

CURRENT OPPORTUNITIES IN AIR NAVIGATION SERVICES



AZANS

Azeraeronavigation

Azerbaijan



“Azeraeronavigation” Air Traffic Department

CANSO Euro/Central Asia ANSPs CEO Summit

Azerbaijan, 24 January 2024





INTRODUCTION

Introduction - About AZANS

“Azeraeronavigation” Air Traffic Department (AZANS) - Air Navigation Service Provider of Republic of Azerbaijan.

- “Azeraeronavigation” Air Traffic Department of “Azerbaijan Hava Yollary” CJSC was established in 1996.
- AZANS is responsible for the air navigation services provision within the FIR with a total area of 165.4 thousand km² (86.6 thousand km² over the country's land area and 78.8 thousand km² over the Caspian Sea). The length of route network within the airspace of Azerbaijan Republic is around 11,000 km.
- "Flight Information Region" (FIR) of Azerbaijan - the boundaries designated and approved by the ICAO Council in accordance with the provisions of the Convention on International Civil Aviation (Chicago Convention) for the provision of international air navigation within the airspace of the Republic of Azerbaijan.
- The main tasks of AZANS Provision of the air traffic control service and ensuring flight safety in the airspace of the Republic of Azerbaijan In accordance with the ICAO requirements
- Airspace is a valuable national resource of the State, and the air navigation system is a tool and engine for the management and organization of safe and effective international and national aviation transport.
- Beneficial geopolitical location of Azerbaijan Republic on crossroads of West and East, makes airspace of Azerbaijan Republic a connecting link between Europe and Asia.
- Significant air traffic flows connecting the regions of Europe and Asia as well as the Middle East and North America pass through the airspace of Azerbaijan and increase annually.
- Baku/HeydarAliyev airport is the largest transport hub in the region.

AZANS' vision, mission and value

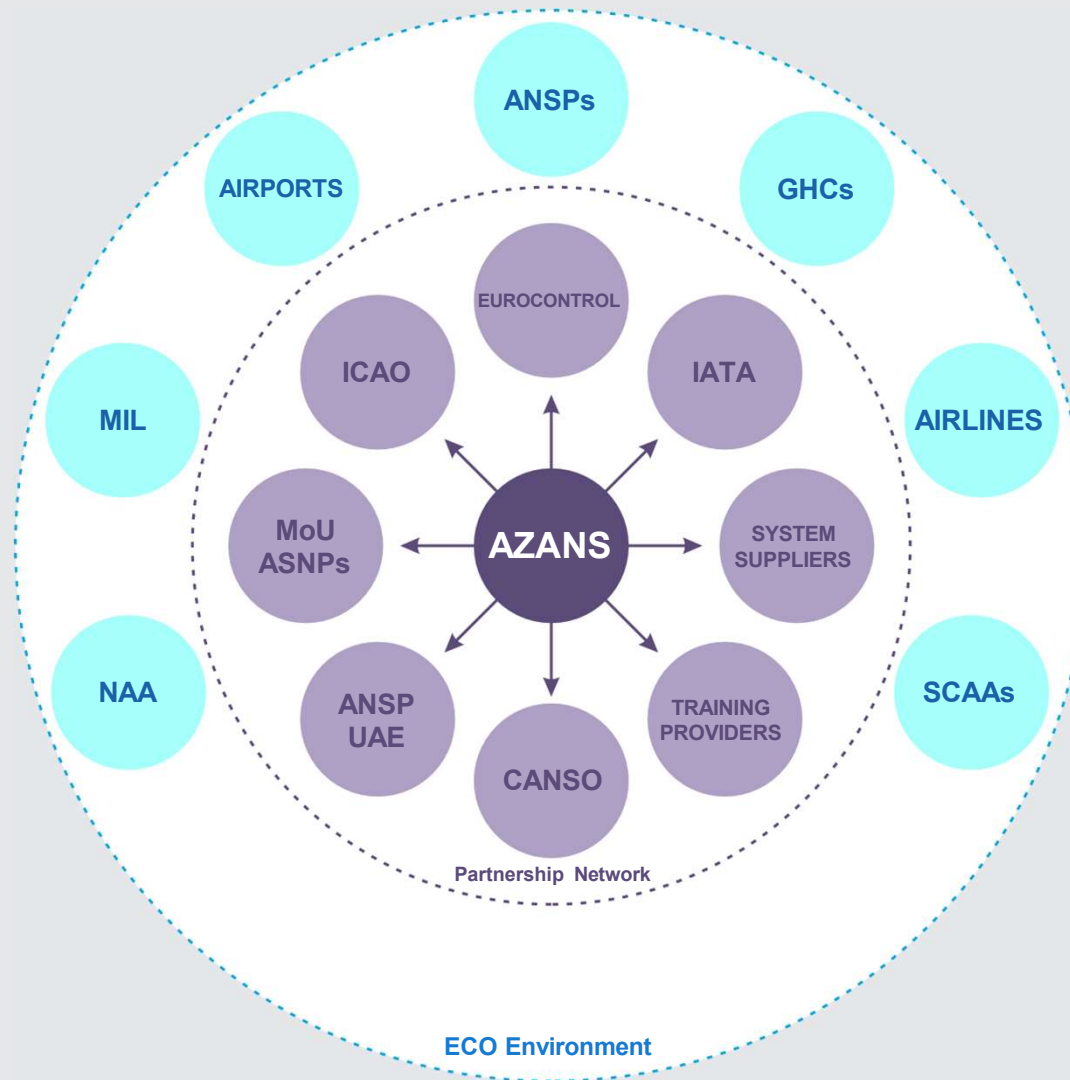


Our vision: to become advanced and respected ANSP in the eyes of international aviation community, in the eyes of our users and our employees

Our mission: to maintain an appropriate level of flight safety in the airspace of Azerbaijan, while implementing highly technological and efficient solutions in order to ensure the highest level of customer satisfaction and sustainable development

Our value: Safe and efficient airspace of Azerbaijan.

