar MSSR Mode S Gdańsk (new radar site close to Gdańsk (finally replacing current one), data from this radar may be potentially shared with Oro Navigacija; • existing radar MSSR Mode S Łomża-Mściwuje; data from this radar may be potentially shared with Oro Navigacija.

4.2 - Deployment of SESAR Common Projects (CP1)

CP1 ATM Functionality (CP1-AF)/ Sub-functionality (CP1-s-AF)	Target date of implementation	Date of actual/expected deployment of s-AF	Description of realised and/or planned investment(s) related to the deployment of s-AF	Relevant investments (Ref. # as per section 2)	RP4 determined costs related to the sub-AF (in national currency and in nominal terms)				
					2025	2026	2027	2028	2029
CP1-AF1 - Extended AMAN and Integrated AMAN/DMAN in High-Density TMAs									
CP1-s-AF1.1 AMAN extended to en-route airspace	*31.12.2024*	PL airports are out of the geographical scope of CP1-s-AF1.1	CWP is updated and displays operational data from En-route AMAN system (TTL and TTG) - functionality supporting the AMAN / IMPLEMENTING: PANSA	-	0	0	0	0	0
CP1-s-AF1.2 AMAN/DMAN Integration	*31.12.2027*	PL airports are out of the geographical scope of CP1-s-AF1.2	CWP is updated and displays operational data from En-route AMAN system (TTL and TTG)-functionality supporting the AMAN / IMPLEMENTING: PANSA	-	0	0	0	0	0
CP1-AF2 - Airport Integration and Throughput									
CP1-s-AF2.1 DMAN synchronised with predeparture sequencing	*31.12.2022*	PL airports are out of the geographical scope of CP1-s-AF2.1	PLANNED (partly already implemented) Poland is not obliged to implement this sub-functionality but PANSA carries out the tasks within this scope.	E	166 416	257 307	268 956	253 673	241 881
CP1-s-AF2.2.1 Initial airport operations plan (iAOP)	*31.12.2023*	PL airports are out of the geographical scope of CP1-s-AF2.2.1	NOT APPLICABLE	-	0	0	0	0	0
CP1-s-AF2.2.2 Airport operations plan (AOP)	*31.12.2027*	31.12.2027	ONGOING PANSA and Polish Airports carry out their tasks - initial stage	A1; E	2 566 403	1 590 344	1 520 800	1 836 112	3 211 528
CP1-s-AF2.3 Airport safety nets	*31.12.2025*	PL airports are out of the geographical scope of CP1-s-AF2.3. Target date (according to LSSIP 2023) set internally in PANSA is 01.04.2027	PLANNED	B1; E	255 612	380 582	410 903	390 901	372 657
CP1-AF3 - Flexible Airspace Management and Free Route Airspace									
CP1-s-AF3.1 Airspace management and advanced flexible use of airspace	*31.12.2022*	31.12.2022	COMPLETED PANSA is using local ASM system (CAT) together with CIAM NM system (as a complementary tool) to fulfill all the requirements and ASM needs. The project planned for RP4 is to develop a new CAT system that will take into account the requirements of the ATM Master Plan and business needs. IMPLEMENTING: PANSA	C3; C9; E	1 893 117	2 171 625	2 469 008	2 451 826	2 448 345

