



AIR NAVIGATION SERVICE PROVIDER  
STATE AIRPORTS AUTHORITY of TÜRKİYE

# ANNUAL REPORT 2024



2024



AIR NAVIGATION SERVICE PROVIDER  
AND STATE AIRPORTS AUTHORITY  
of TÜRKİYE

# ANNUAL REPORT

2024



*The future is in the skies.*

*H. Oatland*



# Foreword

The year 2024 marked a pivotal period of both transition and progress for the General Directorate of State Airports Authority (DHMI). As I stepped into the role of Director General, I took pride in continuing our shared mission: to provide safe, fast, and high-quality air navigation services that meet the highest international standards.

Throughout 2024, Türkiye stood at the crossroads of rising regional air traffic and increasing geopolitical complexity. Despite the closures of several airspaces in our region due to ongoing tensions, DHMI's air navigation staff rose to the challenge with professionalism and precision. Our ability to manage these significant traffic loads without a single minute of ATFM delay stands as a testament to our operational excellence and institutional strength.

Among the many milestones of the year, the completion of Çukurova Airport represents a major leap forward in our infrastructure capabilities, reflecting both our national vision and our commitment to regional development. At the same time, we solidified our standing as a leading air navigation service provider within EUROCONTROL, competing at the highest level in terms of service units and number of controlled flights.

Our international presence expanded through SOCEA, a regional cooperation

initiative for air navigation service providers founded in 2023. In 2024, SOCEA grew with the addition of three new members, notably Kyrgyzaeronavigatsia, Tajikairnavigation and Kazaeronavigatsia, further strengthening our role in shaping the future of aviation in our region.

We gaze upon the future, not content with the distance we've covered, but with hope in our hearts and resolve in our steps. Looking ahead, our ambition is clear: to elevate DHMI to the next level in the Century of Türkiye. We are investing in locally developed R&D solutions, embracing innovation, and continuously improving our service quality to meet the evolving demands of the global aviation ecosystem.

I would like to express my deepest gratitude to our dedicated staff, national stakeholders, and international partners for their trust and collaboration throughout this important year. Together, we shall press on with steady steps, on the journey to make Turkish civil aviation a name the world remembers: for trust, for stability, for excellence.

**Enes ÇAKMAK**

Chairman of the Board

Director General





## Board of Directors\*

### **Enes ÇAKMAK**

Chairman of the Board &  
Director General

#### **Fatih ÇAKMAK**

Member of the Board

#### **Dr. Cengiz PAŞAOĞLU**

Member of the Board

#### **Mustafa AKKAYA**

Member of the Board

#### **Muhammed Kerem**

**YEĞNİDEMİR**

Member of the Board

#### **Ali DOĞAN**

Member of the Board

\* As of July 2025.

# DHMI Organization Chart



Inspection Board

Legal Service

Internal Audit

Support Services

Private Secretariat

Office of the Board



**Fatih ÇAKMAK**  
Deputy Director General

Human Resources

Strategy  
Development

Purchasing  
& Supply

Corporate  
Communication



**Dr. Cengiz PAŞAOĞLU**  
Deputy Director General

Air Navigation  
Services

Electronics

Information  
Technologies

Airport Slot  
Coordination Center



**Mustafa AKKAYA**  
Deputy Director General

Finance

Aviation Medical  
Aid & Security

Aviation Training

Occupational  
Health & Safety



**Selami YAPICI**  
Deputy Director General

Airport Operations

Public-Private  
Partnership

Marketing  
& Trade

Construction &  
Real Estate



# PREPARED BY

## Route Charges

Berrin TURGUT (Head of Group) • Berrin.TURGUT@dhmi.gov.tr  
Halil ÖZDOĞAN • Halil.OZDOGAN@dhmi.gov.tr

## ANS

Binnur ŞAHİN • Binnur.SAHIN@dhmi.gov.tr  
Sevda TURHAN ER • Sevda.ER@dhmi.gov.tr  
Aslıhan AKGÜN TANRIÖĞEN • Aslıhan.AKGUN@dhmi.gov.tr  
Mehmet AKSEN • Mehmet.AKSEN@dhmi.gov.tr  
İlke TOPHANELİOĞLU • İlke.TOPHANELIOGLU@dhmi.gov.tr  
Sevcihan BARUTÇU AYGÜN • sevcihan.BARUTCU@dhmi.gov.tr

## CNS

Memiş ERSOY • Memis.ERSOY@dhmi.gov.tr

## Performance

Yasin YAVUZ • Yasin.YAVUZ@dhmi.gov.tr  
Sevda TURHAN ER • Sevda.ER@dhmi.gov.tr  
Ozan ULUDAĞ • Ozan.ULUDAG@dhmi.gov.tr

## Milestones

Halil ÖZDOĞAN • Halil.OZDOGAN@dhmi.gov.tr

## Finance

Ufuk KÖKÇÜ • Ufuk.KOKCU@dhmi.gov.tr

## Pictures

Ahmet HARMANCI • Ahmet.HARMANCI@dhmi.gov.tr  
Hüseyin YILDIZ • Huseyin.YILDIZ2@dhmi.gov.tr

## Design & Cover Theme

Kübra YÜCEL • Kubra.YUCEL@dhmi.gov.tr

## Printing

DHMI Printing Division © Copyright - All Rights Reserved



**DHMI**

Emniyet Mahallesi Mevlana Bulvarı No: 32  
Etiler 06560 Yenimahalle / Ankara - TÜRKİYE

T: +90 312 204 20 00

F: +90 312 222 09 76

Call Center: +90 444 34 64

dhmi@dhmi.gov.tr • www.dhmi.gov.tr

**CALL CENTER**

**444 34 64**





# CONTENTS

AIR NAVIGATION SERVICES	12
ROUTE CHARGES	42
COMMUNICATION NAVIGATION SURVEILLANCE	48
PERFORMANCE	60
MILESTONES	72
FINANCIAL STATEMENTS	80





## Mission

To provide air navigation and airport operation services at international standards.



## Vision

To become a leading establishment that is globally competitive in the field of air traffic management and airport operation industry.



# History

DHMI's long history dates back to 1912, when the first aeronautical state enterprise and an aviation training school were founded in Türkiye. In 1933, 10 years after the foundation of the Republic of Türkiye, the civil aviation sector adopted a new organizational model under the Directorate General for State Airlines, which is the ancestor of the DHMI. The spectacular development of civil aviation in subsequent decades made it necessary to separate the functions of air transport and the operation of aerodromes, which were entrusted to Turkish Airlines and the State Airports Enterprise, respectively. In 1984, the State Airports Authority acquired its current legal status and since then it has been conducting air navigation and airport operation services as the General Directorate of State Airports Authority (DHMI).