ECO Environment



Safety Management System

Safety is our core business function. We are committed to development, implementing, maintaining and constantly improving strategies and processes to the highest level of safety performance while delivering our services (AZANS Safety Policy)

Level C project

Completion of the joint project of "Azeraeronavigation" (AZANS) and IATA on implementation of the third level of maturity of the flight safety management system in the airspace of Azerbaijan in accordance with ICAO requirements (level C in accordance with the CANSO\EUROCONTROL SMS maturity level)



Safety award Certificate



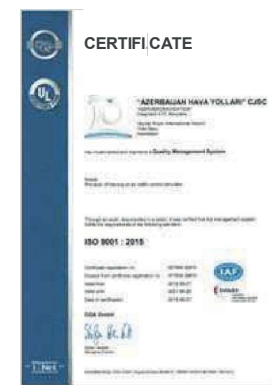
The award recognizes those individuals, teams, or companies that have made a significant contribution to aviation safety in the past 12 months.

Quality Management System Certification

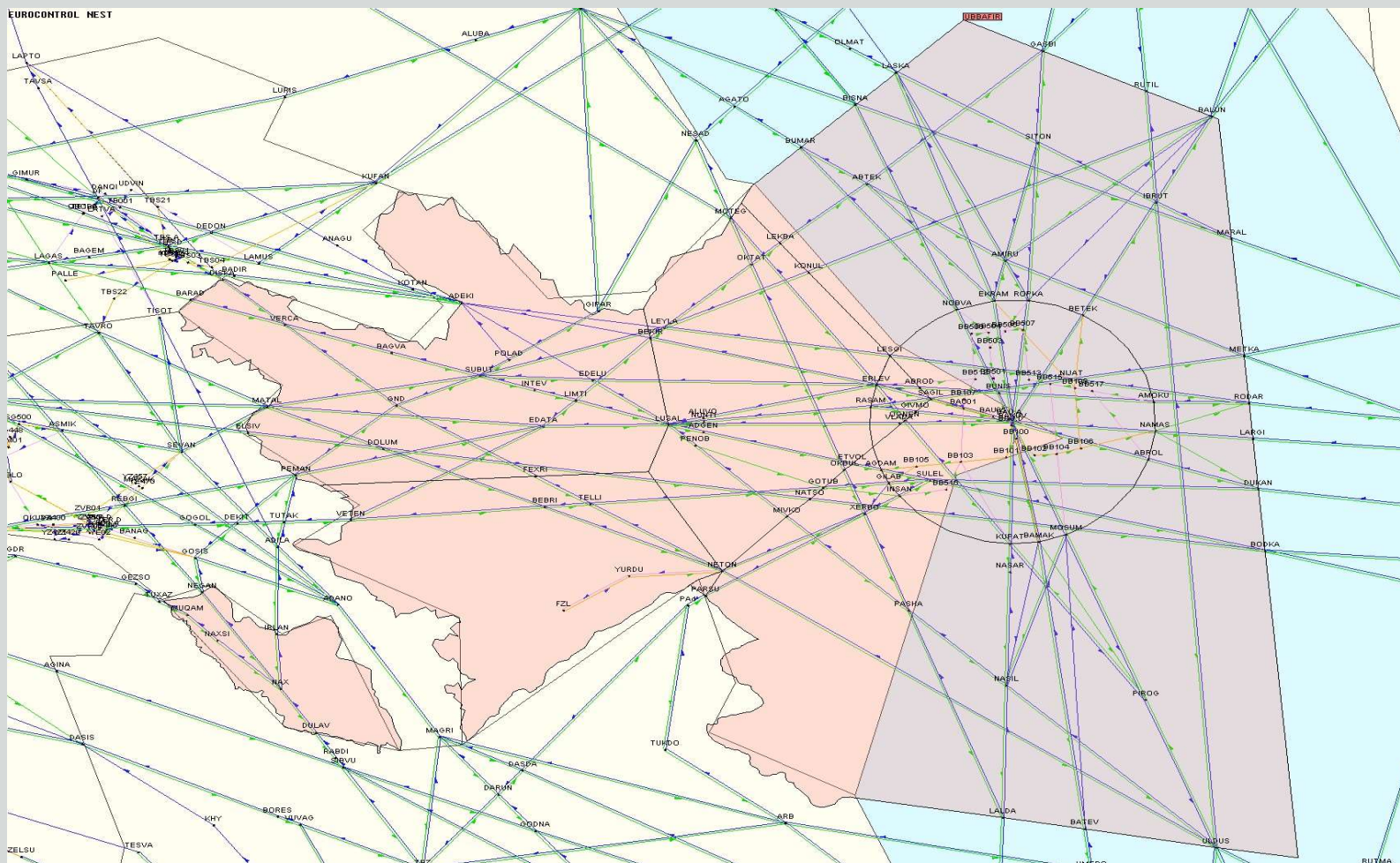
AZANS were certified according to ISO 9001:2008 following the ICAO (Annex 3 and Annex 15) and national requirements in 2010;

AZANS passes annual audits and was successfully re-certified according to the new version of the Standard ISO 9001:2015 in 2018;

In 2022 AZANS successfully passed recertification.



