EUROCONTROL

LSSIP 2021 - POLAND

LOCAL SINGLE SKY IMPLEMENTATION

Implementation Overview

FOREWORD

The exceptional situation we are living in and its effects on aviation, shows the importance of a robust planning and monitoring process for the European ATM implementation in our evolving environment.

EUROCONTROL works with all operational stakeholders to manage a seamless European airspace, linking together the elements of the European ATM system into a single value chain. Focusing on performance of the European network, we partner with the operational stakeholders to enable flights to reach their destination safely, on time, with the least possible impact on environment and in a cost-efficient way.

This year, the EUROCONTROL Network Manager and the SESAR Deployment Manager (SDM) teams joined forces to achieve a unified planning and monitoring, critical to move towards our common goal of implementing a single value chain in aviation.

The famous quote: "What we cannot measure, cannot be improved", shows the importance of ATM implementation reporting. The EUROCONTROL Local Single Sky ImPlementation (LSSIP) process, methodology, tools and documents annually express the commitment of civil and military national organisations (Regulators and National Supervisory Authorities, Air Navigation Service Providers and Airport Operators), and their cooperation towards the implementation of the European ATM Master Plan Level 3, including the EC implementing regulation 2021/116 (Common Project 1).

The LSSIP documents provide an extensive, consolidated and harmonised picture, for the benefit of the ATM community at large, of how ECAC States and States having a Comprehensive Agreement with EUROCONTROL, and stakeholders concerned, are progressing in planning and deploying all mature elements of the European ATM Master Plan.

In addition, EUROCONTROL is promoting practices to avoid unnecessary duplication of reporting from the stakeholders. Our continuous cooperation with the SDM and the SESAR Joint Undertaking (SJU) ensures the optimisation of the reporting mechanisms bringing all the processes into a single value chain, without diverging monitoring results.

The reliability and quality of the data provided by national stakeholders also allows the LSSIP information to constitute the sole source of information for the development of ICAO's Aviation System Block Upgrades (ASBUs) Implementation Monitoring Report in the ICAO EUR Region. EUROCONTROL undertakes this work, on behalf of ICAO, for all 55 ICAO/EUR States in accordance with the Global Air Navigation Plan (GANP).

I would like to thank, once again, all our stakeholders for their engagement and substantial effort spent in contributing to the information shared in the LSSIP+ Tool and to the production of this LSSIP document. This is a proof of commitment to the principles of transparency and partnership, for the benefit of the entire Aviation community!

Enjoy the reading!

Iacopo Prissinotti
Director NM - Network Manager
EUROCONTROL

SESAR DEPLOYMENT MANAGER WORDS

The need for operational stakeholders to participate to multiple reporting cycles has been a long-standing issue for several years. Finally, there is a paradigm shift in this monitoring cycle thanks to the intense cooperation between EUROCONTROL and the SESAR Deployment Manager (SDM), as we become more efficient, consistent and save precious time and resources.

I thank all stakeholders for their participation and crucial contribution to the SESAR Deployment Programme (SDP) Monitoring View through the LSSIP+ Tool. This edition is particularly important, as it will show for the very first time the status of implementation of the Common Project 1 Regulation, at a time where stakeholders are still suffering from the difficult economic situation posed by the consecutive waves of Covid-19 pandemic. The results within the SDP Monitoring View will give SDM the opportunity to identify the risks, support stakeholders and accelerate deployment.

Mariagrazia La Piscopia
Chief Strategy and Programme
SESAR Deployment Manager

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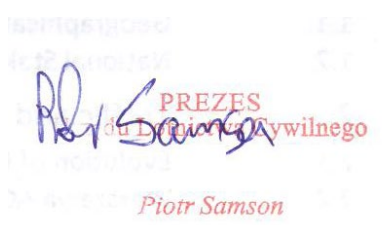
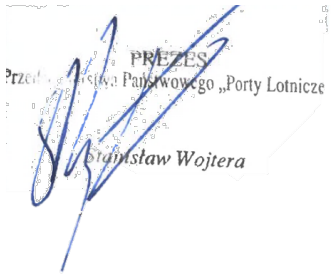
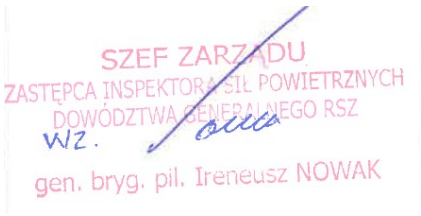
Reference Documents	
LSSIP Documents	https://www.eurocontrol.int/service/local-single-sky-implementation-monitoring
Master Plan Level 3 – Plan Edition 2021	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-plan-level-3
Master Plan Level 3 – Report Year 2021	https://www.eurocontrol.int/publication/european-atm-master-plan-implementation-report-level-3
European ATM Portal	https://www.atmmasterplan.eu/
STATFOR Forecasts	https://www.eurocontrol.int/statfor
National AIP	https://ais.pansa.pl/aip/

APPROVAL SHEET

The following authorities have approved all parts of the LSSIP Year 2021 document and the signatures confirm the correctness of the reported information and reflect the commitment to implement the actions laid down in the European ATM Master Plan Level 3 (Implementation View) – Edition 2021.

Stakeholder / Organisation	Name	Position	Signature and date
Civil Aviation Authority	Mr Piotr SAMSON	President of Civil Aviation Authority	
Polish Air Navigation Services Agency	Ms Anita OLEKSIAK	President of the Polish Air Navigation Services Agency	
"Polish Airports" State Enterprise – Warsaw Chopin Airport	Mr Stanisław WOJTERA	CEO of "Polish Airports State Enterprise"	
General Command of Branches of Armed Forces	Maj Gen Jacek PSZCZOŁA	Inspector for Air Force of General Command of Branches of Armed Forces	

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Executive Summary

National ATM Context

Member State of:

Within the frame of Baltic FAB cooperation, PANSA is working together with Lithuania on the cross-border FRA implementation project (Baltic FAB FRA). The implementation scheduled for 2022 will be based on the outcomes of the PJ.06-02 “Management of Performance Based Free Routing in Lower Airspace” project which was led by PANSA during the SESAR2020 Wave 1 period (2017-2019).

PBN implementation has been completed. In 2020, airports Szczecin-Goleniów (EPSC) has joined the group of 14 airports where full set of PBN flight instrument procedures are operational.

The implementation of the A-CDM system has been successfully finalised at Warsaw Airport. The major parties handling air traffic in the airport were collaborating in system development conducted by Polish Airports' State Enterprise. PANSA contributed in this venture by devising and producing the main part of the information system calculating values of Target Start Up Approval Time (TSAT) and Target Take-Off Time (TTOT) and disseminating them to the appropriate receivers, including Advanced Visual Docking Guidance System (A-VDGS).

At the beginning of 2019, Warsaw and Modlin airports started to use arrival sequencing tool – AMAN. After the successful implementation of AMAN, the internal structure of the TMA airspace, as well as SID and STAR procedures, are being redesigned, to fully leverage the potential of the computer supported planning of the arrival sequence. Implementation of the new airspace design and new procedures was completed in the first half of 2021.

Polish ATCOs continue to validate software solutions developed within the iTEC collaboration.

The iTEC-based systems incorporate the technologies enabled by the advanced 4D trajectory management model, including the new conflict management tools, and the iTEC cooperation allows the joint implementation of the new technologies such as Flight Object management.

As a part of the development of the air traffic control system, to meet the current operational needs, also the functionality of the existing PEGASUS_21 system is still periodically improved. This process will be continued until the core components are replaced with iTEC-based ones.

The following main functionalities are planned:

- Implementation of multilayer vertical split with increased number of ACC sectors open,
- Possible activation of larger number of areas and functionalities supporting tactical shortcuts,
- Improved activation and visualisation of alerts on ATCO display, following safety recommendations, supporting early conflict detection and resolution,
- Support to aircraft identification using Mode-S functionalities,
- Integration with TWR systems (electronic strips, remote TWR).

As part of the iTEC project, PANSA launched a new version of the future air traffic management system on the validation and testing platform. The version marked as P_21 / iTEC SWB3 is the third one that has been successfully launched and contains numerous improvements at the request and initiative of PANSA.

PANSA has launched a module of the EATM Communication Gateway - ECG system, i.e. a system transmitting aviation data, among others flight plans, NOTAM and METEO. The module has been designed in such a way as to take over the functions of the main ECG communication system and thus operational work almost immediately in the event of a system failure. This will ensure an uninterrupted supply of aeronautical data to air traffic control systems.

In 2020 and 2021, PANSA successfully implemented a new TWR dedicated ATM system – The Electronic Flight progress Strips System (EFES) at major regional airports (EPGD, EPSY, EPPO, EPWR, EPKT and EPKK).

EFES is a data hub that not only handles internal system information, required to provide aerodrome traffic control, but also integrates with many external ANSP systems and enables data exchange with airspace users. Linking the surveillance system, the AODB system, the weather system, the DCL system, and the Network Manager, EFES offers its users a whole new level of support.

Contingency Plans for En-route Flight Information Service (CP-FIS) aim to provide reliable, continuous flight information and alerting services in FIR Warszawa class G airspace. In the event of service degradation in one of the local FIS units, the project will give FISOs from an adjacent unit operational and technical tools to substitute the afflicted staff and take over the traffic to continue providing the services, until the issue has been resolved. Moreover, additional working positions, communication equipment and procedures allow the interchangeability of OPS personnel between designated FIS units in critical situations. The project is developed under the EUROCONTROL Guidelines for Contingency Planning of Air Navigation Services.

In order to support the safe, efficient integration with manned aviation and existing airspace users and implement the U-space concept and U-space services, PANSA, with the support of technological partners, have developed and operationally implemented the PansaUTM System.

PansaUTM is the first one in Europe and one of world's first national operational UAS traffic management/air traffic management (UTM/ATM) systems used by ATC operational personnel on daily basis certified by the Civil Aviation Authority.

The system provides fast, digital, 2-way non-verbal communication between air traffic controllers and drone operators. It enables drone operators to check flight possibility in a given area, to digitally submit a flight plan and obtain permission to fly if it does not threaten the safety of aircraft. For air traffic controllers, PansaUTM provides information about drone flights planned in the vicinity of international airports (CTRs) along with simple authorisation/non authorisation tools. The controller has also dynamic geofencing tools and can create alert zones which supports numerous emergency situations to alert drone operators or the ATC in seconds. The system is deployed at 15 operational civil TWRs in Poland and at 5 out of 5 FIS Sectors. In February 2021, new version of the PansaUTM 1.2 system was implemented, introducing new functionalities for operational personnel and UAV pilots, including the so-called automatic clearances.

In 2021 PANSA implemented also the CAT 3.0 airspace management system with new functionalities - visualization of radar data and alerts based on them. System was launched operationally in the PANSA Airspace Management Unit.

RCAMS (Runway Condition Awareness and Monitoring System) is a system that constantly reports on adhesion, temperature, and the amount of water and snow on the runway, developed jointly by PANSA, the Interdisciplinary Center for Mathematical and Computer Modeling of the University of Warsaw (UW ICM) and MicroStep-MIS. The works are carried out as part of the SESAR 2020 project, co-financed by Horizon 2020.

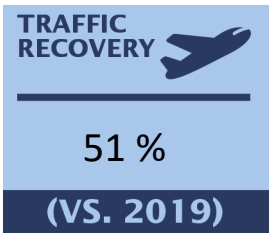
Main national stakeholders:

- Civil Aviation Authority (CAA), acting as the National Supervisory Authority (NSA) for Poland;
- Polish Air Navigation Services Agency (PANSA);
- Polish Air Force (PAF);
- Military Air Traffic Service Office;
- Polish Airports State Enterprise, operating the Warsaw Chopin Airport, Zielona Góra/Babimost Airport and Radom/Sadków Airport;
- State Commission on Aircraft Accidents Investigation (SCAAI).

Main airport covered by LSSIP: Warsaw Chopin Airport – EPWA.

Traffic and Capacity

Level of traffic compared to 2019



Summer En-Route Delay (min per flight)

Poland is part of:

Baltic FAB
A PART OF SINGLE EUROPEAN SKY

Number of national projects: 11

Number of FAB projects: 3

Number of multinational projects: 0

Summary of 2021 developments:

The progress of the implementation objectives during 2021 shows a slight evolution since the past year despite the COVID19 crisis.

Overall, the number of completed objectives has increased from 23 objectives in LSSIP 2020 to 31 objectives, two of them are fully implemented in 2021: FCM06.1 and ENV03. 24 objectives were completed in advance of their FOC date (e.g. AOM21.2, almost all ATC obj., COM12, NAV03.1). Also, there are 22 on-going objectives, 8 with status "not yet planned" and 4 "non-applicable" ones.

In more details, the major developments in 2021 are:

The implementation of the A-CDM system has been successfully finalised at Warsaw Airport. The major parties handling air traffic in the airport were collaborating in system development conducted by Polish Airports' State Enterprise.

At the beginning of 2019, Warsaw and Modlin airports started to use arrival sequencing tool – AMAN. After the successful implementation of AMAN, the internal structure of the TMA airspace, as well as SID and STAR procedures, are being redesigned, to fully leverage the potential of the computer supported planning of the arrival sequence. Implementation of the new airspace design and new procedures was completed in the first half of 2021.

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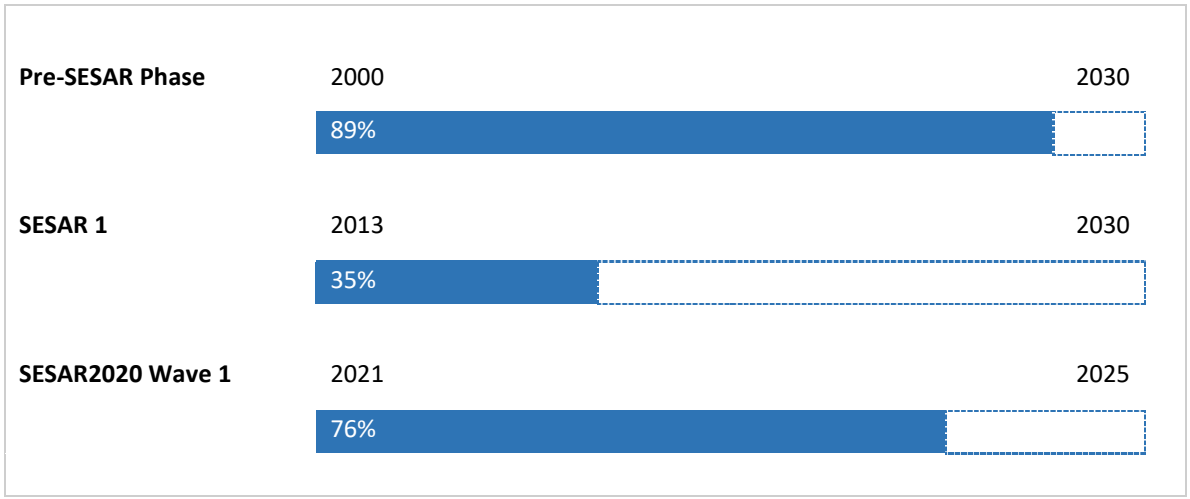
Last, but not least, in 2021 PANSA implemented the CAT 3.0 airspace management system with new functionalities - visualization of radar data and alerts based on them. System was launched operationally in the PANSA Airspace Management Unit.

Progress per SESAR Phase

The figure below shows the progress made so far in the implementation of objectives stemming from different R&D phases (Pre-SESAR, SESAR1 and SESAR 2020).

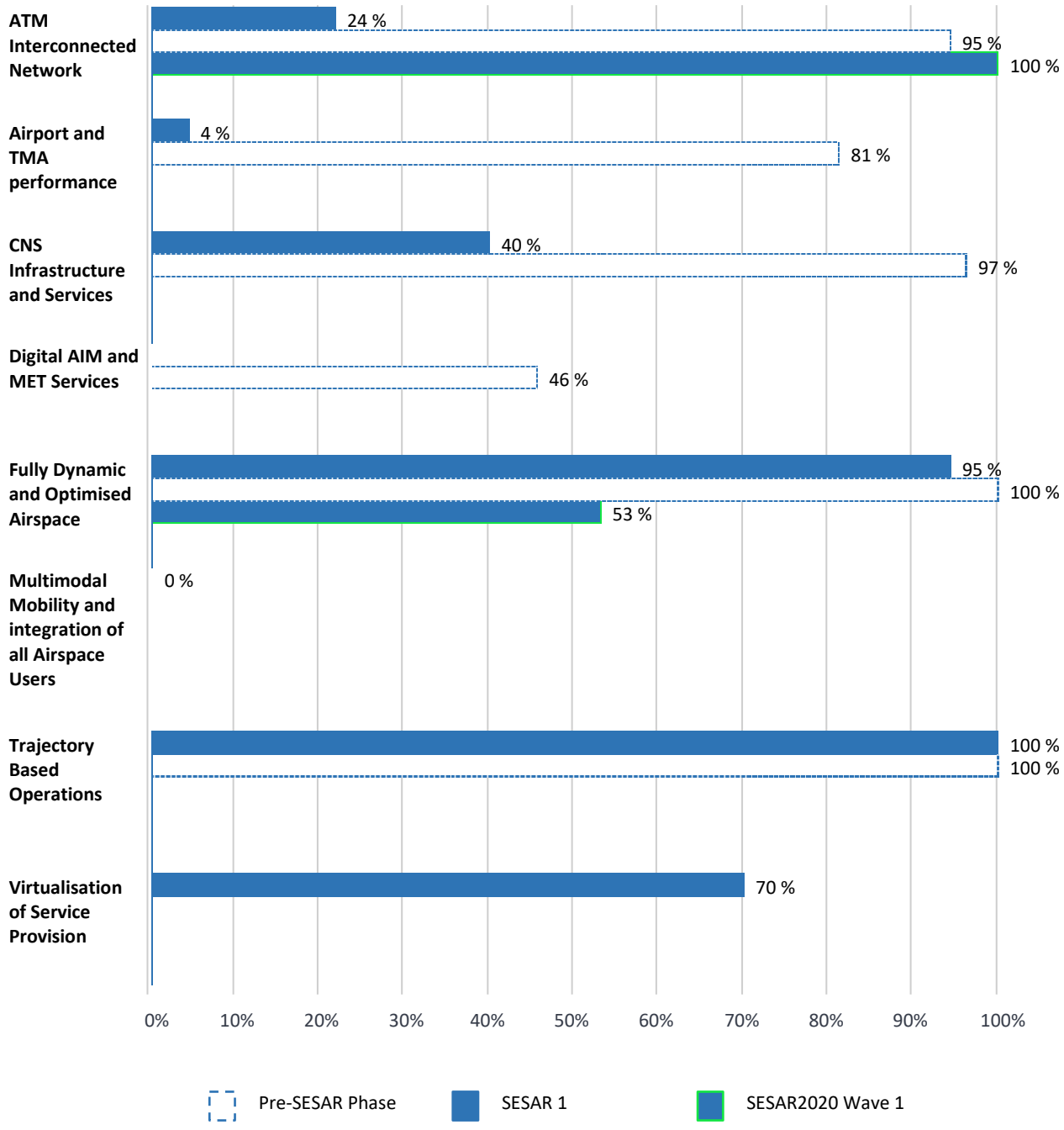
It shows the average implementation progress for all objectives grouped by SESAR Phase, excluding those for which the State is outside the applicability area as defined on a yearly basis in the European ATM Master Plan (Level 3) 2021, i.e. disregarding the declared “NOT APPLICABLE” LSSIP progress status.



Source: LSSIP+ DB

Progress per SESAR Essential Operational Changes and Phase

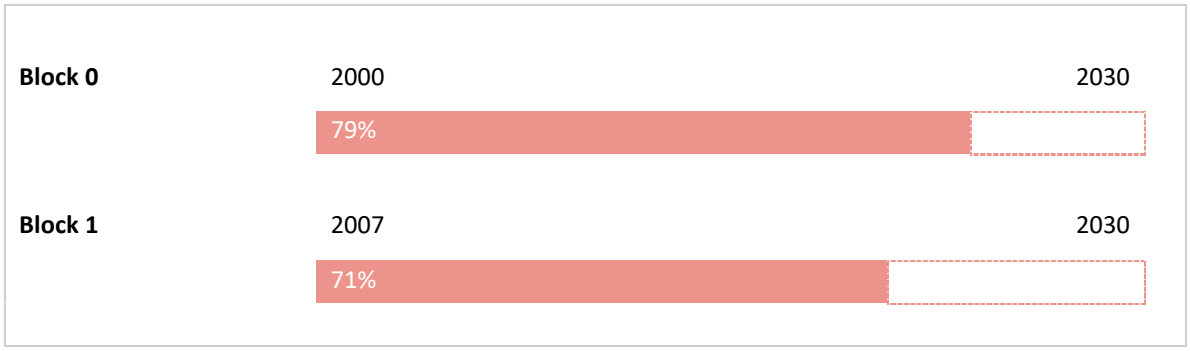
The figure below shows the progress made so far, per SESAR Essential Operational Changes, in the implementation of the SESAR phases. The percentages are calculated as an average, per EOC, of the same objectives as in the previous paragraph.



Source: LSSIP+ DB

ICAO ASBU Implementation Progress – Blocks 0 and 1

The figure below shows the progress made so far in the implementation of the ICAO ASBU Blocks 0 and 1, according to the ICAO Global Air Navigation Plan 6th Edition (2019). The overall percentage is calculated as an average of the relevant Objectives contributing to each of the relevant ASBU Blocks. This is a summary of the table explained in Chapter 5.3 – ICAO ASBU Implementation Progress.



Source: LSSIP+ DB

ATM Deployment Outlook

✓ **Deployed in 2020 - 2021**

- Automated Support for Traffic Complexity Assessment and Flight Planning interfaces
FCM06.1 - 100 % progress

By 2022	By 2023	By 2024	By 2025+
- ASM and A-FUA AOM19.5 - 64 % progress **- Collaborative Flight Planning** FCM03 - 90 % progress **- Implement ACAS II compliant with TCAS II change 7.1** ATC16 - 86 % progress **- Enhanced Free Route Airspace Operations** AOM21.3 - 53 % progress **- Enhanced Short Term ATFCM Measures** FCM04.2 - 85 % progress	**- Voice over Internet Protocol (VoIP) in Airport/Terminal** COM11.2 - 40 % progress **- Interactive Rolling NOP** FCM10 - 60 % progress **- Electronic Terrain and Obstacle Data (eTOD)** INF07 - 46 % progress **- Voice over Internet Protocol (VoIP) in En-Route** COM11.1 - 40 % progress	**- 8,33 kHz Air-Ground Voice Channel Spacing below FL195** ITY-AGVCS2 - 84 % progress	**- Meteorological Information Exchange - Aerodrome Meteorological information Service** INF10.10 - 03 % progress **- Aeronautical Information Exchange - Digital NOTAM service** INF10.6 - 00 % progress **- Meteorological Information Exchange - Network Meteorological Information** INF10.12 - 00 % progress **- Cooperative Network Information Exchange - ATFCM Tactical Updates Service (Airport Capacity and Enroute)** INF10.13 - 38 % progress **- Cooperative Network Information Exchange - Flight Management Service (Slots and NOP/AOP integration)** INF10.14 - 50 % progress **- Cooperative Network Information Exchange - Measures Service (Traffic Regulation)** INF10.15 - 00 % progress **- Cooperative Network Information Exchange - Short Term ATFCM Measures services (MCDM, eHelpdesk, STAM measures)** INF10.16 - 00 % progress **- Flight Information Exchange (Yellow Profile) - Flight Data Request Service** INF10.19 - 00 % progress **- Flight Information Exchange (Yellow Profile) - Notification Service** INF10.20 - 00 % progress **- Flight Information Exchange (Yellow Profile) - Data Publication Service** INF10.21 - 00 % progress **- Flight Information Exchange**

			(Yellow Profile) - Extended AMAN SWIM Service INF10.23 - 00 % progress **- Meteorological Information Exchange - En-Route and Approach Meteorological information service** INF10.11 - 00 % progress **- Aeronautical Information Exchange - Aerodrome mapping service** INF10.7 - 00 % progress **- Aeronautical Information Exchange - Airspace Reservation (ARES)** INF10.5 - 00 % progress **- Stakeholders' SWIM PKI and cyber security** INF10.2 - 06 % progress **- RNP 1 in TMA Operations** NAV03.2 - 30 % progress **- Meteorological Information Exchange - Volcanic Ash Mass Concentration information service** INF10.9 - 03 % progress **- Aeronautical Information Exchange - Aeronautical Information Features service** INF10.8 - 00 % progress

Airport Objectives - Warszawa Airport

✓	**Deployed in 2020 - 2021**	**- Continuous Climb Operations (CCO)** ENV03 - 100 % progress

Source: LSSIP+ DB

By 2022	By 2023	By 2024	By 2025+
	- Remote Tower Services AOP14 - 70 % progress	**- Initial AOP/NOP Information Sharing** FCM11.1 - 00 % progress **- Airport Safety Nets** AOP12.1 - 02 % progress **- Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** AOP04.2 - 13 % progress **- Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** AOP04.1 - 13 % progress	**- Extended Airport Operations Plan** AOP11.2 - 01 % progress **- AOP/NOP integration** FCM11.2 - 00 % progress

Overall situation of Implementation Objectives

Main Objectives	Topic	Progress at the end of 2021	Status	2021		2022		2023		2024		2025		2026		>2026
AOM13.1	Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling	100%	Completed													
AOM19.4	Management of Predefined Airspace Configurations	100%	Completed				*									
AOM19.5	ASM and A-FUA	64%	Ongoing				*									
AOM21.2	Initial Free Route Airspace	100%	Completed				*									
AOM21.3	Enhanced Free Route Airspace Operations	53%	Ongoing										*			
AOP04.1(EPWA)	Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)	13%	Ongoing													
AOP04.2(EPWA)	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)	13%	Ongoing										*			
AOP05(EPWA)	Airport Collaborative Decision Making (A-CDM)	100%	Completed													
AOP10(EPWA)	Time-Based Separation	0%	Not yet planned							*						
AOP11.1(EPWA)	Initial Airport Operations Plan	0%	Not Applicable						*							
AOP11.2(EPWA)	Extended Airport Operations Plan	1%	Ongoing													2027
AOP12.1(EPWA)	Airport Safety Nets	2%	Ongoing										*			
AOP13(EPWA)	Automated Assistance to Controller for Surface Movement Planning and Routing	0%	Not yet planned										*			
AOP14(EPWA)	Remote Tower Services	70%	Ongoing													2030
AOP15(EPWA)	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers	0%	Not yet planned													2030
AOP16(EPWA)	Guidance assistance through airfield ground lighting	0%	Not yet planned													2030
AOP17(EPWA)	Provision/integration of departure planning information to NMOC	0%	Not Applicable													2030
AOP18(EPWA)	Runway Status Lights (RWSL)	0%	Not Applicable													2030

Main Objectives	Topic	Progress at the end of 2021	Status	2021		2022		2023		2024		2025		2026		>2026
AOP19(EPWA)	Departure Management Synchronised with Pre-departure sequencing	0%	Not yet planned				*									
ATC02.8	Ground-Based Safety Nets	100%	Completed		*											
ATC07.1(EPWA)	AMAN Tools and Procedures	100%	Completed													
ATC12.1	Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring	100%	Completed		*											
ATC15.1	Information Exchange with En-route in Support of AMAN	100%	Completed													
ATC15.2(EPWA)	Arrival Management Extended to En-route Airspace	100%	Completed								*					
ATC15.2bis	Arrival Management Extended to En-route Airspace (non CP1)	0%	Not Applicable								*					
ATC18	Multi-Sector Planning En-route - 1P2T	100%	Completed													2030
ATC19(EPWA)	AMAN/DMAN Integration	0%	Not yet planned													2027
ATC20	Enhanced STCA with down-linked parameters via Mode S EHS	100%	Completed													2030
COM10.1	Migrate from AFTN to AMHS (Basic service)	100%	Completed													
COM10.2	Extended AMHS	100%	Completed								*					
COM11.1	Voice over Internet Protocol (VoIP) in En-Route	40%	Ongoing		*											
COM11.2	Voice over Internet Protocol (VoIP) in Airport/Terminal	40%	Ongoing						*							
COM12	New Pan-European Network Service (NewPENS)	100%	Completed								*					
ENV01(EPWA)	Continuous Descent Operations (CDO)	100%	Completed						*							
ENV02(EPWA)	Airport Collaborative Environmental Management	100%	Completed													2030
ENV03(EPWA)	Continuous Climb Operations (CCO)	100%	Completed													2030
FCM03	Collaborative Flight Planning	90%	Ongoing				*									
FCM04.2	Enhanced Short Term ATFCM Measures	85%	Ongoing				*									
FCM06.1	Automated Support for Traffic Complexity Assessment and Flight Planning interfaces	100%	Completed				*									
FCM10	Interactive Rolling NOP	60%	Ongoing						*							
FCM11.1(EPWA)	Initial AOP/NOP Information Sharing	0%	Planned						*							

Main Objectives	Topic	Progress at the end of 2021	Status	2021		2022		2023		2024		2025		2026		>2026
FCM11.2(EPWA)	AOP/NOP integration	0%	Planned													2027
INF07	Electronic Terrain and Obstacle Data (eTOD)	46%	Ongoing													
INF10.10	Meteorological Information Exchange - Aerodrome Meteorological information Service	3%	Ongoing										*			
INF10.11	Meteorological Information Exchange - En-Route and Approach Meteorological information service	0%	Planned										*			
INF10.12	Meteorological Information Exchange - Network Meteorological Information	0%	Planned										*			
INF10.13	Cooperative Network Information Exchange - ATFCM Tactical Updates Service (Airport Capacity and Enroute)	38%	Ongoing										*			
INF10.14	Cooperative Network Information Exchange – Flight Management Service (Slots and NOP/AOP integration)	50%	Ongoing										*			
INF10.15	Cooperative Network Information Exchange – Measures Service (Traffic Regulation)	0%	Planned										*			
INF10.16	Cooperative Network Information Exchange - Short Term ATFCM Measures services (MCDM, eHelpdesk, STAM measures)	0%	Planned										*			
INF10.17	Cooperative Network Information Exchange – Counts service (ATFCM Congestion Points)	0%	Not yet planned										*			
INF10.19	Flight Information Exchange (Yellow Profile) - Flight Data Request Service	0%	Planned										*			
INF10.2	Stakeholders' SWIM PKI and cyber security	6%	Ongoing										*			
INF10.20	Flight Information Exchange (Yellow Profile) - Notification Service	0%	Planned										*			
INF10.21	Flight Information Exchange (Yellow Profile) - Data Publication Service	0%	Planned										*			
INF10.23	Flight Information Exchange (Yellow Profile) - Extended AMAN SWIM Service	0%	Planned										*			
INF10.3	Aeronautical Information Exchange - Airspace structure service	100%	Completed										*			

Main Objectives	Topic	Progress at the end of 2021	Status	2021		2022		2023		2024		2025		2026		>2026
INF10.4	Aeronautical Information Exchange - Airspace Availability Service	100%	Completed										*			
INF10.5	Aeronautical Information Exchange - Airspace Reservation (ARES)	0%	Planned										*			
INF10.6	Aeronautical Information Exchange – Digital NOTAM service	0%	Planned										*			
INF10.7	Aeronautical Information Exchange - Aerodrome mapping service	0%	Planned										*			
INF10.8	Aeronautical Information Exchange - Aeronautical Information Features service	0%	Planned										*			
INF10.9	Meteorological Information Exchange - Volcanic Ash Mass Concentration information service	3%	Ongoing										*			
ITY-ACID	Aircraft Identification	100%	Completed													
ITY-AGDL	Initial ATC Air-Ground Data Link Services	100%	Completed													
ITY-AGVCS2	8,33 kHz Air-Ground Voice Channel Spacing below FL195	84%	Ongoing													
ITY-FMTP	Common Flight Message Transfer Protocol (FMTP)	100%	Completed													
NAV03.1	RNAV 1 in TMA Operations	100%	Completed													2030
NAV03.2	RNP 1 in TMA Operations	30%	Ongoing													2030
NAV10	RNP Approach Procedures to instrument RWY	100%	Completed							*						
NAV12	ATS IFR Routes for Rotorcraft Operations	0%	Not yet planned													2030
SAF11	Improve Runway Safety by Preventing Runway Excursions	100%	Completed													

LEGEND:

*	Full Operational Capability (FOC) date
	The Planned Implementation Date as reported in the LSSIP DB for each objective

Source: LSSIP+ DB

Introduction

The Local Single Sky ImPlementation (LSSIP) documents, as an integral part of the Master Plan (MP) Level 3 (L3)/LSSIP mechanism, constitute a short/medium term implementation plan containing ECAC States' actions to achieve the Implementation Objectives as set out by the MP Level 3 and to improve the performance of their national ATM System. This LSSIP document describes the situation in the State at the end of December 2021, together with plans for the next years.