## Legal Statute And Objectives

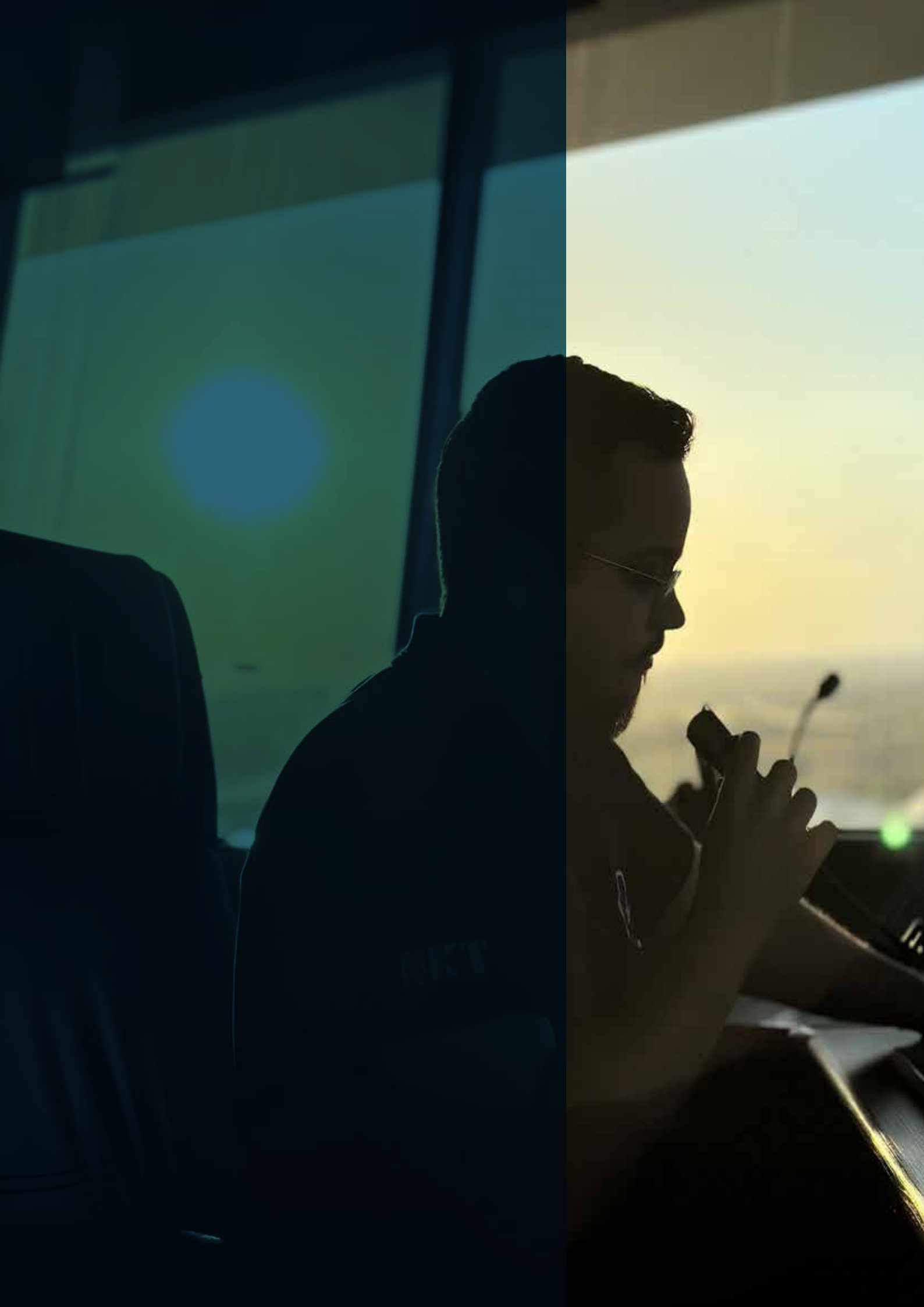
As a legal entity that has autonomy over its activities, DHMI is a state-owned enterprise (SOE) that is associated with the Ministry of Transport and Infrastructure. Its liability is limited to its capital. The status of the DHMI has been retained by the latest presidential decree. Established as organisations whose capital belonged to the state, state-owned enterprises are characterised by their public service mission. The objectives of the DHMI can be summed up as follows:

- ✈ To provide air navigation and airport operation services,
- ✈ To install and set up air navigation systems, facilities and other related systems, and
- ✈ To maintain them at a level that meets modern aviation standards.

## Core Principles and Values

- ✈ Sustainability
- ✈ Quality
- ✈ Transparency
- ✈ Professional expertise
- ✈ Utilization of advanced technology and IT systems
- ✈ Safety and Reliability
- ✈ Environmental and humanitarian awareness
- ✈ Passenger friendliness
- ✈ Productivity







# AIR NAVIGATION SERVICES



## Air Navigation Services



Türkiye has a huge and strategically important airspace with totally 75.902 kilometers of controlled air routes and 982.286 square kilometers of controlled airspace over Europe and Asia continents. Due to its special geographical location, Turkish airspace includes crossroads with north south and east-west traffic flows between Europe, Asia and the Middle East.

Devlet Hava Meydanları İşletmesi (DHMI) is responsible for Air Navigation Services in the Turkish airspace. Civil aviation in Türkiye is the responsibility of the Ministry of Transport and Infrastructure. The Directorate General of Civil Aviation (DGCA) a certified entity designated by the Minister of Transport is the Turkish Regulatory Authority. DHMI Air Navigation Department of Directorate General of State Airports of Türkiye is the unique provider of Civil Air Navigation Services for Türkiye. DHMI is a 100 % State-owned Autonomous State Enterprise and provides all the Air Traffic Services within civil airspace (Controlled Airspace, TMA and CTRs).








One of the main objectives of DHMI is **“to provide air navigation services for all users in a qualified, balanced, safe, environmental, friendly, fair and economic manner and the development of the air traffic”**

DHMI's strategy has two primary focuses:

-  To maintain its level of performance and strives to continuously improve the quality of its services.
-  To steadily develop its position in Europe and to achieve a leading position in the provision of air navigation services in the region.

Realization of DHMI's strategic principles is premised on reaching the following strategic goals:

Maintaining high-level air traffic safety,

-  Ensuring competent and highly qualified staff
-  Maintaining top quality services
-  Keeping air traffic delays to a minimum
-  Maintaining the economic efficiency at an acceptable level
-  Enabling environmental and fuel benefits.

DHMI also works to achieve Turkish transport policy goals.



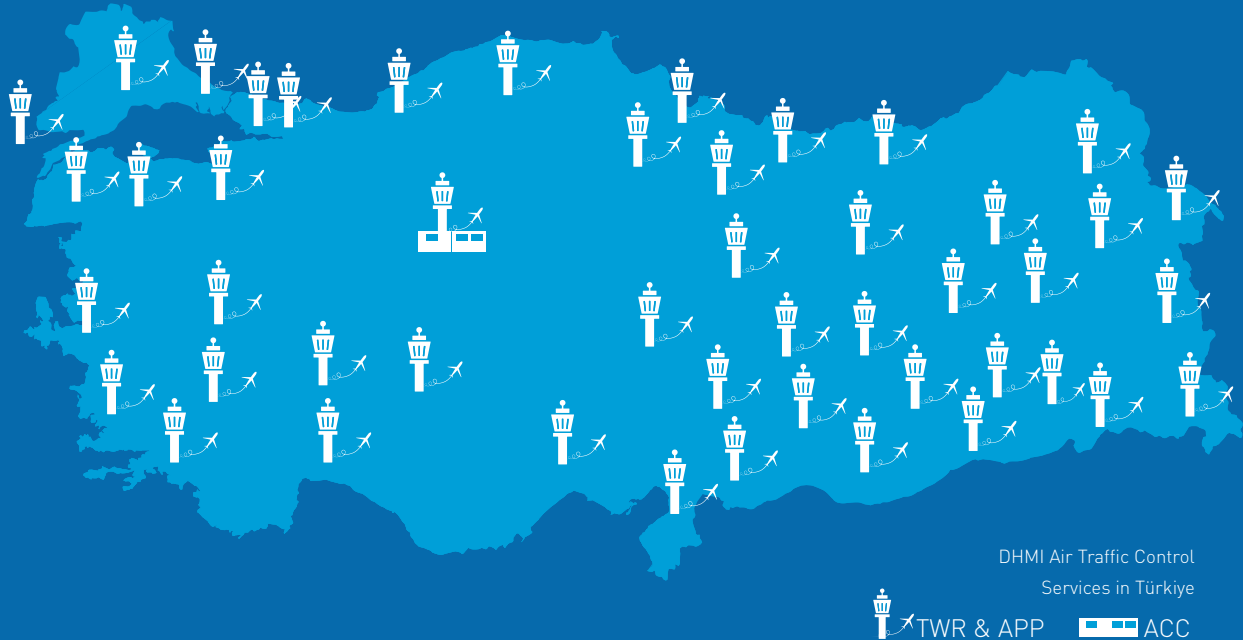
## ATC Units

DHMI's main ATC units are as follows:

- ✈️ Ankara ACC: Ankara Area Control Centre provides area control services within Ankara and İstanbul Flight Information Region. It also provides approach control services in Ankara TMA.
- ✈️ 48 Aerodrome Control Towers provide both approach control and aerodrome control services (İstanbul, İstanbul Atatürk, İstanbul Sabiha Gökçen Havalimanı, Ankara Esenboğa, İzmir Adnan Menderes, Antalya, Antalya Gazipaşa Alanya, Muğla Dalaman, Muğla Milas-Bodrum, Adana, Trabzon, Isparta Süleyman Demirel, Kapadokya, Erzurum Gaziantep, Adıyaman, Ağrı

Ahmed-i Hani, Aydın Çıldır, Balıkesir Koca Seyit, Bingöl, Bursa Yenişehir, Çanakkale, Çanakkale Gökçeada, Denizli Çardak, Elazığ, Erzincan, Hatay, Iğdır, Kahramanmaraş, Kars Harakani, Kastamonu, Mardin, Muş Sultan Alparslan, Samsun Çarşamba, Siirt, Sinop, Sivas Nuri Demirağ, Şanlıurfa GAP, Şırnak Şerafettin Elçi, Tekirdağ Çorlu Atatürk, Tokat, Uşak, Van Ferit Melen, Zafer, Zonguldak Çaycuma, Ordu-Giresun, Hakkari Yüksekova Selahaddin Eyyubi, Rize-Artvin)

- ✈️ 4 Aerodrome Control Towers provide aerodrome control services (Eskişehir Hasan Polatkan, Hazerfen, Samsun 19 Mayıs, Efes)





## Responsibilities

DHMI came into existence on 1933, taking the responsibilities of the safety of air navigation within the civil airspace in Türkiye. Its zone of activities extends from ground level to flight level 450. Air traffic control, aeronautical information service, alerting service, planning air traffic flow

above Türkiye, training services, publishing and updating aviation publications are just some of numerous DHMI's activity spheres.