CP1-s-AF3.2 Free route airspace	*31.12.2025*	24.02.2022	COMPLETED Full FRA (ACC Warszawa FL 95 - FL660) including connection with TMAs implemented since FEB 2019. Cross-border FRA operations implementated with Lithuania and Slovakia since 24.02.2022. Cross Border FRA operations with Lithuania were implemented as one common cross-border FRA area named "Baltic FRA". Baltic FRA as a project is coordinated under umbrella of Baltic FAB. Cross-border operations between Poland and Slovakia allowed to start cross-border FRA Operations between Baltic FRA and SEE FRA (FABCE). This activity allowed to fill in cross border FPLs within the area of 7 countries. IMPLEMENTING: PANSA	C3; C9; E	7 161 839	6 789 624	2 469 413	2 341 749	2 228 981
CP1-AF4 - Network Collaborative Management									
CP1-s-AF4.1 Enhanced short-term ATFCM measures	*31.12.2022*	31.12.2022	COMPLETED PANSA is using STAM measures via NM tool. IMPLEMENTING: PANSA	-	0	0	0	0	0
CP1-s-AF4.2 Collaborative NOP	*31.12.2023*	30.09.2023	COMPLETED The technical NM platform from which downloading the Target Times is in use, the operational personnel is fully trained and the safety assessment has been performed. Both, the NM application (NMP Flow) and the local traffic complexity tool are used by PANSA. In particular, the local Traffic Complexity tool is used to process the Target Times, SAM and SRM messages and the NMP Flow is used to exchange all the other information. IMPLEMENTING: PANSA	-	0	0	0	0	0
CP1-s-AF4.3 Automated support for traffic complexity assessment	*31.12.2022*	15.07.2021	COMPLETED TCT is implemented. Simultaneously it works operationally with CHMI. TCT is not treated as a primary tool/system. It is a support tool. IMPLEMENTING: PANSA	B2; E	2 595 829	2 508 296	2 118 951	1 632 170	1 443 359

CP1-s-AF4.4 AOP/NOP integration	*31.12.2027*	31.12.2027	NOT YET PLANNED In the evolution of processes and procedures new data elements will be shared and also negotiated between AOP and NOP. These will have to be integrated in addition to the information that is shared in the iAOP-NOP exchange. The processes,procedures and underlying concepts for the creation and integration will have to be agreed upon and/or adapted. This will apply to arrival planning information (e.g., TTO/TTA via API), as well as departure information (e.g., P-DPI based on airport capacity information), and also enhanced management of capacities (e.g., diversion capabilities). For Family 4.4.1 - AOP-NOP Integration there will be documents available to provide guidance to the CP1 (IR2021/116) for the extended AOP and integration of the extended AOP with the network operations plan, and the implementation guide in similar fashion as to Family 4.2.2 Initial AOP/NOP Information Sharing. ALL ABOVE - IMPLEMENTING: PANSA (define AOP/NOP integration data and procedures), PPL	Costs not yet planned	0	0	0	0	0
CP1-AF5 - SWIM									
CP1-s-AF5.1 Common infrastructure components	*31.12.2024*		GOVERNANCE Project has been managed by EUROCONTROL, drafting and implementing of the common framework both for local PKI integration implementation in an operational way and delivering the digital interoperational certificates to the SWIM users.	-	0	0	0	0	0