Chapter 1 provides an overview of the ATM institutional arrangements within the State, the membership of the State in various international organisations, the organisational structure of the main ATM players -civil and military- and their responsibilities under the national legislation. In addition, it gives an overview of the Airspace Organisation and Classification, the ATC Units and the ATM systems operated by the main ANSP.

Chapter 2 provides a comprehensive picture of the situation of Air Traffic, Capacity and ATFM Delay per each ACC in the State. It shows the evolution of Air Traffic and Delay in the last five years and the forecast for the next five years. It also presents the achieved performance in terms of delay during the summer season period and the planned projects assumed to offer the required capacity which will match the foreseen traffic increase and keep the delay at the agreed performance level, taking into account the current aviation situation caused by the COVID19 crisis.

Chapter 3 provides the main Implementation Projects (at national, FAB and multinational level) which contribute directly to the implementation of the MP Operational Improvements and/or Enablers and Implementation Objectives. The LSSIP document covers a high-level list of the projects showing the applicable links. All other details like description, timescale, progress made and expected contribution to the ATM Key Performance Areas provided by the State per each project are available in the LSSP DB (extraction can be asked to LSSIP FP or LSSIP CP).

Chapter 4 deals with other cooperation activities beyond Implementation Projects. It provides an overview of the FAB cooperation, as well as all other multinational initiatives, which are out of the FAB scope. The content of this chapter generally is developed and agreed in close cooperation between the States concerned.

Chapter 5 contains aggregated information at State level covering the overall level of implementation, implementation per SESAR Essential Operational Change and implementation of ICAO ASBUs. In addition, it provides the high-level information on progress and plans of each Implementation Objective. The information for each Implementation Objective is presented in boxes giving a summary of the progress and plans of implementation for each Stakeholder. The conventions used are presented at the beginning of the section.

The information contained in Chapter 5 – Implementation Objectives Progress is deemed sufficient to satisfy State reporting requirements towards ICAO in relation to ASBU (Aviation System Block Upgrades) monitoring.

1. National ATM Environment

1.1. Geographical Scope

International Membership

Poland is a Member of the following international organisations in the field of ATM:

Organisation		Since
ECAC	✓	28th June, 1990
EUROCONTROL	✓	1st September, 2004
European Union	✓	1st May, 2004
EASA	✓	1st May, 2004
ICAO	✓	4th April, 1947
NATO	✓	12th March, 1999
ITU	✓	1st January, 1921
EDA	✓	2004
EUROCAE	✓	2019 PANSA as a Full Member

Geographical description of the FIR(s)

The geographical scope of this document is the Warszawa Flight Information Region (FIR Warszawa). It consists of Polish airspace over the land, internal waters and territorial sea and certain airspace over the open Baltic high sea.

The Polish airspace consists of controlled and uncontrolled airspace.

The controlled airspace consists of:

- CTRs/MCTRs,
- CTA:
    - TMAs/MTMAs above upper limit of CTRs up to FL095,
    - Whole airspace between FL095-FL660 (TMAs and en-route airspace).

The uncontrolled airspace is defined as airspace from GND to FL 095 outside controlled airspace and flexible airspace elements, unless they were classified as class G airspace.

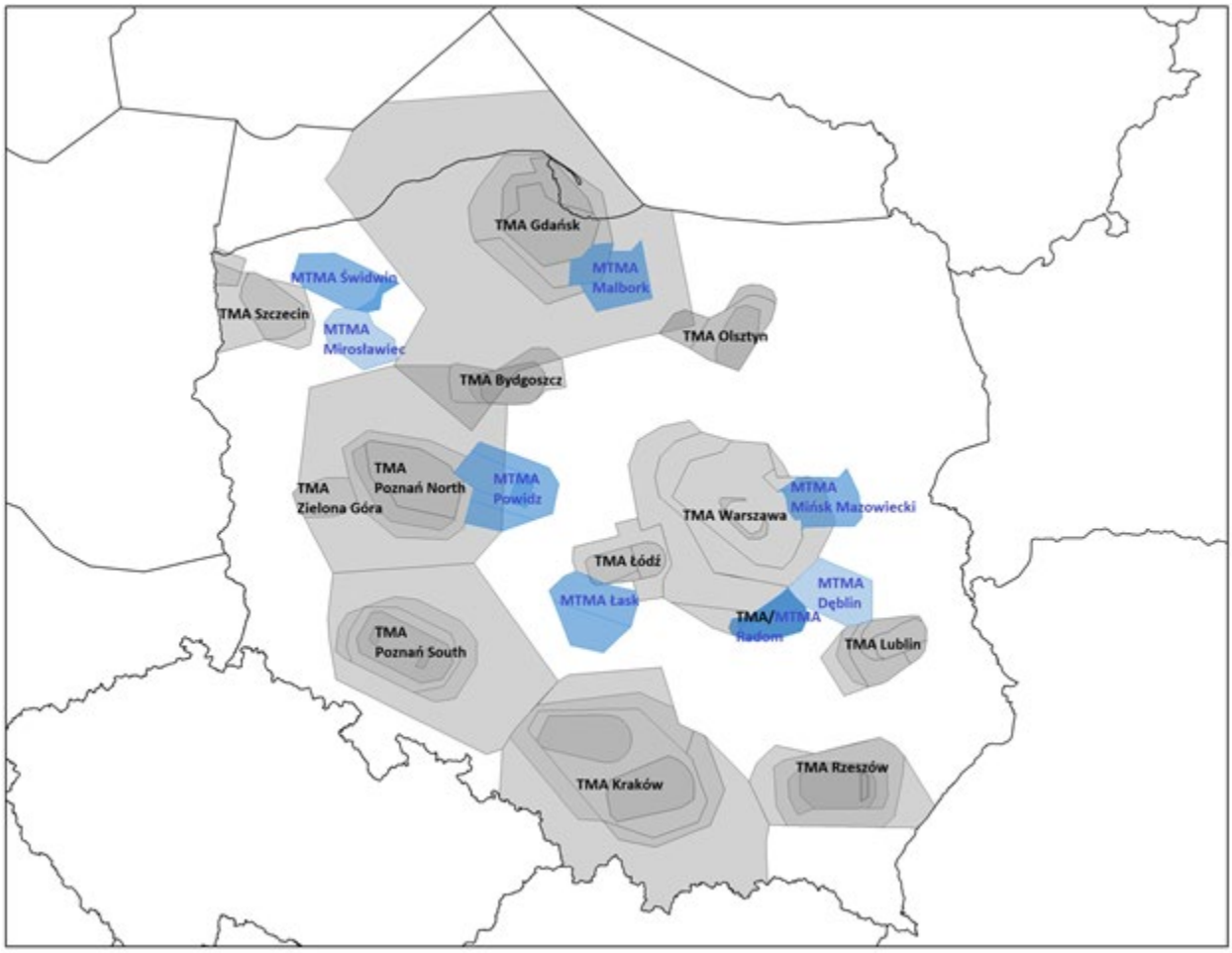
There are 12 TMAs within the FIR WARSZAWA at: Gdańsk, Kraków, Szczecin, Warszawa, Rzeszów, Łódź, Poznań, Lublin, Bydgoszcz, Zielona Góra, Radom and Olsztyn.

TMA		Lower limit	Upper limit	No of sectors
LTMA/UTMA Gdańsk		1800ft	FL135 (LTMA) FL285 (UTMA)	6
LTMA/UTMA Kraków		2300ft	FL095 (LTMA) FL285 (UTMA)	6
TMA Szczecin		1000ft	FL135	5
TMA Warszawa		1000ft	FL225	7
TMA Rzeszów		1500ft	FL145	5
TMA Łódź		1700ft	FL115	5
TMA Poznań	North	1600ft	FL195	4
	South	1600ft	FL195	7
TMA Lublin		1500ft	FL135	6
TMA Bydgoszcz		1800ft	FL135	3
TMA Radom		1500ft	FL 115	3
TMA Zielona Góra		1300ft	FL095	1
TMA Olsztyn		1500ft	FL115	4

There are 8 MTMAs within the FIR WARSZAWA at Dęblin, Łask, Malbork, Mińsk Mazowiecki, Mirosławiec, Powidz, Radom, Świdwin.

MTMA	Lower limit	Upper limit	No of sectors
MTMA Dęblin	2000ft	FL095	1
MTMA Łask	2500ft	FL095	3
MTMA Malbork	2000ft	FL095	2
MTMA Mińsk Maz.	2000ft	FL095	3
MTMA Mirosławiec	1500ft	FL095	1
MTMA Powidz	1500ft	FL095	4
MTMA Radom	1500ft	FL095	3
MTMA Świdwin	1500ft	FL095	3

The lateral dimensions of all TMAs are described in the Polish AIP starts from section ENR 2.1.


TMA Gdańsk
MTMA Malbork
MTMA Świdwin
TMA Szczecin
MTMA Mirosławiec
TMA Olsztyn
TMA Bydgoszcz
TMA Poznań North
TMA Zielona Góra
MTMA Powidz
TMA Warszawa
MTMA Mińsk Mazowiecki
TMA Łódź
MTMA Łask
MTMA Dęblin
TMA/MTMA Radom
TMA Lublin
TMA Poznań South
TMA Kraków
TMA Rzeszów

Airspace Classification and Organisation

Since 18th March 2004, Airspace ICAO class C has been applied from FL 095 to FL 660, except Airspace ICAO class G that has been applied from SFC/GND to FL 095 in non-controlled airspace.

Class D has been implemented in following CTRs and TMAs:

- Civil: CTR and TMA Lublin up to FL095; CTR and TMA Zielona Góra up to FL095; CTR and TMA Radom up to FL095; CTR and TMA Olsztyn up to FL095; CTR EPWA; CTR and TMA Łódź up to 5500 ft AMSL; CTR and TMA Rzeszów up to FL 095; CTR EPBY; CTR EPMO, sector Heringsdorf in TMA Szczecin. Further implementation is planned systematically within another TMA's and CTR's.
- Military: CTR and TMA Świdwin up to FL095; CTR and TMA Mirosławiec up to FL095; CTR and TMA Malbork up to FL095; CTR and TMA Powidz up to FL095; CTR and TMA Łask up to FL095; CTR and TMA Mińsk Mazowiecki up to FL095; CTR and TMA Dęblin up to FL095; CTR and TMA Radom up to FL095; CTR Darłowo; CTR Cewice; CTR Oksywie; CTR Pruszcz Gdański; CTR Inowrocław; CTR Łęczyca; CTR Tomaszów Mazowiecki, CTR Krzesiny.

At present, the situation is as follows:

FL or Alt Band	**Poland**	
Upper Limit		
FL 095-FL 660	**C**	
GND-FL 095 Outside CTRs/MCTRs and TMAs/MTMAs	**G**	
Major TMA	**C**	
Minor TMA/MTMA	**C**	**D Up to FL095**
CTA/AWY	**C**	
CTR/MCTR	**C**	**D**

Legend	A	B	C	D	E	F	G	Unclassified or N/A	No Reply

ATC Units

The following Table lists the ACC sectors and TMAs in the Polish airspace, which are of concern to this LSSIP.

ATC Unit	Number of sectors*		Associated FIR(s)	Remarks
	En-route	TMA		
Warszawa ACC	- 17* (24) GAT ACC - 3* (6) OAT ACC		FIR WARSZAWA (CTA)	Warszawa ACC provides Radar Services for all aircraft in assigned airspace. ATC sectors are opened, closed and combined according to predicted traffic demand. Flexibility of airspace management was enhanced in 2016 by vertical split of sectors into two layers, and in 2017 by defining offsets between layers ("balconies"), as well as increasing the number of valid combinations.
Warszawa APP		3* (17)	FIR WARSZAWA (TMA Warszawa)	APP collocated with ACC and utilizes the same ATM system.
Gdańsk APP		2* (2)	FIR WARSZAWA (LTMA Gdańsk, UTMA Gdańsk)	APP collocated with TWR. Gdańsk APP utilizes the same ATM system as ACC Warszawa. Local ATM system is available as a contingency.
Kraków APP		5* (4)	FIR WARSZAWA (UTMA Kraków, LTMA Kraków Sector A EPKK, LTMA Kraków Sector A EPKT)	APP collocated with TWR. Kraków APP utilizes the same ATM system as ACC Warszawa. Local ATM system is available as a contingency.
Poznań APP		3* (2)	FIR WARSZAWA (TMA Poznań North, TMA Poznań South)	APP collocated with TWR. Poznań APP utilizes the same ATM system as ACC Warszawa. Local ATM system is available as a contingency.

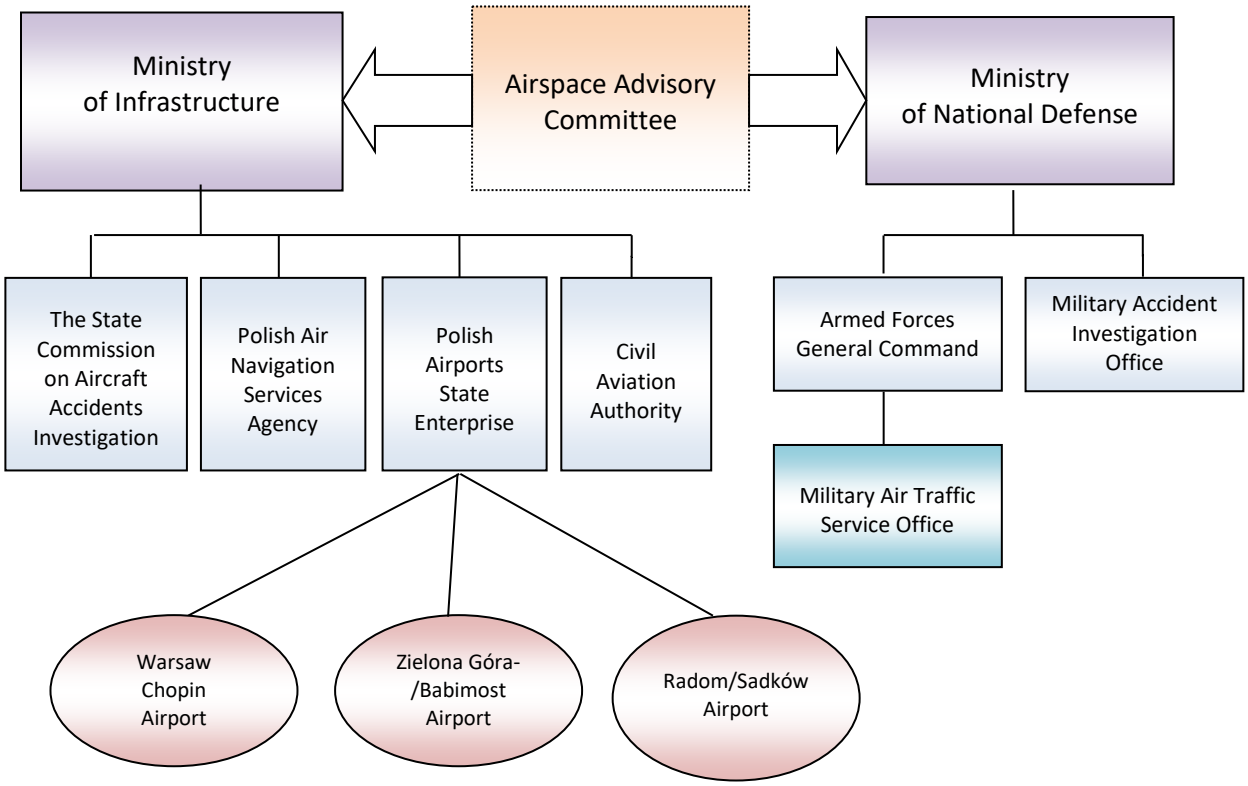
* The first value represents the number of physical sectors available in a given location, called UCS. Each UCS consists of one or two controller working positions. The value in brackets shows the number of logical sectors, which can be assigned to physical sectors in different combinations, depending on traffic load and configuration of runways. In the locations where the number of physical sectors exceeds the number of logical sectors, the extra positions are used for contingency purposes.

1.2.National Stakeholders

The main National Stakeholders important for efficient ATM operations in Poland are the following:

- The Civil Aviation Authority (CAA), acting as the National Supervisory Authority (NSA) for Poland;
- The Polish Air Navigation Services Agency (PANSA);
- The Polish Air Force (PAF);
- The Military Air Traffic Service Office;
- The Polish Airports State Enterprise, operating the Warsaw Chopin Airport, Zielona Góra/Babimost Airport and Radom/Sadków Airport;
- The State Commission on Aircraft Accident Investigation (SCAAI).

Their activities are detailed in the following subchapters and their relationships are shown in the diagram below.



Civil Regulator(s)

General Information

The Ministry of Infrastructure is responsible for civil aviation in Poland. The different national entities, having regulatory responsibilities in ATM, are summarised in the table below. The CAA is further detailed in the following sections.

Activity in ATM:	Organisation responsible	Legal Basis
Rule-making	The Ministry of Infrastructure The Civil Aviation Authority (CAA)	Polish Aviation Law act of 3 July 2002 with further amendments
Safety Oversight	The Civil Aviation Authority (CAA)	Regulation (EU) No 2017/373 Polish Aviation Law act of 3 July 2002 with further amendments
Enforcement actions in case of non-compliance with safety regulatory requirements	The Civil Aviation Authority (CAA)	Polish Aviation Law act of 3 July 2002 with further amendments (articles: 27, 161 and 162 of and Annex III) Regulation of the Minister of Infrastructure of 30 September 2020 on the certification of activities in civil aviation (§ 47, § 48, § 49)
Airspace	The Civil Aviation Authority (CAA)	Regulation (EU) No 2019/123 Regulation (EU) No 255/2010 Polish Aviation Law act of 3 July 2002 with further amendments
Economic	The Civil Aviation Authority (CAA) The Ministry of Infrastructure	Regulation (EU) 2019/317 Polish Aviation Law act of 3 July 2002 with further amendments
Environment	The Ministry of Climate and Environment	Regulation (UE) No 748/2012 Annex 16 ICAO
Security	The Ministry of Internal Affairs and Administration The Civil Aviation Authority (CAA)	Regulation (EU) No 2015/1998 MoIAaA general rules CAA approval of "Security Programme for aerodromes and conducting of security inspections, oversight"
Accidents investigation	State Commission on Aircraft Accidents Investigation (SCAAI)	Convention on International Civil Aviation signed on 7 December 1944 Polish Aviation Law act of 3 July 2002 with further amendments

The Civil Aviation Authority (CAA)

The President of the Civil Aviation Authority performs functions of aviation administration and aviation supervisory authority in the following main areas: compliance with legal provisions related to the civil aviation, operation of aircraft and certification of entities conducting activity in civil aviation, airworthiness of aeronautical equipment and competency of flight personnel, registers of aircraft, aerodromes, aviation ground facilities, flight personnel and landing areas, flight safety in civil aviation (including examination and evaluation of safety levels in civil aviation), application of civil aviation regulations, approving boundaries of manoeuvring area of the aerodrome.

Polish Aviation Law act of 3 July 2002 provides the main basis upon which the Polish aviation regulatory framework is being developed.

IAW Aviation Law, the Civil Aviation Authority is in charge of ATM safety regulation and has been nominated as the National Supervisory Authority (as per SES Regulations). As the National Supervisory Authority, the CAA is independent from the Polish Air Navigation Services Agency. The independence is thus achieved at institutional level.

Rulemaking, Safety Oversight and Safety Performance Monitoring have been entrusted to the safety regulatory function (CAA). ATM safety occurrence analyses have been entrusted to CAA together with SCAAI and PANSA. In the flight safety domain the CAA covers following areas:

- Evaluation of principles for creating methods leading to organising flight safety and prevention activities;
- Safety oversight and inspection of ATM services and aircraft;
- Cooperation with the State Commission on Aircraft Accidents Investigation – evaluation and analysis of accident causes;
- Conclusions and after accident recommendations, supervision and control of their implementation;
- Managing the accident and aviation incidents' database;
- Preparation of annual and immediate after-flight damage reports;
- Consultation of draft aviation regulations;
- Preparation of Annual Summary Template.

Annual Report published:	N	ANNUAL SAFETY OVERSIGHT REPORT is no longer being developed (due to the expiry of the obligation stemming from art. 15 of Reg. 1034/2011). Annual Safety Template is not published.

The address of the NSA website: www.ulc.gov.pl

The Air Navigation Service Provider – PANSA

Services provided

The Polish Air Navigation Services Agency (PANSA) was set up on 1st April 2007 and replaced the Polish Air Traffic Agency (PATA), which was a state body was responsible for air traffic over Poland. PANSA is responsible for guaranteeing safe, continuous, fluent and efficient air traffic. It is a state body (acting as a legal entity with an autonomous budget) responsible for air traffic management within Polish airspace in accordance with ICAO rules, except at military airports.

Governance:	Independent Agency	**Ownership:**	State-owned
Services provided	**Y/N**	**Comment**	
ATC en-route	Y		
ATC approach	Y		
ATC Aerodrome(s)	Y		
AIS	Y		
CNS	Y		
MET	N	• Institute of Meteorology and Water Management-National Research Institute(IMGW-PIB) • Warmia i Mazury Sp. z o.o. • Radom Meteo Sp. z o. o	
ATCO training	Y		
Others	Y	Flight Safety Inspection (NAV&SUR test flights, and control flight of the procedures).	
Additional information:			
Provision of services in other State(s):	Y	Special designated areas where ATS are provided by one of the agreed States.	
Annual Report published:	Y	PANSA publishes an Annual Report every year. Address of ANSP website: www.pansa.pl.	

ATC Systems in use

Main ANSP part of any technology alliance[2]	Y	iTEC system

FDPS

Specify the manufacturer of the ATC system currently in use:	Indra Sistemas S.A. (PEGASUS_21 FDPS)
Upgrade[3] of the ATC system is performed or planned?	Planned: Current batch of changes was already finalized in 2019. There is a roadmap for the last set of improvements of the existing system (2020-2022).
Replacement of the ATC system by the new one is planned?	The system components will be replaced for iTEC-compliant solution after 2025, after initial deployed in the new contingency centre ahead of this date. Starting from 2020 its TWR components are being replaced by dedicated TWR system.
ATC Unit	Warszawa ACC, Gdańsk APP, Kraków APP, Poznań APP, Warszawa APP, TWR units.

[2] Technology alliance is an alliance with another service provider for joint procurement of technology from a particular supplier (e.g. COOPANS alliance)

[3] Upgrade is defined as any modification that changes the operational characteristics of the system (SES Framework Regulation 549/2004, Article 2 (40))

Specify the manufacturer of the ATC system currently in use:	Indra Sistemas S.A. (PEGASUS_21 local contingency FDPS)
Upgrade[4] of the ATC system is performed or planned?	No
Replacement of the ATC system by the new one is planned?	No
ATC Unit	Gdańsk APP, Kraków APP, Poznań APP

SDPS

Specify the manufacturer of the ATC system currently in use:	Indra Sistemas S.A. (PEGASUS_21 primary SDPS)
Upgrade of the ATC system is performed or planned?	No
Replacement of the ATC system by the new one is planned?	No
ATC Unit	Warszawa ACC, Gdańsk APP, Kraków APP, Poznań APP, Warszawa APP

Specify the manufacturer of the ATC system currently in use:	Comsoft Gmbh (PEGASUS_21 secondary SDPS – ARTAS)
Upgrade of the ATC system is performed or planned?	Yes
Replacement of the ATC system by the new one is planned?	No
ATC Unit	Warszawa ACC, Gdańsk APP, Kraków APP, Poznań APP, Warszawa APP

Specify the manufacturer of the ATC system currently in use:	Indra Sistemas S.A. (PEGASUS_21 local contingency SDPS)
Upgrade of the ATC system is performed or planned?	No
Replacement of the ATC system by the new one is planned?	No
ATC Unit	Gdańsk APP, Kraków APP, Poznań APP

Airports

General information

Polish Airports State Enterprise (PPL) is an active and leading stakeholder of the strategic transport infrastructure development and deployment for Poland.

PPL owns the Chopin Airport in Warsaw (EPWA) which is the largest for Poland and one of the largest in Central-East Europe. Warsaw Chopin Airport provides international services, allowing participant and providers use it as a gateway between Europe and the East. It continues to operate for providers who offer passengers long distance travel services. Chopin Airport is the home base for the national provider PLL LOT.

Two of the currently functioning Polish Airports, Warsaw Chopin Airport and Zielona Góra/Babimost, are operated by PPL. Radom-Sadków airport managed as well by PPL has been closed to civil aircraft since 2019 due to modernization works. Other regional airports, Gdańsk-Lech Wałęsa, Katowice-Pyrzowice, Wrocław-Strachowice, Kraków-Balice, Szczecin-Goleniów, Poznań-Ławica, Łódź-Lublinek, Rzeszów-Jasionka, Bydgoszcz-Szwederowo, Warszawa-Modlin, Lublin, Olsztyn-Mazury, have been transformed into commercial companies with ownership shared by State Treasury, PPL, local authorities and private sector.

Airport(s) covered by the LSSIP

Referring to the List of Airports in the European ATM Master Plan Level 3 Implementation Plan Edition 2021 – Annex 2, it is up to the individual State to decide which additional airports will be reported through LSSIP for those Objectives.

The airport covered in this LSSIP is Warsaw Chopin Airport, which is the main national airport of Poland, and it is part of the airports listed in the 'APT' related list of airports. The most important fact is that Warsaw Airport is covered by the list of airports in CP1 Regulation, mandated for AOP11.2 and FCM11.2.

[4] Upgrade is defined as any modification that changes the operational characteristics of the system (SES Framework Regulation 549/2004, Article 2 (40))

The EUROCONTROL Public Airport Corner also provides information for the following airport(s):
https://ext.eurocontrol.int/airport_corner_public/EPWA

Military Authorities

The Military Authorities responsible for air traffic management for military aircraft in Poland are the Armed Forces General Command, and the Military Air Traffic Service Office (MATSO) of Polish Forces. They report to the Ministry of Defence through the Chief of General Staff.

In peacetime, the management of Polish airspace functions is carried out by the Minister for Transport. During wartime or a state of emergency, upon the Polish Aviation Law of 3 July 2002, the Minister of Infrastructure and the Minister of Defence, by means of regulations, define the rules for handling the functions to the Minister of Defence, considering the rules of cooperation between national air traffic management authorities with relevant military services. All responsibilities relating to state security are realised by the Minister of Defence through appropriate executive bodies.

On the basis of legal documents, on the 1st January 2002, the Military Air Traffic Service Office (MATSO) of Polish Armed Forces was established. Being the main military authority subordinate to the Armed Forces General Commander, MATSO holds the position of the central management and supervision body over the military air traffic service in Polish Armed Forces. MATSO accomplishes the tasks on the operational management level and its area of responsibility comprises the general supervision over military air traffic services at military air bases as well as coordination between civil and military services.

Additionally, its area of responsibility includes the implementation of unified procedures, norms, and standards of technical equipment, and unification of ATS personnel qualifications in integrated air traffic management system.

MATSO cooperates with the Polish Air Navigation Services Agency (PANSA) and other Polish civil aviation organisations. The main objective of this cooperation is the delegation of air traffic management authority to MATSO in times of war or crisis.

Polish military authorities set objectives for the adoption of NATO standards and procedures under the guidelines of NATO Air Traffic Management Committee (NATMC). This led to the integrated ATM system.

The Polish Aviation Law of 3 July 2002 allows Military to provide ATC services at military aerodromes. In July 2017, IAW UE 550/2004, CAA allowed Armed Forced to provide air navigation services in airspace delegated under military authority. Military Air Traffic Control Service (aerodrome control, approach control) is provided to all aircraft (civil/military) performing flights in MCTRs/MTMAs designed for every military airport. In MCTRs and MTMAs class D is applied. It means that by internal regulation all services are provided in accordance with CAA regulations with exceptions (for military users) described in ATC Local Operational Procedures and MIL AIP.

The military provides military ATS at military aerodromes, except SAR service, which is provided in the whole FIR Warszawa (MET can be provided by separate organisation according to regulations; some services can be provided by MIL MET, but not all).

The level of integration between civil and military is realised through the ASM specialists (MATSO officers at AMC Poland in the Polish Air Navigation Services Agency).

The Military regulatory, service provision and user role in ATM are recalled in a synthetic way in the chart below.

Regulatory role

Regulatory framework and rule making

OAT		GAT	
OAT and provision of service for OAT governed by national legal provisions?	Y	Provision of service for GAT by the Military governed by national legal provisions?	Y
Level of such legal provision: State Law		Level of such legal provision: Civil-Military agreement	
Authority signing such legal provision: Minister of Infrastructure		Authority signing such legal provision: President of PL CAA and Commander of the Polish Armed Forces	
These provisions cover:		These provisions cover:	
Rules of the Air for OAT	Y		
Organisation of military ATS for OAT	N	Organisation of military ATS for GAT	Y
OAT/GAT Coordination	Y	OAT/GAT Co-ordination	Y
ATCO Training	N	ATCO Training	Y
ATCO Licensing	N	ATCO Licensing	Y
ANSP Certification	N	ANSP Certification	N
ANSP Supervision	N	ANSP Supervision	N
Aircrew Training	N		
Aircrew Licensing	N		
Additional Information:		Additional Information:	
Means used to inform airspace users (other than military) about these provisions:		Means used to inform airspace users (other than military) about these provisions:	
National AIP	Y	National AIP	N
National Military AIP	Y	National Military AIP	Y
EUROCONTROL eAIP	N	EUROCONTROL eAIP	N
Other:	Sent to Eurocontrol via e-mail	Other:	

Oversight

OAT	GAT
National oversight body for OAT: Y	NSA (as per SES reg. 550/2004) for GAT services provided by the military: declaration of 5 July 2017
Additional information:	Additional information:

Service Provision role

OAT		GAT	
Services Provided:		Services Provided:	
En-Route	PANSA	En-Route	PANSA
Approach/TMA	PANSA in TMA Poznań	Approach/TMA	PANSA
Airfield/TWR/GND	AFGC	Airfield/TWR/GND	PANSA
AIS	AFGC	AIS	PANSA
MET	AFGC	MET	MET office
SAR	AFGC, PANSA – coordination	SAR	PANSA – coordination
TSA/TRA monitoring	AFGC, PANSA	FIS	PANSA
Other:		Other:	
Additional Information:		Additional Information:	

Military ANSP providing GAT services SES certified?	N	If YES, since:	-	Duration of the Certificate:	-
Certificate issued by:	N/A			If NO, is this fact reported to the EC in accordance with SES regulations?	N
Additional Information: Military ANSP is not certified, however CAA – IAW Art. 7, par 5 reg. 550/2004, allowed Armed Forces for ANS provision in airspace under military supervision (MCTR's, MTMA's, TRA (D class airspace).					