The main services provided by DHMI Air Navigation Department are:

### Air Traffic Management:

- ✈ Air Space Management
- ✈ Air Traffic Services
- ✈ ATM occurrence investigation
- ✈ Participation in EUROCONTROL and ICAO activities/projects,

### Airspace design

- ✈ Designing instrument approach and ATS/RNAV routes,
- ✈ Designing departure and arrival procedures from/to Turkish airports by using conventional methods non-conventional methods based on RNAV in accordance with the PBN (Performance Based Navigation) concept
- ✈ Modernising airspace to make air traffic management more efficient, reduce the impact air traffic especially for the environment, and supporting future growth.

### Aeronautical Information Management:

- ✈ Preparing, publishing and distributing all aeronautical information/data concerning Turkish Airspace and Aerodromes via Turkish AIP,
- ✈ Publishing Aeronautical Information Circulars and Pre-flight bulletins,
- ✈ Producing and distributing aeronautical charts,
- ✈ Receiving, issuing and distributing NOTAMs,
- ✈ Controlling the Flight Permission of A/C using the Turkish Airspace and Aerodromes
- ✈ Controlling, distributing and supervising the Flight Plans (FPL)
- ✈ Coordinating SAR activities





## Flight Inspection Services:

- ✈ Participating in the design and development process of instrument flight procedures
- ✈ Approving instrument procedures,
- ✈ Calibrating and validating the signal quality and reliability of facilities (Radars, NDB, VOR, DME and ILS with its two Flight Inspection aircraft flying for an average of 900 hours per year.
- ✈ Providing transportation of maintenance personnel and/or spare parts in order to achieve in-place repair of a malfunction of radars, navigation aids and communication systems.
- ✈ Participating in reconnaissance and evaluation works on the locations of the new navigation aids
- ✈ Conducting individual trainings for air traffic controllers on VFR flight patterns and procedures of their aerodromes.

## The Eurocontrol Management;

- ✈ Establishment of the national cost base for en-route charges taking into account all economic developments,
- ✈ Collection, validation and exchange to the CRCO of flight data in line with our reporting responsibilities,
- ✈ Coordination and follow-up of financial and operational route charges related issues

## System Project Development and Assessment

- ✈ Solve the problems or the bottlenecks occurring in the current air navigation infrastructures
- ✈ Follow the latest aviation technology and the projects and participate where available
- ✈ Research new technologies to improve the ATM services
- ✈ Cooperate with national and international research organizations for R&D issues

## Air Navigation SMS & QMS Management

- ✈ Manage the SMS implementation plan
- ✈ Monitor any corrective action required in order to ensure accomplishment;
- ✈ Facilitate the risk management process that should include hazard identification, risk assessment and risk mitigation;
- ✈ Maintain safety documentation;
- ✈ Plan and organize staff safety training;

## Unmanned Aerial Vehicle Traffic Management Division

- ✈ Coordination and follow up the protocols about UAV flights.
- ✈ Maintain the statistical data of the total number of UAV flights
- ✈ Establish procedures about civilian/military UAV flights
- ✈ Observe and report the impact of the flights on the airspace capacity



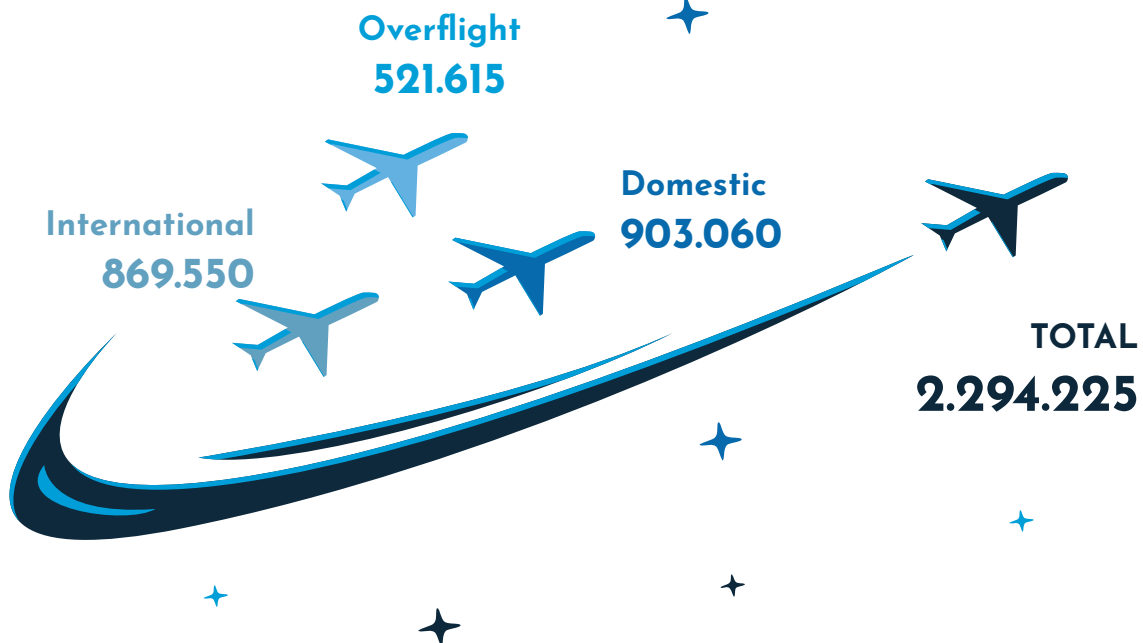
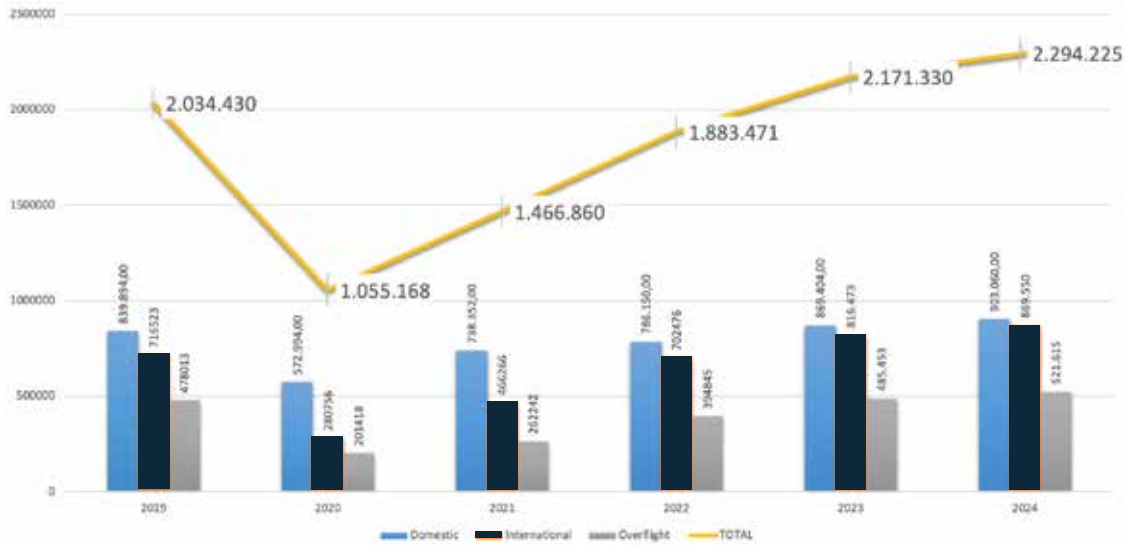
## Movements in the Airspace and at Airports in Türkiye

Traffic in the Turkish Airspace increased by 5,7% compared to 2023 and reached 2.294.225 flights. There was a general increase in the air traffic; in terms of overflights, arrivals/departures and domestic flights.