CP1-s-AF5.2 SWIM yellow profile technical infrastructure and specifications	*31.12.2025*	31.12.2025 SDP 5.2.1 / INF10.2 Stakeholders' SWIM PKI and cyber security	ONGOING Cybersecurity -Polish Air Navigation Agency (PANSA) being as an Operator of Key Services according to the Act of 5 July 2018 on the national cybersecurity system (UKSC) implements Directive (EU) of the European Parliament and of the Council on measures for a high common level of security of network and information systems within the European Union (Directive 2016/1148), the so-called NIS Directive. PANSA systematically assesses the risk of systems affecting the key services and performs the obligation to conduct a cyclical audit of compliance with in the UKSC, as part of the obligations according to the UKSC. PANSA as an Operator of Key conducts constant monitoring and controls cyber security of systems. PANSA has decided to develop its own PKI. IMPLEMENTING: PANSA, PPL, IMWM	C9; E	2 607 946	3 318 996	3 419 288	3 297 638	3 475 237
CP1-s-AF5.3 Aeronautical information exchange	*31.12.2024*	1. SDP 5.3.1 / INF10.3 - 31/12/2018 2. SDP 5.3.1 / INF10.4 - 31/12/2018 3. SDP 5.3.1 / INF10.5 - 31/12/2025 3. SDP 5.3.1 / INF10.6 - 31/12/2025 4. SDP 5.3.1 / INF10.7 - 31/12/2025 5. SDP 5.3.1 / INF10.8 - 31/12/2025	COMPLETED/ONGOING 1.SDP 5.3.1 / INF10.3 Aeronautical Information Exchange - Airspace structure service - Objective is completed. 2.SDP 5.3.1 / INF10.4 Aeronautical Information Exchange - Airspace Availability Service - Objective is completed. 3. SDP 5.3.1 / INF10.5 Aeronautical Information Exchange - Airspace Reservation (ARES) - Planned 4. SDP 5.3.1 / INF10.6 Aeronautical Information Exchange – Digital NOTAM service - PANSA investment plans up to 2025 cover the implementation of Digital NOTAM Service systems. Digital NOTAM project is kicked-off - since begining of 2023. 5.SDP 5.3.1 / INF10.7 Aeronautical Information Exchange - Aerodrome mapping service - AMDB (for 6 airports) project is kicked-off - since begining of 2023. PANSA is planning to launch the public procurement for some systems needed for AMDB in 1st Q 2024. AMDB is also supported by CEF IP ACADIA. 6.SDP 5.3.1 / INF10.8 Aeronautical Information Exchange - Aeronautical Information Features service - PANSA has defined and signed the agreement with the provider. PANSA also started the migration to EAD SDD system. The AIFS services, also supported by CEF IP ACADIA, should be ready in 2025. ALL ABOVE - IMPLEMENTING: PANSA	C9; E	1 060 822	1 611 946	1 939 724	1 940 286	1 957 638

CP1-s-AF5.4 Meteorological information exchange	*31.12.2025*	SDP 5.4.1 / INF10.9 - 2025/12/31 SDP 5.4.1 / INF10.10 - 2025/12/31 SDP 5.4.1 / INF10.11 - 2025/12/31 SDP 5.4.1 / INF10.12 - 2025/12/31	PLANNED/ONGOING SDP 5.4.1 / INF10.9 Meteorological Information Exchange - Volcanic Ash Mass Concentration information service - The main goal is to consume Volcanic Ash Mass Concentration Service. PANSA is waiting for Toulouse and London when they will start the operational service in 2025. PANSA cooperate with IMGW and with other three met providers for three regional airports. VAAC London announces the delivery date of the product as a SWIM-compliant service as November 2024. SDP 5.4.1 / INF10.10 Meteorological Information Exchange - Aerodrome Meteorological information Service - Meteorological services in Europe are in the process of agreeing service templates so that service producers can issue services in accordance with user requirements and each user can be integrated with SWIM. SDP 5.4.1 / INF10.11 Meteorological Information Exchange - En-Route and Approach Meteorological information service - Meteorological services in Europe are in the process of agreeing service templates so that service producers can issue services in accordance with user requirements and each user can be integrated with SWIM. SDP 5.4.1 / INF10.12 Meteorological Information Exchange - Network Meteorological Information - PANSA Integrated data-lake (internal tool) will be capable to consume NETWORK MET information services. IMWM-PIB participates in the SUMMER CROSS Border forecast project for Netwok Manager. ALL ABOVE - IMPLEMENTING: PANSA, IMWM	C9; E	207 606	279 677	360 895	343 094	329 753