User role

IFR inside controlled airspace, Military aircraft can fly?	OAT only		GAT only		Both OAT and GAT	Y	

If Military fly OAT-IFR inside controlled airspace, specify the available options:			
Free Routing	Y	Within specific corridors only	
Within the regular (GAT) national route network	Y	Under radar control	Y
Within a special OAT route system		Under radar advisory service	

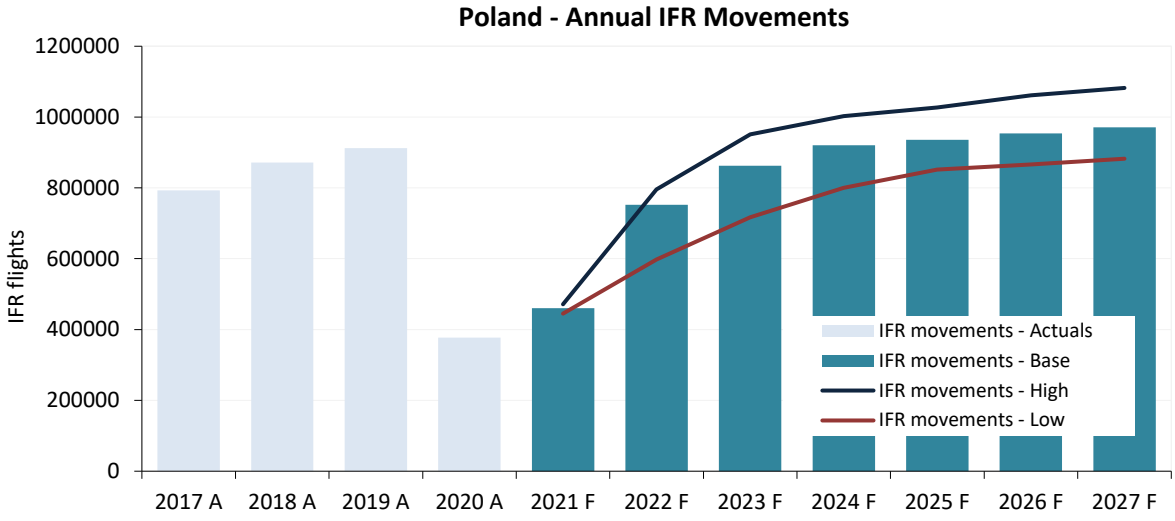
If Military fly GAT-IFR inside controlled airspace, specify existing special arrangements:								
				No special arrangements	X	Exemption from Route Charges		X
				Exemption from flow and capacity (ATFCM) measures		Provision of ATC in UHF		
CNS exemptions:	RVSM	X	8.33	X	Mode S		ACAS	X
Others:	-							

Flexible Use of Airspace (FUA)

Military in Poland applies FUA requirements as specified in the Regulation No 2150/2005: Y
FUA Level 1 implemented: Y
FUA Level 2 implemented: Y
FUA Level 3 implemented: Y

2. Traffic and Capacity

2.1.Evolution of traffic in Poland



EUROCONTROL Forecast Update 2021-2027 - October 2021											
IFR flights yearly growth		2018 A	2019 A	2020 A	2021 F	2022 F	2023 F	2024 F	2025 F	2026 F	2027 F
Poland	High				25%	69%	20%	5%	2%	3%	2%
	Base	10%	5%	-59%	22%	63%	15%	7%	2%	2%	2%
	Low				18%	34%	20%	12%	6%	2%	2%
ECAC	High				28%	62%	12%	4%	2%	3%	2%
	Base	4%	1%	-55%	25%	57%	8%	5%	2%	2%	2%
	Low				21%	36%	13%	7%	7%	2%	2%

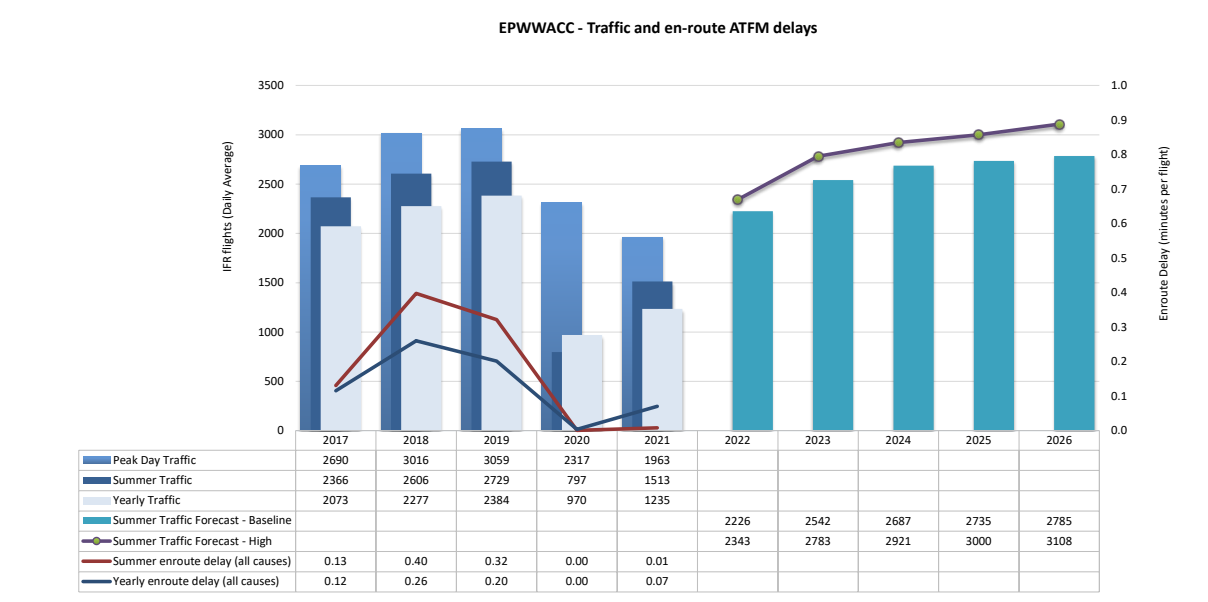
2021

Traffic in Poland was at 51% of 2019[5].

[5] 2019: reference year for traffic recovery, prior to COVID19

2.2.Warszawa ACC

Traffic and en-route ATFM delays 2017-2026



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Peak Day Traffic	2690	3016	3059	2317	1963					
Summer Traffic	2366	2606	2729	797	1513					
Yearly Traffic	2073	2277	2384	970	1235					
Summer Traffic Forecast - Baseline						2226	2542	2687	2735	2785
Summer Traffic Forecast - High						2343	2783	2921	3000	3108
Summer enroute delay (all causes)	0.13	0.40	0.32	0.00	0.01					
Yearly enroute delay (all causes)	0.12	0.26	0.20	0.00	0.07					

Source: NMIR

2021 performance

Warszawa ACC	Traffic (% of 2019)	En-route Delay (min. per flight)		Capacity	
		All reasons	ACC Reference Value	Capacity Gap?	Baseline
Year	52%	0.07	0.07	No	
Summer	55%	0.01			123

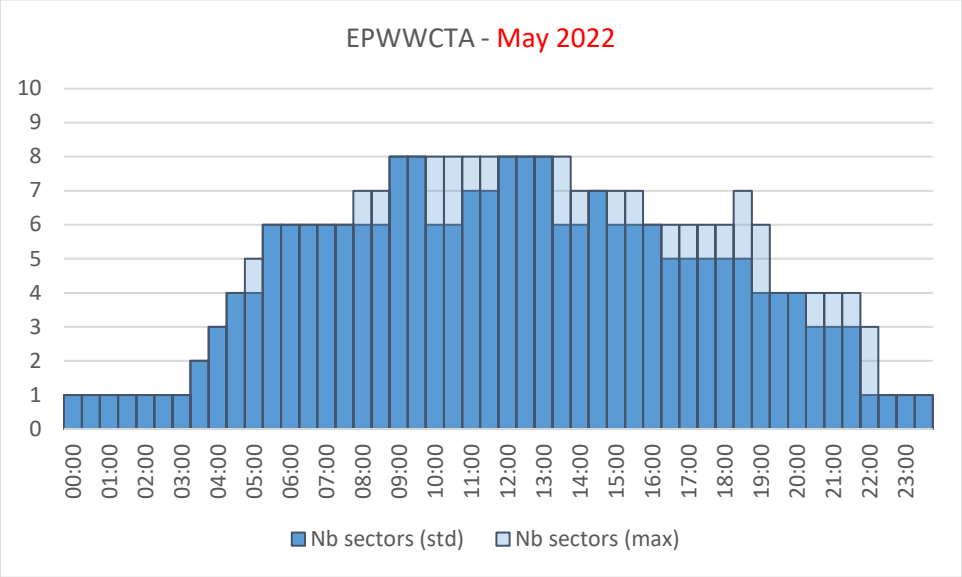
Summer 2021 performance assessment		
The average delay per flight was 0.01 minutes per flight in Summer 2021.		
Operational actions	**Achieved**	**Comments**
Evolutionary ASM Tool to support for Advanced FUA	Yes	
Redesign of all TMAs in Warsaw FIR	Yes	TMA EPWA and EPPO
Advanced ATFCM techniques, including STAM, workload and complexity estimation, and improved predictability	Yes	
Additional controllers	No	
TCT implementation	Yes	
Continuous development of sector configurations and management	Ongoing	

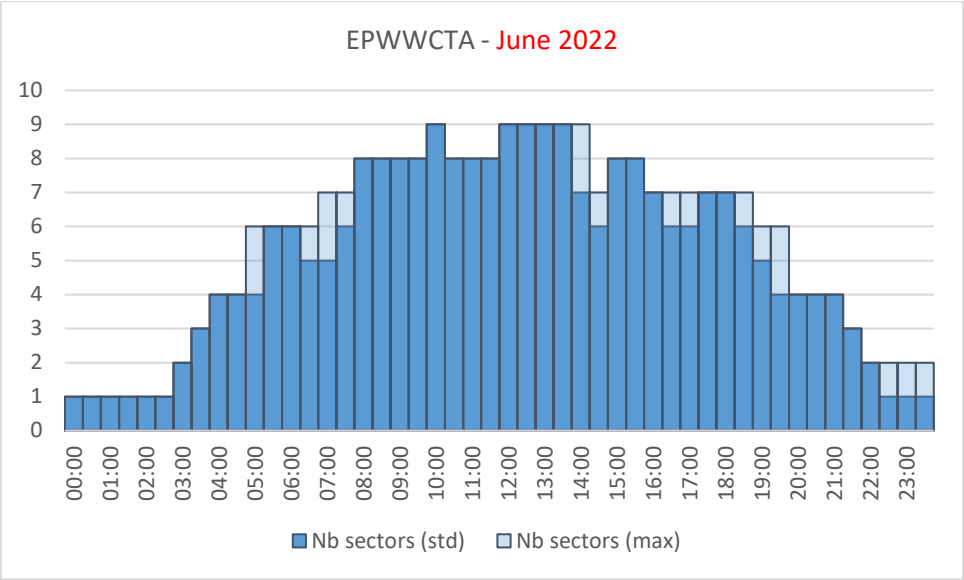
Planning Period – Summer 2022-2026

The planning focuses on the summer season to reflect the most demanding period of the year from a capacity perspective. This approach ensures consistency with the previous planning cycles.

The measures for each year are the measures that will be implemented before the summer season.

Summer Capacity Plan					
	2022	2023	2024	2025	2026
Free Route Airspace	Stepped Cross-Border FRA Implementation according to the airspace restructuring project				
	With Lithuania, Slovakia	With Sweden			
Airspace Management Advanced FUA	Evolutionary ASM Tool to support for Advanced FUA				
Airport & TMA Network Integration	Redesign of TMA Kraków				
Cooperative Traffic Management	Advanced ATFCM techniques, including STAM, workload and complexity estimation, and improved predictability				
Airspace	Additional layers				
Procedures					
Staffing	Additional controllers				
Technical					
Capacity	Continuous development of sector configurations and management				
Significant Events					
Max sectors	13/14	14	14/15	14/15	14/15
Planned Annual Capacity Increase	33%	20%	6%	3%	3%
Capacity Profile - Base Annual % Increase	26%	16%	5%		
Capacity Plan v. Profile - Base	6%	9%	11%		
Capacity Profile - High Annual % Increase	33%	20%	6%		
Capacity Plan v. Profile - High	1%	1%	1%		
Annual Reference Value (min)	0.12	0.12	0.12		
Additional information					




EPWWCTA - June 2022
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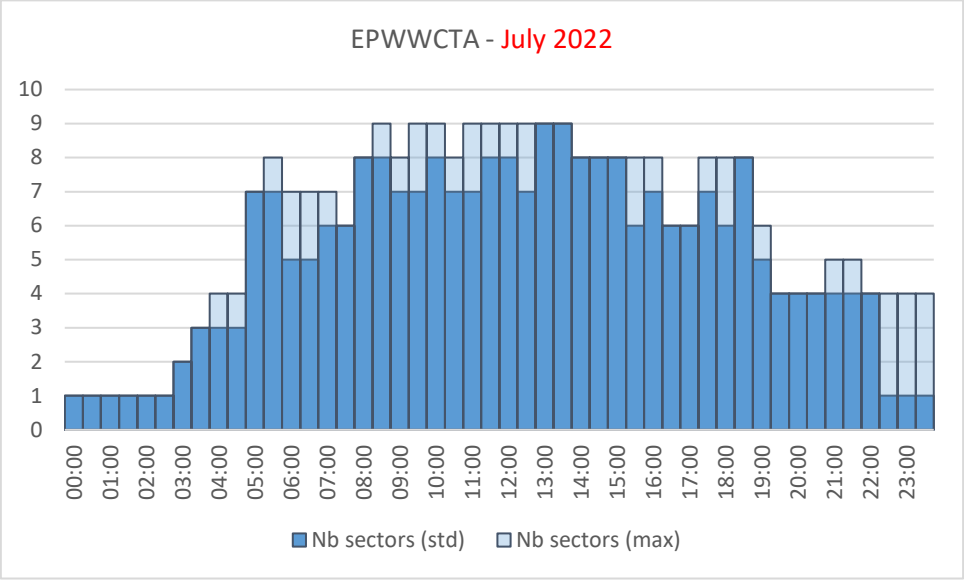
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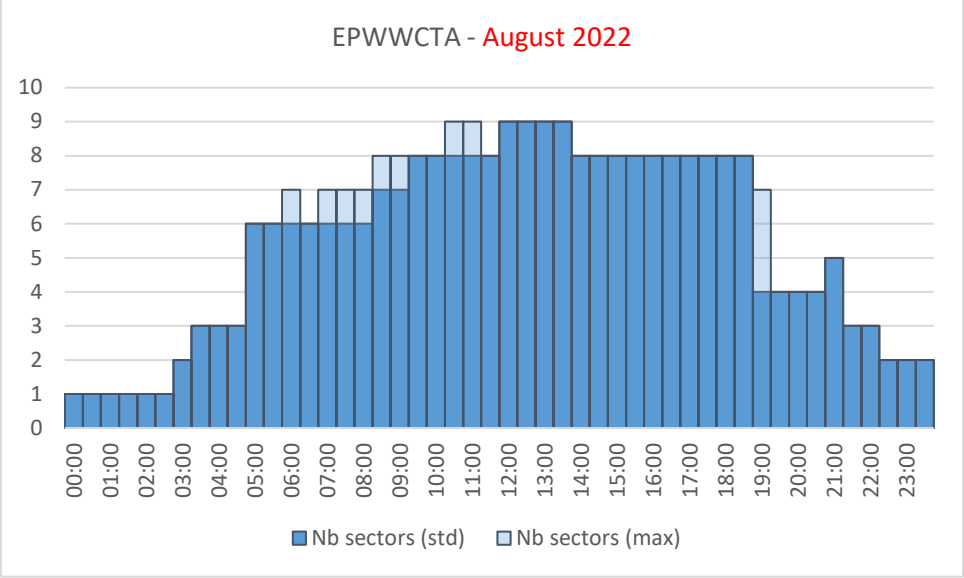
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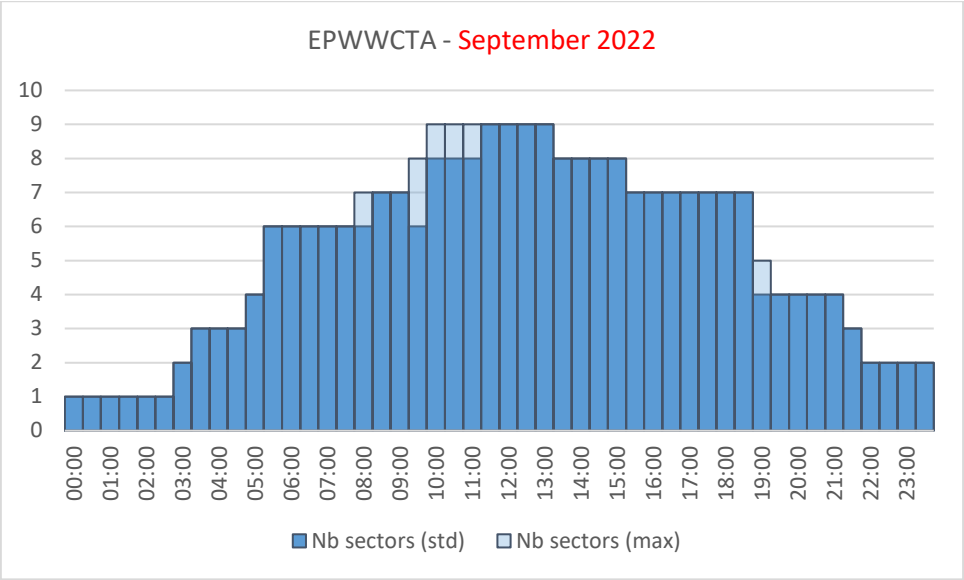
EPWWCTA - September 2022
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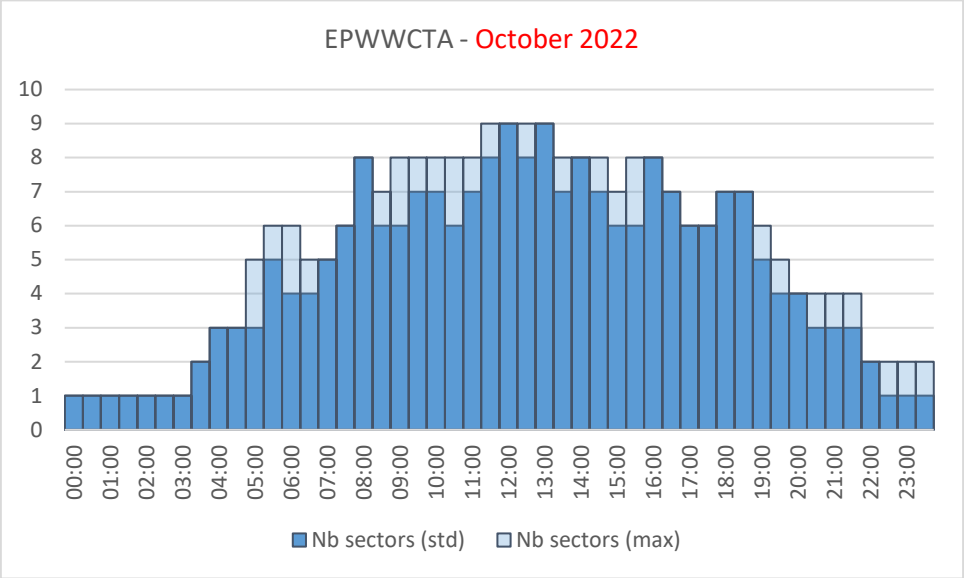
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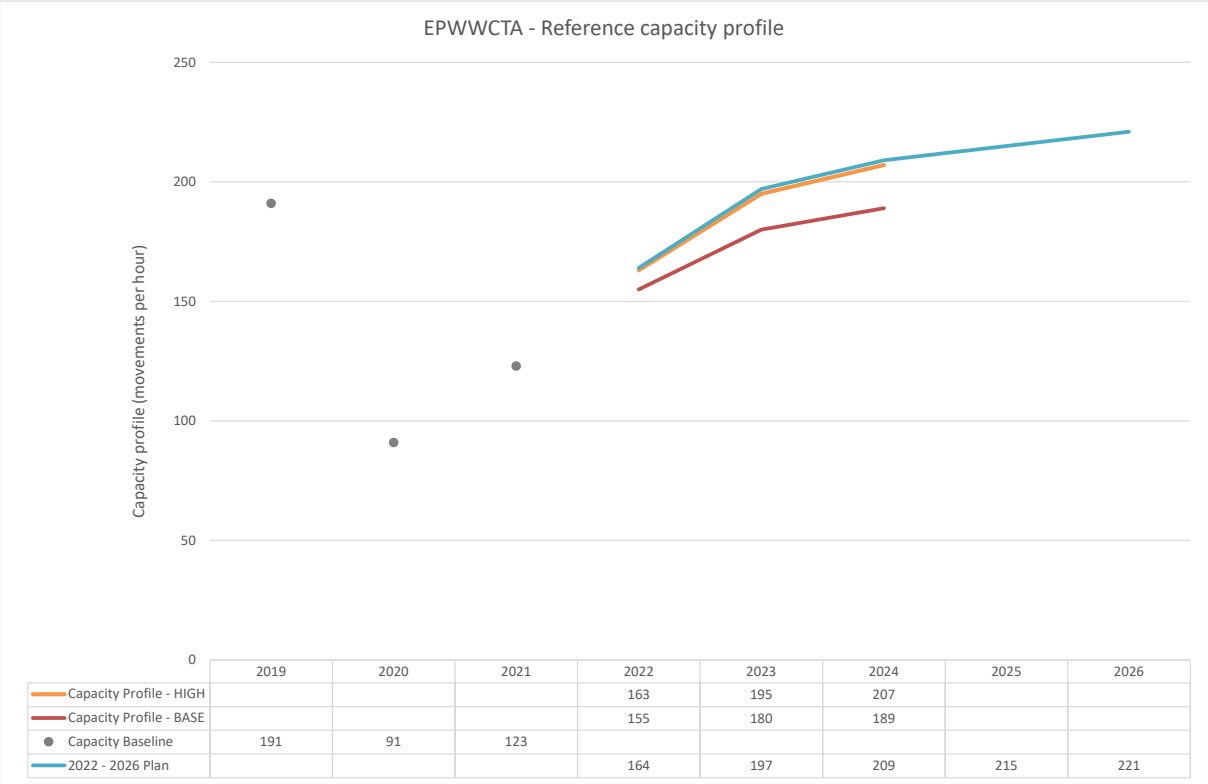


2022-2026 Outlook
No capacity issues are foreseen for Warszawa ACC for the period 2022-2026.

3. Implementation Projects

The tables below present the high-level information about the main projects currently ongoing in Poland. The details of each project are available in the LSSIP+ DB (extraction can be asked to LSSIP FP or LSSIP CP).

3.1.National projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
A-CDM Airport Collaborative Decision Making (PR-55 A-CDM)	PANSA (PL), PPL - Warszawa Airport (PL)	2010-2020	Final stage	L3: AOP05
Campus - construction and design (PZC01)	PANSA (PL)	2016-2029	In scope of schedule - due to COVID19 pandemic and traffic downturn, schedule will be flexible and probably extended (aligned with some lifecycles of ATM/CNS hardware).	RP2 PP: Group of investments - ATC training and contingency infrastructure RP3 PP: Campus - construction and design
Communication system	PANSA (PL)	2018-2028	In scope of schedule - linked with other projects (Campus, OPS Centre Poznań)	L3: COM11.1, ITY-AGVCS2 RP3 PP: Communication systems
Establishment of a Free Route Airspace (Free Route Airspace)	PANSA (PL)	2013-2019	Implemented.	L3: AOM21.2 DP: FRA RP2 PP: FRA
Implement Advanced Surface Movement Guidance and Control System - A-SMGCS system for Warsaw airport (Pr-12 A-SMGCS)	PANSA (PL)	2013-2024	Extending the scope and introducing an advanced traffic management system in EPWA to ensure an adequate level of safety.	L3: AOP04.2, AOP04.1 RP2 PP: Pr-12 A-SMGCS RP3 PP: IA480139_A-SMGCS
MLAT System for FIR Warsaw (PR70)	PANSA (PL)	2015-2026	Ongoing	L3: ITY-ACID RP2 PP: MLAT System for FIR Warsaw RP3 PP: IT440732 - MLAT system for FIR Warsaw

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
Modernisation of ATM System	PANSA (PL)	2014-2022	Ongoing - linked with iTEC development and future deployment.	DP: AF3 Sub. AF3.2 Project Family 3.2.1. RP2 PP: Modernisation of PEGASUS_21 RP3 PP: IT430900_Modernization_of_the_ATM_system_2
Remote TWR (Pr-73)	PANSA (PL)	2014-2023	Ongoing - implementation in stages.	L3: AOP14 RP2 PP: Remote TWR RP3 PP: IR470208_Virtualization_of_ATS_airport _services
SUR Infrastructure (PR-65)	PANSA (PL)	2014-2020	Implemented	L3: ITY-ACID
UAV environment development (U-Space Programme)	PANSA (PL)	2018-2025	In scope of schedule	RP3 PP: IP470701_U-Space_Program
iTEC	PANSA (PL)	2019-2026	In scope of schedule	L3: ATC15.2, ATC18 DP: AF#5 (AF 5.3, AF5.4 AF 5.5, AF 5.6) AF#6 (AF 6.1) RP3 PP: 03440701_iTEC

3.2.FAB projects

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
Enhancement of inter-FAB cooperation and cooperation with non-EU countries (PROJECT 3.1)	Lithuanian CAA/NSA (LT), Mil. Authority (PL), Military Authority (LT), ORO NAVIGACIJA (LT), PANSA (PL), Reg. Authority (PL)	Continuous activity	Outcome of Baltic FAB Implementation Programme Closing Report dated 29 November 2016 states: "Implementation phase is closed. – Baltic FAB ANSPs will continue to seek for further possibilities of common actions in international environment in accordance with Baltic FAB Development Strategy." Project is a continuous activity.	L3: ATC07.1, ATC02.8, AOM21.2, ATC15.1, ATC15.2, ATC12.1
Local Traffic Complexity Management	Lithuanian Airports (LT), Mil. Authority (PL), Military Authority (LT), ORO NAVIGACIJA (LT), PANSA (PL), PPL - Warszawa Airport (PL)	2018-2022	In accordance with the PCP IR (EU 716/2014) and the Deployment Programme, ATM Functionality # 4 (Network Collaborative Management), including the Project Family 4.4.2 (Traffic Complexity tools), is required to be deployed in the European Air Traffic Management Network (EATMN). Project is in implementation stage. PANSA/Poland and Oro Navigacija/Lithuania submitted project application in 2018 Q1, which was approved in November 2018. Project Grant Agreement was signed in December 2018. At the end of November 2018 the project Kick-off meeting was organized in Vilnius in order to discuss project plan, tasks, responsibilities, etc. Note: TCT in Vilnius has been de-scoped from IP2017_057, as due to COVID-19 Oro Navigacija reviewed all projects and considering airspace complexity/investment ratio, in 4Q of 2020 ON management decided to terminate this project. In 2021 ON withdrawn from the common project and is going to implement TCT through NM capabilities.	L3: ATC12.1 DP: DP2017: Family 4.4.2 - Traffic Complexity tools

Name of project:	Organisation(s):	Schedule:	Progress Description:	Links:
iTEC/Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	ORO NAVIGACIJA (LT), PANSA (PL)	2013-2022	Outcome of Baltic FAB Implementation Programme Closing Report dated 29 November 2016 states: "Implementation phase is closed, technical solution has been agreed upon, public procurement announced, contracts signed, implementation procedure started" Cross Border FRA initiative between PL and LT is scheduled to be implemented in 2022.	L3: ATC02.8, ITY-AGDL, ITY-AGVCS2, ITY-FMTP, ATC12.1 RP2 PP: Modernisation of ATM System RP3 PP: IT430900_Modernization_of_the_ATM_system_2

3.3.Multinational projects

None

4. Cooperation activities

4.1.FAB Co-ordination

Baltic Functional Airspace Block.

The Polish ANSP PANSA and Lithuanian SE "Oro Navigacija" have been applying provisions of the Single European Sky initiative consistently. We began our active participation in the multi-annual SESAR 2020 Programme coordinated by the European Union and continued our successful collaboration in the Baltic Functional Airspace Block.

Based on the outcomes of the Baltic FAB Implementation Programme Closing Report dated 29th November 2016, the majority of the projects presented in the previous versions of the LSSIP document were closed due to their completion. Currently, Baltic FAB States, Lithuania and Poland, conduct three main projects. These projects are part of the Action Plan to the Baltic FAB Development Strategy 2025.

In 2021 several initiatives within Baltic FAB were undertaken. In September 2021 there was a workshop organized by Baltic FAB (together with FABEC, GARS and Vilnius Tech) - "Climate change and the role of air traffic control". During a two day meeting there were panels form key aviation stakeholders like EUROCONTROL, DFS and FABEC. In parallel FAB ANSPs CEOs meeting was held in Vilnius, concentrating on current operational and technical activities and common areas of interest, including UTM, digitalization in ATM and environmental aspects. This was continued during FAB ANSPs meeting in PANSA HQ in January 2022. During World ATM Congress 2021 in Madrid, both Oro Navigacija and PANSA took part in panels on Volatility, Traffic Recover, Environment and Capacity as well as Civil-Military Cooperation. Currently both ANSP are involved in in SESAR Wave 2 and 3 projects (PJ10-93, PJ32 and PJ34).

Within the frame of Baltic FAB cooperation, PANSA is working together with Lithuania on the cross-border FRA implementation project (Baltic FRA). Current plans assume implementation during year 2022. The scope of the project also includes introduction of cross-border operations between Baltic FAB (Poland) and Slovakia which also could be translated into the merge of cross-border FRA operation between Baltic FRA and SEE FRA. The implementation will be based on the outcomes of the PJ.06-02 "Management of Performance Based Free Routing in Lower Airspace" project which was led by PANSA during the SESAR2020 wave 1 period (2017-2019).

4.2.Multinational cooperation initiatives

B4 Consortium

B4 Consortium was set up formally on 8 September 2014 by:

- PANSA, Polish ANSP,
- ANS CR, the Czech Republic ANSP,
- LPS SR, š.p., the Slovak Republic ANSP,
- SE "Oro navigacija", Lithuanian ANSP.

It represents small and medium-sized European Air Navigation Service Providers and their third linked parties from research (universities, research centres and consultancy) and industry (equipment manufacturers) community.

PANSA (Poland) and SE "Oro navigacija" (Lithuania) compose the Baltic FAB. ANS CR (Czech Republic) and LPS (Slovakia) belong to neighbouring FAB CE. All 4 ANSPs are the members of GATE ONE.

In February 2017, the preparation of a comprehensive Consortium Agreement was concluded. The signed Agreement establishes the principles of cooperation between the consortium members, the governance structure of the consortium and it defines the responsibilities of members and the principles related to intellectual property rights.

During 2021, B4 Members actively participated in the research and innovations activities in SESAR 2020 Solutions under Industrial Research projects and in works in Transversal and Demonstration projects, thus fulfilling their obligations set out in respective Grant Agreements. The work performed by B4 Members staff included development of innovative operational and technological concepts, execution and participation in execution of validations of new technological and operational solutions as well as contribution to all contractual and projects deliverables.

PANSA is participating in following SESAR 2020 solutions:

- Solution #17: Improved access to secondary airports;
- Solution #25: Safety support tools for avoiding runway excursions;
- Solution #28: Network Connected Airports;
- Solution #29: Digital Smart Airports;
- Solution #35: Multiple Remote Tower and Remote Tower Centre;
- Solution #93: Delegation of airspace between ATSUs using Virtual Centre concept;
- Solution #117: IFR RPAS integration in Airspace Class A to C;
- Solution #53: Improved Ground Trajectory Predictions enabling future automation tools;
- Solution #56: Improved vertical profiles through safe vertical clearances;
- Solution #88: Trajectory Prediction Common Service;
- Solution #40: Mission trajectories management with integrated Dynamic Mobile Areas Type 1 and Type 2;
- Solution #44: Dynamic Airspace Configurations (DAC).

PANSA is also actively participating in the following projects:

- PJ.19-W2: Content Integration;
- PJ.20-W2: Master Planning;
- VLD 02 STAIRS

In 2021 PANSA has started the process of joining the SESAR 3 JU as one of the founding members.