Airspace of Azerbaijan

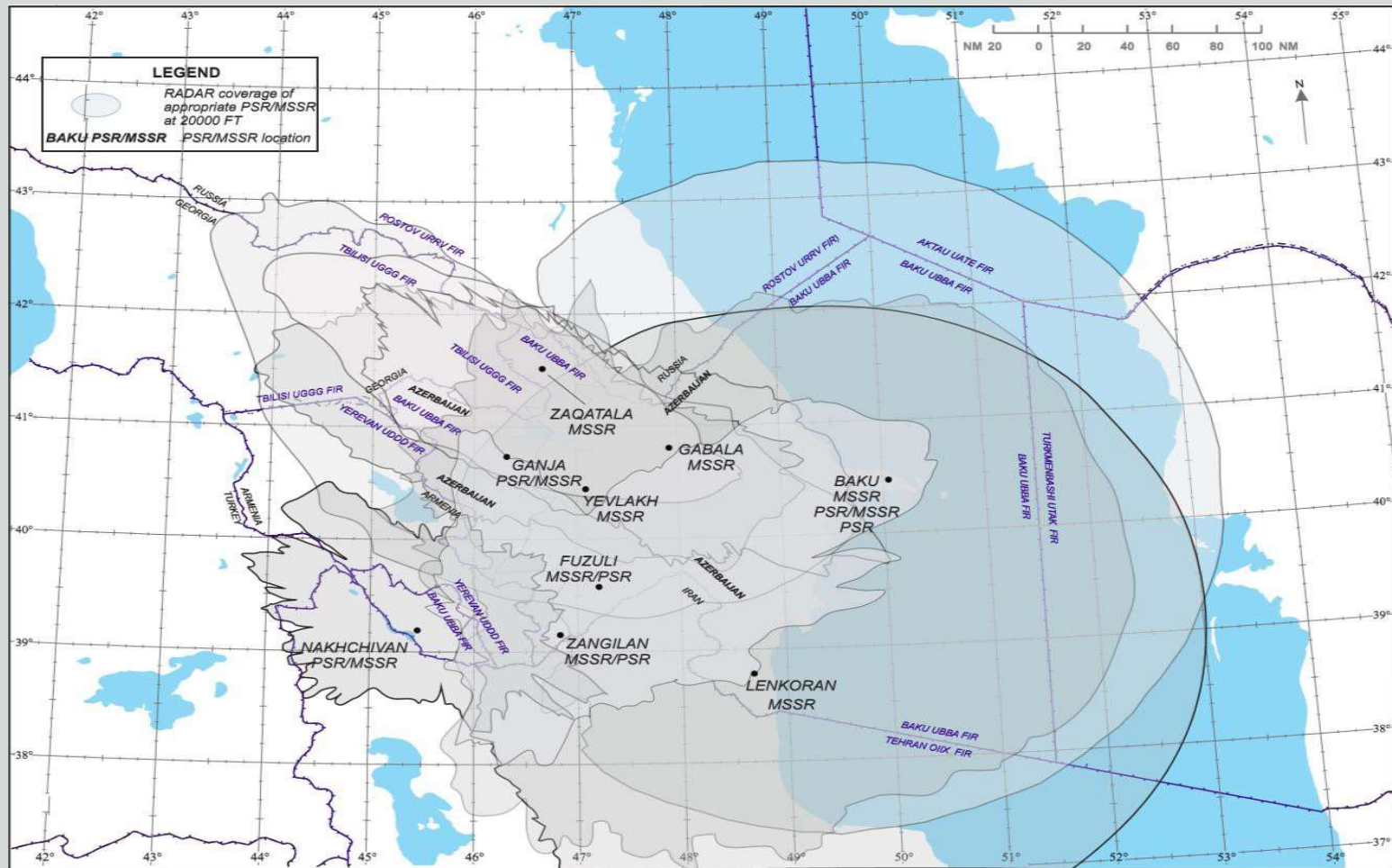


Airspace of Azerbaijan

Flight Information Region	Baku FIR
Terminal Control Area	4
Control Zone	10
Lenght of airways	11 000 km
Daily IFR traffic	650 ACFT
Air Traffic Control Center	10
Area Control Center	1 (5 sectors)
Approach Control Unit	4
Tower Control Unit	10

CNS and Meteo Systems Infrastructure

Type of the system	Quantity
ATC Automated Systems	12
Surveillance Systems:	12
- Radar	10
-SMR	1
- MLAT	1
Navigation Systems	34
Communication Systems	6
Meteo:	8
- Radar	2
- Systems (AWOS, ATIS, VOLMET, etc.)	6



AZANS Locations



Baku (Main Tower)



Baku (Tower North)



Ganja



Nakhchivan



Gabala (Main Tower)



Gabala (Virtual Tower System)



Zangilan



Füzuli



Lankaran



Zaqatala



Yevlakh



Alyat and Lachin
(coming soon)



Airspace
Supervision &
Efficiency
Center

Airspace Efficiency, Strategy and Development Center

Airspace Efficiency, Strategy and Development Center is a key driver in AZANS Airspace Management, Air Traffic Flow Management, Strategic Development, Implementation of Integrated Management System, Infrastructure Development and Professional Development.

Airspace Efficiency, Strategy and Development Center is responsible for:

- Network Management;
- Airspace Safety and Efficiency;
- Airspace Design;
- Post-ops Analysis;
- ATM Research;
- Strategy and Development;
- Project Management;
- Standards Implementation;
- Quality and Risk Management;
- Training Management.

ATFM (Air Traffic Flow Management) - a service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilized to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority (ICAO Doc 4444 Air Traffic Management Manual).