CP1-s-AF5.5 Cooperative network information exchange	*31.12.2024*	SDP 5.5.1 / INF10.13 - 2025/12/31 SDP 5.5.1 / INF10.14 - NOT APPLICABLE SDP 5.5.1 / INF10.15 - 2025/12/31 SDP 5.5.1 / INF10.16 - 2025/12/31 SDP 5.5.1 / INF10.17 - 2025/12/31	SDP 5.5.1 / INF10.13 Cooperative Network Information Exchange - ATFCM Tactical Updates Service (Airport Capacity and Enroute) - PANSA provides the ATFCM tactical and pre-tactical updates to NM via the NM Services (eHelpdesk, NMP Flow).ONGOING IMPLEMENTING: PANSA SDP 5.5.1 / INF10.14 Cooperative Network Information Exchange – Flight Management Service (Slots and NOP/AOP integration) - (NOT APPLICABLE) PANSA systems are capable to consume NM flight update information: - in the scope of A-CDM for EPWA; - TCT Pansa uses eHelpdesk and NMP Flow applications in daily operations. IMPLEMENTING: PANSA, PPL SDP 5.5.1 / INF10.15 Cooperative Network Information Exchange – Measures Service (Traffic Regulation) - PANSA uses the measures service via the NM Services (eHelpdesk, NMP Flow) ONGOING IMPLEMENTING: PANSA SDP 5.5.1 / INF10.16 Cooperative Network Information Exchange - Short Term ATFCM Measures services (MCDM, eHelpdesk, STAM measures) - PANSA uses the Short Term ATFCM Measures service via the NM Services (eHelpdesk, NMP Flow) ONGOING IMPLEMENTING: PANSA SDP 5.5.1 / INF10.17 Cooperative Network Information Exchange – Counts service (ATFCM Congestion Points) - PLANNED IMPLEMENTING: PANSA	B2	5 114	18 709	33 699	132 616	283 306

CP1-s-AF5.6 Flight information exchange (yellow profile)	*31.12.2025*	SDP 5.6.1 / INF10.19 - 31/12/2030 SDP 5.6.1 / INF10.20 - 31/12/2030 SDP 5.6.1 / INF10.21 - 31/12/2030 SDP 5.6.1 / INF10.23 - not yet planned	SDP 5.6.1 / INF10.19 Flight Information Exchange (Yellow Profile) - Flight Data Request Service - PANSA will be able to consume these three services by the end of 2025 and will translate data to be used operationally in the current ATM system. A new (planned) ATM system (iTEC) provided by Indra will be able to work with FF-ICE in near future (ongoing development within iTEC Project). It is envisaged that the new ATM system will be available around 2030. SDM and ECTL are working on a set of operational use cases for the Operational Stakeholders in the frame of FF-ICE supportive initiative. Within this common initiative a realistic roadmap is being elaborated in collaboration with the operational stakeholders. PLANNED IMPLEMENTING: PANSA SDP 5.6.1 / INF10.20 Flight Information Exchange (Yellow Profile) - Notification Service; SDP 5.6.1 / INF10.21 Flight Information Exchange (Yellow Profile) - Data Publication Service - PANSA will be able to consume these three services by the end of 2025 and will translate data to be used operationally in the current ATM system. Extended AMAN is not yet planned. The current ATM system will not be able to work with FF-ICE. A new (planned) ATM system (iTEC) provided by Indra will be able to work with FF-ICE in near future (ongoing development within iTEC Project). It is envisaged that the new ATM system will be available around 2030. PLANNED IMPLEMENTING: PANSA SDP 5.6.1 / INF10.23 Flight Information Exchange (Yellow Profile) - Extended AMAN SWIM Service - Extended AMAN is not yet planned. The current ATM system will not be able to work with FF-ICE. A new (planned) ATM system (iTEC) provided by Indra will be able to work with FF-ICE in near future (ongoing development within iTEC Project). It is envisaged that the new ATM system will be available around 2030. NOT YET PLANNED IMPLEMENTING: PANSA	C9	137 486	190 199	276 854	263 589	254 093
CP1-AF6 - Initial Trajectory Information Sharing									
CP1-s-AF6.1 Initial air-ground trajectory information sharing	*31.12.2027*	SDP 6.1.2 / ATC23	SDP 6.1.2 / ATC23 Initial Air-Ground Trajectory Information Sharing (Ground Domain) PANSA is a member of ACDLS. In order to pool datalink expertise, ensure a common prioritisation, share service delivery costs and enable CP1/AF6 deployment is organised ACDLS (ATS Common DLS procurement) to increase the performance of the datalink network for 26 air navigation service providers.	-	1 919 175	1 804 109	0	0	0
CP1-s-AF6.2 Network Manager trajectory information enhancement	*31.12.2027*	Not applicable - NM dedicated	NOT APPLICABLE Upgrade of NM systems	-	0	0	0	0	0