International (arrival/departure) flights increased by 6,5%, overflights increased by

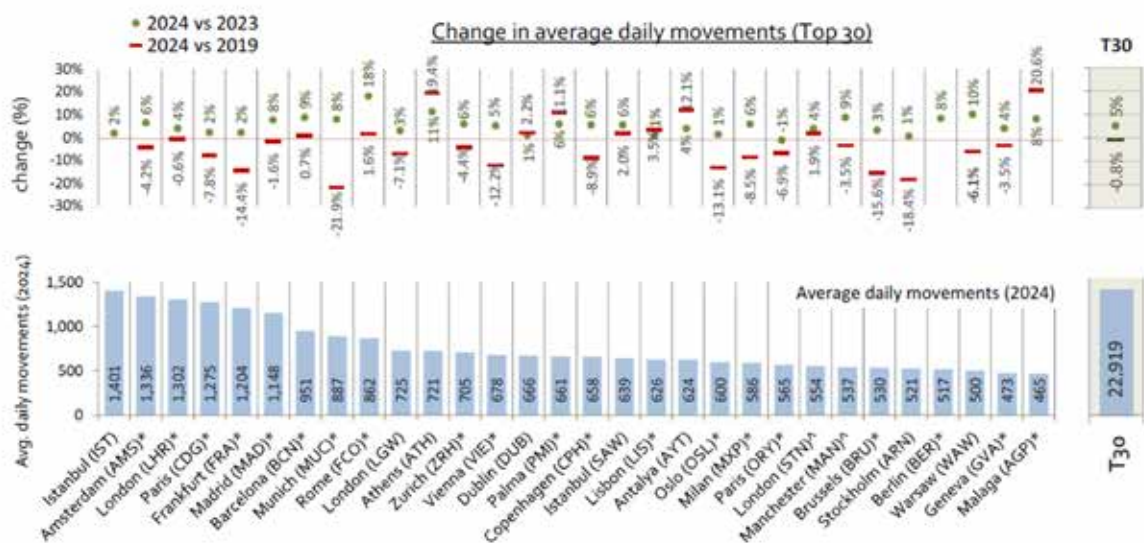
7,4% and domestic flights increased by 3,9% compared to the previous year

In 2024, number of domestic flights comprised 39% of total flights in Turkish airspace, slightly more than the number of international flights which comprised 38% of total flights, and the remaining 23% were overflights.





Year	2024
Number of Passengers (Including Transit Flights)	230.833.911
Number of Passengers	230.291.231
- Domestic	95.356.111
- International	134.935.120
Number of Transit Passengers	542.680
Total Flights (Including Overflights)	2.294.225
Number of Flights	1.772.610
- Domestic	903.060
- International	869.550
Number of Overflights	521.615
Traffic Load (Cargo+Post+Luggage) (Ton)	5.156.701
- Domestic	898.648
- International	4.258.053
Number of Cargo Traffic	2.166.797
- Domestic	115.861
- International	2.050.937



According to EUROCONTROL data, İstanbul Airport was Europe's busiest airport, finishing 2024 average of 1,141 daily flights. Both

Antalya and Sabiha Gökçen Airports are in the top 30 European airports in terms of air traffic.





## Recruitment

The total number of ATCOs employed by DHMI was 2074 for 2024. DHMI's controller recruitment plan continues. Sufficient numbers of ATCOs are currently available to meet operational requirements but with no excess.

A major training program of ab-initio ATCOs has been underway due to the large increase in traffic and the consequent need to create new sectors to manage this capacity.

## Training

Training means investing in the future. Once again this year, despite the heavy workload, the DHMI kept up this principle and managed to ensure high-quality training for all of its trainees.

DHMI provides initial training in both theoretical air traffic management and practical simulator-based training. The Basic Training for ATCO trainees was conducted at the Training Centre of DHMI, located at Esenboğa Airport, DHMI conducts basic, refreshment and advanced ATC training programmes. The training center has theoretical training classrooms, laboratories, radar simulator, tower simulator with 3-dimensional and 360-degree monitoring features and pilot control units.

The Air Traffic Control Simulator System consists of tower and approach/en-route control units. The system has the capability of running stand-alone as a tower or radar simulator or in integrated mode where the same scenario can run among all sectors (en-route/approach/tower) as in the real ATC environment. Working positions are equipped with ground and approach radar screens, NAV-AID and lighting panels, weather-NOTAM display, strip printers and voice communication systems. The appropriate design of the radar work stations also gives the possibility of non-radar training.

Basic training courses are designed in line with the EUROCONTROL Specification for the ATCO Common Core Content Initial Training. Besides, we have also a vigorous and continuous refreshment training plan

In 2024, recruitment campaign started with a press advertisement in in December 2023. After the analysis of the applications, 150 applicants were invited to sit a computerized aptitude test, which was held in March 2024. This test is commonly known as the FEAST and was used on license from EUROCONTROL. Candidates successful at FEAST test were invited to the interviews with top management, then 14 student ATCOs were recruited.

covering the present and future needs of ATCOs. In 2024, one Basic ATCO training courses completed and the students obtained their licenses.

Regular refresher, development, and emergency courses were provided either by DHMI and EUROCONTROL

Basic training courses are designed in line with the EUROCONTROL Specification for the ATCO Common Core Content Initial Training. Besides, we have also a vigorous and continuous refreshment training plan covering the present and future needs of ATCOs.

DHMI also conducts some training courses for staff other than ATC personnel who are working for Electronic Units, Communication, AIS, Fire Brigade, Special Security and other units.

Moreover, ANS personnel participated to ATM related courses at the Eurocontrol Aviation Learning Centre in Luxembourg, in order to increase their knowledge in 2024.



## Airspace Planning/Design and Projects

To cope with the continuous traffic growth and to satisfy the extra capacity needs, studies have been carried out to increase the capacities of the İstanbul, Antalya and İzmir Adnan Menderes Airports.

To implement the Simultaneous Triple Independent Runway Operations (TRO) at İstanbul Airport and to modify the airspace design in order to serve TRO at İstanbul TMA, safety and simulation studies has been done.

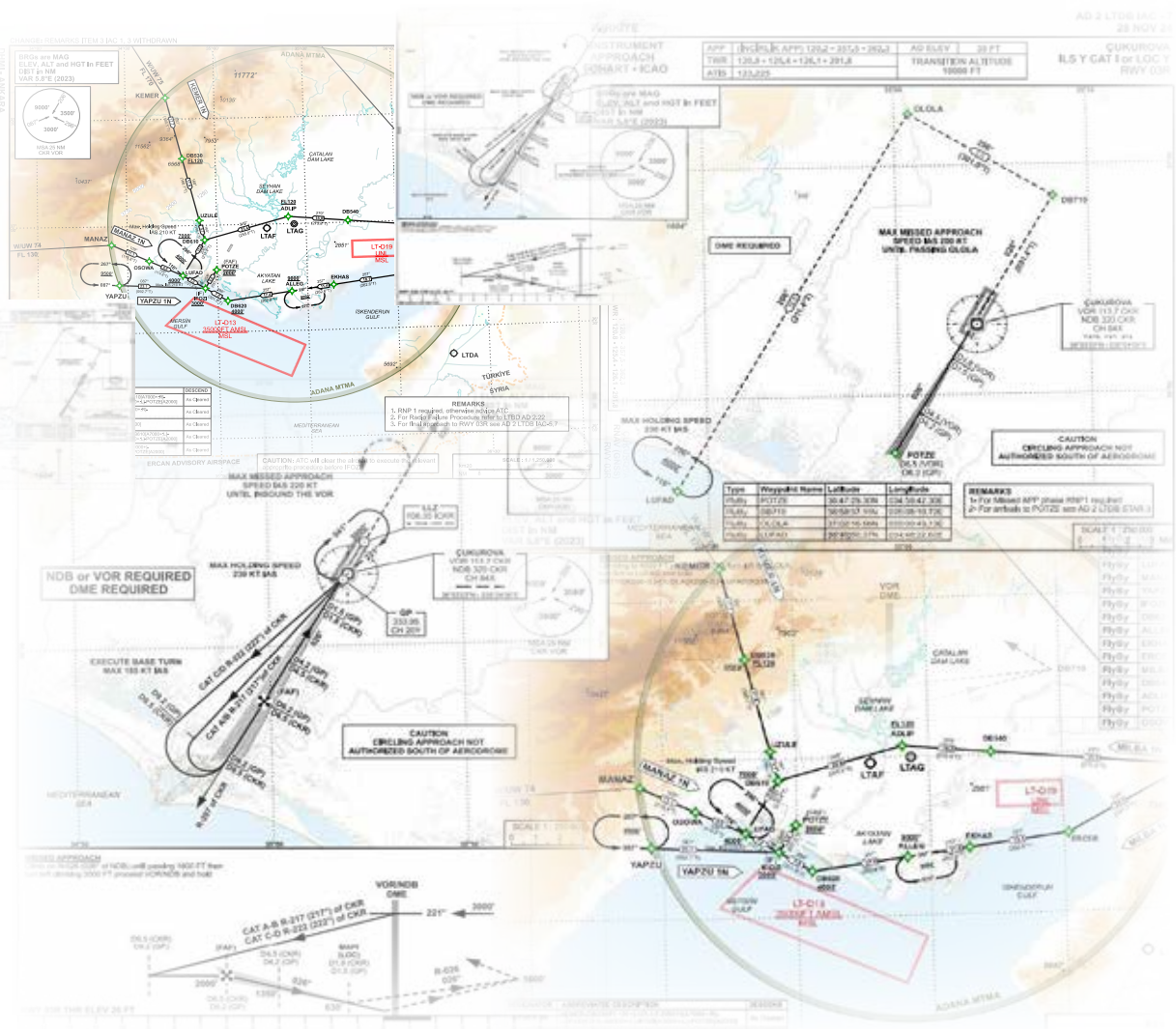
Also new airspace design studies for Antalya Airport and İzmir Adnan Menderes has been carried out.