A6 Alliance

The A6 Alliance was founded in 2011 by six ANSP members of the SESAR JU – DFS (Germany), DSNA (France), AENA (Spain) renamed later to ENAIRE, ENAV (Italy), NATS (UK) and NORACON – a consortium of Austro Control (Austria), AVINOR (Norway), EANS (Estonia), Finavia (Finland), IAA (Ireland), LFV (Sweden) and Naviair (Denmark).

Members of the A6 Alliance control more than 80 % of EU air traffic. They are responsible for more than 70 % of the investment in the future air traffic management infrastructure.

In 2015, PANSA became a full member of the A6 Alliance. At the same time, the COOPANS consortium replaced NORACON in all A6 activities and the B4 Consortium joined A6 in the area of SESAR 2020.

The A6 Alliance has also concluded a collaboration agreement with Skyguide in relation to SESAR 2020 R&D activities, as well as with ROMATSA and HungaroControl in relation to SESAR Deployment Manager.

In 2020 A6 Alliance accepted Skyguide as an independent A6 Member and NAV Portugal as COOPANS member in A6. The A6 Alliance plays a significant role in Research & Development through active participation in the SESAR Programme.

Areas of PANSA involvement in 2021:

a) taking part in discussions and information sharing on COVID-19 crisis management
b) preparation of positions regarding operational/technical, policy and legal regulations proposals prepared or led by the EU institutions/bodies together with other partners (Exceptional measures for RP3, SES II+, CP1, U-Space etc.);
c) participation in the SESAR Joint Undertaking (mainly focusing on a successful closing of Wave 1 and preparing the call for Wave 2 of SESAR 2020 Programme), SESAR Deployment Manager and initiatives/projects financed by INEA (SWIM, DLS, etc.);

d) A6 activities: develop proposals for improvement of the ATM system in Europe and drive their implementation (e.g. SESAR Digital Backbone);
e) taking part in preparation of ANSPs positions for negotiations with NM on the new SESAR Deployment and Infrastructure Partnership (SDIP) arrangements.

In 2020 & 2021, PANSA's CEO Mr. Janusz Janiszewski was leading the A6 as a chairman in A6 Steering Board, the highest decision-making body of the alliance responsible for providing strategic directions and decisions, approving the strategies and verification of the achievement of A6 goals.

Gate One

Gate One is a bottom up regional ANSP initiative established in 2013. The purpose of the coordination platform is to promote the efficiency of European Air Traffic Management through enhanced cooperation among the participating service providers, as well as to ensure a more powerful and coordinated advocacy of the region in the European decision-making processes.

Gate One covers three existing Functional Airspace Blocks – FABs (Baltic FAB: Poland and Lithuania, Danube FAB: Romania and Bulgaria and FAB CE: Austria, Bosnia & Herzegovina, Croatia, Czech Republic, Hungary, Slovakia and Slovenia) and two non-EU Flight Information Regions (Belgrade (Serbia) and Skopje (Macedonia).

The members of the Gate One initiative, which is one of the largest regional ANSP platforms in Europe, agreed to play a more active role to explore potential for future inter-FAB cooperation.

The airspace between the Baltic Sea and the Black Sea is one of the most important gateways of the European continent. This region handles air traffic in the directions of North and South, East and West, sustaining links between the central and Nordic countries of the European Union as well as with the continent of Asia and the region of the Middle East.

The actual developments of the European Air Traffic Management industry point towards the assumption that the air navigation service providers of the region, operating under similar conditions, can only be efficient in attaining their interests in case they create a closer cooperation in the coordination of strategic issues (and the operative issues being meaningful at the regional level). Furthermore, they need to strive towards representing a consolidated position concerning common technical and economic issues affecting the region and vital to the Union-wide picture of the Air Traffic Management.

In 2021, Gate One members adopted position on the draft Implementing Decision setting revised Union-wide performance targets for the third reference period, in which they respected the efforts of the European Commission and shared their opinion on safety, capacity, environment, and cost efficiency.

iTEC Collaboration.

The European iTEC Alliance was founded in 2007 by three ANSPs: DFS (Germany), ENAIRE (Spain) and NATS (UK) with Indra as a technology partner. Later on, in 2011, LVNL (Netherlands) joined iTEC Alliance followed by Avinor (Norway) in 2016. The Lithuanian ANSP SE "Oro Navigacija" and the Polish ANSP PANSA officially joined the European iTEC alliance in 2017.

iTEC Alliance provides a platform for synergies and thus cost reductions, helping to realise the vision of a Single European Sky (SES) with greater efficiencies and service standards for Europe's airspace users. The goal of the collaboration is to develop a high-end air traffic management system for busy and complex airspace that meets the Single European Sky ATM Research requirements and enables significant steps towards its productivity.

The members of the iTEC alliance can benefit from sharing of best practices, reduced operational expenditures by sharing development costs and knowledge of risks as well as from enabling accelerated deployment of enhanced systems and future operational concepts.

During 2018-2021, BALTIC FAB ANSPs implemented a joint iTEC Tests, Validations and Planning (iTEC-TVP) project. The iTEC Test, Validation and Planning project concerns the second phase of the PANSA migration to the iTEC-based ATM system. Oro Navigacija is contributing to the project, especially in the matter of cross-border DCT and FRA concept. Baltic FAB ANSPs experts keep working together to achieve sufficient level of cooperation between both ATM Systems: future iTEC Based PANSA System and Oro Navigacija iTEC System, improving interoperability.

PANSA continues its contribution in the iTEC Collaboration – the industrial alliance of the leading European ANSPs and their system provider, INDRA Sistemas. PANSA is particularly involved in the latest iTEC developments – the full unification of the systems and the approach to virtualisation.

Integrated Air Traffic Management

PANSA is continuously supporting the European Community efforts to Digital transformation of ATM, targeting improved efficiency of the European airspace and environmentally friendly sky to fly in the world. PANSA is fully committed to the delivery of the Digital European Sky and was among the major supporters of the new Partnership which is key to achieve the Single European Sky objectives.

CANSO

CANSO is the global voice of the air traffic management industry. As the industry association, CANSO brings the world's air navigation service providers, leading industry innovators and air traffic management specialists together to share knowledge, develop best practice and shape the future for secure and seamless airspace. Together, CANSO members are experts, innovators and the architects of future ATM.

The Purpose of CANSO is to create value for its Members by being the global and regional voice of ATM and by facilitating and supporting improvements in global and regional ATM performance.

CANSO provides safe and efficient air navigation service provision, by:

- Maintaining an international forum for developing and exchanging ideas on current air traffic management related issues;
- Developing an international network for air navigation services (ANS) experts to exchange information and promote best practice within ATC.

CANSO is divided into regions: Africa, Asia-Pacific, Europe, Latin America and the Caribbean, and the Middle East.

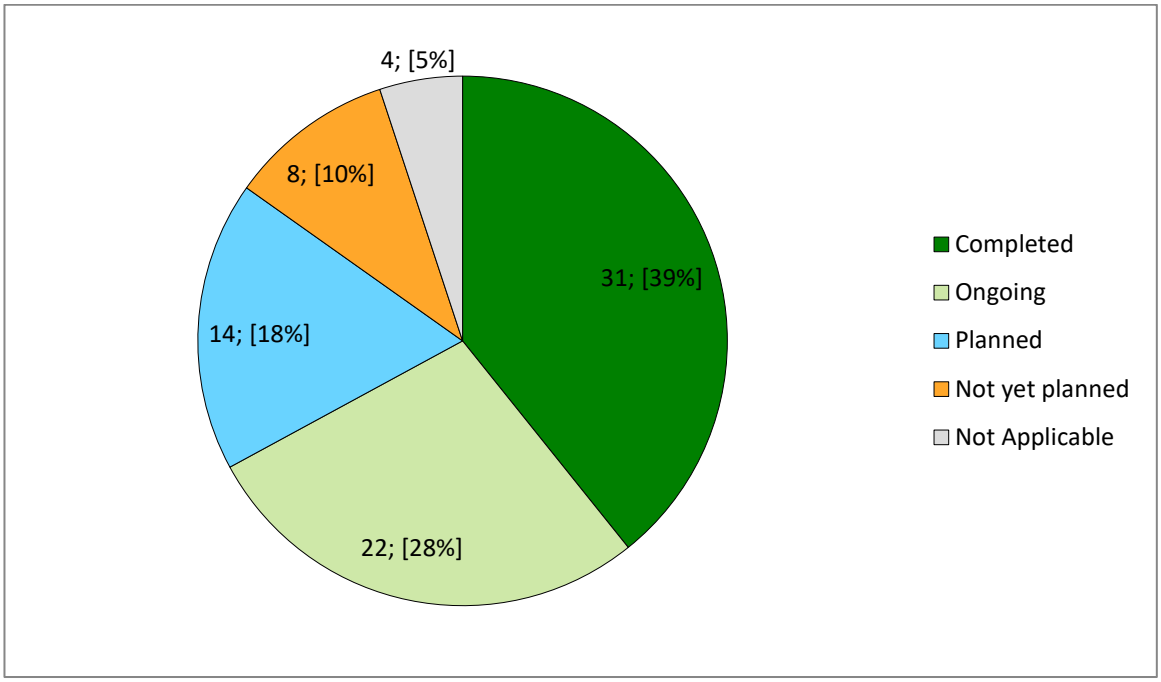
PANSA is a Full Member of CANSO, focusing its contribution on CANSO Europe Region.

Since the beginning of 2021, PANSA Director of Strategy, International Affairs and Projects, Mrs. Magdalena Kukuła has been the chair of the main CANSO Europe work group – Strategic and Political Group (SPG).

5. Implementation Objectives Progress

5.1.State View: Overall Objective Implementation Progress

The graph below shows progress for all Implementation Objectives (applicable and not applicable to the State).



Source: LSSIP+ DB

Summary of the implementation of the objectives

The progress of the implementation objectives during 2021 shows a slight evolution since the past year despite the COVID19 crisis.

25 objectives will benefit from the deployment target dates established in Commission Implementing Regulation (EU) 2021/116 on the establishment of Common Project 1.

Overall, the number of completed objectives has increased from 23 objectives in LSSIP 2020 to 31 objectives, two of them are fully implemented in 2021: FCM06.1 and ENV03.

12 out of 14 Planned Objectives refer in majority to SWIM objectives.

24 objectives were completed in advance of their FOC date (e.g. AOM21.2, almost all ATC obj., COM12, NAV03.1).

On the other hand, for 7 objectives (in Planned or Ongoing status) the planned implementation date goes beyond the full operational capability date set in the European Master Plan Level 3.

Also, there are 22 on-going objectives, 8 with status “not yet planned” and 4 “non-applicable” ones.

5.2.Objective Progress per SESAR Essential Operational Changes

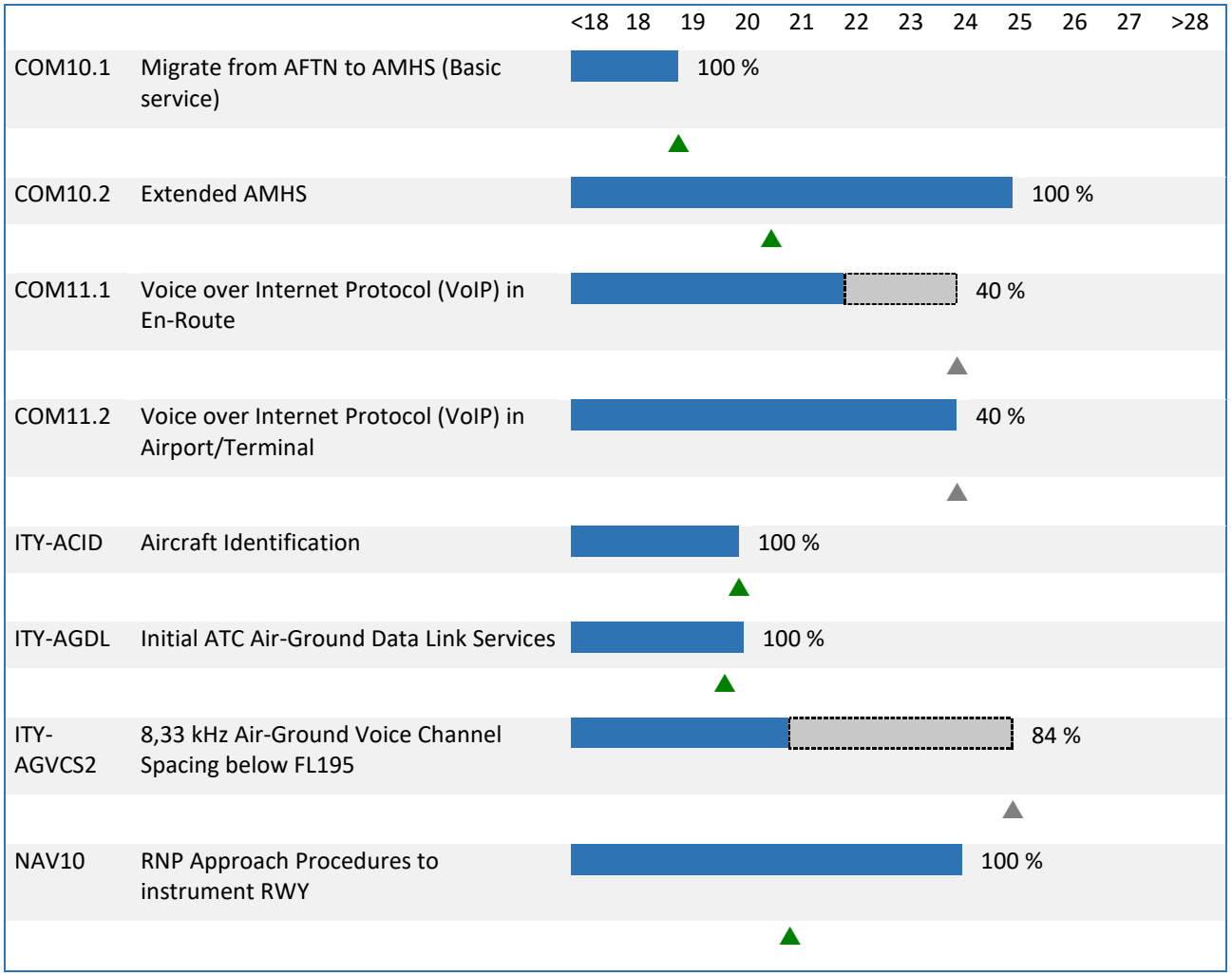
▲ 100% = Objective completed

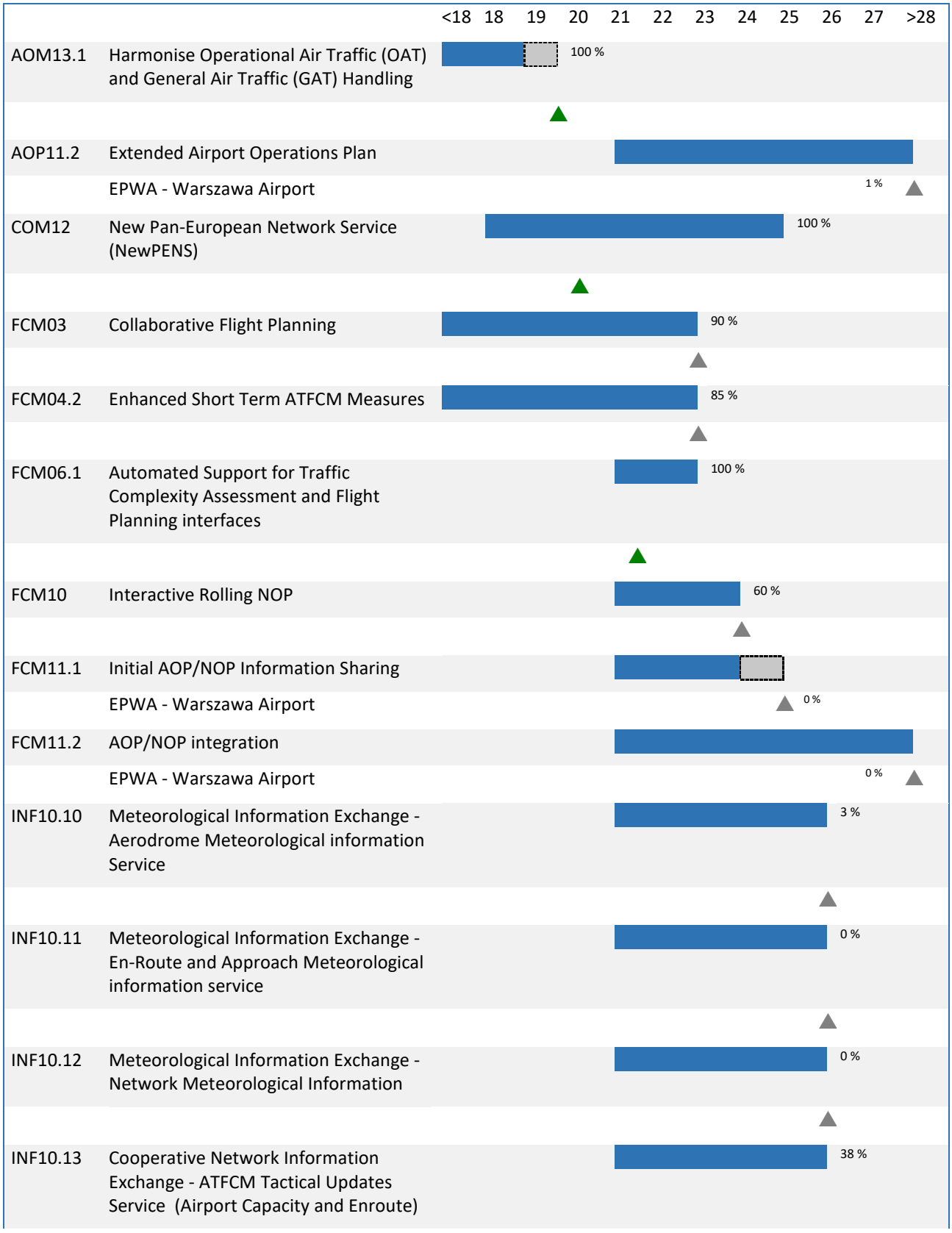
▲ ## % = Expected completion / % Progress

= Implementation Objective timeline (to FOC date)

= Completion beyond Implementation Objective timeline

CNS infrastructure and services

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AOM13.1
Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling
100 %
AOP11.2
Extended Airport Operations Plan
EPWA - Warszawa Airport
1 %
COM12
New Pan-European Network Service (NewPENS)
100 %
FCM03
Collaborative Flight Planning
90 %
FCM04.2
Enhanced Short Term ATFCM Measures
85 %
FCM06.1
Automated Support for Traffic Complexity Assessment and Flight Planning interfaces
100 %
FCM10
Interactive Rolling NOP
60 %
FCM11.1
Initial AOP/NOP Information Sharing
EPWA - Warszawa Airport
0 %
FCM11.2
AOP/NOP integration
EPWA - Warszawa Airport
0 %
INF10.10
Meteorological Information Exchange - Aerodrome Meteorological information Service
3 %
INF10.11
Meteorological Information Exchange - En-Route and Approach Meteorological information service
0 %
INF10.12
Meteorological Information Exchange - Network Meteorological Information
0 %
INF10.13
Cooperative Network Information Exchange - ATFCM Tactical Updates Service (Airport Capacity and Enroute)
38 %

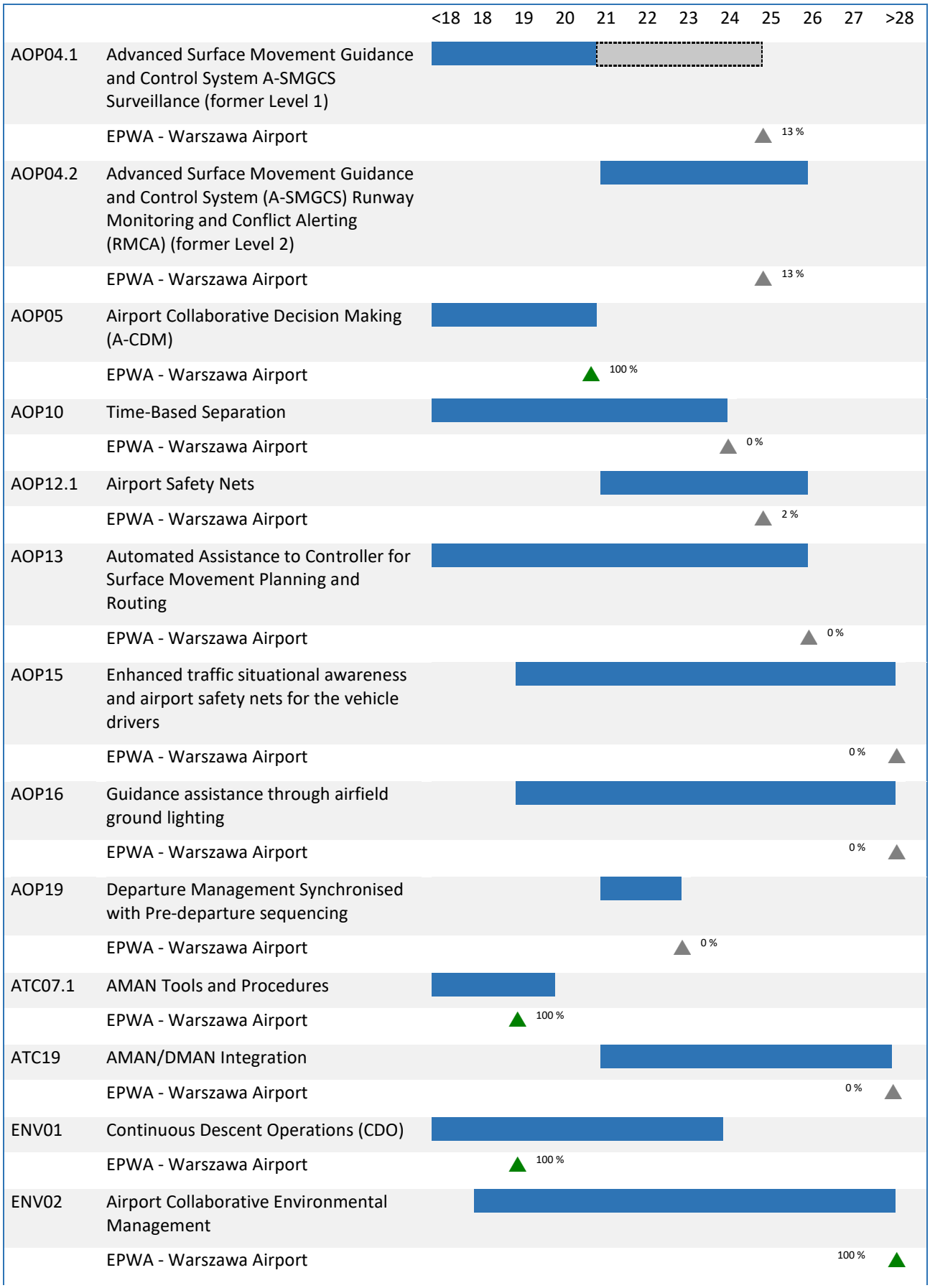
INF10.14	Cooperative Network Information Exchange Flight Management Service (Slots and NOP/AOP integration)	50 %
INF10.15	Cooperative Network Information Exchange Measures Service (Traffic Regulation)	0 %
INF10.16	Cooperative Network Information Exchange - Short Term ATFCM Measures services (MCDM, eHelpdesk, STAM measures)	0 %
INF10.17	Cooperative Network Information Exchange Counts service (ATFCM Congestion Points)	0 %
INF10.19	Flight Information Exchange (Yellow Profile) - Flight Data Request Service	0 %
INF10.2	Stakeholders' SWIM PKI and cyber security	6 %
INF10.20	Flight Information Exchange (Yellow Profile) - Notification Service	0 %
INF10.21	Flight Information Exchange (Yellow Profile) - Data Publication Service	0 %
INF10.23	Flight Information Exchange (Yellow Profile) - Extended AMAN SWIM Service	0 %
INF10.3	Aeronautical Information Exchange - Airspace structure service	100 %
INF10.4	Aeronautical Information Exchange - Airspace Availability Service	100 %
INF10.5	Aeronautical Information Exchange - Airspace Reservation (ARES)	0 %

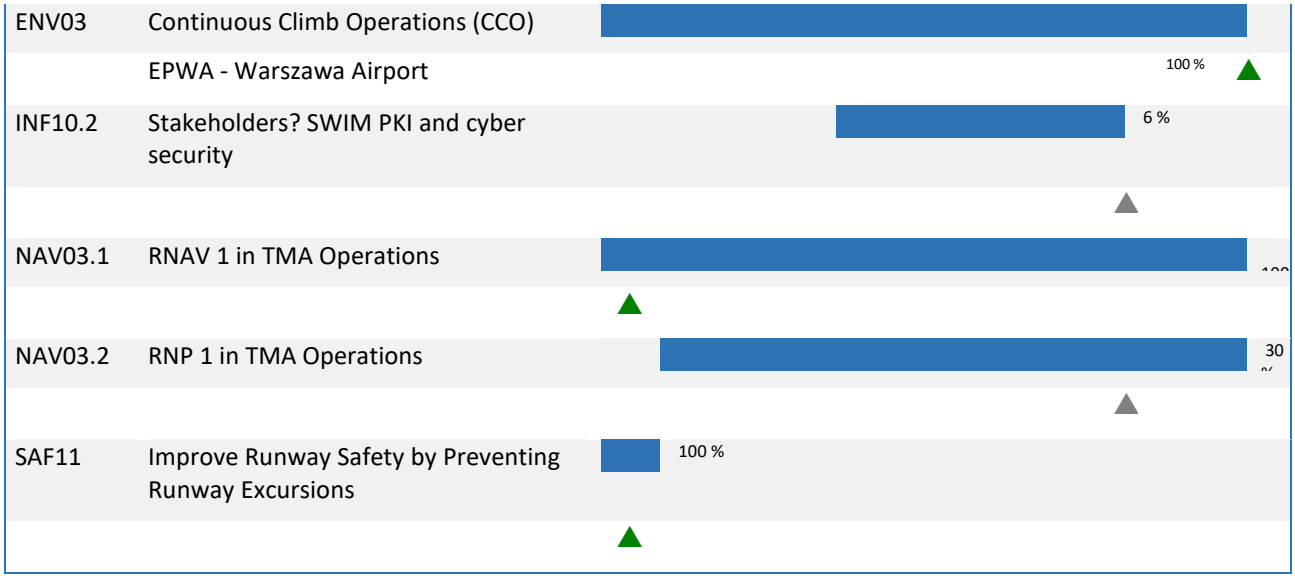
INF10.6	Aeronautical Information Exchange Digital NOTAM service	0 %
INF10.7	Aeronautical Information Exchange - Aerodrome mapping service	0 %
INF10.8	Aeronautical Information Exchange - Aeronautical Information Features service	0 %
INF10.9	Meteorological Information Exchange - Volcanic Ash Mass Concentration information service	3 %

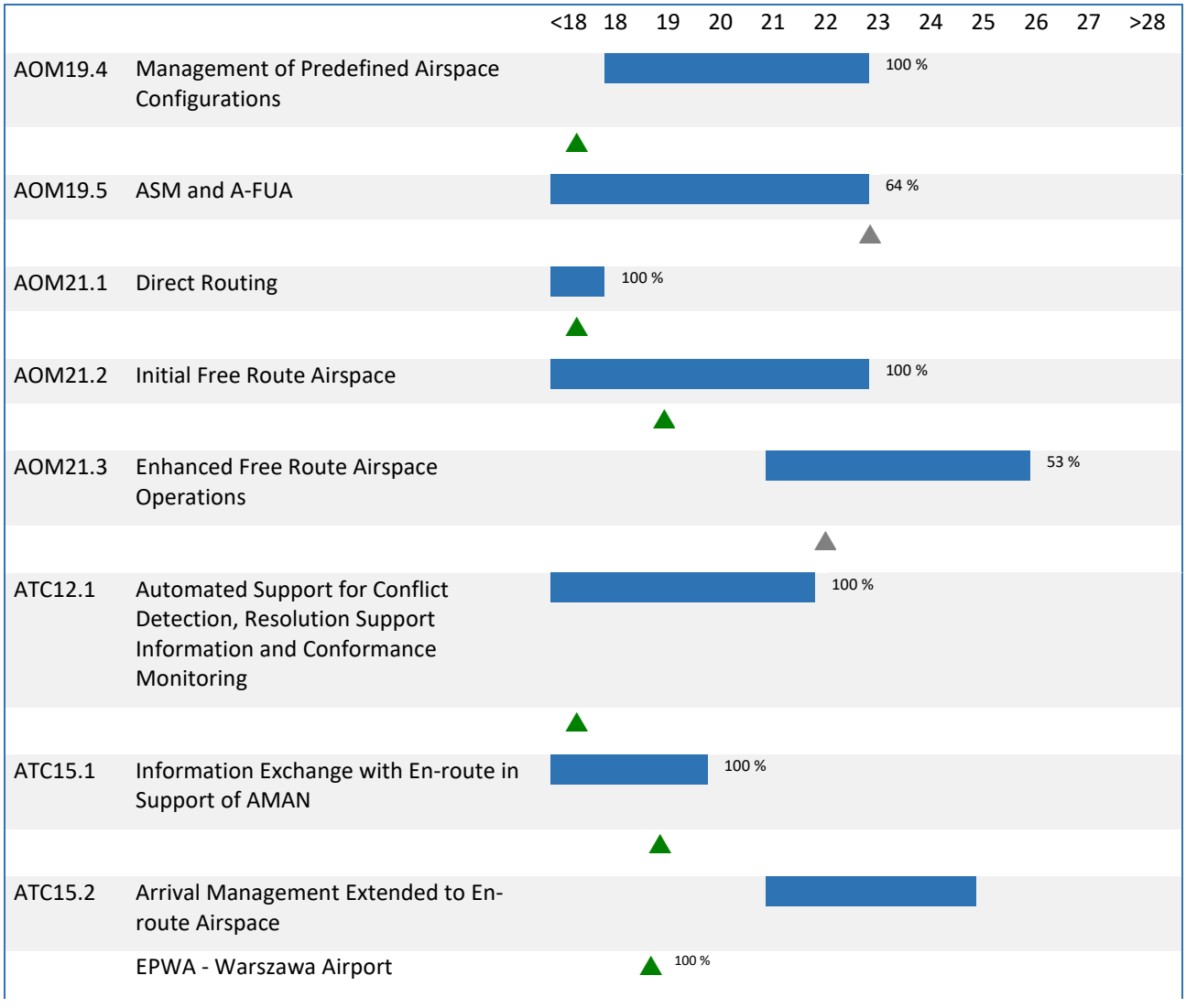
		<18	18	19	20	21	22	23	24	25	26	27	>28
INF07	Electronic Terrain and Obstacle Data (eTOD)								46 %				

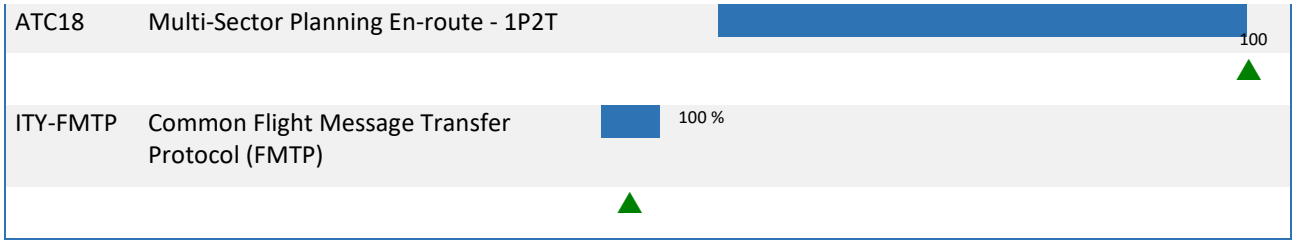
No implementation objectives are available yet for this EOC.