CP1-s-AF6.3 Initial trajectory information sharing ground distribution	*31.12.2027*	SDP 6.3.1 / ATC25 Initial Trajectory Information Sharing ground distribution - Planned	NOT YET PLANNED SDP 6.3.1 / ATC25 Initial Trajectory Information Sharing ground distribution IMPLEMENTING: PANSA	Costs not yet planned	0	0	0	0	0

Total RP4 determined costs for common project related to the sub-functionalities across charging zones for the concerned entity	**20 577 366**	**20 921 413**	**15 288 491**	**14 883 655**	**16 246 778**

4.3 - Change management

Change management practices and transition plans for the entry into service of major airspace changes or for ATM system improvements, aimed at minimising any negative impact on the network performance
PANSA has a dedicated change management program. Identification, initiation, assessment of the need for change, development of the change and implementation of the change are carried out in accordance with the internal regulations in force at PANSA. There is a catalogue of changes requiring notification and/or approval of the President of the Civil Aviation Authority. Each change requires a formal evaluation and risk assessment. Safety assessments are carried out and training support is provided to prepare the workforce for new types of tools and work methods. The process is constantly measured and monitored. Managers of all units and shift supervisors participate in periodic meetings where progress is monitored. During the process impact is assessed, reviewed and mitigated. Negative impact is minimized by close cooperation of the specialists/practitioners and stakeholders during the change process, and transition plans include implementations in a limited environment, which may include monitoring operations during the implementation phase and step-by-step roll-out with less traffic or more staff. The change management process at PANSA is constantly improved on the basis of experience and in order to adapt to changes in law and the requirements of the Civil Aviation Authority.

SECTION 5: TRAFFIC RISK SHARING ARRANGEMENTS AND INCENTIVE SCHEMES

5.1 - Traffic risk sharing parameters
- 5.1.1 Traffic risk sharing - En route charging zones
- 5.1.2 Traffic risk sharing - Terminal charging zones

5.2 - Capacity incentive schemes
- 5.2.1 - Capacity incentive scheme - Enroute
  - a) Parameters for the calculation of financial advantages or disadvantages - En route
  - b) Pivot values - En route
  - c) Modulation mechanism (if applicable)
- 5.2.2 - Capacity incentive scheme - Terminal
  - a) Parameters for the calculation of financial advantages or disadvantages - En route
  - b) Pivot values - Terminal
  - c) Modulation mechanism (if applicable)

5.3 - Optional incentives

Annexes of relevance to this section

ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING
ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES
ANNEX K. OPTIONAL INCENTIVE SCHEMES

5.1 - Traffic risk sharing

5.1.1 Traffic risk sharing - En route charging zones

Poland			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2,00%	±10,0%	70,0%	5,6%	70,0%	5,6%

5.1.2 Traffic risk sharing - Terminal charging zones

Poland - EPWA			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2,00%	±10,0%	70,0%	5,6%	70,0%	5,6%

Poland - Others			Traffic risk-sharing parameters adapted?			no
			Service units lower than plan		Service units higher than plan	
	Dead band	Risk sharing band	% loss to be recovered	Max. charged if SUs 10% < plan	% additional revenue returned	Min. returned if SUs 10% > plan
Standard parameters	±2,00%	±10,0%	70,0%	5,6%	70,0%	5,6%

5.2 - Capacity incentive schemes

5.2.1 - Capacity incentive scheme - En route

a) Parameters for the calculation of financial advantages or disadvantages - En route

En route	Expressed in	Value
Dead band Δ	%	±20,0%
Max bonus (≤2%)	*% of DC*	1,00%
Max penalty (≥ Max bonus)	*% of DC*	1,00%

b) Pivot values - En route

Basis for the annual setting of pivot values	Modulated

c) Modulation mechanism (if applicable)

Section to be filled out only if the option for modulated pivot values has been selected under b) above.