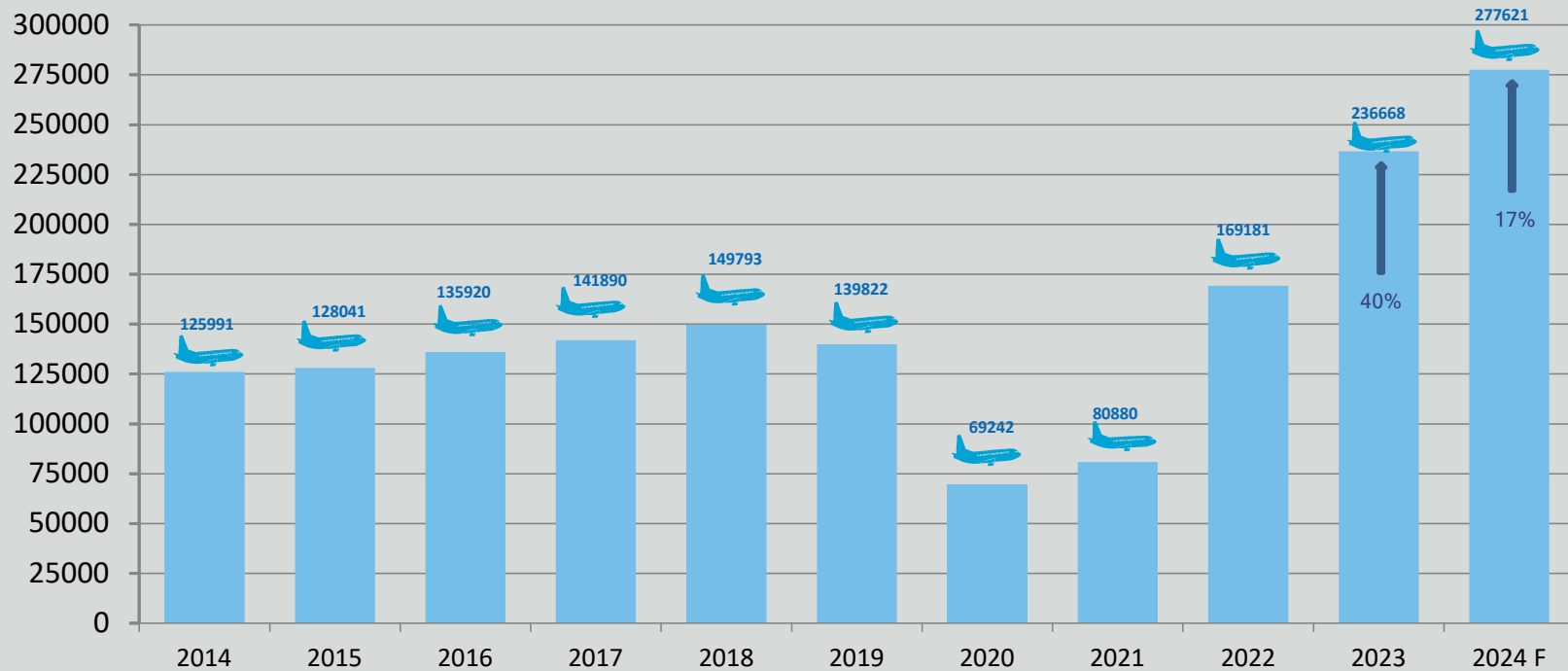
Network Management: management of ATM network functions: airspace design, flow management as well as scarce resources - transponder code allocations, radio frequencies (EU Regulation 677/2011 and Regulation 2019/123).

AZERBAIJAN AIRSPACE TRAFFIC DATA



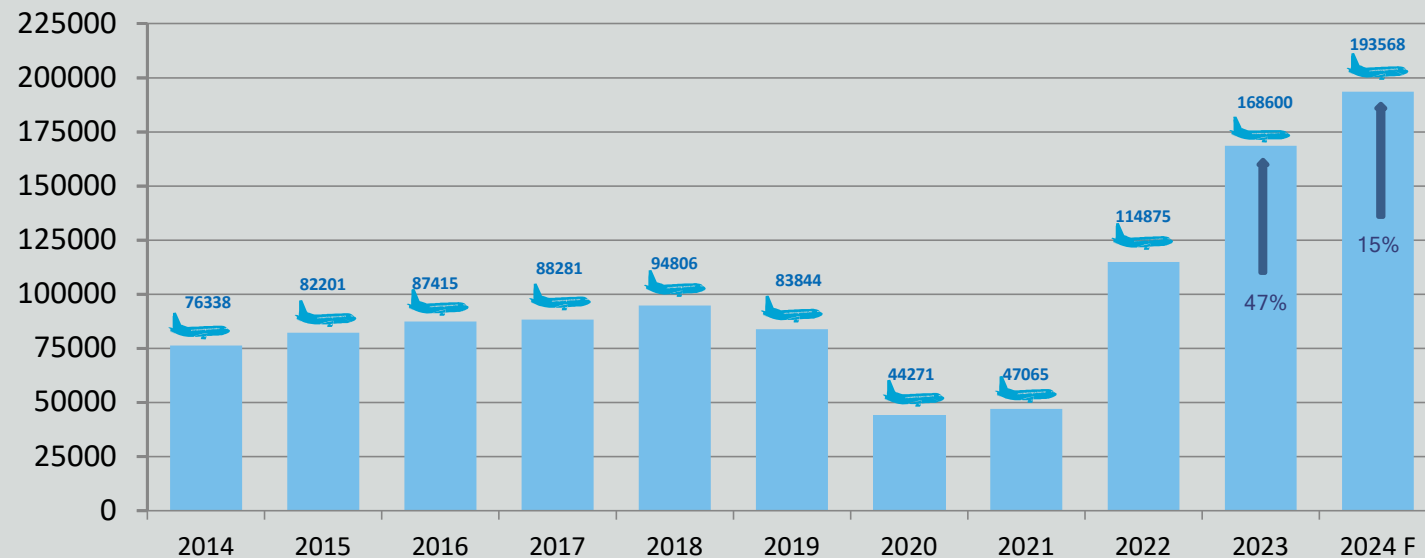
Azerbaijan Airspace Traffic Data - Total FIR

- Daily average - 649 IFR movements (2023).
- Peak day – 779 IFR movements - (July 07, 2023).