Airspace Planning and Design studies also continued during the year 2024;

RNAV SID and STAR procedures were amended/new procedures have been implemented for the Çukurova, Kahramanmaraş, Kars, İstanbul, Trabzon and Zafer Airports to utilize the ATC Services

New Instrument Approach Procedures, RNP APCH procedures, Standard Arrival Routes, Standard Instrument Departure Procedures based on Conventional and P-RNAV/RNP 1 criteria were implemented for Elazığ, Kahramanmaraş, Kars, Şanlıurfa and Zafer Airports have been implemented.

Implementation of these procedures for the rest of Turkish Airports will be realized in accordance with our plans.



## Incident Investigation

Civil ATM incidents are investigated by the "Investigation and Assessment Commission" which reports incidents and investigation findings to the DGCA. The commission is formed of experts with sufficient qualifications. Where requested by the DHMI and/or if DGCA consider it necessary, experts from DGCA will also join the commission in accordance with SHY 65-02 "Reporting and Assessment of ATM Related Safety Occurrences" which was aligned with the EC directives on investigations of civil aviation accidents.

An investigation team is formed for each incident to investigate the incident, determine the causal factor(s) and propose necessary measures to avoid the repetition of such incidents in the future (e.g. training, new procedures, etc.). The results of the investigations are reported to DGCA.

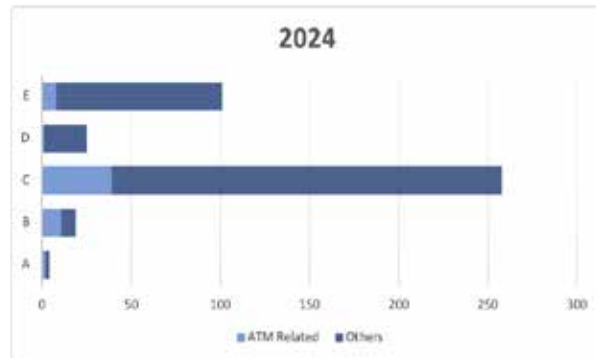
The causes of occurrences are analyzed to identify the areas which should and could be improved and safety recommendations, interventions and corrective actions are developed to reduce the risk incurred. All appropriate safety data are collected and stored.

There were no accidents in 2024 resulting from DHMI's operations. The objective of zero accidents was met. However, there were seven serious incidents that resulted from our operations. Due to the nature of accidents or

serious incidents, they can never be eliminated or predicted with 100% certainty.

While incident reports have been investigated in 2024; 56 of which were classified as ATM related. Appropriate recommendations have been issued for each event and their implementation has been monitored. Actions to be carried out for the implementation of safety nets are underway, like control staff training in the most critical sectors in procedures to avoid or mitigate the main factors detected in incidents.

Acceptable Level of Safety is defined as the number of safety incidents that occurred in the airspace for which DHMI is responsible, weighted according to its severity, in relation to the total number of flights controlled in the Turkish air space throughout the year". Incidents considered as A, B and C severity are those where it is considered that an ATM contribution exists directly by DHMI.



## DHMI's Flight Safety Goals

DHMI has set the goal of a maximum of tolerable probability for ATM direct contribution incidents at classification A, B and C per 100.000 movements in Türkiye. DHMI meets safety targets for 2024.

### Voluntary reporting

Voluntary reporting is encouraged as a best practice in Türkiye. DHMI has two main objectives for Voluntary ATM Occurrence Reporting activities, one of them is the fixing of problems within the shortest time possible and the other one is promoting a data driven approach to further safety enhancement

activities based on low or medium risk bearing incidents, instead on serious risk bearing incidents and accidents. DHMI has been using ATS SMS Confidential Reporting Form for voluntary reporting.

Incidents are reported by either pilots or ATCOs (through the local management) to the DHMI Headquarters. DHMI Just Culture Policy contains the principles and commitments in relation to Just Culture matters. The achievements of the aims of this policy go further than just its publication, as they include the development and adoption of a series of procedures that sustain it.



## Coordination And Cooperation

### Civil Military Cooperation

Military authorities also play a major role in managing the Turkish Airspace. Military ATC is entirely separated from Civil ATC, although very good civil/military co-ordination is maintained. Co-ordination between the military authorities and DHMI is ensured through a Civil-Military Co-ordination Group. Some (11) airports/airfields of military origin are jointly used by military and civil aviation. At eight (8) of these airports, all aircraft are under military ATC control.

In order to increase the capacity of Turkish airspace, with implementation of the SMART system, DHMI and the Military Authorities are

planning to implement the EUROCONTROL Flexible Use of Airspace (FUA) concept to apply the legislation that has been published at Official Gazette dated 18 April 2014. Studies are going on to establish infrastructure and units.



### International Cooperation

DHMI has always given great importance to International Cooperation and to develop its relations with other countries and associations. In this respect, DHMI is fully aware of the benefits of coordination and cooperation among the stakeholders in aviation community and giving a great emphasize to global cooperation in ATM. DHMI is regularly participating and following the events of ICAO, ECAC, EUROCONTROL and CANSO.

Türkiye, as an integral part of the European ATM network and a candidate country for the accession to the European Union, is actively aligning, wherever possible, its national

aviation legislation and aviation environment with the SES policy. With regard to the harmonization to the *acquis communautaire*, DHMI continued to work with Turkish Civil Aviation Authority and the Ministry of Foreign Affairs to review the existing aviation legislations and decide the necessary steps that should be taken.

DHMI has been the full member of CANSO since 2005. In 2011 DHMI has become a member of the European CANSO to the idea of strengthening cooperation amongst ANSP's in the European region. Since then Turkish Air Navigation Service Provider has participated to the CANSO EUR activities.







## Regional Cooperation

Türkiye maintains very close co-operation/co-ordination with all neighbours to optimize performance.

Türkiye has taken on responsibility of some transition tasks in the area and arranging air traffic flow to/from Europe.

It is also considered that, collaborating as closely as we can with our neighbouring civil air navigation service providers has a paramount importance in order to optimize airspace design and management and increase regional capacity, safety and quality. Therefore, Türkiye undertakes initiatives and efforts to ensure the application of same concepts, standards and projects under the EUROCONTROL umbrella.

Fourteenth Air Navigation Conference was held in Montreal/CANADA between August 26th-September 6th 2024. Dr. Cengiz Paşaoğlu represented DHMI and Türkiye as the chief delegate. Following key topics were discussed at the conference:

-  Strategic Planning
-  New Technologies
-  System Performance
-  Hyper-connectivity

Apart from these, the conference was a key stepping stone to the net-zero carbon emission goal of ICAO, aimed to be achieved by 2050.

On 10th of November

LNVL CEO Michiel van Dorst and Director Operations Mark van Knippenberg visited İstanbul Airport. Accompanied by Director General Dr. Cengiz PAŞAOĞLU, they had a chance to observe the airport design, tower control facility and other aspects of the İstanbul Airport. As the airport with the highest aircraft capacity per hour in Europe, İstanbul Airport operates with 3 parallel runways.

The 62nd session of the Eurocontrol Provisional Council was held on November

28th 2024 with the participation of Türkiye. As the main governing body, The Provisional Council oversees the technical, operational, and budgetary matters of Eurocontrol, directs the activities of the organization and ensures that the decisions of the Permanent Commission are implemented. In this session, efficient use of airspace capacity, operational efficiency, and budgetary matters were discussed.

Furthermore, Deputy Director General Dr. Cengiz Paşaoğlu was elected as the Vice President of the Eurocontrol Provisional Council. Dr. Cengiz Paşaoğlu will serve for two years as the Vice President.

On the 24 May 2024 SMATSA CEO Predrag Jovanovic and Directors of SMATSA visited İstanbul Airport. The purpose of the meeting was to enhance collaboration and coordination and ensure the mutual advancement of both DHMI and SMATSA in the field of air navigation.



