

PANSA 2020: A YEAR OF CHALLENGES AND A6 ALLIANCE PRESIDENCY



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In December 2019 the Polish Air Navigation Services Agency (PANSA), officially took over the chairmanship of the A6 Alliance – a group of the largest European air navigation service providers, including those from Germany, France, United Kingdom, Spain and Italy.

This is a very important time for Europe and the future of aviation. I am convinced that together we will develop concepts and solutions that will realistically result in a new European sky.

For PANSA, 2020 will be a year full of new challenges and innovations. We want to limit the environmental impact of aviation, for example by promoting innovative solutions.

As PANSA we support all rational, pragmatic and justified activities – undertaken both at regulatory and operational level – aimed at creating conditions for the modernisation of the European air traffic management system. One of the main topics among current European challenges is the impact of aviation on the environment. From flights without plastic to shorter routes, modern aviation is full of proposals for reducing CO₂ emissions without giving up the need to prepare the industry for growth. Various innovative ideas are already being implemented also among ANSPs in this area.

That is why PANSA contributes to protecting the environment and has implemented new solutions such as "green" Continuous Descent Approach (CDA) and Free Route Airspace (or "POLFRA").

A6 Alliance



A6 activities are aimed at optimising European air traffic management by using different tools – such as coordinating ANSP membership work in research and development within the SESAR JU, developing A6 policy and technical matter agreements among members and establishing common infrastructure development goals along with lobbying activities related to these areas.

During the one-year term as the Chairman of the A6 Steering Board we will coordinate the work on developing joint positions of the A6 Alliance. And this year will be even more important in the light of the currently discussed revision of the Single European Sky legislation package.

PANSA goes green

Capacity shortage is among the hottest topics in Europe, causing more delays and CO₂ emissions. Appropriate air traffic management allows a reduction in the impact of air traffic operations on the environment. With its primary focus on safety, PANSA has also for many years been working on environmental protection issues. PANSA makes every effort to ensure that operational activities contribute to producing measurable results in the form of reduced fuel consumption by aircraft and, consequently, reduced CO₂ emissions.

Today, the "green approach" is a technique increasingly used in Warsaw and other Polish airports. In 2018, at Chopin Airport alone, out of 93,119 landings as many as 42.65% (PRU Data – Performance Review Unit) were Continuous Descent Approaches. In the first nine months of 2019, over 43% of



aircraft landing in Poland used the CDA procedure. As a result, 2,901 tonnes of fuel were saved and CO₂ emissions were reduced by 9,137 tonnes. The planned new central airport in Poland will also result in better environmental protection and noise reduction in the Warsaw area.

New Solidarity Airport

The Solidarity Transport Hub (STH) will be located in the centre of Poland, between Warsaw, the capital city, and the industrial city of Lodz. This location, away from urban areas, will enable the STH to operate 24 hours a day, seven days a week, serving about 45 million passengers per year at the beginning, and up to 100 million in the future. The whole project will entail many modernisation programmes – including communications, navigation and surveillance (CNS) and ATM systems – and infrastructural and ground transport investments. Poland builds a completely new airport while PANSa provides significant modifications to the Polish sky and flight procedures.

Solidarity Airport will also have a strong and positive impact on Polish airspace management, creating the possibility of redesigning airspace architecture – including temporary reserved area (TRA) and temporary segregated airspace (TSA) areas, instrument flight procedures (Standard Instrument Departure Routes (SID) and Standard Arrival Routes (STAR), arrival and departure routes in the free route airspace environment, and adjusting airspace sector designs to changes in air traffic flow. PANSa is well prepared for those challenges and is adopting “best in class” solutions. Concepts developed as a part of the SESAR Deployment Programme will contribute to the optimisation of airspace use, mostly in Central Poland.

The widespread use of PBN routes, like RNAV1, RNP-APCH with APV, and PBN: RNP1 is planned.

The new infrastructure projects like the Solidarity Airport are an excellent opportunity to introduce new ATM solutions, including PANSa in-house tools to support airspace management. One of them is the Common Airspace Tool (CAT), next generation of local ASM support system.

Common Airspace Tool (CAT)

The A-FUA (Advanced Flexible Use of Airspace) programme implementation requires development of procedures and systems to enable real-time airspace status data exchange. This data should be then shared among ASM support systems, the Network Manager, ANSPs and delivered to potential users.

PANSa is continually modernising technology and procedures used to support A-FUA. The aim is to enable airspace users to fly as close to their preferred trajectory as possible, without being constrained by reserved airspace structures, both in controlled and uncontrolled airspace. It will mean implementing the next generation of local ASM support system – CAT (Common Airspace Tool). It provides information on planned and current use of airspace structures. CAT supports airspace management in the ATS route network and Free Route Airspace environment. The tool, developed by PANSa, is used by Airspace Management Cell, air traffic services and the Polish Air Force. ▶



The system contributes to Aeronautical Information Management services solution aspects, providing support of effective ATM specific service provision

This is achieved through real-time exchange of information related to airspace utilisation between involved parties. It enables collaborative decision-making process between civil and military partners. The system automatically exchanges airspace data B2B both with Network Manager and other systems.

The next version of the CAT system, introduced as a part of SESAR 2020 developments, is planned for the near future. Innovations to be implemented will include functionalities supporting collaborative decision-making process between airspace management and flow, and capacity of participants, as well as added radar data visualisation.

Another PANSAs strategic objectives is to accommodate and support the rapid expansion of the drone sector together with safe and efficient integration with the existing airspace users.

PansaUTM

PANSAs understands the implication of UAV (Unmanned Aerial Vehicle) market growth and is actively involved with creating a friendly environment for the increasing number of drones in the Polish sky. Together with partners, PANSAs has enabled the Central-European Drone Demonstrator (CEDD) project in Poland, that gives an opportunity for the controlled testing in the urban environment of the new UAV technologies and services, which would eventually support the deployment of the European U-space concept.

PANSAs's approach to unmanned air traffic has led to digitalised and automated UAV flight coordination and the flight plans management concept, comprised of PANSAs's

own operating solutions and the system part delivered by technological partner HAWK-E and integrated with DroneRadar, the most popular application among drone operators in Poland, called PansaUTM. The implementation of that system in FIR EPWW will accommodate existing and future demand for UAVs operations both in Visual and Beyond Visual Line of Sight (VLOS/BVLOS). PansaUTM will allow for the possibility of easy adaptation as the drone industry evolves. One of the changes currently being managed is the simplification and digitalisation of coordination procedures concerning drones operations in CTRs. PansaUTM would also support the new Polish regulations concerning BVLOS operations outside segregated airspace which entered into force in February 2019. Simultaneously, PANSAs is working on different UAV tracking methods which will help to develop more advanced PansaUTM capabilities such as geofencing, deconfliction and prioritisation.

The future is now

The Polish Air Navigation Services Agency has undertaken many efforts to improve air transport safety, increase airspace capacity, ecology and operational efficiency. Thanks to PANSAs, Poland's sky is becoming safer and more accessible to all its users, every day. However, there is still much work yet to be done – but PANSAs is well prepared for all challenges ahead and is determined to overcome each and every obstacle in its way. ■