		<18	18	19	20	21	22	23	24	25	26	27	>28
AOP14	Remote Tower Services												
	EPWA - Warszawa Airport											70 %	

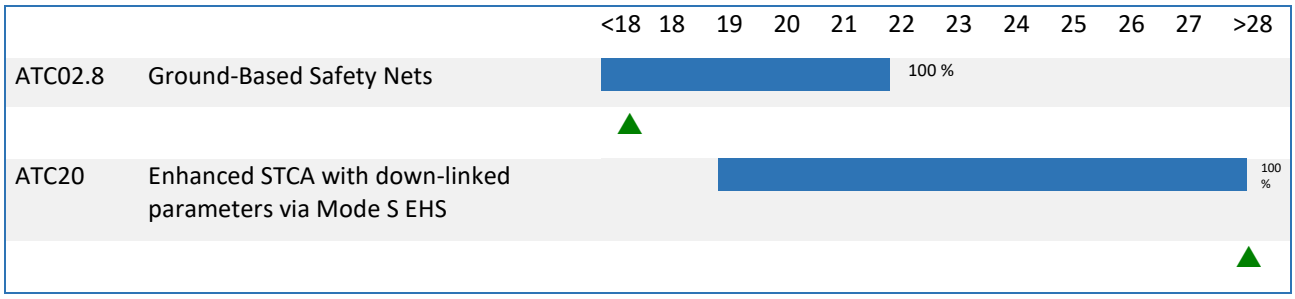

<18 18 19 20 21 22 23 24 25 26 27 >28
AOP04.1 Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)
EPWA - Warszawa Airport 13 %
AOP04.2 Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)
EPWA - Warszawa Airport 13 %
AOP05 Airport Collaborative Decision Making (A-CDM)
EPWA - Warszawa Airport 100 %
AOP10 Time-Based Separation
EPWA - Warszawa Airport 0 %
AOP12.1 Airport Safety Nets
EPWA - Warszawa Airport 2 %
AOP13 Automated Assistance to Controller for Surface Movement Planning and Routing
EPWA - Warszawa Airport 0 %
AOP15 Enhanced traffic situational awareness and airport safety nets for the vehicle drivers
EPWA - Warszawa Airport 0 %
AOP16 Guidance assistance through airfield ground lighting
EPWA - Warszawa Airport 0 %
AOP19 Departure Management Synchronised with Pre-departure sequencing
EPWA - Warszawa Airport 0 %
ATC07.1 AMAN Tools and Procedures
EPWA - Warszawa Airport 100 %
ATC19 AMAN/DMAN Integration
EPWA - Warszawa Airport 0 %
ENV01 Continuous Descent Operations (CDO)
EPWA - Warszawa Airport 100 %
ENV02 Airport Collaborative Environmental Management
EPWA - Warszawa Airport 100 %


ENV03
Continuous Climb Operations (CCO)
EPWA - Warszawa Airport
100 %
INF10.2
Stakeholders? SWIM PKI and cyber security
6 %
NAV03.1
RNAV 1 in TMA Operations
NAV03.2
RNP 1 in TMA Operations
30
SAF11
Improve Runway Safety by Preventing Runway Excursions
100 %

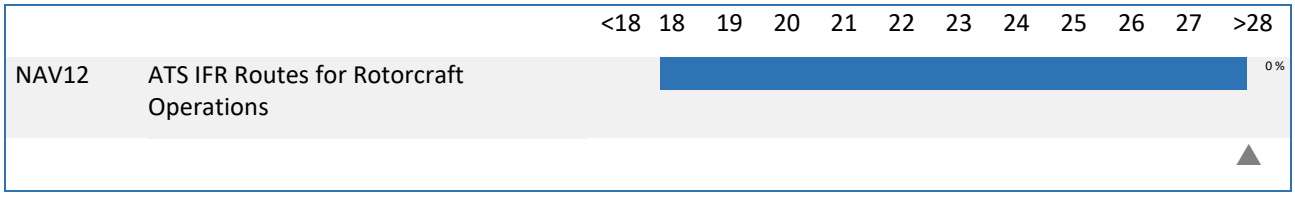

<18 18 19 20 21 22 23 24 25 26 27 >28
AOM19.4
Management of Predefined Airspace Configurations
100 %
AOM19.5
ASM and A-FUA
64 %
AOM21.1
Direct Routing
100 %
AOM21.2
Initial Free Route Airspace
100 %
AOM21.3
Enhanced Free Route Airspace Operations
53 %
ATC12.1
Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring
100 %
ATC15.1
Information Exchange with En-route in Support of AMAN
100 %
ATC15.2
Arrival Management Extended to En-route Airspace
EPWA - Warszawa Airport
100 %



TBO Trajectory -based operations



M3 Multimodal mobility and integration of all airspace users



Source: LSSIP+ DB

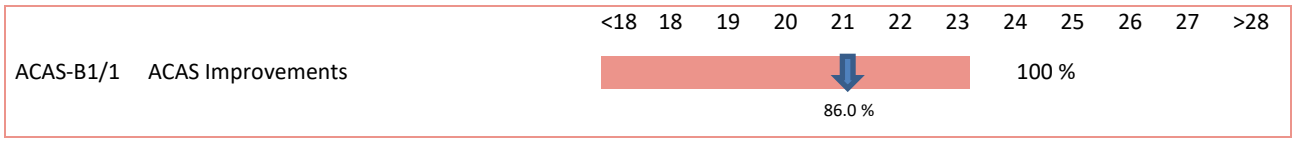
5.3.ICAO ASBU Implementation Progress

The following tables show, for each of the ASBU Elements belonging to a particular ASBU Thread and Block, the overall status, the final date foreseen for completion, and the percentage of progress achieved in the current cycle.

The final set of Block 0 and Block 1 ASBU elements to be monitored in ICAO EUR Region has been approved through written consultation by European Aviation System Planning Group (EASPG) in May 2021, based on the conclusions of the EUR Global Air Navigation Plan (GANP) Transition Project Team.

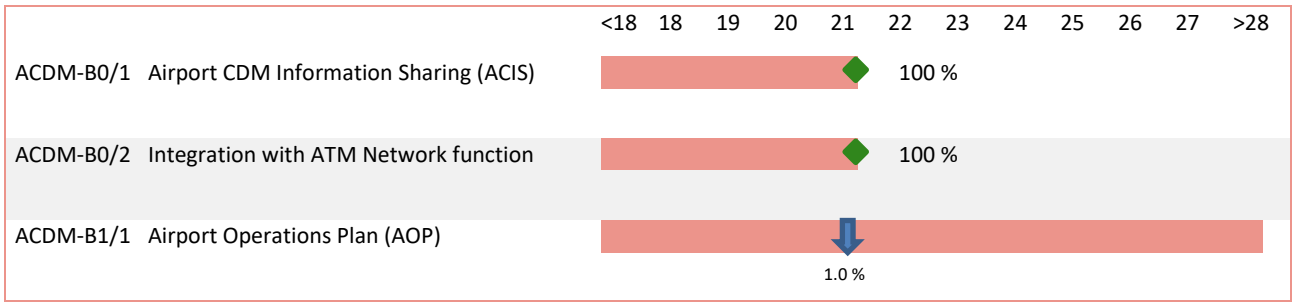
The results below were determined using the LSSIP Year 2021 declared status and progress of the relevant Implementation objectives in accordance with the updated mapping approved by the EASPG/3 meeting.

ACAS



Source: LSSIP+ DB

ACDM

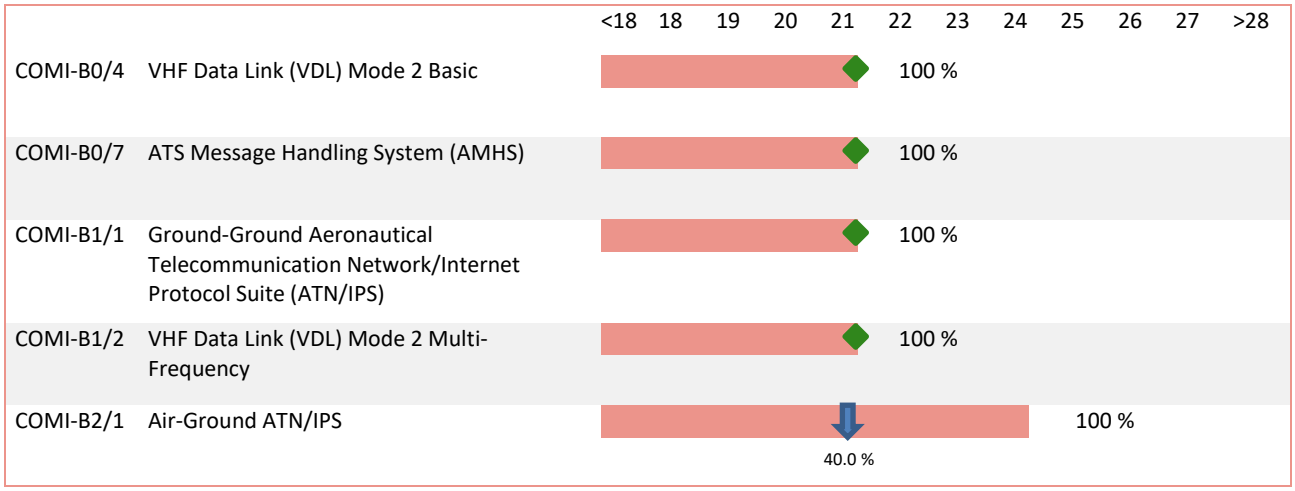


Source: LSSIP+ DB

APTA

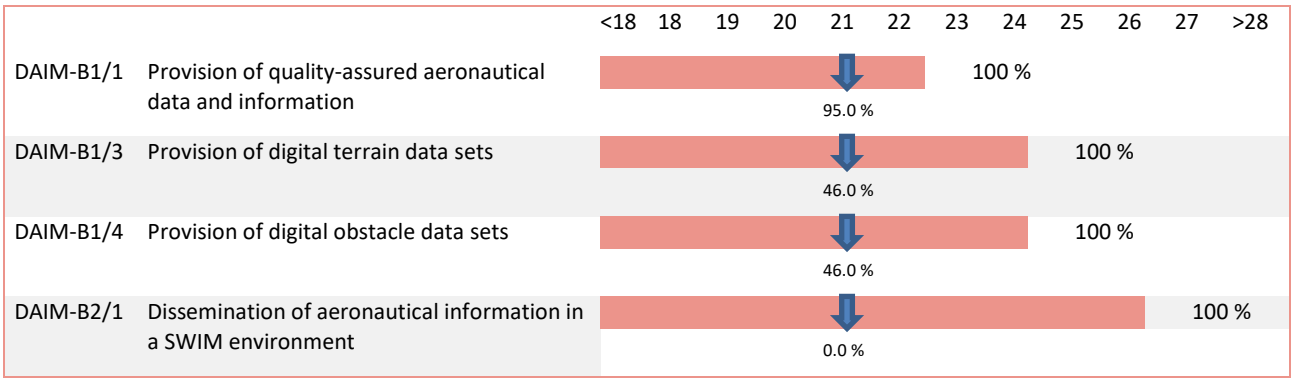
Source: LSSIP+ DB

COMI



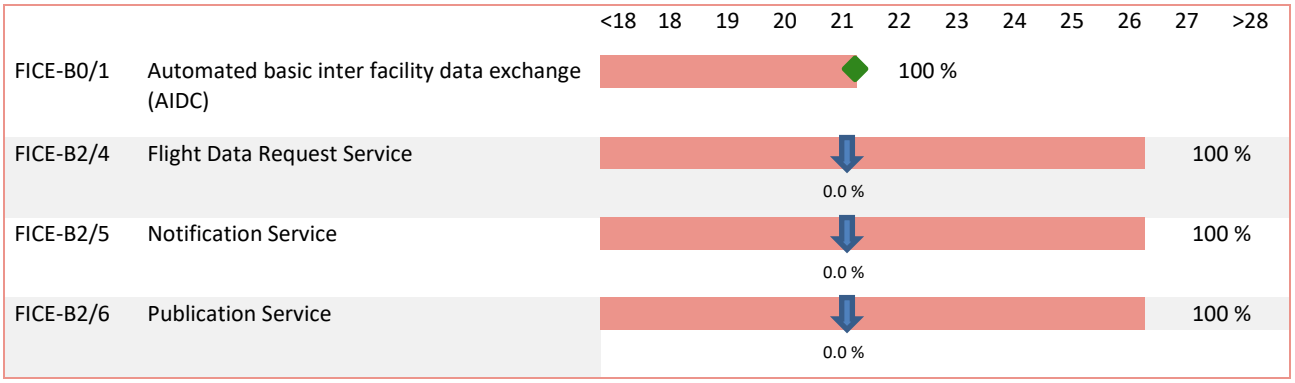
Source: LSSIP+ DB

DAIM



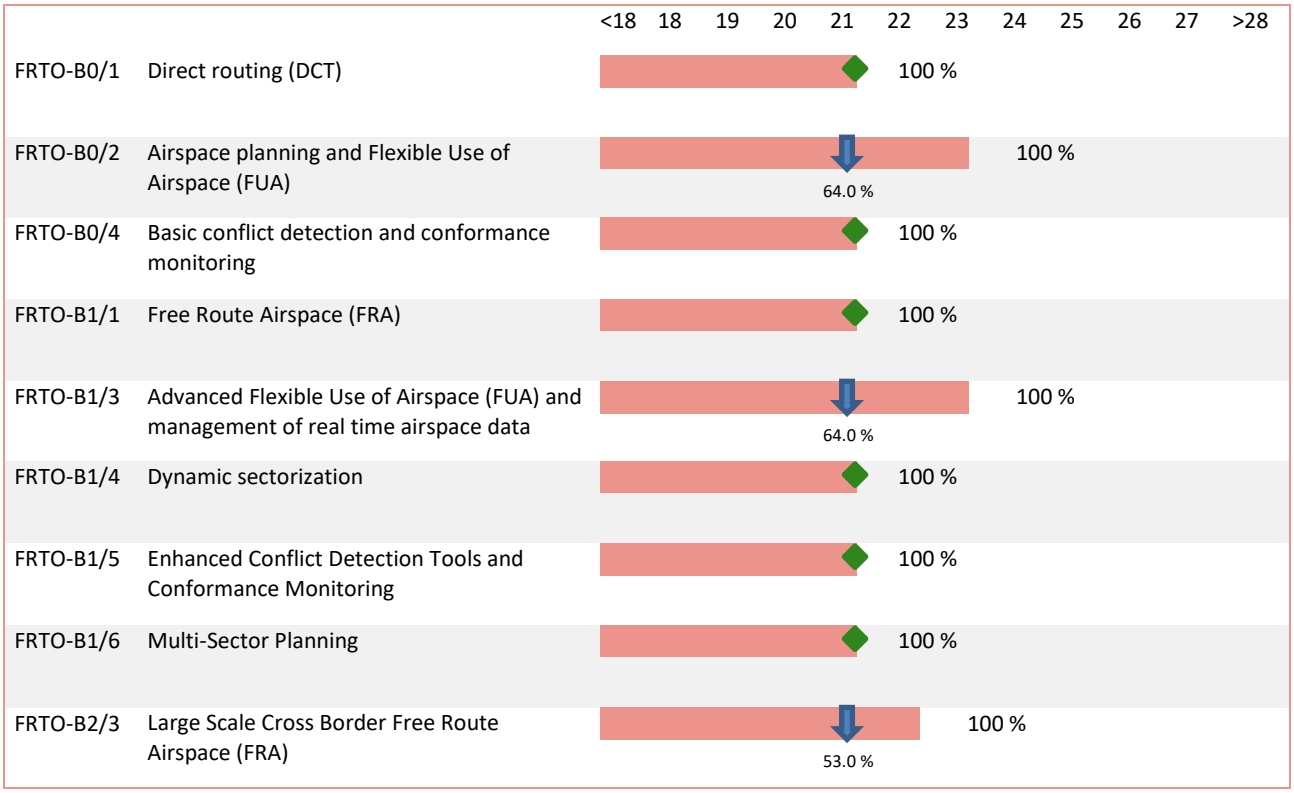
Source: LSSIP+ DB

FICE



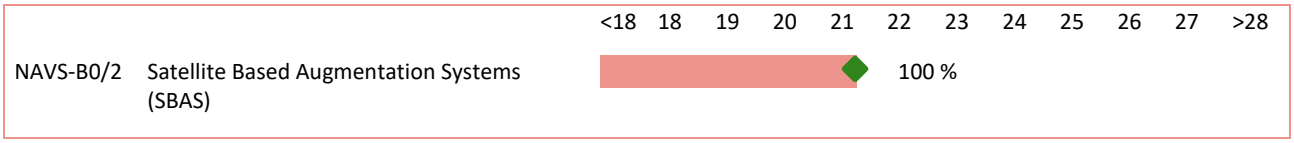
Source: LSSIP+ DB

FRTO



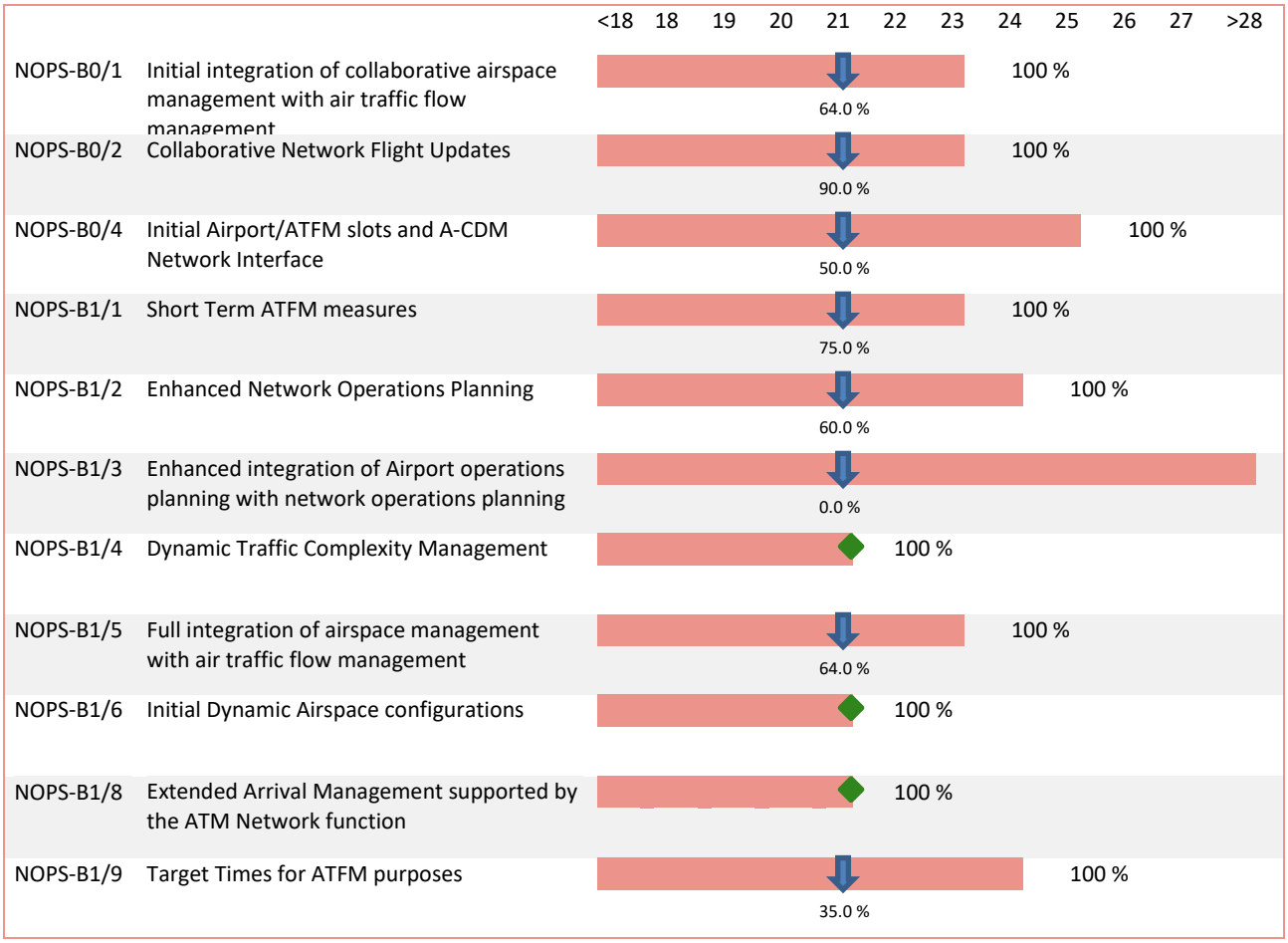
Source: LSSIP+ DB

NAVS



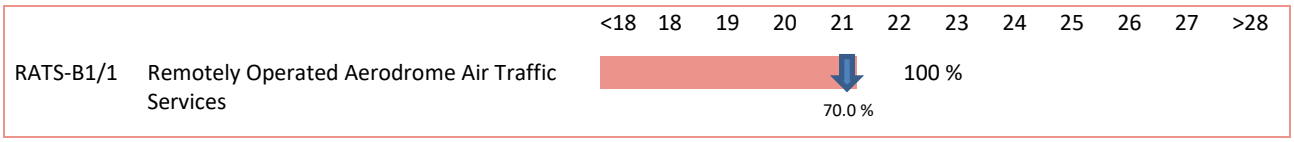
Source: LSSIP+ DB

NOPS



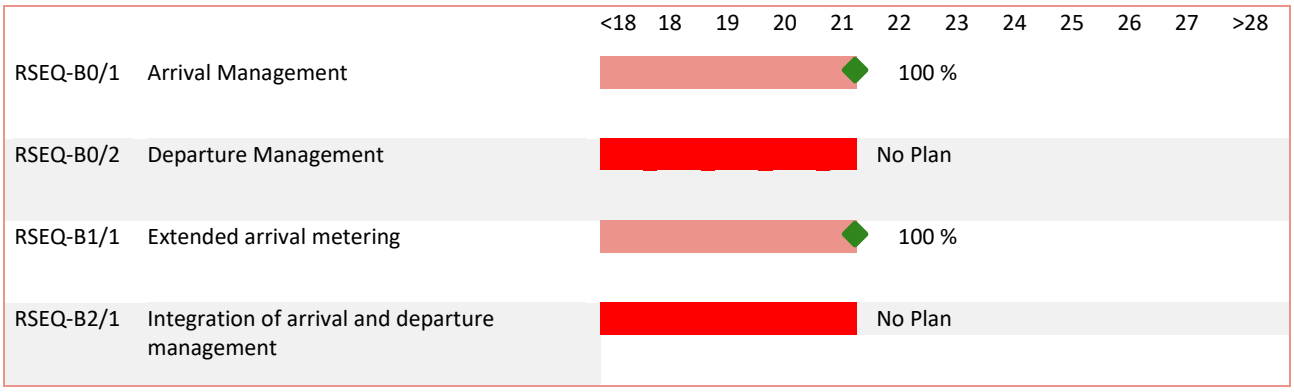
Source: LSSIP+ DB

RATS



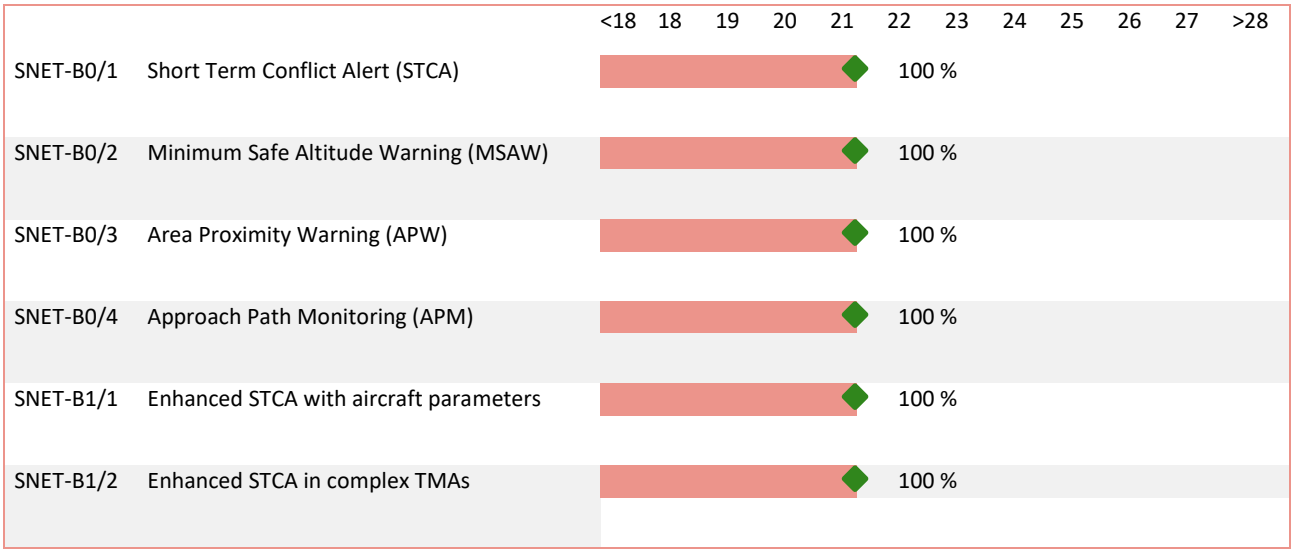
Source: LSSIP+ DB

RSEQ



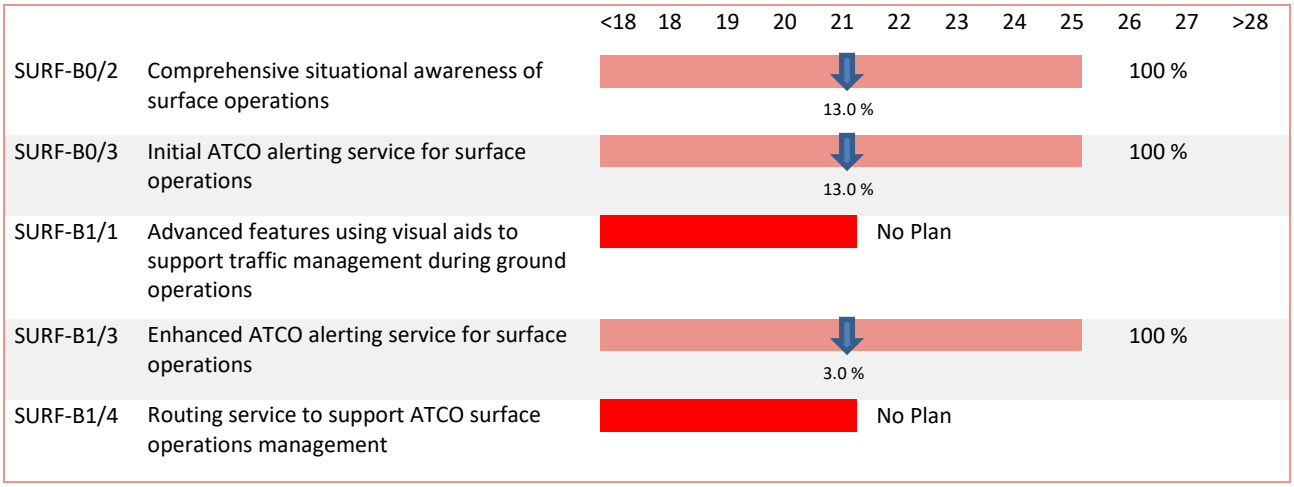
Source: LSSIP+ DB

SNET



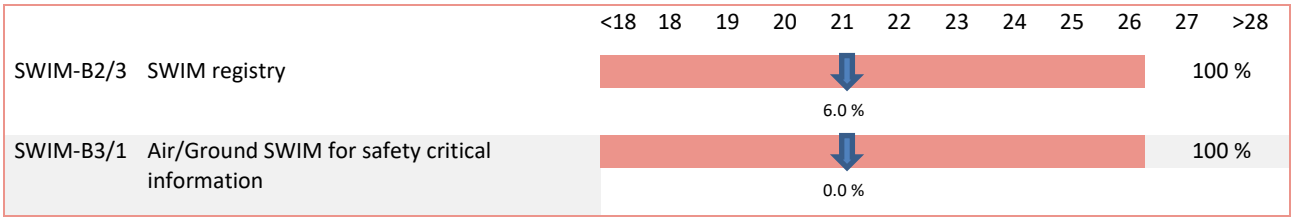
Source: LSSIP+ DB

SURF



Source: LSSIP+ DB

SWIM



Source: LSSIP+ DB

5.4.Detailed Objectives Implementation progress

Objective/Stakeholder Progress Code:			
Completed		Not yet planned	
Ongoing		Not Applicable	
Planned		Missing Data	

Main Objectives

AOM13.1	**Harmonise Operational Air Traffic (OAT) and General Air Traffic (GAT) Handling** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2018		**100%**	**Completed**
Links to Key Features: Optimised ATM Network Services **Links to EOC: ATM Interconnected Network**				
-				
In accordance with OAT/GAT harmonisation, PANSA has implemented new coordination procedures between ACC GAT and ACC OAT. The Regulation of the Minister of Infrastructure of 28 June 2019 on the implementation of the EUROCONTROL Specification on harmonised rules for operational air traffic (OAT) in accordance with the provisions for instrument flights (IFR) in ECAC controlled airspace (EUROAT) entered into force on 27 July 2019. The EUROCONTROL was informed about the official national implementation date on 13 September 2019.				**13/09/2019**
REG (By:12/2018)				
Reg. Authority	The Regulation of the Minister of Infrastructure of 28 June 2019 on the implementation of the EUROCONTROL Specification on harmonised rules for operational air traffic (OAT) in accordance with the provisions for instrument flights (IFR) in ECAC controlled airspace (EUROAT) entered into force on 27 July 2019. The EUROCONTROL was informed about the official national implementation date on 13 September 2019.	-	100%	Completed 27/07/2019
ASP (By:12/2018)				
PANSA	PANSA and the MATSO (Military Air Traffic Service Office) have finished to work on the OAT/GAT harmonization process. LoA regarding OAT between PANSA and MATSO has been signed in 2015. In accordance with OAT/GAT harmonization, PANSA have implemented new coordination procedures between ACC GAT and ACC OAT.	-	100%	Completed 31/12/2017
MIL (By:12/2018)				
Mil. Authority	PANSA and the Polish Air Force have finished the OAT/GAT harmonization process. Military have no EAD terminal but have access to EAD through an agreement with PANSA at national level (Notam by MIL are fed to civil AIS and thus available through EAD). Common AIP covers the Military aspects and needs based on the AIRAC cycle.	-	100%	Completed 13/09/2019

AOM19.4	**Management of Predefined Airspace Configurations** ***Timescales:*** Initial operational capability: 01/01/2018 Full Operational Capability / Target Date: 31/12/2022	**100%**	**Completed**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #31 - Variable profile military reserved areas and enhanced (further automated) civil-military collaboration, #66 - Automated Support for Dynamic Sectorisation** **Links to DP Families: 3.1.2 - Management of Predefined Airspace Configurations** **Links to ICAO ASBUs: FRTO-B1/4, NOPS-B1/6** **Links to EOC: Fully Dynamic and Optimised Airspace**			
-			
ATM system supports up to 500 predefined configurations. In 2018 the system has been upgraded and developed into functionality that enables loading of any combination of sectors from external sources that opens the platform interoperability			**23/11/2016**
ASP (By:12/2022)			
PANSA	-	-	100%	Completed 23/11/2016

AOM19.5	**ASM and A-FUA** ***Timescales:*** Initial Operational Capability: 01/01/2014 Full Operational Capability / Target Date: 31/12/2022	**64%**	**Ongoing**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #31 - Variable profile military reserved areas and enhanced (further automated) civil-military collaboration, #66 - Automated Support for Dynamic Sectorisation** **Links to DP Families: 3.1.1 - ASM and A-FUA** **Links to ICAO ASBUs: FRTO-B0/2, FRTO-B1/3, NOPS-B0/1, NOPS-B1/5** **Links to EOC: Fully Dynamic and Optimised Airspace**			
-			
Drafting operational procedures and development of Local ASM systems support have been started.			**31/12/2022**
ASP (By:12/2022)			
PANSA	-	-	64%	Ongoing 31/12/2022