## SOCEA in 2024

In 2024, the Regional Air Navigation Safety Coordination Platform for European and Asian ANSPs (SOCEA) continued to develop as a dedicated framework for cooperation among air navigation service providers. Established in 2023 by DHMI and Azerbaijan's AZANS, the platform aims to improve flight safety and coordination across a wide region.

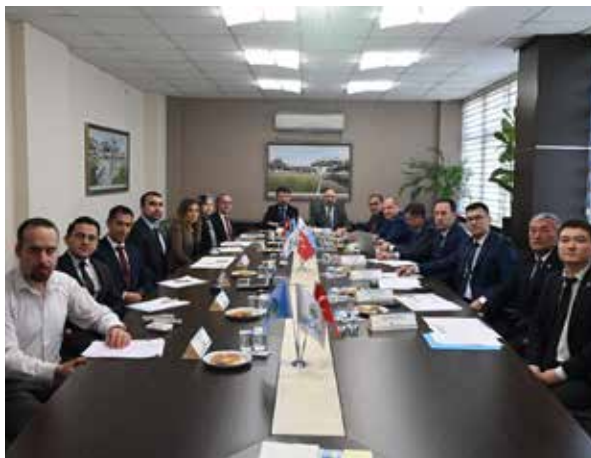
The SOCEA family accepted new members in 2024. Kyrgyzstan's ANSP "Kyrgyzaeronavigatsia" and Tajikistan's ANSP "Tajikairnavigation" joined earlier in the year, and Kazakhstan's "Kazaeronavigatsia" became a full member following its formal accession in October. Discussions also progressed with other prospective members. These developments reflect ongoing regional interest in structured, voluntary cooperation on air navigation matters.



The platform held its first General Assembly in 2024, bringing together leaders of the member ANSPs to take key decisions and set priorities. One of the main outcomes was the preparation for a new governance structure: the Executive Board, which will begin its

work in January 2025. This Board will handle policy implementation and support day-to-day coordination, assisted by a technical committee composed of experts from member organizations.





SOCEA's three working groups—Operational, Technical, and Administrative—were established and started their activities during the year. These groups provided a space for experts to exchange knowledge and work together on safety procedures, technical improvements, and organizational matters. The flexible structure of the working groups allowed members to contribute according to their capacity and area of expertise.

In terms of external engagement, SOCEA maintained its cooperation with international bodies, notably receiving support from the ICAO EUR/NAT Office. This helped ensure that the platform's work remained aligned with international aviation standards and practices.

Overall, 2024 was a year of significant progress. With an expanded membership, working groups in full operation, and preparations in place for the next stage of governance, SOCEA is gradually building its role as an efficient and collaborative mechanism for regional air navigation safety coordination.



## Aeronautical Information Management (AIM)

ICAO Annex-15 briefly states that; Each Contracting State shall provide an aeronautical information service to publish aeronautical information/data related concerning the entire territory of the State as well as those areas over the high seas for which the State is responsible for the provision of ATS.

In accordance with this statement, DHMI is the responsible authority for AIM services throughout Turkish Airspace.

Türkiye AIM units receive, assemble, edit, format, publish/store and distribute all aeronautical information/data concerning the State territory as well as those areas over the high seas for which the State is responsible for the provision of ATS through Aeronautical Information Products.

AIM Units have been certified with ISO 9000 since 2005. Our quality policy is to supply timely, effective and safe air navigation service to achieve customer satisfaction at top level and to improve the Quality Management System constantly.

AIM Services in Türkiye consist of;

- ✈️ AIM headquarters Offices (AIS/MAP, AIP, FIC, COM)
- ✈️ 1 International NOTAM Office (NOF)
- ✈️ 1 National NOTAM Office
- ✈️ 1 FIC (Flight Information Center)
- ✈️ 1 Communication Center (COM)
- ✈️ AIS/ARO Offices at 48 Aerodromes
- ✈️ Total number of AIM staff: 610



Briefly, the tasks of AIM Services are below;

- ✈️ Preparing, publishing and distributing all aeronautical information/data concerning Turkish Airspace and Aerodromes via Turkish AIP,
- ✈️ Publishing Aeronautical Information Circulars,
- ✈️ Producing and distributing aeronautical charts,
- ✈️ Receiving, issuing and distributing NOTAMs,
- ✈️ Controlling, distributing and supervising the Flight Plans (FPL)
- ✈️ VFR Flights are also followed by DEP, ARR messages
- ✈️ Flight permissions for Aircraft to use Turkish Airspace and ADs are granted by Ankara Flight Information Center (FIC) on behalf of Ministry of Transportation and Infrastructure at weekends, public holidays and beyond working hours
- ✈️ Evaluating signals about Air Search and Rescue which is transmitted from COSPAS-SARSAT satellite system and coordinate with related bodies.
- ✈️ Following emerging international developments about AIM, initiated projects aiming automation and integration.



## Quality Management System (QMS)

DHMI has successfully established, documented, implemented, and maintained a Quality Management System that fully complies with the national and international standards. This commitment to excellence has been formally recognized through the certificate issued by the Turkish Standards Institution.

The primary objective of DHMI Quality Management System is to ensure the highest possible level of flight safety, safety of life, and property. This is achieved by adhering to national and international legislation and standards, all while aligning with DHMI's core mission, vision, values, and strategic goals. Throughout 2024, the Turkish Standards Institution, responsible for developing standards across various products, procedures, and services, conducted necessary assessments of DHMI Quality Management System. The concurrent internal assessments revealed no deviations from the established requirements. This outcome unequivocally validates the system's effectiveness and efficiency, underscoring DHMI's capability to optimally utilize its resources.

The management, through its comprehensive quality policy, is dedicated to identifying and consistently meeting user requirements to enhance measurable customer satisfaction. Annually, DHMI proactively conducts Customer Satisfaction Questionnaires among various airline operators. This crucial feedback mechanism facilitates continuous service improvement and ensures that customer expectations are adequately met, ultimately guaranteeing the optimal delivery of air navigation services.



## Safety Management System (SMS)

DHMI consistently ensures to fulfil both Türkiye's and its own national and international obligations. This is done through meticulously pre-planned, systematic activities that align with the risk management principles and the relevant criteria.

DHMI Safety Management System (SMS) for Air Navigation Services extensively covers activities in Air Traffic Control (ATC), Aeronautical Information Management (AIM), and Air Traffic Management/Communication, Navigation, and Surveillance (ATM/CNS) Systems. The organization is continuously working to boost the efficiency of the SMS, foster a widespread safety culture, and actively involve all personnel in safety-related initiatives. The DHMI Safety Policy, crafted in line with both international and national requirements, clearly shows the organization's strong commitment to safety. This policy includes key elements such as safety priority, safety responsibility, safety planning, safety standards, safety achievement, safety assurance, and safety promotion.

The Safety Management System Manual is the core of the SMS. It details the SMS structure, processes, and essential procedures, ensuring strict adherence to national regulations, ICAO standards, and EUROCONTROL Safety Regulatory Requirements (ESARRs), which define European safety standards. Since implementing its SMS, DHMI has intensified efforts to build a robust safety culture embedded across all levels of the organization. This ensures that every employee understands their vital role in contributing to overall safety. As part of this, DHMI introduced the Air Navigation Services SMS Confidential Reporting Form (COREFORM), an electronic system for confidential safety reporting. To uphold commitment to confidentiality and the Personal Data Protection Law, electronic access to the form is restricted only to the authorized personnel.

DHMI Safety Board consists of representatives from relevant departments and is chaired by the Head of the Air Navigation Services, who has direct access to the Accountable Manager. When necessary, experts from other departments, units, or external institutions are invited. A similar structure is in place at all DHMI-operated airports. To ensure safe and effective Air Navigation Services and to boost individual awareness, Air Navigation Safety Management System Bulletins are prepared and published on the SMS Portal. DHMI actively participates in the EUROCONTROL/CANSO Standard of Excellence in Safety Management Systems. This involvement helps identify ways to continuously improve the Safety Management System. Demonstrating a strong commitment to ongoing enhancement, DHMI ensures that experts from relevant departments actively contribute to the EUROCONTROL Safety Team and other related working groups, gaining access to the latest developments in safety management.