Azerbaijan Airspace Traffic Data - Overflights

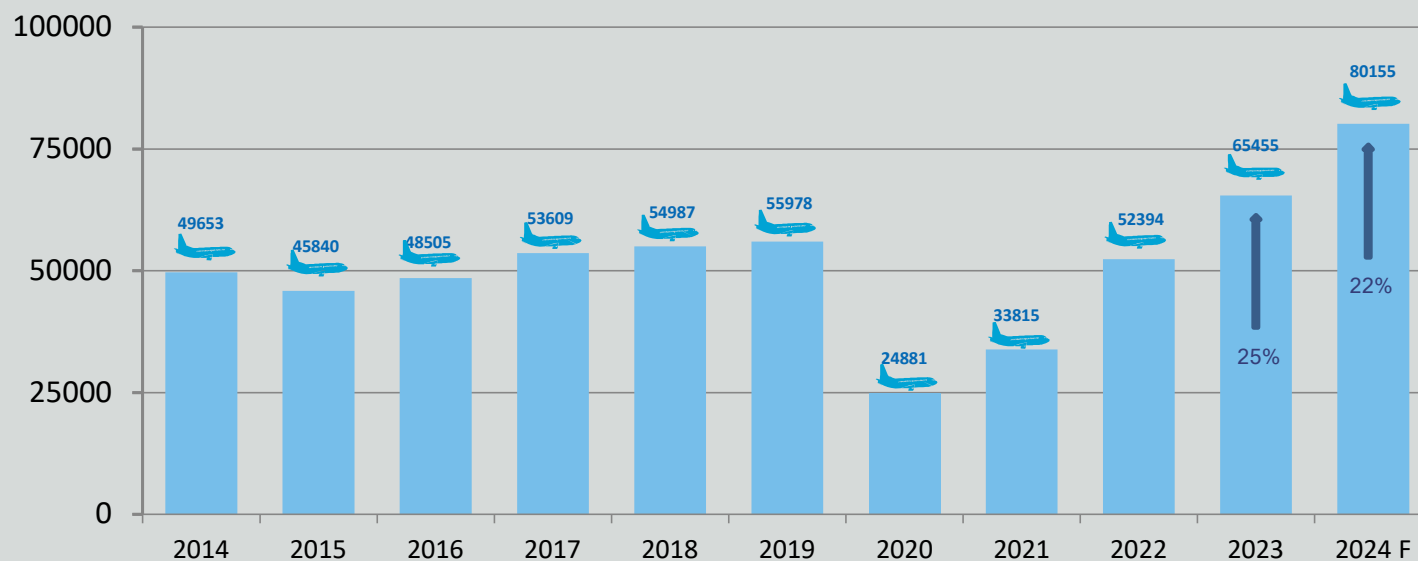
- Overflight traffic via Azerbaijan Republic airspace was impacted by external factors in 2014 - closure of some part of Ukrainian airspace, 2019 - closure of Pakistani airspace, 2020 - COVID-19 and Ukraine-Russia crisis.
- Daily average - 462 IFR movements (2023).
- Peak day – 554 IFR movements (July 05, 2023).



Azerbaijan Airspace Traffic Data

Aerodrome movements

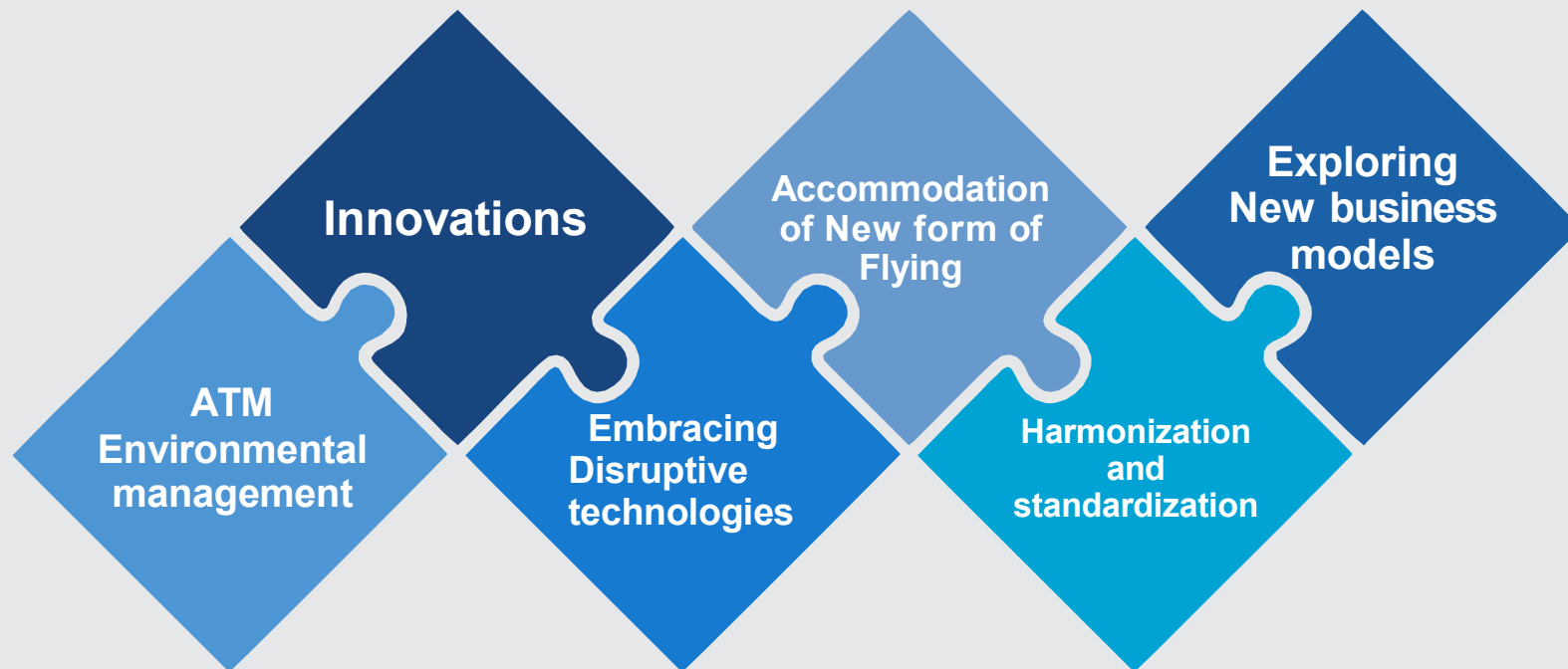
- Daily average - 180 IFR movements (2023).
- Peak day – 235 IFR movements (July 07, 2023).





Development Strategy of AZANS

ATM Delivering a Sustainable Future of Aviation



CANSO Airspace World Genève 2023

Airspace World is the largest and most influential airspace and near-space management event in the world.

Airspace World's is a meeting place for the organizations and people who control the skies of tomorrow. It brought together key players in manned and unmanned aviation to collaborate on a blueprint for the future of the skies, as well as international organizations including CANSO, ICAO, IATA, EUROCONTROL, EASA, ACI and others.

AZANS' participation at Airspace World provided opportunities to demonstrate the development of civil aviation in Azerbaijan, significantly expand connections and strengthen its position in the industry, as well as attract the attention of international organizations working in the field of application of advanced technologies.



National Airspace Strategy (NAS)

The International Air Transport Association (IATA) and AZANS, the Air Navigation Service Provider of Azerbaijan developed Azerbaijan National Airspace Strategy (NAS).