Modulation mechanism of pivot values	Both A) and B)

Based on the modulation mechanism(s) selected above, provide a detailed description of the principles and methodology used to modulate the pivot values

Option A) - Modulation based on unforeseen changes in traffic

1) the pivot value for the year N is **equal** to the yearly update of reference values provided by the Network Manager in the NOP	Yes
2) the pivot value for year N is **informed** by the yearly update early update of reference values by the Network Manager in the NOP	No

If 2) applies describe the principle and formulas on the basis of which the pivot values are calculated
Not aplicable

Option B) - Modulation limiting pivot values to C, R, S, T, M, P delay codes

The scope of the incentives is limited to delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual
Explanation on the methodology used to modulate the pivot values accordingly
For details please see Annex I.

Additional information in the case of the combination of A) and B)

If the modulation of pivot values is based on both options A) and B) above, provide additional information on how these two modulation mechanisms are applied in combination with each other
For en-route Incentive Scheme modulation mechanisms (A+B) will be applied. It is taking into account significant and unforeseen changes in traffic and allows to adjust the pivot value to current trends occurring in European airspace in accordance with the results of NM analyses and at the same time it is taking into account causes of delays related to: ATC capacity, ATC routing, ATC staffing level, ATC equipment, airspace management and special events. For details please see Annex I.

5.2.2 - Capacity incentive scheme - Terminal

a) Parameters for the calculation of financial advantages or disadvantages - Terminal

Terminal	Expressed in	Value
Dead band Δ	%	20%
Max bonus (≤2%)	*% of DC*	1,00%
Max penalty (≥ Max bonus)	*% of DC*	1,00%

b) Pivot values - Terminal

Basis for the annual setting of pivot values	Modulated

c) Modulation mechanism (if applicable)

Section to be filled out only if the option for modulated pivot values has been selected under b) above.

Modulation mechanism of pivot values	B) Limited to CRSTMP delay causes

Based on the modulation mechanism(s) selected above, provide a detailed description of the principles and methodology used to modulate the pivot values

Option A) - Modulation based on unforeseen changes in traffic

The pivot value for year N is modulated in order to enable significant and unforeseen changes in traffic to be taken into account	No

Description the principle and formulas on the basis of which the pivot values are calculated
Not aplicable

Option B) - Modulation limiting pivot values to C, R, S, T, M, P delay codes

The scope of the incentives is limited to delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual
Explanation on the methodology used to modulate the pivot values accordingly
The modulated pivot value will be calculated to cover only delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual. For details please see Annex I.

Additional information in the case of the combination of A) and B)

If the modulation of pivot values is based on both options A) and B) above, provide additional information on how these two modulation mechanisms are applied in combination with each other
Not aplicable

5.3 - Optional incentives

Total maximum bonus for all optional incentives (≤2%):	0,0%	Total maximum penalty for optional incentives (≤4%):	0,0%

Number of optional incentives	0

SECTION 6: IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 Monitoring of the implementation plan