AOM21.2	**Initial Free Route Airspace** ***Timescales:*** Initial operational capability: 01/01/2015 Full Operational Capability / Target Date: 31/12/2022	**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #32 - Free Route through the use of Direct Routing, #33 - Free Route through Free Routing for Flights both in cruise and vertically evolving above a specified Flight Level, #66 - Automated Support for Dynamic Sectorisation** **Links to DP Families: 3.2.1 - Initial FRA** **Links to ICAO ASBUs: FRTO-B1/1** **Links to EOC: Fully Dynamic and Optimised Airspace**			
-			
Implementation of Free Route Airspace in FIR Warszawa was divided into several steps. First step of FRA implementation namely Direct Routing (Ref to AOM21.1) was completed in 10/12/2015 Second phase – FRA implementation - was implemented on AIRAC 28/02/2019.			**28/02/2019**
ASP (By:12/2022)			

AOM21.2	**Initial Free Route Airspace** ***Timescales:*** Initial operational capability: 01/01/2015 Full Operational Capability / Target Date: 31/12/2022		**100%**	**Completed**
PANSA	Implementation of Free Route Airspace in FIR Warszawa was divided into several steps. First step of FRA implementation namely Direct Routing (Ref to AOM21.1) was completed in 10/12/2015 Second phase – FRA implementation - was implemented on AIRAC 28/02/2019.	Enhancement of inter-FAB cooperation and cooperation with non-EU countries / Establishment of a Free Route Airspace (Free Route Airspace)	100%	Completed 28/02/2019

AOM21.3	**Enhanced Free Route Airspace Operations** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**53%**	**Ongoing**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: PJ.06-01 - Optimized traffic management to enable Free Routing in high and very high complexity cross border environments.** **Links to DP Families: 3.2.2 - Enhanced Free Route Airspace Operations** **Links to ICAO ASBUs: FRTO-B2/3** **Links to EOC: Fully Dynamic and Optimised Airspace**				
-				
Full FRA (ACC Warszawa FL 95-FL660) including connection with TMAs implemented since Feb ‘19. Cross-border FRA operations implementation ONGOING.				**24/02/2022**
ASP (By:12/2025)				
PANSA	Full FRA (ACC Warszawa FL 95 - FL660) including connection with TMAs implemented since FEB 2019. Cross-border FRA operations implementation ONGOING.	-	53%	Ongoing 24/02/2022

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 31/12/2020		**13%**	**Ongoing**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #70 - Enhanced Ground Controller Situation Awareness in all Weather Conditions** **Links to ICAO ASBUs: SURF-B0/2** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
The A-SMGCS system will be implemented at Chopin Airport (EPWA) in cooperation of PANSA and PPL. The project will cover installation of A-SMGCS including surveillance and airport safety support services.				**30/11/2024**
REG (By:12/2010)				
Reg. Authority	A-SMGCS project has started in PANSA for the Warsaw Airport, with appropriate working group arrangements and cooperation with PPL.	-	7%	Ongoing 30/11/2024
ASP (By:01/2021)				

AOP04.1	**Advanced Surface Movement Guidance and Control System A-SMGCS Surveillance (former Level 1)** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 31/12/2020		**13%**	**Ongoing**
PANSA	A SMGCS project has started in PANSA for the Warsaw Chopin Airport, with appropriate working group arrangements and cooperation with PPL. Other stakeholders company might be associated to adequate project activities. At present work is focused on the tender process (competitive dialogue) currently in progress.	Implement Advanced Surface Movement Guidance and Control System - A-SMGCS system for Warsaw airport	3%	Ongoing 30/11/2024
APO (By:01/2021)				
PPL - Warszawa Airport	According agreement signed related to cooperation in A-SMGCS system implementation, General Director of Polish Airports State Enterprise appointed a task force to cooperate with PANSA. PPL's experts were involved in creation Operational Concept Document for A-SMGCS for Chopin Airport.	-	30%	Ongoing 31/12/2022

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2021 Full operational capability: 31/12/2025		**13%**	**Ongoing**
Links to Key Features: High Performing Airport Operations **Links to ICAO ASBUs: SURF-B0/3** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
The A-SMGCS system will be implemented at Chopin Airport (EPWA) in cooperation of PANSA and PPL. The project will cover installation of A-SMGCS including airport safety support functionality.				**30/11/2024**
ASP (By:12/2025)				
PANSA	A SMGCS project has started in PANSA for the Warsaw Chopin Airport, with appropriate working group arrangements and cooperation with PPL. Other stakeholders company might be associated to adequate project activities. At present work is focused on the tender (competitive dialogue) which has been published on 21/07/2016 and is currently in progress.	Implement Advanced Surface Movement Guidance and Control System - A-SMGCS system for Warsaw airport	3%	Ongoing 30/11/2024
APO (By:12/2025)				
PPL - Warszawa Airport	On 26/10/2015 PANSA and PPL signed an agreement related to cooperation in A-SMGCS system implementation. According agreement General Director of Polish Airports State Enterprise appointed a task force to cooperate with PANSA.	-	40%	Ongoing 30/09/2022

AOP04.2	**Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (former Level 2)** ***Timescales:*** Initial operational capability: 01/01/2021 Full operational capability: 31/12/2025		**13%**	**Ongoing**
	PPL experts were involved in creation Operational Concept Document for A-SMGCS for Chopin Airport.			

AOP05	**Airport Collaborative Decision Making (A-CDM)** ***Timescales:*** Initial operational capability: 01/01/2004 Full operational capability: 31/12/2020		**100%**	**Completed**
Links to Key Features: High Performing Airport Operations **Links to ICAO ASBUs: ACDM-B0/1, ACDM-B0/2, NOPS-B0/4** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
A-CDM EPWA has been finished and is now awaiting NM acceptance during operational test procedure. PANSA, PPL and LOT together with ground handling services react to NM comments and suggestions. There are no significant updates of A-CDM algorithm, only small patches in case of errors detected applied. Full implementation and operations date 29.10.2020.				**29/10/2020**
ASP (By:01/2021)				
PANSA	A-CDM EPWA has been finished and is now awaiting NM acceptance during operational test procedure. PANSA, PPL and LOT together with ground handling services react to NM comments and suggestions. There are no significant updates of A-CDM algorithm, only small patches in case of errors detected applied.	A-CDM Airport Collaborative Decision Making	100%	Completed 30/06/2019
APO (By:01/2021)				
PPL - Warszawa Airport	The project organisation comprises already a Steering Committee and focal points in the various stakeholders represented PANSA, Warsaw Chopin Airport authorities, LOT and handling agents. A gap analysis were performed in April 2008. MoU was agreed and signed in March 2009 and updated in 2010 by all involved partners. Full implementation and operations date 29.10.2020. The relevant Airport and ATC Staff took part in the general CDM training organized by IANS (APT ACDM).	A-CDM Airport Collaborative Decision Making	100%	Completed 29/10/2020

AOP10	**Time-Based Separation** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2024	**0%**	**Not yet planned**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #64 - Time Based Separation** **Links to ICAO ASBUs: WAKE-B2/7** **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
Objective not applicable to the EPWA airport but Time-Based Separation is under preliminary analysis process.			-
REG (By:01/2024)			

AOP10	**Time-Based Separation** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 01/01/2024		**0%**	**Not yet planned**
Reg. Authority	-	-	0%	Not yet planned -
ASP (By:12/2024)				
PANSA	Time-Based Separation is under preliminary analysis process.	-	0%	Not yet planned -

AOP11.1	**Initial Airport Operations Plan** ***Timescales:*** - not applicable -		**0%**	**Not Applicable**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #21 - Airport Operations Plan and AOP-NOP Seamless Integration** **Links to DP Families: 2.2.1 - Initial AOP** **Links to ICAO ASBUs: ACDM-B1/1** **Links to EOC: ATM Interconnected Network**				
EPWA - Warszawa Airport (Outside Applicability Area)				
Poland (EPWA) is going to implement Extended AOP.				**-**
ASP (By:12/2023)				
PANSA	Poland (EPWA) is going to implement Extended AOP.	-	0%	Not Applicable -
APO (By:12/2023)				
PPL - Warszawa Airport	Poland (EPWA) is going to implement Extended AOP.	-	0%	Not Applicable -

AOP11.2	**Extended Airport Operations Plan** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2027		**1%**	**Ongoing**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #21 - Airport Operations Plan and AOP-NOP Seamless Integration** **Links to DP Families: 2.2.2 - Extended AOP** **Links to ICAO ASBUs: ACDM-B1/1** **Links to EOC: ATM Interconnected Network**				
EPWA - Warszawa Airport				
More detailed indication regarding AOP implementation are welcomed, for example the results of AOP NOP Implementation Task Force (ANI TF).				**31/12/2027**
ASP (By:12/2027)				
PANSA	-	-	2%	Ongoing 31/12/2027
APO (By:12/2027)				
PPL - Warszawa Airport	-	-	0%	Planned 31/12/2027

AOP12.1	**Airport Safety Nets** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**2%**	**Ongoing**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #02 - Airport Safety Nets for controllers: conformance monitoring alerts and detection of conflicting ATC clearances** **Links to DP Families: 2.3.1 - Airport Safety Nets** **Links to ICAO ASBUs: SURF-B1/3** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
Implementation in scope A-SMGCS project.				**30/11/2024**
ASP (By:12/2025)				
PANSA	Implementation in scope A-SMGCS project.	-	3%	Ongoing 30/11/2024
APO (By:12/2025)				
PPL - Warszawa Airport	Implementation in scope A-SMGCS project.	-	2%	Ongoing 30/11/2024

AOP13	**Automated Assistance to Controller for Surface Movement Planning and Routing** ***Timescales:*** Initial operational capability: 01/01/2016 Full operational capability: 31/12/2025		**0%**	**Not yet planned**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #22 - Automated Assistance to Controller for Surface Movement Planning and Routing, #53 - Pre-Departure Sequencing supported by Route Planning** **Links to ICAO ASBUs: SURF-B1/4** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
Objective not yet planned to the EPWA airport				**-**
REG (By:12/2025)				
Reg. Authority	Objective not yet planned to the EPWA airport.	-	0%	Not yet planned -
ASP (By:12/2025)				
PANSA	Objective not yet planned to the EPWA airport	-	0%	Not yet planned -

AOP19	**Departure Management Synchronised with Pre-departure sequencing** ***Timescales:*** - not applicable -		**0%**	**Not yet planned**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #106 - DMAN Baseline for integrated AMAN DMAN, #53 - Pre-Departure Sequencing supported by Route Planning** **Links to DP Families: 2.1.1 - Departure Management Synchronised with Pre-departure sequencing** **Links to ICAO ASBUs: RSEQ-B0/2** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
No plan so far.				**-**

AOP19	**Departure Management Synchronised with Pre-departure sequencing** ***Timescales:*** - not applicable -		**0%**	**Not yet planned**
ASP (By:12/2022)				
PANSA	-	-	0%	Not yet planned -
APO (By:12/2022)				
PPL - Warszawa Airport	-	-	0%	Not yet planned -

ATC02.8	**Ground-Based Safety Nets** ***Timescales:*** Initial operational capability: 01/01/2009 Full operational capability: 31/12/2021		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to DP Families: 3.2.1 - Initial FRA** **Links to ICAO ASBUs: SNET-B0/2, SNET-B0/3, SNET-B0/4** **Links to EOC: Trajectory Based Operations**				
-				
New ATM system with enhanced safety-nets capabilities is running since November 2013. PANSA developed company policy for safety nets and assigned staff responsible for its maintenance and improvement (completed 30/06/2014). PANSA developed company policy for safety nets and assigned staff responsible for its maintenance and improvement (continuous process). APM is a functional element of MSAW.				**31/12/2016**
ASP (By:12/2021)				
PANSA	New ATM system with enhanced safety-nets capabilities is running since November 2013. PANSA developed company policy for safety nets and assigned staff responsible for its maintenance and improvement (completed 30/06/2014). PANSA developed company policy for safety nets and assigned staff responsible for its maintenance and improvement (continuous process). APM is a functional element of MSAW.	Enhancement of inter-FAB cooperation and cooperation with non-EU countries / iTEC/Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	100%	Completed 31/12/2016

ATC07.1	**AMAN Tools and Procedures** ***Timescales:*** Initial operational capability: 01/01/2007 Full operational capability: 31/12/2019		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: RSEQ-B0/1** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
AMAN for Warsaw and Modlin airport pair, together with the integration of the tool in the PEGASUS_21 ATM system, as well as the capability of receiving inputs from external AMAN systems is completed.				**17/01/2019**
ASP (By:01/2020)				
PANSA	AMAN for Warsaw and Modlin airport pair, together with the integration of the tool in the PEGASUS_21 ATM system, as well as the capability of receiving inputs from external AMAN systems is completed.	Enhancement of inter-FAB cooperation and cooperation with non-EU countries	100%	Completed 17/01/2019

ATC12.1	**Automated Support for Conflict Detection, Resolution Support Information and Conformance Monitoring** ***Timescales:*** Initial operational capability: 01/01/2015 Full operational capability: 31/12/2021		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #104 - Sector Team Operations - En-route Air Traffic Organiser, #27 - MTCD and conformance monitoring tools** **Links to DP Families: 3.2.1 - Initial FRA** **Links to ICAO ASBUs: FRTO-B0/4, FRTO-B1/5** **Links to EOC: Fully Dynamic and Optimised Airspace**				
-				
MTCD implemented and in use since operational of PEGASUS_21 at the end of 2013. Functional upgrade and further fine-tuning of the algorithm is ongoing (continuous improvement process). MTCD does not provide any resolution proposal.				**31/12/2016**
ASP (By:12/2021)				
PANSA	MTCD implemented and in use since operational of PEGASUS_21 at the end of 2013. Functional upgrade and further fine-tuning of the algorithm is ongoing (continuous improvement process).	Enhancement of inter-FAB cooperation and cooperation with non-EU countries / Local Traffic Complexity Management / iTEC / Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	100%	Completed 31/12/2016

ATC15.1	**Information Exchange with En-route in Support of AMAN** ***Timescales:*** Initial operational capability: 01/01/2012 Full operational capability: 31/12/2019		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to EOC: Fully Dynamic and Optimised Airspace**				
-				
Internally basic AMAN implementation is completed for Warsaw and Modlin airport pair. The project includes capability of receiving input from external AMAN systems. Actual operational deployment will depend on demand from adjacent centers.				**17/01/2019**
ASP (By:12/2019)				
PANSA	Internally basic AMAN implementation is completed for Warsaw and Modlin airport pair. The project includes capability of receiving input from external AMAN systems. Actual operational deployment will depend on demand from adjacent centers.	Enhancement of inter-FAB cooperation and cooperation with non-EU countries	100%	Completed 17/01/2019

ATC15.2	**Arrival Management Extended to En-route Airspace** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2024		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #05 - Extended Arrival Management (AMAN) horizon** **Links to DP Families: 1.1.1 - Arrival Management extended to en-route airspace** **Links to ICAO ASBUs: NOPS-B1/8, RSEQ-B1/1** **Links to EOC: Fully Dynamic and Optimised Airspace**				
EPWA - Warszawa Airport				
Arrival Management Extended to En-route Airspace (for arrivals to EPWA and EPMO).				**30/11/2018**
ASP (By:12/2024)				
PANSA	-	Enhancement of inter-FAB cooperation and cooperation with non-EU countries / iTEC	100%	Completed 30/11/2018

ATC15.2bis	**Arrival Management Extended to En-route Airspace (non CP1)** **(Outside Applicability Area)** ***Timescales:*** - not applicable -		**0%**	**Not Applicable**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #05 - Extended Arrival Management (AMAN) horizon** **Links to DP Families: 1.1.1 - Arrival Management extended to en-route airspace** **Links to ICAO ASBUs: NOPS-B1/8, RSEQ-B1/1** **Links to EOC: Fully Dynamic and Optimised Airspace**				
-				
Not applicable				**-**
ASP (By:12/2024)				
PANSA	-	-	0%	Not Applicable -

ATC19	**AMAN/DMAN Integration** ***Timescales:*** - not applicable -		**0%**	**Not yet planned**
Links to Key Features: High Performing Airport Operations **Links to Solutions: #54 - Flow based Integration of Arrival and Departure Management** **Links to DP Families: 1.2.1 - AMAN/DMAN Integration** **Links to ICAO ASBUs: RSEQ-B2/1** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport (Outside Applicability Area)				
CWP is updated and display operational data from En-route AMAN system (TTL and TTG).				-
ASP (By:12/2027)				
PANSA	CWP is updated and display operational data from En-route AMAN system (TTL and TTG).	-	0%	Not yet planned -
APO (By:12/2027)				
PPL - Warszawa Airport	-	-	0%	Not yet planned -

COM10.1	**Migrate from AFTN to AMHS (Basic service)** ***Timescales:*** Initial Operational Capability: 01/12/2011 Full Operational Capability: 31/12/2018		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B0/7** **Links to EOC: CNS Infrastructure and Services**				
-				
AMHS capability and gateway facilities to AFTN are a function of the new AMHS/AFTN system. Extended AMHS functions tested, validated & in operational use.				**31/12/2018**
ASP (By:12/2018)				
PANSA	-	-	100%	Completed 31/12/2018

COM10.2	**Extended AMHS** ***Timescales:*** Initial Operational Capability: 01/12/2011 Full Operational Capability: 31/12/2024		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B0/7** **Links to EOC: CNS Infrastructure and Services**				
-				
Upgrade the AMHS capability in existing COM centres to provide the Extended ATSMHS in accordance with the profile specified in the AMHS Community Specification. Extended AMHS functions tested, validated & in operational use.				**20/08/2020**
ASP (By:12/2024)				
PANSA	-	-	100%	Completed 20/08/2020

COM11.1	**Voice over Internet Protocol (VoIP) in En-Route** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2021		**40%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B2/1** **Links to EOC: CNS Infrastructure and Services**				
-				
PANSA is going to implement VoIP technology in the different components of the ATM COM domain (Ground radio stations - VCS and VCS - VCS). The implementation is foreseen based on EUROCAE standards.				**31/12/2023**
ASP (By:12/2021)				
PANSA	PANSA is going to implement VoIP technology in the different components of the ATM COM domain (Ground radio stations - VCS and VCS - VCS). The implementation is foreseen based on EUROCAE standards. CAO acquainted with the PANSA-s Strategic plan. Additional investment plan which is the basis for long-term PANSA-s Plan, are associated with the implementation of ESSIP objectives. Implementation of the investment for which procurement procedure are carried out, will provide VoIP for EPWA	Communication system	40%	Ongoing 31/12/2023

COM11.2	**Voice over Internet Protocol (VoIP) in Airport/Terminal** ***Timescales:*** Initial operational capability: 01/01/2013 Full operational capability: 31/12/2023		**40%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B2/1** **Links to EOC: CNS Infrastructure and Services**				
-				
PANSA is focused on Voice over Internet Protocol inter-centre telephony (ground communication). With safety analysis it will be possible to migrate radio communication resources dedicated to others services, also taking into account Contingency Center in Poznań.				**31/12/2023**
ASP (By:12/2023)				
PANSA	-	-	40%	Ongoing 31/12/2023

COM12	**New Pan-European Network Service (NewPENS)** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability (33 ANSPs): 31/12/2024		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B1/1** **Links to EOC: ATM Interconnected Network**				
-				
Activity started. PANSA signed New PENS contract 17/04/2018. TWG - Transition Working Group has been created. Migration to NewPENS is completed.				**31/03/2020**
ASP (By:12/2024)				
PANSA	Activity started. PANSA signed New PENS contract 17/04/2018. TWG - Transition Working Group has been created. Migration to NewPENS completed.	-	100%	Completed 31/03/2020
APO (By:12/2024)				

COM12	**New Pan-European Network Service (NewPENS)** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability (33 ANSPs): 31/12/2024		**100%**	**Completed**
PPL - Warszawa Airport	-	-	0%	Not Applicable -

ENV01	**Continuous Descent Operations (CDO)** ***Timescales:*** Initial operational capability: 01/07/2007 Full operational capability: 31/12/2023		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #11 - Continuous Descent Operations (CDO)** **Links to ICAO ASBUs: APTA-B0/4, APTA-B1/4** **Links to EOC: Airport and TMA performance**				
EPWA - Warszawa Airport				
CDA is implemented in P-RNAVs and the operational implementation took place on the 22 of October 2009 for the Warsaw TMA. Operational implementation of the STAR P-RNAV procedures took place on the 17 of December 2009. Objective implemented in 10 out of 15 airports. Publication: EPGD i EPPO – 18 OCT 2012; EPKK i EPKT – 02 JUN 2011; EPMO – 28 JUN 2012; EPWA – 22 OCT 2009; EPWR – 30 MAY 2013; EPLB – 27 APR 2017; EPLL – 05 FEB 2015; EPRZ – 26 APR 2018 AIRAC Cycle.				**01/01/2019**
ASP (By:12/2023)				
PANSA	Implemented in 10 out of 15 airports. Publication: EPGD i EPPO – 18 OCT 2012; EPKK i EPKT – 02 JUN 2011; EPMO – 28 JUN 2012; EPWA – 22 OCT 2009; EPWR – 30 MAY 2013; EPLB – 27 APR 2017; EPLL – 05 FEB 2015; EPRZ – 26 APR 2018 AIRAC Cycle.	-	100%	Completed 01/01/2019
APO (By:12/2023)				
PPL - Warszawa Airport	Implemented in 2009 for night time traffic and during the day if the traffic patterns allow it.	-	100%	Completed 31/12/2009

FCM03	**Collaborative Flight Planning** ***Timescales:*** Initial operational capability: 01/01/2000 Full operational capability: 31/12/2022		**90%**	**Ongoing**
Links to Key Features: Optimised ATM Network Services **Links to ICAO ASBUs: NOPS-B0/2** **Links to EOC: ATM Interconnected Network**				
-				
ADEXP processing is implemented in the new ATM system, although supplementary software might still need upgrades before operational implementation of ADEXP. Switchover from ICAO to ADEXP format is postponed, as there is no operational benefit expected from this action.				**31/12/2022**
ASP (By:12/2022)				
PANSA	ADEXP processing is implemented in the new ATM system, although supplementary software might still need upgrades before operational implementation of ADEXP. Switchover from ICAO to ADEXP format is postponed, as there is no operational benefit expected from this action. Automated AFP messages are supported, but to avoid propagating errors, they are sent automatically only for specific triggers.	-	90%	Ongoing 31/12/2022

FCM04.2	**Enhanced Short Term ATFCM Measures** ***Timescales:*** Initial operational capability: 01/11/2017 Full Operational Capability / Target Date: 31/12/2022		**85%**	**Ongoing**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #17 - Advanced Short-Term ATFCM Measures (STAM)** **Links to DP Families: 4.1.1 - Enhanced Short Term ATFCM Measures** **Links to ICAO ASBUs: NOPS-B1/1** **Links to EOC: ATM Interconnected Network**				
-				
For the moment we are using STAM measures via NM tool. At the same time we're implementing our local ATFCM tool which will be used for STAM measures as well.				**31/12/2022**
ASP (By:12/2022)				
PANSA	For the moment we are using STAM measures via NM tool. At the same time we're implementing our local ATFCM tool which will be used for STAM measures as well.	-	75%	Ongoing 31/12/2022

FCM06.1	**Automated Support for Traffic Complexity Assessment and Flight Planning interfaces** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target date: 31/12/2022		**100%**	**Completed**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #19 - Automated support for Traffic Complexity Detection and Resolution, #37 - Extended Flight Plan, PJ.18-02c - eFPL distribution to ATC** **Links to DP Families: 4.3.1 - Automated Support for Traffic Complexity Assessment and Flight Planning Interfaces** **Links to ICAO ASBUs: NOPS-B1/4** **Links to EOC: ATM Interconnected Network**				
-				
-				**15/07/2021**
ASP (By:12/2022)				
PANSA	TCT is not treated as a primary tool/system. It is a support tool.	-	100%	Completed 15/07/2021

FCM10	**Interactive Rolling NOP** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2023		**60%**	**Ongoing**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #18 - CTOT and TTA, #20 - Collaborative NOP for Step 1** **Links to DP Families: 4.2.1 - Interactive Rolling NOP** **Links to ICAO ASBUs: NOPS-B1/2, NOPS-B1/9** **Links to EOC: ATM Interconnected Network**				
-				
Integrated data-lake "Arena" (internal tool) will be capable of downloading TT.				**31/12/2023**
ASP (By:12/2023)				
PANSA	Integrated data-lake "Arena" (internal tool) will be capable of downloading TT.	-	29%	Ongoing 31/12/2023

FCM11.1	**Initial AOP/NOP Information Sharing** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2023	**0%**	**Planned**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #20 - Collaborative NOP for Step 1, #21 - Airport Operations Plan and AOP-NOP Seamless Integration** **Links to DP Families: 4.2.2 - Initial AOP/NOP Information Sharing** **Links to ICAO ASBUs: NOPS-B0/4** **Links to EOC: ATM Interconnected Network**			
EPWA - Warszawa Airport			
Currently PL is able to exchange A-CDM DPI messages (except P-DPI).			**31/12/2024**
ASP (By:12/2023)			
PANSA	-	-	0%	Planned 31/12/2024
APO (By:12/2023)			
PPL - Warszawa Airport	-	-	0%	Planned 31/12/2024

FCM11.2	**AOP/NOP integration** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2027	**0%**	**Planned**
Links to Key Features: Optimised ATM Network Services **Links to Solutions: #18 - CTOT and TTA, #20 - Collaborative NOP for Step 1, #21 - Airport Operations Plan and AOP-NOP Seamless Integration** **Links to DP Families: 4.4.1 - AOP/NOP Integration** **Links to ICAO ASBUs: NOPS-B1/3** **Links to EOC: ATM Interconnected Network**			
EPWA - Warszawa Airport			
Planned			**31/12/2027**
ASP (By:12/2027)			
PANSA	-	-	0%	Planned 31/12/2027
APO (By:12/2027)			
PPL - Warszawa Airport	-	-	0%	Planned 31/12/2027

INF07	**Electronic Terrain and Obstacle Data (eTOD)** ***Timescales:*** Initial operational capability: 01/11/2014 Full operational capability: 31/12/2018	**46%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: DAIM-B1/3, DAIM-B1/4** **Links to EOC: Digital AIM and MET Services**			
-			
There is no plan for national TOD implementation program. PANSA publishes obstacle data set for Area 1 according to 2020/469 Annex 15 specification. The aerodrome authority also collects aeronautical obstacle data for Area 2 (in obstacle limitation surfaces), 3 and 4 in close cooperation with the CAA. The terrain data will be managed and provided by Polish Head Office of Geodesy and Cartography.			**31/12/2023**

INF07	**Electronic Terrain and Obstacle Data (eTOD)** ***Timescales:*** Initial operational capability: 01/11/2014 Full operational capability: 31/12/2018		**46%**	**Ongoing**
REG (By:01/2019)				
Reg. Authority	Polish CAA has taken several activities regarding the TOD INF07 objective. Since 2006 the CAA specialists have been participating in the eTOD WG meetings in Eurocontrol. The eTOD area 1 obstacle dataset for Poland is already available. For the last four years several national ADQ and eTOD Implementation WG meetings, attended by the CAA, AD and geodetic companies' representatives, have taken place. The Polish CAA is working together with the Polish Head Office of Land Surveying and Cartography in order to make terrain dataset. Concerning obstacles, the Polish CAA is also in close cooperation with MIL Authorities.	-	85%	Ongoing 31/12/2023
ASP (By:01/2019)				
PANSA	Currently PANSA does not have a plan or roadmap of implementation of TOD within Poland. There is no national TOD implementation program. However PANSA publishes obstacle data set for Area 1 according to Annex 15 specification. There is also the plan for collecting obstacles for Area 2, 3 and 4 from Airport Authorities with close cooperation with CAA PANSA already is collecting, managing and providing obstacle data sets for all of areas. The terrain data will be managed and provided by Polish Head Office of Geodesy and Cartography	-	10%	Ongoing 31/12/2023
APO (By:01/2019)				
PPL - Warszawa Airport	EPWA activities with respect to e-TOD: - in zone 2a and 2b air obstacles are systematically monitored (measured) and data about such obstacles are collected, - PPL collects the data of zones 3, 2a, 2b and 2c from the resources of the Chief National Surveyor, which meet the e-TOD standards - zone 3 is optional, no e-TOD data acquired for EPWA, - e-TOD for zone 4 is ready and submitted to CAA All data concerning e-TOD both in discrete (point) and map form are updated and archived on an ongoing basis.	-	5%	Ongoing 31/12/2022

INF10.2	**Stakeholders' SWIM PKI and cyber security** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**6%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.2.1 - Stakeholders' SWIM PKI and cybersecurity** **Links to EOC: ATM Interconnected Network, Airport and TMA performance**				
-				
Please note that in PANSA there is no decision yet, if we will use own-local PKI or common PKI (European Aviation Common PKI – EACP).				**31/12/2025**
ASP (By:12/2025)				
PANSA	Please note that in PANSA there is no decision yet, if we will use own-local PKI or common PKI (European Aviation	-	0%	Planned

INF10.2	**Stakeholders' SWIM PKI and cyber security** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**6%**	**Ongoing**
	Common PKI – EACP).			31/12/2025
APO (By:12/2025)				
PPL - Warszawa Airport	Polish Airports Enterprise (P.P. Porty Lotnicze) manages among others Warsaw Chopin Airport, PPL 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. PPL 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. Polish Airports Enterprise as an Operator of Key Services in Warsaw Chopin Airport conducts constant monitoring and controls cyber security of systems.	-	17%	Ongoing 31/12/2025
MET (By:12/2025)				
IMGW	-	-	2%	Ongoing 31/12/2025

INF10.3	**Aeronautical Information Exchange - Airspace structure service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Objective is completed				**31/12/2018**
ASP (By:12/2025)				
PANSA	-	-	100%	Completed 31/12/2018

INF10.4	**Aeronautical Information Exchange - Airspace Availability Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Objective is completed				**31/12/2018**
ASP (By:12/2025)				
PANSA	-	-	100%	Completed 31/12/2018

INF10.5	**Aeronautical Information Exchange - Airspace Reservation (ARES)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Planned				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.6	**Aeronautical Information Exchange – Digital NOTAM service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
PANSA investment plans up to 2025 cover the implementation of Digital NOTAM Service systems.				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025
AIS (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.7	**Aeronautical Information Exchange - Aerodrome mapping service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Activity is planned by PANSA				**31/12/2025**
AIS (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.8	**Aeronautical Information Exchange - Aeronautical Information Features service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #46 - SWIM Yellow Profile** **Links to DP Families: 5.3.1 - Aeronautical Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Activity is planned by PANSA				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025
AIS (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.9	**Meteorological Information Exchange - Volcanic Ash Mass Concentration information service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**3%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #35 - MET Information Exchange, #46 - SWIM Yellow Profile** **Links to DP Families: 5.4.1 - Meteorological Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Planned				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025
MET (By:12/2025)				
IMGW	-	-	3%	Ongoing 31/12/2025

INF10.10	**Meteorological Information Exchange - Aerodrome Meteorological information Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**3%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #35 - MET Information Exchange, #46 - SWIM Yellow Profile** **Links to DP Families: 5.4.1 - Meteorological Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
-				**31/12/2025**
ASP (By:12/2025)				
PANSA	Integrated data-lake "Arena" (internal tool) will be capable to consume aerodrome MET information services.	-	3%	Ongoing 31/12/2025

INF10.10	**Meteorological Information Exchange - Aerodrome Meteorological information Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**3%**	**Ongoing**
APO (By:12/2025)				
PPL - Warszawa Airport	-	-	0%	Planned 31/12/2025
MET (By:12/2025)				
IMGW	-	-	3%	Ongoing 31/12/2025

INF10.11	**Meteorological Information Exchange - En-Route and Approach Meteorological information service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #35 - MET Information Exchange, #46 - SWIM Yellow Profile** **Links to DP Families: 5.4.1 - Meteorological Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Integrated data-lake "Arena" (internal tool) will be capable to consume En-Route and approach MET information services.				**31/12/2025**
ASP (By:12/2025)				
PANSA	Integrated data-lake "Arena" (internal tool) will be capable to consume En-Route and approach MET information services.	-	0%	Planned 31/12/2025
MET (By:12/2025)				
IMGW	-	-	0%	Planned 31/12/2025