In 2024, the DHMI Air Navigation Services Safety Management System advanced from Level 'B' to Level 'C', indicating a higher maturity level, as of November 7, 2024. As part of the 2024 EUROCONTROL/CANSO Standard of Excellence (SoE) in Safety Management Systems Measurement, the "Interactive SMS Trainings" application,



reviewed by the assessment commission, was submitted to the platform for sharing best practices. It received commendation, was positively evaluated, and recognized as a 'Good Practice' and published in SKYbrary. The SMS audits were carried out across Air Navigation Service Units between October 14 and November 22, 2024. Initial SMS Training Programme was delivered to Air Traffic Controllers and AIM Experts in February and March 2024. Additionally, SMS Refresher Training Programme was provided to 142 personnel, including Air Traffic Controllers and AIM Experts, during June and July 2024. Safety analysis studies for the ÇARE System

## Just Culture Policy

As the Air Navigation Service Provider of Türkiye, a Just Culture philosophy is embraced by DHMI. This means that while destructive or harmful behaviour resulting from a staff member's deliberate negligence or abuse of their position is not tolerated, personnel will not be penalized for errors that stem from insufficient professional knowledge or experience in performing their duties.

Our organization is committed to ensuring the highest safety standards. To this end, and to ensure the safe continuation of services provided, all accidents, incidents, occurrences, and elements posing potential risks must be reported without any reservation or hesitation. Therefore, all Air Navigation Service personnel are obligated to report safety-related matters. The primary purpose of reporting is not to blame anyone, but to conduct risk assessments and prevent accidents/incidents. Unless there is unlawful conduct, deliberate negligence, abuse of position, or an intentional refusal to apply rules or procedures, no adverse action will be taken against personnel who report a situation deemed to have negatively affected or potentially affected safety.

Ensuring the safety of service is among our most fundamental duties, and it is crucial to provide all necessary contributions to keep

(Multi-Purpose Radar Display) and the EFS/DCL System (Electronic Flight Strip/Digital Clearance), jointly developed by TÜBİTAK and DHMI, were successfully completed in coordination with TÜBİTAK. In addition, safety analysis activities have been initiated for the National Surveillance Radar MGR/Mode-S system, developed as part of DHMI's R&D project.

DHMI Safety Policy and the Just Culture Policy are signed by the General Manager, who holds the highest level of responsibility for the establishment, implementation, development, and continuity of the Safety Management System.

operational risks at an acceptable level. It is clear that reporting safety issues is the best way to achieve this goal. Just Culture is not only the best way to achieve a reporting culture but also supports our Safety Policy.







## Safety Policy

In air navigation services, which are among the key operational areas of the civil aviation sector in terms of flight safety and the protection of life and property, it is essential to ensure integrity and enable direct intervention through the timely implementation of preventive and corrective measures.

Fulfilling Türkiye's and DHMI's national and international obligations in a timely and accurate manner, in line with established criteria, can only be achieved through this approach.

Therefore, within the scope of air navigation service integrity, the selection, training, licensing, and maintenance of valid ratings for air navigation personnel, as well as all types of air navigation technical infrastructure, airspace planning and management, and both strategic and tactical operational activities, are included.

The Directorate of Air Navigation Services considers the elimination of any potential

safety risks as a primary duty in the provision of services, with the fundamental objective of ensuring flight safety and the protection of life and property.

Our goal is to continuously strive to enhance the safety performance of the Air Navigation Services provided by our Organization and to minimize, as much as possible, the risks that could lead to an aircraft accident.

In line with this objective:

A Safety Management System (SMS) is adopted that:

- Defines safety as the top priority,
- Clearly sets out and identifies responsibilities related to safety,
- Promotes safety awareness and consciousness among all personnel,
- Strives to meet national and international aviation standards,
- Encourages all personnel to report safety-related issues encountered or anticipated during the provision of services,
- Promotes voluntary reporting in line with existing legislative provisions,
- Supports the spread of a just culture, where destructive or harmful behaviour resulting from deliberate negligence or misconduct are not tolerated, while personnel are not punished for unintentional errors arising from a lack of experience or knowledge within their professional duties,
- Ensures compliance with all safety standards and requirements,
- Supports the exchange of safety-related data and information,
- Establishes and measures safety performance against realistic objectives and targets,
- Aims at the continuous improvement of safety performance.

Our top management is committed to:

- Promoting a strong and pervasive safety culture,
- Ensuring the continuous maintenance of safety-related competencies of all personnel,
- Providing the necessary resources for the effective implementation and maintenance of the Safety Management System,
- Regularly reviewing progress and developments related to the Safety Management System,
- Providing maximum support for implementing the necessary arrangements to achieve safety objectives.

## Air Traffic Management R&D

Since 2009, DHMI has been conducting R&D activities in cooperation with TÜBİTAK in the field of air traffic management. To date, 15 projects have been successfully completed, while 2 projects are still in progress. In addition

to these national efforts, DHMI participates in the SESAR-funded Project, contributing to international research on innovative UTM solutions for safe drone operations.



Following the completion of the projects here are the products gained:

## 1- Aircraft Tracking System R&D Project (HATS)

The developed system aims to track the helicopters and aircraft from take-off to landing. The system is based on transferring the aircraft's position data via GPRS messages and the message transferring is taken over by satellite communication if the GSM signals are unavailable. This makes seamless tracking possible. The system consists of an Aircraft Tracking Device (HATS) which is mounted on the helicopters/aircraft and an Aircraft Tracking Center (HATM) which is a land-based server system.



## 2- Avian Radar (KUŞRAD)

The system is developed to monitor bird activity on potential migrating routes. The birds are a threat to aircraft both on the ground and in the air. The system works as an early alert to the air traffic controller to detect any flock of birds that are migrating. Bird activity is continuously recorded on the server for statistical analysis. This analysis is used to control aircraft approach, departure, and arrival routes and times. The system consists

of two radars: a horizontal surveillance pulse radar operating in the S band and a vertically scanning FMCW radar operating in the X band. The system operates 24/7, detecting and tracking birds and flocks of birds, as well as aircraft, and reporting their range, elevation and direction. The system is installed at İstanbul Atatürk International Airport.





### 3- ATC Aerodrome & Approach/En-route Control Radar Simulator System (atcTRsim)

Following the signing of the agreement that includes R&D cooperation between DHMI and TÜBİTAK, The ATC (Air Traffic Controller) Simulator System was the first project scheduled to be completed in 30 months. The property rights of developed software belong to DHMI. Thus, DHMI can deploy these software tools at any airport or air traffic center in order to enhance the number and quality of ATC training facilities. ATC Simulator is a complete system that meets ab initio and advanced ATC training requirements and provides significant cost and time savings.

It supports all levels of radar and tower ATC training that complies with international standards like ICAO and EUROCONTROL. ATC Simulator systems are also interoperable with the other ATM systems. It has fast time

performance to manage high traffic loads on multiple exercises. The system is installed and in use at 3 locations which are Ankara Esenboğa Airport Aviation Academy, Türkiye Air Traffic Control Center and İstanbul Atatürk International Airport.



### 4- FOD Detection Radar (FODRAD)

The Foreign Object Debris (FOD) Detection Radar System was developed to enhance runway safety by continuously surveilling runways for foreign objects. Traditionally, runway inspections have been conducted visually and often under time pressure due to air traffic flow. The FOD Detection System significantly reduces inspection time while increasing safety. The system infrastructure is designed using radar-, optical-, or hybrid-based surveillance technologies. The system is currently operational at Antalya International Airport.





## 5- ÇARE (Multi-Purpose Radar Display)

The Multi-Purpose Radar Display (CARE) is a self-contained and easy-to-use system that allows the displaying on two-dimensional maps with data in specific formats from various surveillance sources to provide situationally to air traffic controllers.

The system includes multiple maintenance data supports and their operating functions and single or multiple selected sources can be observed on the screen. Serving in 46 air traffic control units in Turkish Airspace, ÇARE is a human-machine interface application that displays real-time flight data on the map within the framework of its air traffic control management capability. The user-friendliness of ÇARE's interface allows air traffic controllers



to manage air traffic effectively and ensures that air traffic safety is maintained at the highest level. ÇARE system is installed and in use at three air traffic control units in Azerbaijan; Baku Heydar Aliyev International Airport, Fuzuli International Airport and Gence International Airport.