6.2 Non-compliance with targets during the reference period

6 - IMPLEMENTATION OF THE PERFORMANCE PLAN

6.1 Monitoring of the implementation plan

Description of the processes put in place by the NSA to monitor the implementation of the Performance Plan including the yearly monitoring of all KPIs and PIs defined in Annex I of the Regulation and a description of the data sources
Based on Article 37, Regulation (EU) 2019/317 Polish NSA is obliged to carefully monitor the implementation of the revised Polish Performance Plan for RP3. Polish CAA in cooperation with Network Manager will prepare the annual Monitoring Report for the Republic of Poland and after approval will submit it to the European Commission via PRB until 1st June of every year of RP4 at the latest. The implementation and monitoring of KPA Safety, Environment and Capacity will be carried out in annual basis. The indicators for monitoring are presented in Annex I of regulation 2019/317. Polish NSA monitors: - execution of staff training plan, - implementation of major projects aimed at increasing capacity and enhancing flight efficiency, - implementation of corrective measures in the safety area. Additionally, CAA is obliged to perform the process of continuous oversight of all ANSPs as it is stated in the Regulation 2017/373. These monitoring activities at the national level includes ANSP's business and annual plans and their consistency with the PP. Additionally, Polish NSA is monitoring activities to cover the following areas: - investment plan (CAPEX) execution, - execution of planned costs, - use of public funding, including EU funding, - execution of employment plan. Monitoring of cost efficiency in RP4 - approach implemented in final years of RP3 to be continued, - focus on key cost drivers (ATCO numbers, salaries, investments), - quarterly monitoring of key financial performance and cost data to identify red flags, - individual approach to entities based on their size and scope of services provided, standardized supervisory approach where possible, - cost recovery through cost-exempt mechanism subjected to close scrutiny.

6.2 Non-compliance with targets during the reference period

Description of the processes put in place and measures to be applied by the NSA to address the situation where targets are not reached during the reference period
In case a target is not met at national level, the NSA PL shall identify potential issues, apply corrective measures designed to correct the situation and subsequently inform the European Commission in accordance with Art. 37 of the Regulation (EU) 2019/317. Based on all the inputs, NSA in cooperation with Network Manager will prepare annual Monitoring Report for the Republic of Poland and after its approval will submit it to the European Commission via PRB until 1st June of every year of RP4 at the latest. The monitoring exercise described above will give CAA the necessary information to react in advance when the risk of not reaching the target will be identified. This prudent approach shall minimise the risk of the situation when targets are not reached (in case when the situation is caused by the circumstances under ANSPs' control).

7 - ANNEXES

ANNEX A. REPORTING TABLES & ADDITIONAL INFORMATION (EN-ROUTE)
- ANNEX A.x - En route Charging Zone #x

ANNEX B. REPORTING TABLES & ADDITIONAL INFORMATION (TERMINAL)
- ANNEX B.x - Terminal Charging Zone #x

ANNEX C. CONSULTATION
ANNEX D. LOCAL TRAFFIC FORECASTS
ANNEX E. INVESTMENTS
ANNEX F. BASELINE VALUES (COST-EFFICIENCY)
ANNEX G. PARAMETERS FOR THE TRAFFIC RISK SHARING
ANNEX H. RESTRUCTURING MEASURES AND COSTS
ANNEX I. PARAMETERS FOR THE MANDATORY CAPACITY INCENTIVES
ANNEX J. OPTIONAL KPIs AND TARGETS
ANNEX K. OPTIONAL INCENTIVE SCHEMES
ANNEX L. JUSTIFICATION FOR SIMPLIFIED CHARGING SCHEME
ANNEX M. COST ALLOCATION
ANNEX N. CROSS-BORDER ANS
ANNEX O. JUSTIFICATIONS FOR THE LOCAL SAFETY TARGETS
ANNEX P. JUSTIFICATIONS FOR THE LOCAL ENVIRONMENT TARGETS
ANNEX Q. JUSTIFICATIONS FOR THE LOCAL CAPACITY TARGETS
ANNEX R. JUSTIFICATIONS FOR THE LOCAL COST-EFFICIENCY TARGETS
ANNEX S. INTERDEPENDENCIES
ANNEX T. OTHER MATERIAL
ANNEX U. VERIFICATION BY THE NSA OF THE COMPLIANCE OF THE COST BASE
ANNEX V. IMPLEMENTATION OF ATM MASTER PLAN
ANNEX Y. RESPONSES TO COMPLETENESS VERIFICATION
ANNEX Z. CORRECTIVE MEASURES