INF10.12	**Meteorological Information Exchange - Network Meteorological Information** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #34 - Digital Integrated Briefing, #35 - MET Information Exchange, #46 - SWIM Yellow Profile** **Links to DP Families: 5.4.1 - Meteorological Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
-				**31/12/2025**
ASP (By:12/2025)				
PANSA	Integrated data-lake "Arena" (internal tool) will be capable to consume NETWORK MET information services.	-	0%	Planned 31/12/2025
MET (By:12/2025)				
IMGW	-	-	0%	Planned 31/12/2025

INF10.13	**Cooperative Network Information Exchange - ATFCM Tactical Updates Service (Airport Capacity and Enroute)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**38%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.5.1 - Cooperative Network Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
PANSA implementation date is in line with CP1 Regulation.			**31/12/2025**
ASP (By:12/2025)			
PANSA	-	-	38%	Ongoing 31/12/2025

INF10.14	**Cooperative Network Information Exchange – Flight Management Service (Slots and NOP/AOP integration)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**50%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.5.1 - Cooperative Network Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
PANSA systems are capable to consume NM flight update information since mid 2021 in the scope of A-CDM for EPWA.			**31/12/2025**
ASP (By:12/2025)			
PANSA	-	-	100%	Completed -
APO (By:12/2025)			
PPL - Warszawa Airport	-	-	0%	Planned 31/12/2025

INF10.15	**Cooperative Network Information Exchange – Measures Service (Traffic Regulation)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.5.1 - Cooperative Network Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
PANSA implementation date is in line with CP1 Regulation.			**31/12/2025**
ASP (By:12/2025)			
PANSA	PANSA implementation date is in line with CP1 Regulation.	-	0%	Planned 31/12/2025

INF10.16	**Cooperative Network Information Exchange - Short Term ATFCM Measures services (MCDM, eHelpdesk, STAM measures)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.5.1 - Cooperative Network Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Cooperative Network Information Exchange - Short Term ATFCM Measures services is planned in 2025.				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.17	**Cooperative Network Information Exchange – Counts service (ATFCM Congestion Points)** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Not yet planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.5.1 - Cooperative Network Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
Not yet planned.				**-**
ASP (By:12/2025)				
PANSA	-	-	0%	Not yet planned -

INF10.19	**Flight Information Exchange (Yellow Profile) - Flight Data Request Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025		**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.6.1 - Flight Information Exchange** **Links to EOC: ATM Interconnected Network**				
-				
PANSA implementation date is in line with CP1 Regulation.				**31/12/2025**
ASP (By:12/2025)				
PANSA	-	-	0%	Planned 31/12/2025

INF10.20	**Flight Information Exchange (Yellow Profile) - Notification Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.6.1 - Flight Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
Planned			**31/12/2025**
ASP (By:12/2025)			

PANSA	-	-	0%	Planned 31/12/2025

INF10.21	**Flight Information Exchange (Yellow Profile) - Data Publication Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.6.1 - Flight Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
Planned			**31/12/2025**
ASP (By:12/2025)			

PANSA	-	-	0%	Planned 31/12/2025

INF10.23	**Flight Information Exchange (Yellow Profile) - Extended AMAN SWIM Service** ***Timescales:*** Initial Operational Capability: 01/01/2021 Full Operational Capability / Target Date: 31/12/2025	**0%**	**Planned**
Links to Key Features: Enabling the Aviation Infrastructure **Links to Solutions: #46 - SWIM Yellow Profile** **Links to DP Families: 5.6.1 - Flight Information Exchange** **Links to EOC: ATM Interconnected Network**			
-			
Planned.			**31/12/2025**
ASP (By:12/2025)			

PANSA	-	-	0%	Planned 31/12/2025

ITY-ACID	**Aircraft Identification** ***Timescales:*** Entry into force of the Regulation: 13/12/2011 System capability: 02/01/2020		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure Links to EOC: CNS Infrastructure and Services				
-				
PANSA defined plans and executed process to implement new radars and WAM systems providing FIR Warsaw mode S coverage. Required operational and technical training and documentation provided in due time as well as safety related activities required as part of the functional changes implementation were under supervision of CAA. Further activity is ongoing to increase number of coverage layers.				**02/01/2020**
ASP (By:01/2020)				
PANSA	PANSA defined plans and executed process to implement new radars and WAM systems providing FIR Warsaw mode S coverage. Required operational and technical training and documentation provided in due time as well as safety related activities required as part of the functional changes implementation were under supervision of CAA. There are two projects ongoing to replace legacy A/C radars and maintain an optimal coverage redundancy level. The projects assume new MSSR modes S/PSR radars and WAM/LAMADS-B systems with implementation dates from 2022.	MLAT System for FIR Warsaw / SUR Infrastructure	100%	Completed 02/01/2020

ITY-AGDL	**Initial ATC Air-Ground Data Link Services** ***Timescales:*** Entry into force: 06/02/2009 ATS unit operational capability: 05/02/2018 Aircraft capability: 05/02/2020		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: COMI-B0/4, COMI-B1/2** **Links to EOC: CNS Infrastructure and Services**				
-				
PANSA has implemented Initial ATC Air-Ground Data Link Services.				**31/10/2019**
REG (By:02/2018)				
Reg. Authority	Poland has implemented Commission Regulation (EC) No 29/2009 amended by the Regulation 310/2015. Requirements contained in AGDL regulation, related to implementation of the data links, will be checked during the process of air-ground data link services approvals.	-	100%	Completed 01/03/2018
ASP (By:02/2018)				
PANSA	PANSA has implemented Initial ATC Air-Ground Data Link Services	iTEC/Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	100%	Completed 31/10/2019
MIL (By:01/2019)				
Mil. Authority	Polish Air Force does not have plans to install data link equipment on state transport aircrafts.	-	0%	Not Applicable -

ITY-AGVCS2	**8,33 kHz Air-Ground Voice Channel Spacing below FL195** ***Timescales:*** Entry into force: 07/12/2012 New and upgraded radio equipment: 17/11/2013 New or upgraded radios on State aircraft: 01/01/2014 Interim target for freq. conversions: 31/12/2014 All radio equipment: 31/12/2017 All frequencies converted: 31/12/2018 State aircraft equipped, except those notified to EC: 31/12/2018 State aircraft equipped, except those exempted [Art 9(11)]: 31/12/2020		**84%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to EOC: CNS Infrastructure and Services**				
-				
Poland has implemented Regulation 1079/2012 ensuring compliance with the requirements on 8.33 kHz frequency conversions. In 2016 PANSA finalised exchanging of all the radio communication equipment used for APP, TWR and ATIS. Frequency conversions and operational implementation is completed. List of State aircraft that cannot be equipped with 8.33 kHz radios has been communicated to the Commission. 92% of concerned State aircraft equipped.				**31/12/2024**
REG (By:12/2018)				
Reg. Authority	Poland has implemented Regulation 1079/2012 ensuring compliance with the requirements on 8.33 kHz frequency conversions.	-	100%	Completed 31/12/2018
ASP (By:12/2018)				
PANSA	In 2016 PANSA finalised exchanging of all the radio communication equipment used for APP, TWR and ATIS. Frequency conversions and operational implementation is completed.	Communication system / iTEC/Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	100%	Completed 08/11/2018
MIL (By:12/2020)				
Mil. Authority	List of State aircraft that cannot be equipped with 8.33 kHz radios has been communicated to the Commission. 92% of concerned State aircraft equipped. Budgetary constraints.	-	30%	Ongoing 31/12/2024
APO (By:12/2018)				
PPL - Warszawa Airport	-	-	0%	Not Applicable -

ITY-FMTP	**Common Flight Message Transfer Protocol (FMTP)** ***Timescales:*** Entry into force of regulation: 28/06/2007 All EATMN systems put into service after 01/01/09: 01/01/2009 All EATMN systems in operation by 20/04/11: 20/04/2011 Transitional arrangements: 31/12/2012 Transitional arrangements when bilaterally agreed between ANSPs: 31/12/2014		**100%**	**Completed**
Links to Key Features: Enabling the Aviation Infrastructure **Links to EOC: Fully Dynamic and Optimised Airspace**				
-				
There is an agreed Communication strategy for PANSA. The objective is well planned but linked to the implementation of the new ATM system (Pegasus 21), which is scheduled past the objective deadline date. PANSA has implemented TCP/IP interfaces to support flight data exchange in the new ATMC system. At this moment operational IPv6 connections are utilised with DFS, LFV and ANS CR.				**31/12/2013**
ASP (By:12/2014)				
PANSA	There is an agreed Communication strategy for PANSA. The objective is well planned but linked to the implementation of the new ATMC system (Pegasus 21), which is scheduled past the objective deadline date. PANSA has implemented TCP/IP interfaces to support flight data exchange in the new ATMC system. At this moment operational IPv6 connections are utilised with DFS, LFV and ANS CR.	iTEC/Convergence of ATM systems in the Baltic FAB ACCs and Cross Borders Service provision with Joint Contingency Service Provision	100%	Completed 31/12/2013
MIL (By:12/2014)				
Mil. Authority	Military do not provide ATC service to civil flights	-	0%	Not Applicable -

NAV03.1	**RNAV 1 in TMA Operations** ***Timescales:*** Initial operational capability: 01/01/2001 One SID and STAR per instrument RWY, where established: 25/01/2024 All SIDs and STARs per instrument RWY, where established: 06/06/2030		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #62 - P-RNAV in a complex TMA** **Links to ICAO ASBUs: APTA-B0/2** **Links to EOC: Airport and TMA performance**				
-				
100% planed RNAV1 SID and STAR is implemented (“PBN Implementation Plan and PANSA “Airspace Strategy “ grant that All instrument RWYs ends will be provided with SIDs & STARs RNAV1-radar TMA or RNP1-non radar TMA)				**31/12/2009**
REG (By:06/2030)				
Reg. Authority	As a part of the implementation of the "PBN Implementation Plan in Poland", Polish CAA receives notifications of changes in the functional system – RNP flight procedures, GNSS, etc. – which are then verified and approved. There is no separate verification of the mentioned Plan as such.	-	100%	Completed 31/12/2009

NAV03.1	**RNAV 1 in TMA Operations** ***Timescales:*** Initial operational capability: 01/01/2001 One SID and STAR per instrument RWY, where established: 25/01/2024 All SIDs and STARs per instrument RWY, where established: 06/06/2030		**100%**	**Completed**
ASP (By:06/2030)				
PANSA	100% planed RNAV1 SID and STAR is implemented ("PBN Implementation Plan and PANSA "Airspace Strategy " grant that All instrument RWYs ends will be provided with SIDs & STARs RNAV1-radar TMA or RNP1-non radar TMA)	-	100%	Completed 31/12/2009

NAV03.2	**RNP 1 in TMA Operations** ***Timescales:*** Start: 07/08/2018 One SID and STAR per instrument RWY, where established: 25/01/2024 All SIDs and STARs per instrument RWY, where established: 06/06/2030		**30%**	**Ongoing**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #09 - Enhanced terminal operations with automatic RNP transition to ILS/GLS, #51 - Enhanced terminal operations with LPV procedures** **Links to ICAO ASBUs: APTA-B1/2** **Links to EOC: Airport and TMA performance**				
-				
RNP-1 are already implemented for EPBY, EPRA, EPRZ, EPLL, EPSY,EPZG (DEP & ARR) On the basis of PANSA's analysis, due to terrain structure, there is no operational need to implement RNP 1 arrival and departure procedures with Radius to Fix (RF). PBN Transition Plan Poland v01 - drafted. PBN Transition Plan Poland v02 - draft for consultation with AUs, Reg, APO, MIL.				**31/12/2025**
REG (By:06/2030)				
Reg. Authority	As a part of the implementation of the "PBN Implementation Plan Poland", Polish CAA receives notifications of changes in the functional system – RNP flight procedures, GNSS, etc. – which are then verified and approved. There is no separate verification of the mentioned Plan as such. Development of "PBN Transition Plan v. 02" is ongoing. The document is expected to be ready by the end of January 2022.	-	100%	Completed 18/12/2020
ASP (By:06/2030)				
PANSA	RNP-1 are already implemented for EPBY, EPRA, EPRZ, EPLL, EPSY, EPSC, EPZG (DEP & ARR) On the basis PANSA's analysis, due to terrain structure, there is no operational need to implement RNP 1 arrival and departure procedures with Radius to Fix (RF). PBN Transition Plan Poland v01 - drafted. PBN Transition Plan Poland v02 - draft for consultation with AUs, Reg, APO, MIL.	-	20%	Ongoing 31/12/2025

NAV10	**RNP Approach Procedures to instrument RWY** ***Timescales:*** Initial operational capability: 01/06/2011 Instrument RWY ends without precision approach in EU SES States.: 03/12/2020 Instrument RWY ends served by precision approach.: 25/01/2024		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #103 - LPV approaches using SBAS as alternative to ILS CAT I** **Links to ICAO ASBUs: APTA-B0/1, APTA-B1/1, NAVS-B0/2** **Links to EOC: CNS Infrastructure and Services**				
-				
PANSA Implemented APV procedures for the Airport in Katowice, Gdansk, Kraków, Wroclaw, Rzeszów, Szczecin, Bydgoszcz, Olsztyn-Mazury, Modlin, Łódź, Lublin. PANSA develops safety assessment (FHA, PSSA and SSA) for each implemented procedures including APV Baro and APV SBAS approaches. At the end of 2020 PANSA has published procedures for all applicable airports with IFR runways.				**31/12/2020**
REG (By:01/2024)				
Reg. Authority	The EASA AMC 20-27 was translated and published on CAA website. EASA AMC 20-28 is still under development.	-	100%	Completed 31/12/2020
ASP (By:01/2024)				
PANSA	PANSA Implemented APV procedures for the Airport in Katowice, Gdansk, Kraków, Wroclaw, Rzeszów, Szczecin, Bydgoszcz, Olsztyn-Mazury, Modlin, Łódź, Lublin PANSA develops safety assessment (FHA,PSSA and SSA) for each implemented procedures including APV Baro and APV SBAS approaches. At the end of 2020 PANSA has completed publishing of the RNP approach procedures for all applicable airports with IFR runways.	-	100%	Completed 31/12/2019

NAV12	**ATS IFR Routes for Rotorcraft Operations** ***Timescales:*** Rotorcraft RNP0.3, RNP1 or RNAV1 ATS routes above FL150, where established.: 03/12/2020 One rotorcraft RNP0.3, RNP01 or RNAV1 SID and STAR per instrument RWY, where established.: 25/01/2024 Rotorcraft RNP0.3, RNP1 or RNAV1 ATS routes below FL150, where established.: 25/01/2024 All rotorcraft RNP0.3, RNP01 or RNAV1 SIDs and STARs per instrument RWY, where established.: 06/06/2030		**0%**	**Not yet planned**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #113 - Optimised low-level instrument flight rules (IFR) routes for rotorcraft** **Links to ICAO ASBUs: APTA-B0/6** **Links to EOC: Multimodal Mobility and integration of all Airspace Users**				
-				
-				-
REG (By:06/2030)				
Reg. Authority	-	-	0%	Not yet planned -
ASP (By:06/2030)				
PANSA	PBN Transition Plan Poland v01 - drafted. PBN Transition Plan Poland v02 - draft for consultation with AUs, Reg, APO, MIL.	-	0%	Not yet planned -

SAF11	**Improve Runway Safety by Preventing Runway Excursions** ***Timescales:*** Initial operational capability: 01/09/2013 Full operational capability: 31/01/2018		**100%**	**Completed**
Links to Key Features: High Performing Airport Operations **Links to EOC: Airport and TMA performance**				
-				
In particular at the main Polish Airport - Warsaw Chopin Airport. The Safety Committee was established to share best practices of runway excursion among the other things. Members of the Safety Committee represent main stakeholders at Warsaw Airport, including Polish Air Navigation Services Agency (PANSA). CAA will exercise its role according to the foreseen timetable on the basis of information from stakeholders.				**01/09/2017**
REG (By:01/2018)				
Reg. Authority	CAA will exercise its role according to the foreseen timetable on the basis of information from stakeholders.	-	100%	Completed 01/09/2017
ASP (By:12/2014)				
PANSA	Dedicated teams for prevention of runway excursions as well as runway incursion were established in the following Polish airports: Warszawa, Katowice, Krakow, Poznan, Wroclaw, Gdansk, Szczecin, Zielona Gora, Rzeszow, Lodz and Bydgoszcz. The one of the main activity of those teams is to implement recommendations of European Action Plan for the Prevention of Runway Excursion. In particular at the main Polish Airport - Warsaw Chopin Airport. The Safety Committee was established to share best practices of runway excursion among the other things. Members of the Safety Committee represent main stakeholders at Warsaw Airport, including Polish Air Navigation Services Agency (PANSA).	-	100%	Completed 31/12/2014
APO (By:12/2014)				
PPL - Warszawa Airport	-	-	100%	Completed 30/09/2014

Additional Objectives for ICAO ASBU Monitoring

AOM21.1	**Direct Routing** ***Timescales:*** Initial Operational Capability: 01/01/2015 Full Operational Capability: 31/12/2017	**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: FRTO-B0/1** **Links to EOC: Fully Dynamic and Optimised Airspace**			
-			
Implementation of Direct Routing (FRA like) in FIR Warszawa is one of the phases of Free Route Airspace Implementation. This phase is already implemented, however it is still under continues development.			**10/12/2015**
ASP (By:12/2017)			
PANSA	The last phase of FRA like in FIR EPWW next package of DCT routes has been implemented from 10.12.2015.	-	100%	Completed 10/12/2015

ATC02.2	**Implement ground based safety nets - Short Term Conflict Alert (STCA) - level 2 for en-route operations** ***Timescales:*** Initial operational capability: 01/01/2008 Full operational capability: 31/01/2013	**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: SNET-B0/1**			
-			
The CAA approved EUROCONTROL STCA Specifications New ATM system with enhanced safety-nets capabilities is running since November 2013. PANSA developed company policy for safety nets and assigned staff responsible for its maintenance and improvement.			-
ASP (By:01/2013)			
PANSA	STCA capabilities in the new system are upgraded compared to the old one. Initial training of ATCOs completed before operational start-up of the new ATM system in November 2013.	-	100%	Completed -

ATC02.9	**Short Term Conflict Alert (STCA) for TMAs** ***Timescales:*** Initial operational capability: 01/01/2018 Full operational capability: 31/12/2020		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #60 - Enhanced Short Term Conflict Alert (STCA) for Terminal Manoeuvring Areas (TMAs)** **Links to ICAO ASBUs: SNET-B1/2**				
-				
STCA function for TMA was deployed at the end of 2013. STCA prediction and violation thresholds for TMA are configured differently than in en-route airspace. Selected Altitude is used to decide if CFL can be used in the STCA prediction algorithm in given case. Further improvement proposals have been identified that can be deployed in the future upgrades. STCA is not using the Multi-Hypothesis STCA Algorithm functionality.				**30/11/2013**
ASP (By:12/2020)				
PANSA	STCA function for TMA was deployed at the end of 2013. STCA prediction and violation thresholds for TMA are configured differently than in en-route airspace. Selected Altitude is used to decide if CFL can be used in the STCA prediction algorithm in given case. Further improvement proposals have been identified that can be deployed in the future upgrades.	-	100%	Completed 30/11/2013

ATC16	**Implement ACAS II compliant with TCAS II change 7.1** ***Timescales:*** Initial operational capability: 01/03/2012 Full operational capability: 31/12/2015		**86%**	**Ongoing**
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: ACAS-B1/1**				
-				
Planned for its timely implementation. No specific training package was developed but all requirements arising from software changes ver 7.0 vs. ver 7.1 are in place in existing training plans and refreshment courses for ATCO. At present the possibility of equipment transport-type aircraft is under review due to budgetary constraints.				**31/12/2022**
REG (By:12/2015)				
Reg. Authority	Planned for its timely implementation.	-	100%	Completed -
ASP (By:03/2012)				
PANSA	No specific training package was developed but all requirements arising from software changes ver 7.0 vs. ver 7.1 are in place in existing training plans and refreshment courses for ATCO	-	100%	Completed -
MIL (By:12/2015)				
Mil. Authority	At present the possibility of equipment transport-type aircraft is under review due to budgetary constraints.	-	53%	Ongoing 31/12/2022

FCM01	**Implement enhanced tactical flow management services** ***Timescales:*** Initial operational capability: 01/08/2001 Full operational capability: 31/12/2006		**100%**	**Completed**
Links to Key Features: Optimised ATM Network Services **Links to ICAO ASBUs: NOPS-B0/2**				
-				
PANSA is equipped with CFMU terminals. Provision of flight activations to CFMU is implemented. Supply ETFMS with Standard Correlated Position is planned using Entry Nodes .as function of the new ATM system. MIL has no Service provision role. MIL does not currently have CFMU terminals				-
ASP (By:07/2014)				
PANSA	PANSA is equipped with CFMU terminals. Provision of flight activations to CFMU is implemented. Supply ETFMS with Standard Correlated Position is planned as function of the new ATM system using Entry Nodes. There is no plan for the implementation of other functions.	-	100%	Completed -

ITY-ADQ	**Ensure Quality of Aeronautical Data and Aeronautical Information** ***Timescales:*** Entry into force of the regulation: 16/02/2010 Article 5(4)(a), Article 5(4)(b) and Article 6 to 13 to be implemented by: 30/06/2013 Article 4, Article5(1) and Article 5(2), Article 5(3) and Article 5(4)(c) to be implemented by: 30/06/2014 All data requirements implemented by: 30/06/2017		**95%**	**Ongoing**
Links to Key Features: Enabling the Aviation Infrastructure **Links to ICAO ASBUs: DAIM-B1/1**				
-				
Operationally, AIS Poland uses AIXM 5.1 format (ADQ compliant), but EAD and other users prefer data in AIXM 4.5 format (not ADQ compliant). Data made available by AIS are not accompanied by ADQ compliant metadata. PANSA instruction for AIM needs to be updated with more transparent description of procedures for manual or semi-automated data processes as well as error reporting and rectification. The existing formal arrangements regarding the co-operation between AIS and other services provided by PANSA (ASM, ATFM, ATS, CNS, and IFP) have proved to be insufficient and do not guarantee that all stakeholders are clearly defined and aware of their responsibilities.				**31/03/2022**
REG (By:06/2017)				
Reg. Authority	The ADQ regulation in no more applicable. Polish CAA for over a year has been checking the quality of data based on the Reg. 469/2020.	-	100%	Completed 01/09/2021
ASP (By:06/2017)				
PANSA		-	80%	Ongoing

ITY-ADQ	**Ensure Quality of Aeronautical Data and Aeronautical Information** ***Timescales:*** Entry into force of the regulation: 16/02/2010 Article 5(4)(a), Article 5(4)(b) and Article 6 to 13 to be implemented by: 30/06/2013 Article 4, Article5(1) and Article 5(2), Article 5(3) and Article 5(4)(c) to be implemented by: 30/06/2014 All data requirements implemented by: 30/06/2017		**95%**	**Ongoing**
	Operationally, AIS Poland uses AIXM 5.1 format (ADQ compliant), but EAD and other users prefer data in AIXM 4.5 format (not ADQ compliant). Data made available by AIS are not accompanied by ADQ compliant metadata. PANSA instruction for AIM needs to be updated with more transparent description of procedures for manual or semi-automated data processes as well as error reporting and rectification. The existing formal arrangements regarding the co-operation between AIS and other services provided by PANSA (ASM, ATFM, ATS, CNS, and IFP) have proved to be insufficient and do not guarantee that all stakeholders are clearly defined and aware of their responsibilities.			31/03/2022
Mil. Authority	Data quality requirements has been fulfilled by ASP. All electronic data is compliant to all requirements and a statement of compliance has been provided to the NSA (30/06/2017).	-	100%	Completed 31/12/2021
APO (By:06/2017)				
PPL - Warszawa Airport	The regulations implementing ADQ (Eurocontrol specifications) have been issued and apply; the employees authorised to enter data are both trained in the knowledge of ADQ (PANSA) and have authorizations to enter data through a relevant IT application, also have access to PLX.	-	100%	Completed 31/10/2019

ITY-COTR	**Implementation of ground-ground automated co-ordination processes** ***Timescales:*** Entry into force of Regulation: 27/07/2006 For putting into service of EATMN systems in respect of notification and initial coordination processes: 27/07/2006 For putting into service of EATMN systems in respect of Revision of Coordination, Abrogation of Coordination, Basic Flight Data and Change to Basic Flight Data: 01/01/2009 To all EATMN systems in operation by 12/2012: 31/12/2012		**100%**	**Completed**
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: FICE-B0/1**				
-				
In the current system Basic OLDI messages are implemented with basic messages being exchanged with all neighbouring ACC at the exception of Kaliningrad. In the new Pegasus system is ready to exchange also other all OLDI messages (not yet operationally used with any partner) will be implemented. Military have one civil working position directly connected to the civil control centre				-
ASP (By:12/2012)				
PANSA	In the current system OLDI is implemented with basic messages being exchanged with all neighbouring ACC, with the exception of Kaliningrad. In the new ATM system is ready to support more advanced features, although the scope of possible enhancements is yet to be confirmed by surrounding partners. Pegasus system all OLDI messages will be implemented.	-	100%	Completed -
MIL (By:12/2012)				
Mil. Authority	Military have one civil working position directly connected to the civil control centre	-	0%	Not Applicable -

Local Objectives

Note: Local Objectives are addressing solutions that are considered beneficial for specific operating environments, therefore for which a clear widespread commitment has not been expressed yet. They are characterised with no deadline and voluntary applicability area.

AOP14	Remote Tower Services *Applicability and timescale: Local*	70%	Ongoing
Links to Key Features: High Performing Airport Operations **Links to Solutions: #12 - Single Remote Tower operations for medium traffic volumes, #13 - Remotely Provided Air Traffic Service for Contingency Situations at Aerodromes, #52 - Remote Tower for two low density aerodromes, #71 - ATC and AFIS service in a single low density aerodrome from a remote CWP** **Links to ICAO ASBUs: RATS-B1/1** **Links to EOC: Virtualisation of Service Provision**			
EPWA - Warszawa Airport			
rTWR project is currently co-led with new Central HUB in PL as testing and validating system with external financing. Implementation date is related to financial schedule. Remote service will be provided. Remote Tower for normal and contingency service provision.			**31/12/2023**

AOP15	Enhanced traffic situational awareness and airport safety nets for the vehicle drivers *Applicability and timescale: Local*	0%	Not yet planned
Links to Key Features: High Performing Airport Operations **Links to Solutions: #04 - Enhanced Traffic Situational Awareness and Airport Safety Nets for the vehicle drivers** **Links to ICAO ASBUs: SURF-B2/2** **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
Not yet planned.			-

AOP16	Guidance assistance through airfield ground lighting *Applicability and timescale: Local*	0%	Not yet planned
Links to Key Features: High Performing Airport Operations **Links to Solutions: #47 - Guidance Assistance through Airfield Ground Lighting** **Links to ICAO ASBUs: SURF-B1/1** **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
No interest to any airport so far.			-

AOP17	Provision/integration of departure planning information to NMOC *Applicability and timescale: Local*	%	Not Applicable
Links to Key Features: High Performing Airport Operations **Links to Solutions: #61 - CWP Airport - Low Cost and Simple Departure Data Entry Panel** **Links to ICAO ASBUs: NOPS-B0/4** **Links to EOC: ATM Interconnected Network**			
EPWA - Warszawa Airport			
EPWA has already deployed A-CDM. Nevertheless - for information: all EPWW airports will be equipped with PANSA 'Terminus' A-CDM & Advanced ATM Tower software. Small and medium airports will stay on its Advanced ATM Tower level that will send DPI messages applicable for AOP17 requirements.			-

AOP18	Runway Status Lights (RWSL) *Applicability and timescale: Local*	0%	Not Applicable
Links to Key Features: High Performing Airport Operations **Links to Solutions: #01 - RunWay Status Lights** **Links to ICAO ASBUs: SURF-B2/2, SURF-B2/3** **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
N/A			-

ATC18	Multi-Sector Planning En-route - 1P2T *Applicability and timescale: Local*	100%	Completed
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #63 - Multi Sector Planning** **Links to ICAO ASBUs: FRTO-B1/6** **Links to EOC: Fully Dynamic and Optimised Airspace**			
-			
The ATM system functionality of having one planner position for two executive positions was technically completed at the beginning of 2017, and now it is being validated by operational staff. Operationally it is used only by FIS and APP (some specific configurations). In ACC the concept of multiplanner was implemented for OAT sectors only.			**08/11/2018**

ATC20	Enhanced STCA with down-linked parameters via Mode S EHS *Applicability and timescale: Local*	100%	Completed
Links to Key Features: Advanced Air Traffic Services **Links to Solutions: #69 - Enhanced STCA with down-linked parameters** **Links to ICAO ASBUs: SNET-B1/1** **Links to EOC: Trajectory Based Operations**			
-			
Technically available form 2018. All ASP SLoAs completed.			**25/10/2018**

ENV02	Airport Collaborative Environmental Management *Applicability and timescale: Local*	100%	Completed
Links to Key Features: High Performing Airport Operations **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
Basic noise instrumentation exists. PPL and PANSA collaborate together in process of optimization SID and STAR procedures in order to minimization impact of noise.			**31/12/2016**

ENV03	Continuous Climb Operations (CCO) *Applicability and timescale: Local*	100%	Completed
Links to Key Features: Advanced Air Traffic Services **Links to ICAO ASBUs: APTA-B0/5, APTA-B1/5** **Links to EOC: Airport and TMA performance**			
EPWA - Warszawa Airport			
SID Procedures are designed according to ICAO's PBN Concept using RNP-1 navigation specification in TMA environment. It is important that it is not feasible to achieve 100% of a CCO operations at EPWA because the great number of factors are to be taken into consideration like actual traffic volume, design of inbound and outbound procedures, crew cooperation, meteorological conditions as well as operational and system changes. CCO rate at EPWA is around level 95% of operations up to FL100. In higher altitudes this parameter is lower due to the operational situation and constraints. Nevertheless, PANSA is continuously improving SID/STAR procedures in order to be ready for CCO operations in maximum possible extent having in mind that safety has always the highest priority. In summary, PANSA operational procedures allows the CCO/CDO operations in maximal possible extent, ATCO are trained for this kind of operations as one of the work-standards being regularly monitored and assessed. Thus, having in mind readiness of PANSA for CCO operations – the LSSIP objective "ENV03 Continuous Climb Operations (CCO)" should be treated as completed. Comment on the period MAR2020 – DEC2021 Due to the Covid-19 situation and the resulting significant decrease in air traffic in FIR EPWW, we achieved higher than expected CCO feasibility in the mentioned period. This is partially due to the fact that the volume of air traffic remained at the level of about 50% of the pre-covid planned traffic for 2020 & 2021			**31/12/2021**