AZANS and IATA strengthened their existing cooperation for this initiative, which is aimed at delivering benefits to the traveling public, while supporting national economic growth and the competitiveness of the Azerbaijan aviation sector and the global sustainability goals of air transport.

“The Azerbaijan National Airspace Strategy will:

- Provide the overall State-level mandate for long-term investment in the airspace system as a key part of the country's transport infrastructure
- Align industry's airspace investments to a scope and sequence that speeds up roll-out and maximizes the benefits for airlines and passengers
- Explain to stakeholders affected by airspace changes, why airspace is being modernized and how they will be engaged
- Create a strong governance structure that provides the State, Industry and Regulator with the means to track and drive NAS roll-out locally



National Airspace Strategy (NAS) of Azerbaijan

Strategic plan to modernize the Azerbaijan airspace and Air Navigation Service

30th November 2023



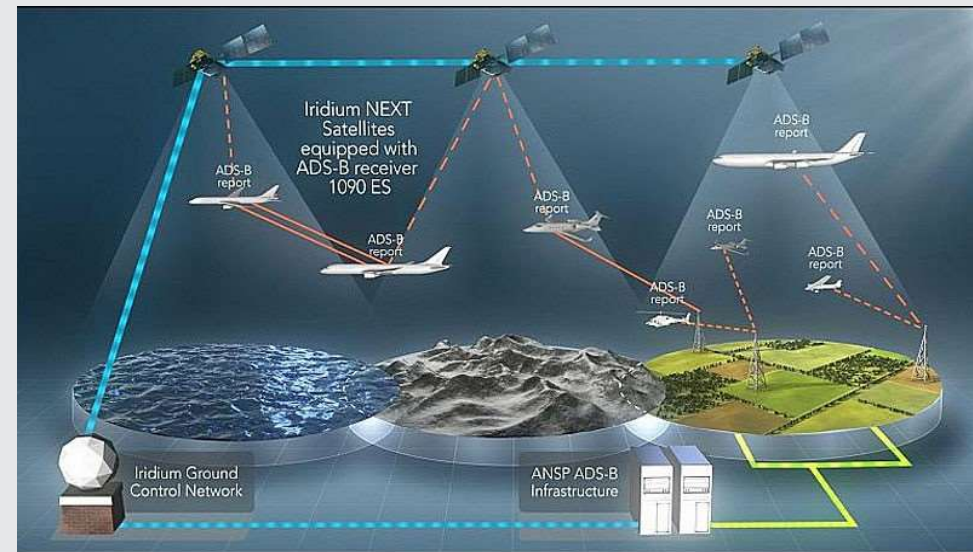
MINISTRY OF DIGITAL DEVELOPMENT
AND TRANSPORT
OF THE REPUBLIC OF AZERBAIJAN



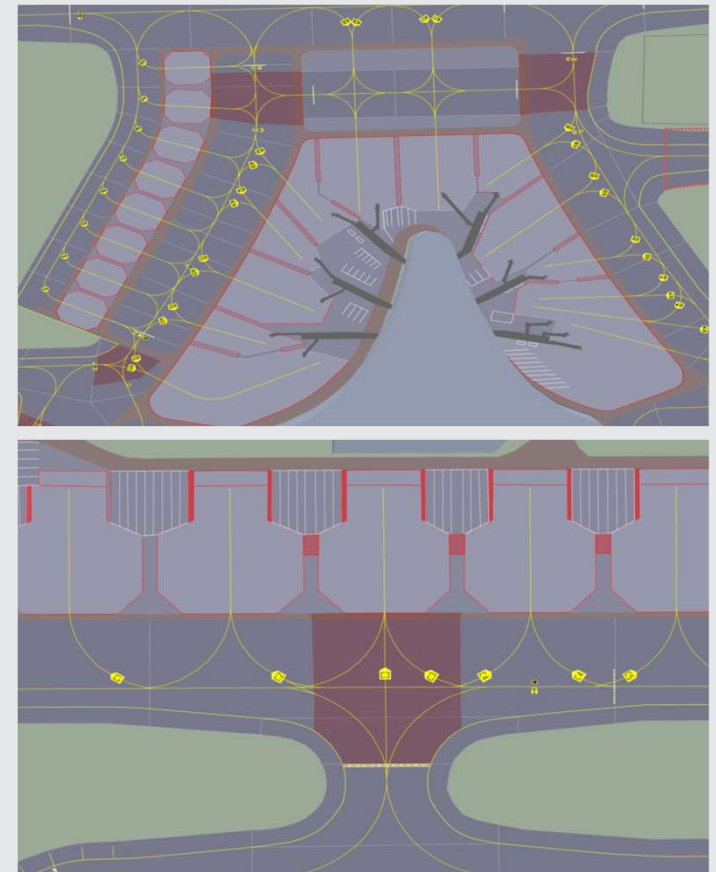
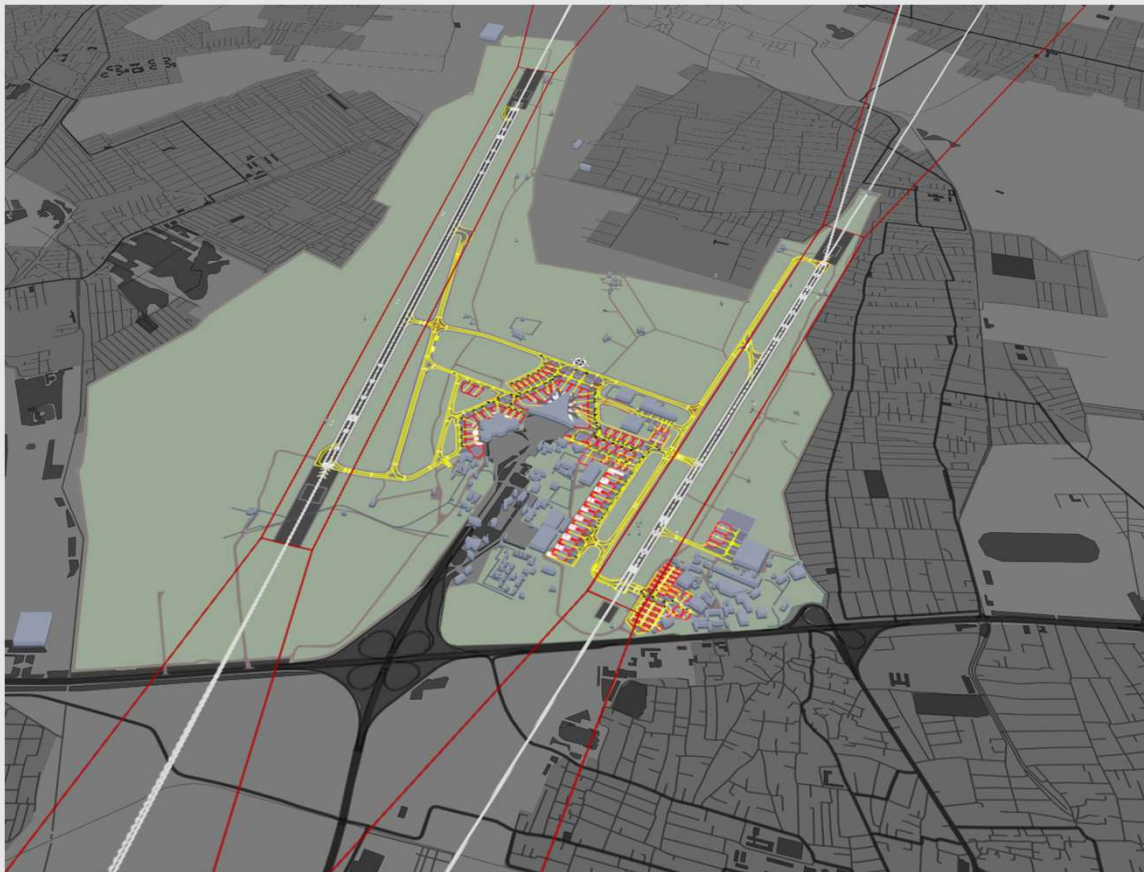
Introduction of Advanced Satellite based Air Traffic Control Surveillance System