6. Annexes

A. Specialists involved in the ATM implementation reporting for Poland

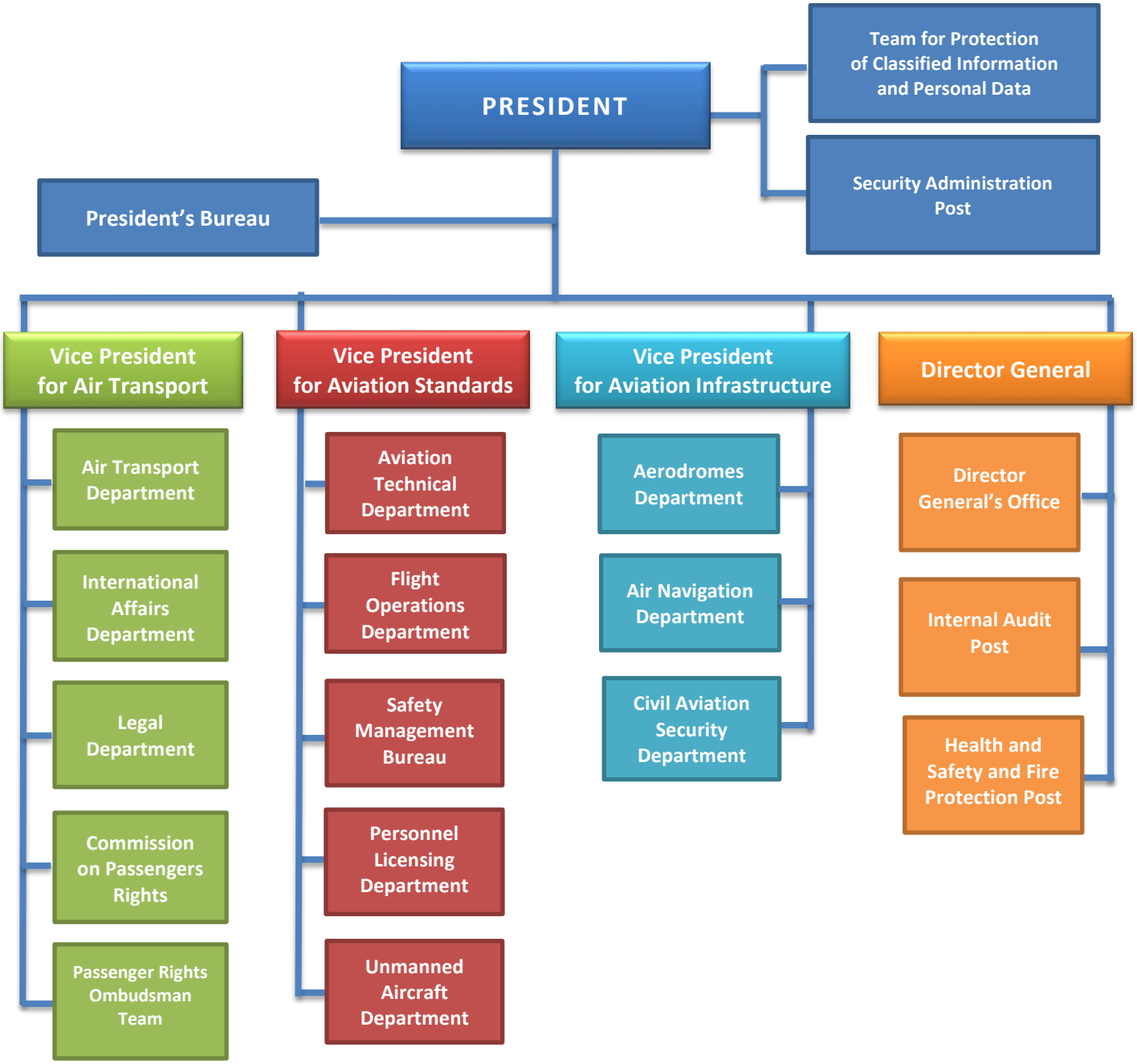
LSSIP Co-ordination

LSSIP Focal Points	Organisation	Name
LSSIP National Focal Point	POLISH AIR NAVIGATION SERVICES AGENCY	Mrs Jolanta WAKULICZ
LSSIP Focal Point for PANSA	POLISH AIR NAVIGATION SERVICES AGENCY	Mr Marcin ZIMNY
LSSIP Focal Point for CAA	CIVIL AVIATION AUTHORITY	Mrs Ewa GÓRECKA-CISZEWSKA
LSSIP Focal Point for NSA	CIVIL AVIATION AUTHORITY	Mr Dariusz WOJTASIK
LSSIP Focal Point for Airport	POLISH AIRPORTS STATE ENTERPRISE	Mr Sławomir LORENT
LSSIP Focal Point for Military	POLISH AIR FORCE	Mr Maj. Marcin ZAŁĘSKI
LSSIP Focal point for MET	IMGW	Mrs Ewa JAKUSIK Mr Jakub MADEJAK Mr Bartłomiej KULESZA

Other Focal Points	Organisation	Name
Focal Point for NETSYS	POLISH AIR NAVIGATION SERVICES AGENCY	Mr Michał MURAWSKI Mr Maciej DĄBROWSKI
Focal Point for SUR	POLISH AIR NAVIGATION SERVICES AGENCY	Mr Dariusz JASIŃSKI
Focal Point for SDP/CP1	POLISH AIR NAVIGATION SERVICES AGENCY	Mr Jakub KĘPA Mr Marcin ZIMNY

B. National stakeholders organisation charts

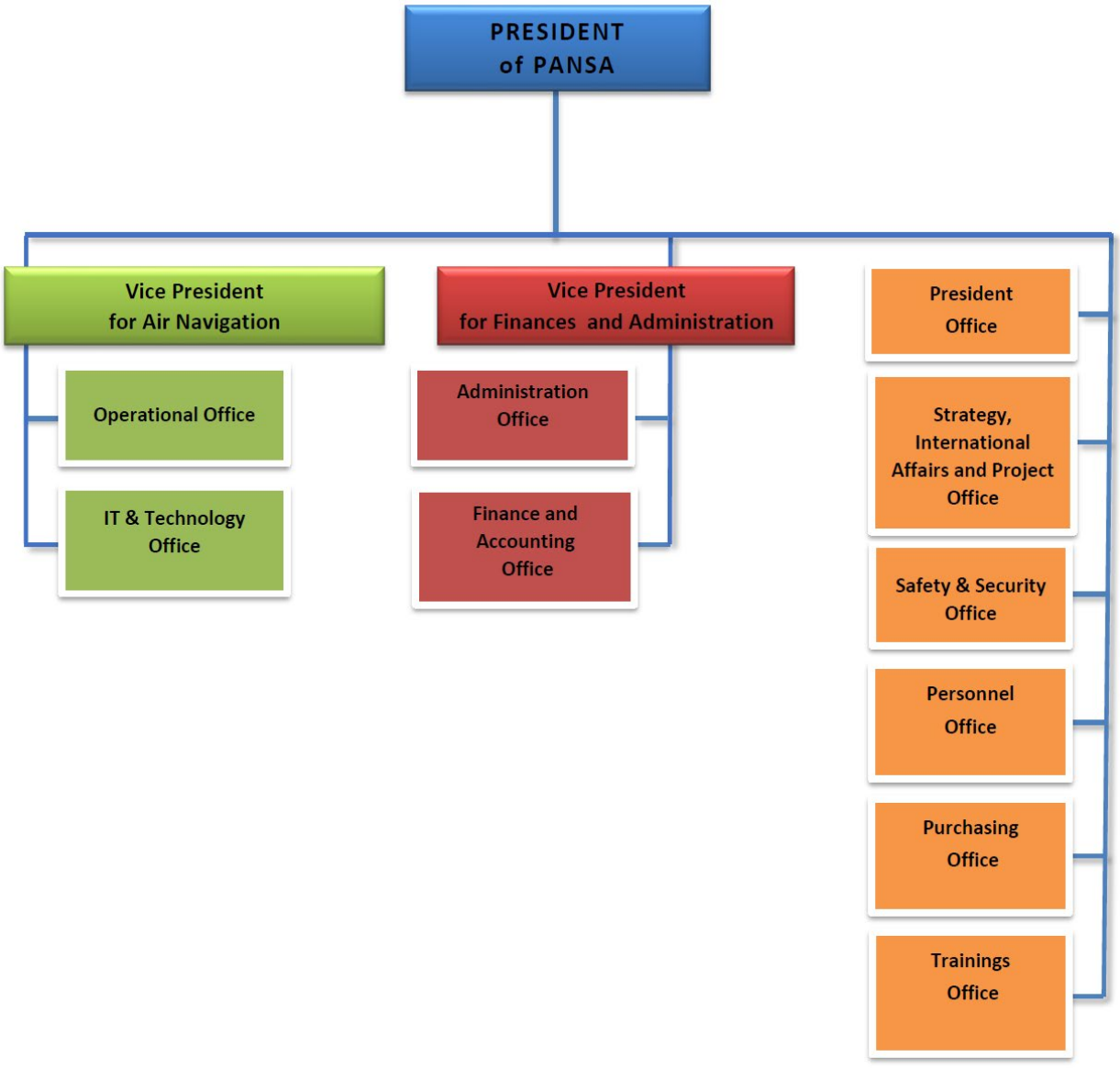
Organisational Structure of the Civil Aviation Authority



PANSA

Polish Air Navigation Services Agency was set up under the Act of 8 December 2006 and started its activity on the 1st of April 2007. The Agency's ongoing activity is supervised by the President of the Civil Aviation Authority under the provision of the Act of 3 July 2002 – the Aviation Law. PANSA performs its functions under the authority of the Minister of Infrastructure.

Organizational Structure of Polish Air Navigation Services Agency



C. Implementation Objectives' links with other plans

The table below (extracted from the MPL3 Plan 2021) shows for each implementation objective, the mapping of the L3 implementation Objectives to the corresponding SESAR Essential Operational Changes, the SESAR Solutions, the Deployment Program families, the ICAO ASBU, the EASA EPAS, the Network Strategy Plan, the Airspace Architecture Study Transition Plan (AAS TP) Milestones and the SESAR Key Features.

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
CNS	ATC21 – Composite surveillance ADS-B/WAM	#114	-	ASUR-B0/1 ASUR-B0/2	RMT.0679 RMT.0519	SO8/3 SO8/4	AM-1.17	EAI
	COM10.1 – Migration from AFTN to AMHS (Basic service)	-	-	COMI B0/7	-	SO7/4	-	-
	COM10.2 – Extended AMHS	-	-	COMI B0/7	-	SO7/4	-	-
	COM11.1 – Voice over Internet Protocol (VoIP) in En-Route	-	-	COMI B2/1	-	SO8/4	AM-1.3	EAI
	COM11.2 – Voice over Internet Protocol (VoIP) in Airport/Terminal	-	-	COMI B2/1	-	SO8/4	-	EAI
	ITY-ACID – Aircraft identification	-	-	-	-	SO8/2	-	EAI
	ITY-AGDL – Initial ATC air-ground data link services	-	-	COMI B0/4 COMI B1/2	RMT.0524	SO4/1 SO8/3	AM-1.1	EAI
	ITY-AGVCS2 – 8.33 kHz Air-Ground Voice Channel Spacing below FL195	-	-	-	-	SO8/1	-	EAI
	NAV10 – RNP Approach Procedures to instrument RWY	#103	-	APTA B0/1 APTA B1/1 NAVS B0/2	RMT.0445 RMT.0643	SO6/5	-	AATS
	NAV11 – Precision Approach using GBAS CAT II/III based on GPS L1	#55	-	NAVS B1/1	RMT.0682 RMT.0379	-	-	HPAO
iN	AOM13.1 – Harmonise OAT and GAT handling	-	-	-	-	SO6/2	-	OANS
	AOP11.1 – Initial Airport Operations Plan	#21	2.2.1	ACDM-B1/1	-	SO6/2	-	HPAO
	AOP11.2 – Extended Airport Operations Plan	#21	2.2.2	ACDM-B1/1	-	SO5/2	-	HPAO
	AOP17 – Provision/integration of DPI to NMOC	#61	-	NOPS B0/4	-	-	-	HPAO

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	COM12 – NewPENS	-	-	COMI B1/1	-	SO2/3 SO2/4 SO8/3 SO8/4	-	EAI
	FCM03 – Collaborative flight planning	-	-	NOPS B0/2	-	SO4/3	AM-1.14	OANS
	FCM04.2 – Enhanced Short Term ATFCM Measures	#17	4.1.1	NOPS B1/1	-	SO4/5	AM-1.11	OANS
	FCM06.1 – Automated Support for Traffic Complexity Assessment and Flight Planning interfaces	#19	4.3.1	NOPS B0/2, NOPS B1/4	-	SO4/3, SO4/5	AM-1.13	OANS
	FCM09 – Enhanced ATFM Slot swapping	#56	-	NOPS B1/7	-	SO6/1	-	OANS
	FCM10 – Interactive rolling NOP	#18 #20	4.2.1	NOPS B1/2	-	SO2/2 SO4/2 SO4/5	AM-1.9 AM-1.12	OANS
	FCM11.1 – Initial AOP/NOP Information Sharing	#20 #21	4.2.2	NOPS-B0/4	-	SO4/4 SO4/5 SO5/2	AM-1.12	OANS
	FCM11.2 – AOP/NOP integration	#18 #20 #21	4.4.1	NOPS-B1/3	-	SO4/4 SO4/5 SO5/2	AM-1.12	OANS
	INF10.2 – Stakeholders' SWIM PKI and cyber security	#46	5.2.1	SWIM-B2/3	RMT.0720	SO2/4	AM-1.5	EAI
	INF10.3 – Aeronautical Information Exchange - Airspace structure service	#46	5.3.1	-	-	SO2/4	AM-1.5	EAI
	INF10.4 – Aeronautical Information Exchange - Airspace availability service	#46	5.3.1	-	-	SO2/4	AM-1.5	EAI
	INF10.5 – Aeronautical Information Exchange - Airspace Reservation (ARES) service	#46	5.3.1	-	-	SO2/4	AM-1.5	EAI
	INF10.6 – Aeronautical Information Exchange - Digital NOTAM service	#34 #46	5.3.1	-	-	SO2/4	AM-1.5	EAI
	INF10.7 – Aeronautical Information Exchange - Aerodrome Mapping	#34 #46	5.3.1	-	-	SO2/4	AM-1.5	EAI

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	information exchange service							
	INF10.8 – Aeronautical Information Exchange - Aeronautical Information Features service	#34 #46	5.3.1	-	-	SO2/4	AM-1.5	EAI
	INF10.9 – Meteorological Information Exchange - Volcanic ash concentration service	#34 #35 #46	5.4.1	-	-	SO2/4	AM-1.5	EAI
	INF10.10 – Meteorological Information Exchange - Aerodrome Meteorological information Service	#34 #35 #46	5.4.1	-	-	SO2/4	AM-1.5	EAI
	INF10.11 – Meteorological Information Exchange - En-Route and Approach Meteorological information service	#34 #35 #46	5.4.1	-	-	SO2/4	AM-1.5	EAI
	INF10.12 – Meteorological Information Exchange - Network Manager Meteorological Information	#34 #35 #46	5.4.1	-	-	SO2/4	AM-1.5	EAI
	INF10.13 – Cooperative Network Information Exchange - ATFCM Tactical Updates Service	#46	5.5.1	-	-	SO2/4	AM-1.5	EAI
	INF10.14 – Cooperative Network Information Exchange - Flight Management Service	#46	5.5.1	-	-	SO2/4 SO5/2	AM-1.5	EAI
	INF10.15 – Cooperative Network Information Exchange - Measures Service	#46	5.5.1	-	-	SO2/4 SO4/5	AM-1.5	EAI
	INF10.16 – Cooperative Network Information Exchange - Short Term ATFCM Measures services	#46	5.5.1	-	-	SO2/4 SO4/5	AM-1.5	EAI
	INF10.17 – Cooperative Network Information	#46	5.5.1	-	-	SO2/4	AM-1.5	EAI

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	Exchange - Counts service							
	INF10.18 – Flight Information Exchange - Filing Service	#46	5.6.1	FICE-B2/2	-	SO2/4	AM-1.5	EAI
	INF10.19 – Flight Information Exchange - Flight Data Request Service	#46	5.6.1	FICE-B2/4	-	SO2/4	AM-1.5	EAI
	INF10.20 – Flight Information Exchange - Notification Service	#46	5.6.1	FICE-B2/5	-	SO2/4	AM-1.5	EAI
	INF10.21 – Flight Information Exchange - Publication Service	#46	5.6.1	FICE-B2/6	-	SO2/4	AM-1.5	EAI
	INF10.22 – Flight Information Exchange - Trial Service	#46	5.6.1	FICE-B2/3	-	SO2/4	AM-1.5	EAI
	INF10.23 – Flight Information Exchange - Extended AMAN SWIM Service	#46	5.6.1	DAIM-B2/1 SWIM-B3/1	-	SO2/4	AM-1.5	EAI
dS	INF07 – Electronic Terrain and Obstacle Data (e-TOD)	-	-	DAIM B1/3 DAIM B1/4	RMT.0703 RMT.0722	SO2/5	-	EAI
U-s	-	-	-	-	-	-	-	-
vS	AOP14 – Remote Tower Services	#12 #13 #52 #71	-	RATS B1/1	RMT.0624	SO6/5	-	HPAO
	AOP04.1 – A-SMGCS Surveillance (former Level 1)	#70	-	SURF B0/2	MST.0029	SO6/6	-	HPAO
	AOP04.2 – A-SMGCS RMCA (former Level 2)	-	-	SURF B0/3	MST.0029	SO6/6	-	HPAO
ATp	AOP05 – Airport CDM	-	-	ACDM B0/1 ACDM B0/2 NOPS B0/4	-	SO6/4	-	HPAO
	AOP10 – Time Based Separation	#64	-	WAKE B2/7	-	SO6/5	-	HPAO
	AOP12.1 – Airport Safety Nets	#02	2.3.1	SURF B1/3	MST.0029	SP6/6	-	HPAO

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	AOP13 – Automated assistance to Controller for Surface Movement planning and routing	#22 #53	-	SURF B1/4	MST.0029	SO6/6	-	HPAO
	AOP15 – Safety Nets for vehicle drivers	#04	-	SURF B2/2	MST.0029	-	-	HPAO
	AOP16 – Guidance assistance through airfield lighting	#47	-	SURF B1/1	MST.0029	-	-	HPAO
	AOP18 – Runway Status Lights	#01	-	-	MST.0029	-	-	HPAO
	AOP19 – Departure Management Synchronised with Pre-departure sequencing	#53 #106	2.1.1	RSEQ-B0/2	-		-	HPAO
	AOP20 – Wake Turbulence Separations for Departures based on Static Aircraft Characteristics (S-PWS-D)	PJ.02-01-06	-	WAKE-B2/4	RMT.0476		-	HPAO
	AOP21 – Wake Turbulence Separations for Arrivals based on Static Aircraft Characteristics (S-PWS-A)	PJ.02-01-04	-	WAKE-B2/4	RMT.0476		-	HPAO
	AOP22 – Minimum pair separations based on SRP	PJ.02-03	-	-	-		-	HPAO
	AOP23 – Integrated runway sequence for full traffic optimization on single and multiple runway airports	PJ.02-08-01	-	RSEQ – B2/1	-		-	HPAO
	AOP24 – Optimised use of runway configuration for multiple runway airports	PJ.02-08-02	-	RSEQ-B3/3	-		-	HPAO
	ATC07.1 – Arrival management tools	-	-	RSEQ B0/1	-	SO4/1	-	AATS
	ATC19 – Enhanced AMAN-DMAN integration	#54	1.2.1	RSEQ B2/1	-	SO6/5 SO4/1	-	AATS
	ENV01 – Continuous Descent Operations	#11	-	APTA B0/4 APTA-B1/4	-	SO6/5	-	AATS
	ENV02 – Airport Collaborative Environmental Management	-	-	-	-	-	-	HPAO

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	ENV03 – Continuous Climb Operations	-	-	APTA B0/5 APTA-B1/5	-	SO6/5	-	AATS
	NAV03.1 – RNAV1 in TMA Operations	#62	-	APTA B0/2	RMT.0445	SO6/5	-	AATS
	NAV03.2 – RNP1 in TMA Operations	#09, #51	-	APTA B1/2	RMT.0445	SO6/5	-	AATS
	SAF11 – Improve runway safety by preventing runway excursions	-	-	-	MST.0028 RMT.0570 RMT.0703	-	-	HPAO
dA	AOM19.4 – Management of Pre-defined Airspace Configurations	#31 #66	3.1.2	NOPS B1/6 FRTO B1/4	-	SO3/2 SO3/3	AM-1.10 AM-1.8-	OANS
	AOM19.5 – ASM and A-FUA	#31 #66	3.1.1	NOPS B1/5, NOPS B0/1, FRTO B1/3, FRTO B0/2	-	SO3/2 SO3/3	AM-1.10 AM-1.8	OANS
	AOM21.2 – Initial Free Route Airspace	#32 #33 #66	3.2.1	FRTO B1/1	-	SO3/1 SO3/4	AM-1.10 AM-5.1	AATS
	AOM21.3 – Enhanced Free Route Airspace Operations	PJ.06-01	3.2.2	FRTO B2/3	-	SO3/1 SO3/4	AM-1.6 AM-1.7	AATS
	ATC12.1 – MONA, TCT and MTCD	#27 #104	3.2.1	FRTO B0/4 FRTO B1/5	-	SO3/1 SO4/1	AM-1.15 AM-5.1	AATS
	ATC15.1 – Initial Extension of AMAN to En-route	-	-	-	-	SO4/1	-	AATS
	ATC15.2 – Arrival Management Extended to En-route Airspace	#05	1.1.1	RSEQ B1/1 NOPS B1/8	-	SO4/1	AM-1.3	AATS
	ATC18 – Multi Sector Planning En-route – 1P2T	#63	-	FRTO B1/6	-	SO4/1	AM-4.3 AM-5.1	AATS
	ITY-FMTP – Apply a common flight message transfer protocol (FMTP)	-	-	-	-	SO8/3	AM-1.3	EAI
TBO	ATC02.8 – Ground based safety nets	-	3.2.1	SNET B0/1 SNET B0/2 SNET B0/3 SNET B0/4	-	SO4/1	-	AATS
	ATC20 – Enhanced STCA with DAP via Mode S EHS	#69	-	SNET B1/1	MST.0030	SO7/2	-	AATS
	ATC22 – Initial Air-Ground Trajectory	#115	6.1.1	-	RMT.0682	SO4/5	AM-1.2	EAI

EOC	Level 3 Implementation Objectives	SESAR Sol.	DP Family	ICAO ASBUs	EPAS	NSP	AAS TP	KF
	Information Sharing (Airborne Domain)							
	ATC23 – Initial Air-Ground Trajectory Information Sharing (Ground Domain)	#115 PJ.18-06b1	6.1.2	-	RMT.0682	SO4/5	AM-1.2	EAI
	ATC24 – Network Manager Trajectory Information Enhancement	PJ.18-06b1	6.2.1	-	RMT.0682	SO4/5	-	EAI
	ATC25 – Initial Trajectory Information Sharing ground distribution	#115	6.3.1	-	MST.0031		AM-1.2	EAI
M3	NAV12 – ATS IFR Routes for Rotorcraft Operations	#113	-	APTA B0/6	MST.0031	SO6/5	-	AATS

D. SESAR Solutions implemented in a voluntary way[6]

This Annex is not published in the LSSIP Document, but is available in the LSSIP Tool, which can be made available upon request to Focal Point and/or Contact Person.

[6] Referred as 'Non-committed' SESAR solutions in the MP L3 Report.

E. Surveillance (SUR)

European ATM Surveillance data are captured to enable Network performance improvements and ensure global interoperability.

This Annex includes Surveillance implementation information related to projects, sensors and data integration. The objective for the inclusion of this information in LSSIP is to consolidate the data collection process and increase efficiency by avoiding parallel surveys.

The corresponding tables have been prefilled with information already available from recent surveys within the surveillance area. For practical reasons to harmonise the reporting, since the LSSIP 2021 cycle the questionnaire is included in the LSSIP Annex.

Surveillance Projects

This section includes Surveillance system projects covering the full chain from Sensor to Surveillance data integration into SDPS and CWP.

Activity Description **Area / Airspace**	**System Description** (for new system, replacement/upgrade or decommissioning)	**Expected contribution to the Key Performance Areas**	**Schedule**
Area/Name: LAM/ADS-B Warsaw **Activity type:** **Relationship with other projects:** **Objective:** **Airspace**: CTR **Service**: ATC	**Type:** MLAT/ADS-B for A-SMGCS **Number of sites**: 19 **Provider**: ERA **Coverage:**	**Capacity:** Potential for capacity increase through enhanced operational situational awareness of ANSP and Airport authority, in particular in low visibility conditions. **Operational-Efficiency:** **Safety:** Enhanced situational awareness, higher data integrity and unambiguous identification. **Security:** **Environment:** **RF/Spectrum:** **Cost-Efficiency:**	**Sensor installation date:** **Operational date:** Finished 2020, but not yet integrated with TWR systems **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Activity Description Area / Airspace	System Description (for new system, replacement/upgrade or decommissioning)	Expected contribution to the Key Performance Areas	Schedule
Area/Name: WAM/LAM/ADS-B System for Warsaw FIR (West, South, Central) **Activity type:** Coverage/ADD/rationalization **Relationship with other projects:** **Objective:** **Airspace**: ENR/TMA/CTR **Service**: ATC, FIS	**Type:** WAM with ADS-B capabilities **Number of sites**: app. 60 **Provider**: **Coverage:** Wide Area Multilateration system for Warsaw FIR to create additional coverage layer for radar-controlled TMAs and en-route or maintain current number of coverage layers, where WAM replaces legacy MSSRs, CTR coverage to support airport landing categories	**Capacity:** potential to decrease delays and increase capacity by separation minima reduction capacity by separation minima reduction **Operational-Efficiency:** **Safety:** improved SUR service availability, enhanced operational situation awareness **Security:** **Environment:** reduction of interrogation power, lower power consumption **RF/Spectrum:** **Cost-Efficiency:** Lower life cycle investment and operational cost in comparison with radars.	**Sensor installation date:** **Operational date:** Project ongoing – phased implementation 2024-2026 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Activity Description Area / Airspace	System Description (for new system, replacement/upgrade or decommissioning)	Expected contribution to the Key Performance Areas	Schedule
Area/Name: PSR/MSSR Mode S **Activity type:** **Relationship with other projects:** **Objective:** Replacement of legacy radars located in Pultusk and in TMAs area of Gdansk and Katowice **Airspace**: ENR/TMA **Service**: ATC, FIS	**Type:** PSR/Mode S **Number of sites**: 3 (2 PSR/MSSR S – Gdansk, Katowice, 1 MSSR S - Pultusk) **Provider**: **Coverage:**	**Capacity:** maintaining required level of SUR service performance parameters **Operational-Efficiency:** **Safety:** Higher data integrity and unambiguous identification, detection of non-cooperative targets (intrusions) **Security:** **Environment:** **RF/Spectrum:** **Cost-Efficiency:**	**Sensor installation date:** Project ongoing - phased implementation Pultusk -2023, Gdansk, Katowice - 2024 **Operational date:** **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Activity Description Area / Airspace	System Description (for new system, replacement/upgrade or decommissioning)	Expected contribution to the Key Performance Areas	Schedule
Area/Name: TWR system SUR data integration **Activity type:** **Relationship with other projects:** **Objective:** SUR Coverage **Airspace**: CTR **Service**: ATC	**Type:** ATM System **Number of sites**: EPWA **Provider**: SAAB **Coverage:** EPWA CTR	**Capacity:** **Operational-Efficiency:** **Safety:** Higher data integrity and unambiguous identification **Security:** **Environment:** **RF/Spectrum:** **Cost-Efficiency:**	**Sensor installation date:** Project ongoing, planned operational implementation - 2023 **Operational date:** 2023 **ADS-B operational integration date (ATCO CWP) where applicable:** **Estimated End of Life:**

Surveillance sensors (just numbers, no technical/ops details)

This section summarises the number of Surveillance sensors per state. This covers all current and planned sensors intended for operational use.

Note: Please only count each sensor once even if it is part of combined systems. A combined PSR and Mode S SSR is only counted once in the row for CMB PSR Mode S (and consequently not counted in the PSR nor in the Mode S rows). Similarly, for a multilateration system, providing coverage both on the airport surface and in the CTR or TMA the individual sensor can be allocated to one or the other but each sensor must only be counted once, either in one of the MLAT/WAM rows or in one of the Airport MLAT/LAM rows.

Sensor Type	2021	2022	2023	2024	2025	2026
WAM Systems/Clustors						
WAM Sensors (Rx, Tx, Rx/Tx)	2 Tx, 3 Rx/Tx, 5RX			26	36	
Mode S	4		5			
Airport MLAT Systems/Clustors						
Airport MLAT Sensors (Rx, Tx, Rx/Tx)	EPGD - 6 Rx, EPWA - 18 Rx, 7 Rx/Tx				12	
ADS-B equipped Vehicles						
Mode A/C	3			0		
Space-based ADS-B						
Surface Movement Radar (SMR)	1	1	1	1	1	
ADS-B receivers (not part of MLAT/WAM)						
CMB PSR Mode A/C	3			1		
CMB PSR Mode S	4			6		
PSR stand alone						

Surveillance Data Use

This section provides and overview of the use of Surveillance data per state. This includes usage of Downlinked Aircraft derived Parameters (DAP) / Aircraft Derived Data (ADD) and ADS-B data.

ADD/DAP data usage

ATCO, System, Tools (which tool)

ADD/DAP data item	Usage of DAP/ADD			
	Indicate if and how the data is used by ATCOs: - not used - Displayed for information - Part of operational procedure - Other (please indicate) **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Indicate if and how the data is used by TOOLS:** - Please indicate tools and status per tool (e.g. operational, evaluation, other) **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Indicate if and how the data is used by the Tracker:** - Operational usage - Evaluation - Other **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Other**
Selected Altitude	part of op. procedure, Mode S, WAM	SNET, operational, Mode S, WAM		
Barometric pressure setting	part of op. procedure, Mode S, WAM			
Roll angle	display, Mode S, WAM		Operational, Mode S, WAM	
True track angle	display, Mode S, WAM		Operational, Mode S, WAM	
Ground speed	part of op. procedure, Mode S, WAM			
Track angle rate	part of op. procedure, Mode S, WAM		Operational, Mode S, WAM	

ADD/DAP data item	Usage of DAP/ADD			
	Indicate if and how the data is used by ATCOs: - not used - Displayed for information - Part of operational procedure - Other (please indicate) **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Indicate if and how the data is used by TOOLS:** - Please indicate tools and status per tool (e.g. operational, evaluation, other) **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Indicate if and how the data is used by the Tracker:** - Operational usage - Evaluation - Other **Indicate Initial operational date or planned ops date** **Indicate source(s) (Mode S, ADS-B, WAM)**	**Other**
Magnetic heading	part of op. procedure, Mode S, WAM	SNET planned, Mode S, WAM		
Indicated airspeed	part of op. procedure, Mode S, WAM	SNET planned, Mode S, WAM		
Mach No	display, Mode S, WAM	SNET planned, Mode S, WAM		
Vertical rate (Baro, Inertial)	part of op. procedure, Mode S, WAM	SNET planned, Mode S, WAM		
True Airspeed	display, Mode S, WAM			
Other data items				

ADS-B integration

ADS-B use case and integration date	Operational or planned ops date	Sites
ACC ATC integration ENR		
ACC ATC integration TMA		
ATC integration TWR CTR/TMA	2023	EPWA
Flight Information Service		
ATCO Traffic Awareness		
Traffic planning e.g. Arrival Manager		
Conflict Alerting, e.g. STCA		
Airport surveillance e.g. Traffic awareness, Target identification support	2020	EPGD
Other:	Used currently	Support, test and analysis.

F. Glossary of abbreviations

This Annex mainly shows the abbreviations that are specific to the LSSIP Document for Poland.

Other general abbreviations are in the Acronyms and Abbreviations document in:

https://www.eurocontrol.int/airial/

Term	Description
ACSS	Air Control Surveillance Service of Lower Airspace (SNRLs - Pol).
AF	ATM Functionality
BALTINT	Baltic Integration Project
BANC	Baltic Air Navigation Committee
CAA	Civil Aviation Authority
FT	Fast Track
IMGW	Institute of Meteorology and Water Management
MATSO	Military Air Traffic Service Office of Polish Armed Forces
MATZ	Military Aerodrome Traffic Zones
MoD	Ministry of Defence
NSA	National Supervisory Authority
OH&S	Occupational Health and Safety
PAF	Polish Air Forces
PAFFSO	Polish Armed Forces Flight Safety Office
PANSA	Polish Air Navigation Services Agency
PCP	Pilot Common Project
PDP	Preliminary Deployment Programme
PPL	“Polish Airports” State Enterprise – Warsaw Chopin Airport
PRANET	PANSA Radar Network
S-AF	Sub ATM Functionality
SCAAI	State Commission on Aircraft Accidents Investigation
SNET	Safety Nets