In 2023 AZANS and Aireon implemented a satellite-based Air Traffic Control Surveillance System for global air traffic called "Automatic Dependent Surveillance-Broadcast (ADS-B)" in the airspace of the Republic of Azerbaijan.

The application of the ADS-B system and the use of satellite capabilities in the airspace of the Republic of Azerbaijan will ensure full control over global air traffic, thereby increasing the safety and efficiency of flights and enabling the forecasting and improvement of the airspace release capacity.



Next Generation Aeronautical Information and Digital Airspace Management Environment



CARE

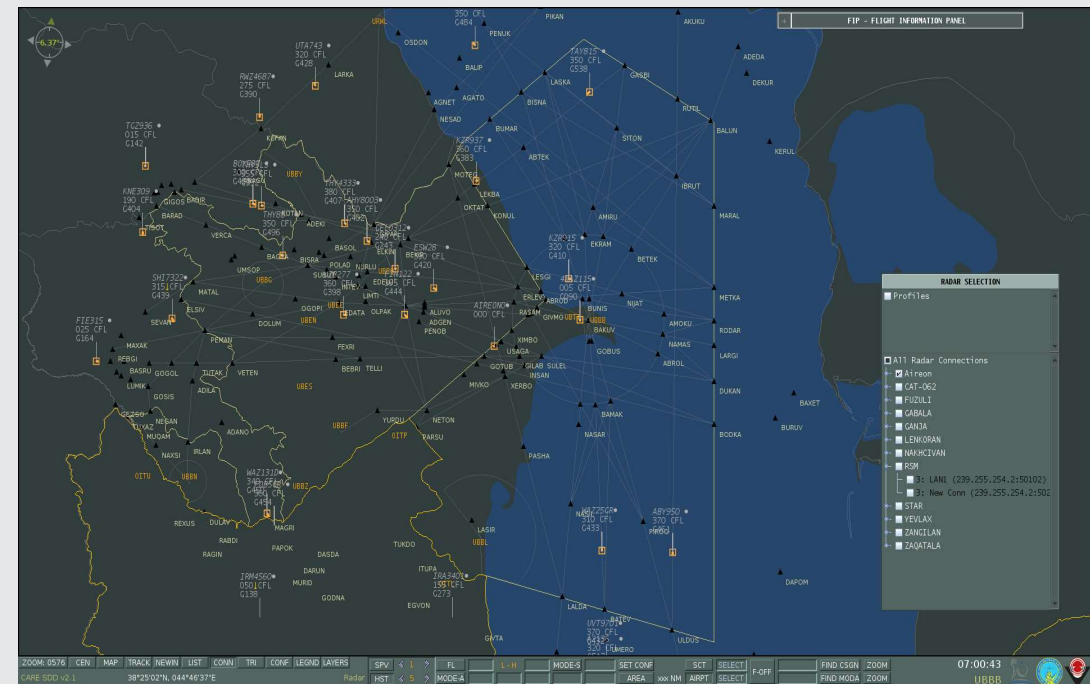
Multiple Purpose Radar Display

Air Navigation Service Provider
"Azeraeronavigation" has completed a project to implement the backup ATC system "ÇARE"

The protocol for the implementation of the ÇARE system was signed between the Directorate General of State Airports of Turkey (DHMI) and the Air Traffic Directorate "Azeraeronavigation", CJSC "Azerbaijan Hava Yollari".

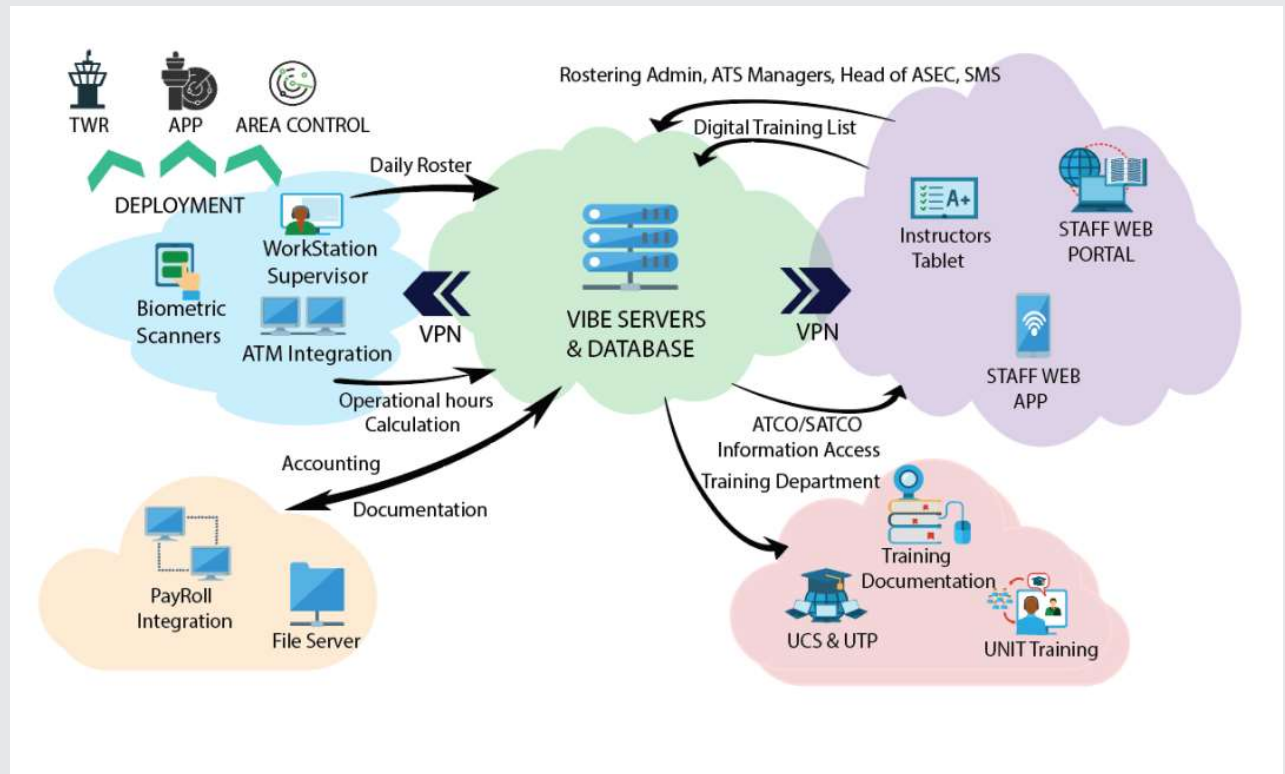
As part of the protocol, an agreement was signed for the supply of the ÇARE system in three separate air traffic control centers of Azerbaijan: at Heydar Aliyev International Airport and at the international airports of Ganja and Fizuli.

The ÇARE system will allow the Azeraeronavigation ATC to effectively manage air traffic and maintain air traffic safety at the highest level. The implementation of the ÇARE system at three international airports (Baku, Ganja, Fizuli) is part of the cooperation agreement signed between Azerbaijan and Turkey.



Vibe System Implementation– Roster, Competency, Training Organization and Briefing

The Vibe System is a comprehensive HR software solution designed specifically for Air Traffic Controllers (ATCs) in AZANS. The system includes a range of modules to support competency management, roster management, staff record management, briefing management, and training organization management. Additionally, the Vibe System also includes a document management module (DMS) to allow for easy organization and retrieval of important documents.



Drone Protection System at Baku/Heydar Aliyev airport

Drone Protection System has - 3 (three) RPLS-AK360 systems that operate uninterruptedly by neutralizing the control of the drones

Unmanned aerial vehicles (UAV), also called drones, are becoming increasingly popular around the world. As the fastest growing segment of aviation, UAV continue to increase in number, technical complexity and capabilities. The widespread availability of drones and the lack of training of their operators make their use a potential risk to civil aviation. Drones pose a particular danger near the airports and in the vicinity of runways. Therefore, critical infrastructures as airports need to be protected from such aerial attacks, through effective counteracting technologies.

The system is a protection means of Baku Heydar Aliyev Intl' airport infrastructure (airfield, terminals, etc.) as well as surrounding airspace from invasive and malicious drone or unauthorized multiple commercial drone activities.



Civil military Coordination center



2024 PROJECTS

- National Airspace Strategy – implementation
- Rehabilitation of Air Navigation Infrastructure at liberated territories;
- Delivery and installation of air navigation equipment and systems to ensure an acceptable level of flight safety at the Lachin International Airport;
- AZANS in AFEZ. Air navigation infrastructure development at AZ Cargo Village
- Creation of Branch Institute of German Air Navigation Academy (Deutsche Flugsicherung Academy);
- Implementation of UFA 360 3D TWR and ACC Simulators and training Facilities;
- Implement digital meteorological information exchange services in format IWXXM in accordance with ICAO requirements;



2024 PROJECTS

- Improvement of Meteorological services – enhanced 4D forecasting model;
- EUROCONTROL ATCO selection tool ;
- NG PHASE 2 Next Generation Aeronautical Information Management Environment + Digital NOTAM
- Implementation of DATA analytic and KPI/ENV monitoring tool;
- Implementation of Virtual and remote ATC Towers ,and effectiveness of operations of Heliports in Caspian Sea;
- Construction of ATC Artificial Intelligence Center, Remote Airport Management and Control of Unmanned Aerial Vehicles;
- Upgrade of ATC system
- Upgrade of AIM system



AZANS supporting traffic connection between of Europe and ASIA



The Central Asian regional aviation supply chain is a significant component of global civil aviation transportation, contributing to the development of global economy.

To support the development of regional civil aviation, AZANS with European expertise actively work and facilitate closer cooperation with neighbouring countries in the Central Asia region

Collaborative projects focusing on airspace and air route development, air traffic procedures and air traffic flow management, and implementation of latest ATC technologies with neighbouring air navigation service providers to enhance flight safety, effective airspace utilization, and meet the needs of airspace users.

AZANS see importance of regional cooperation which will have a positive effect flight efficiency, reduce environmental impact, sustainable support growing global demand within the region



**CANSO Global
ATM Summit
and 28th AGM**

**BAKU
2024**

THANK YOU!





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