## 6- MGR Radar System (with Mode-S SSR Capability)

In the civil aviation domain, generally, combined PSR (Primary Surveillance Radar) and SSR radar systems are used. It was intended to develop National Primary Surveillance Radar and Secondary Surveillance Radar with MODE-S capability and finally integrate them to gain a combined PSR/SSR Mode-S radar system. MGR Surveillance Radar System consists of an S-Band fully Solid State Pulse Doppler Radar (Primary Surveillance Radar - PSR) and an L-Band Enhanced Mode-S Secondary Surveillance Radar (MSSR). The system is developed to provide the surveillance information to Air Traffic Controllers. The system is designed according to ICAO and EUROCONTROL recommendations and standards. Detection

and tracking of air targets by PSR are performed up to 60 nautical miles using advanced coherent radar signal processing techniques in different weather conditions. The minimum range of the SSR is 200 nautical miles. The system can simultaneously track up to 1,000 targets via Moving Target Detection (MTD) and Clutter Reduction capability by using low/high beam selection, sensitivity time control (STC), adaptive clutter map and Doppler filters. Also, the weather channel can provide 6 levels of precipitation information at 1.4° to 0.95 nautical miles resolution. The system architecture is fully redundant and optimized for 7/24 continuous operation. The system is installed in Gaziantep Airport and ready to serve.



## 7- EFS/DCL (Electronic Flight Strip - Departure Clearance) System


EFS (Electronic Flight Strip) System is basically a part of the National ATC Systems Project which is still ongoing. The system has been developed by Turkish system and software developers. The system provides functionality to replace paper strips in a TWR and APP environment. It is user-friendly, highly configurable and can be customized to fit both large and small airports. The tool has the ability to send and receive AFTN messages both in ADEXP and ICAO format and is well integrated into the FDP systems by using fundamental SSR Code/CFL request capability. With its easy-to-use interface, flexible usage modes and integrated connections to many outsources (e.g. AFTN, IOP, DCL, DHMI networks) the system supplies workload reduction to air traffic controllers highly. To date, the system has been installed in 29 aerodromes and is used very effectively by air traffic controllers. It is planned to be installed in more aerodromes depending on demands.



Our ongoing projects are as follows:

### 1. National ATC (Air Traffic Control) Systems

After the completion of the related project which is under development so far, it is aimed to have National ATC Systems that are listed below:

-  Surveillance Data Processing System (SDPS)
-  Flight Data Processing System (FDPS)
-  Operational Display System (ODS)
-  Supervisor Operational Display System (SODS)
-  Safety Nets
-  ATC Support Software Tools (ATC Tools)

-  Technical Monitoring & Control System (TMC)
-  Database Management Software Maintenance Development Environment (DBM-SDE)
-  Data-Link System

By using national sources (technologies, qualified developers etc.) it is intended to obtain domain knowledge, know-how and low cost - non foreign dependent systems in air traffic management. The systems are expected to be tested and used in late of 2025. The development process of all systems is still in progress.

## 2. National WMLAT (Wide Area Multilateration) System

It is aimed to develop and implement the MLAT (Multilateration) System, which is a new generation technique in the surveillance of aircraft, within national means, the intellectual and property rights of which belong to our organization. A-SMGCS (Advanced Ground Movements Guidance and Control System), which is planned to be developed along MLAT System, provides surveillance and guidance with the control of aircraft and vehicles in order to maintain the declared ground movement rate, providing the necessary safety level in all weather conditions within the airport operational visibility level (AVOL). A-SMGCS is a system consisting of the integration of SMR (Surface Movement Radar) and MLAT (Multilateration) systems,

which helps to carry out airport ground operations safely and quickly, especially in low visibility conditions, at night and at distances where the visibility is not sufficient, where the view at the ATC Tower is lost.

- ✈ MLAT (Multilateration) Sensors
- ✈ WAM (Wide Area Multilateration)
- ✈ SMR (Surface Movement Radar)
- ✈ A-SMGCS (Advanced Ground Movement Guidance and Control System)

The systems above will be developed integrated with each other and then installed at İzmir Adnan Menderes Airport.

Ongoing international project:

### 1- AI4Hydrop Project - SESAR 3 JU (Single European Sky ATM Research 3 Joint Undertaking)

The project intends to address various research questions and objectives, including assessing and quantifying the level of safety for U-space operations, defining a safety framework for strategic and tactical operations, determining the acceptable level of automation and AI integration, optimizing airspace usage, and establishing a rational flight approval process. By leveraging AI techniques, the project seeks to pave the way for automated air traffic management, enabling the efficient and secure integration of drones into airspace while considering potential risks, societal impacts, and environmental concerns.

DHMI (Air Navigation Service Provider of Türkiye) takes a beneficiary role that is to

provide domain information about ATM/UTM (Air Traffic Management/Unmanned Air Traffic Management) and to complete the work packages shown below cooperatively with other partners:

- ✈ Project Management
- ✈ Requirement Elicitation and Holistic Conceptual Framework
- ✈ Dynamic Airspace Structure Design
- ✈ Autonomous Flight Plan Approval
- ✈ Integration, Validation and Recommendation for the holistic framework
- ✈ Communication, Dissemination and Exploitation







## Events Attended in 2024

- 6th PRODUCTIVITY AND TECHNOLOGY FAIR
- AIRSPACE WORLD
- AIREX- ISTANBUL AIRSHOW
- TEKNOFEST ADANA
- SAHA EXPO 2024)
- UFEST

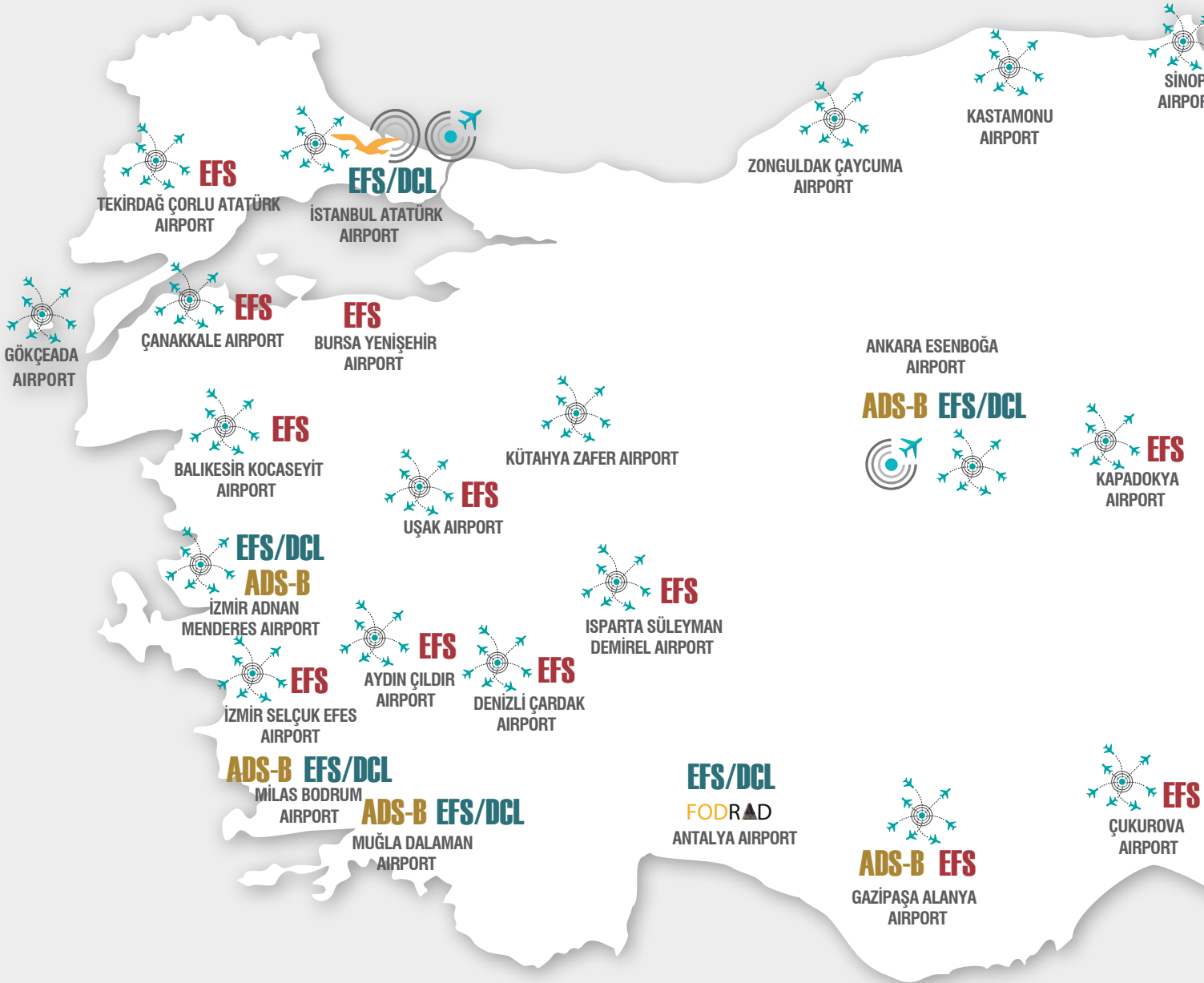








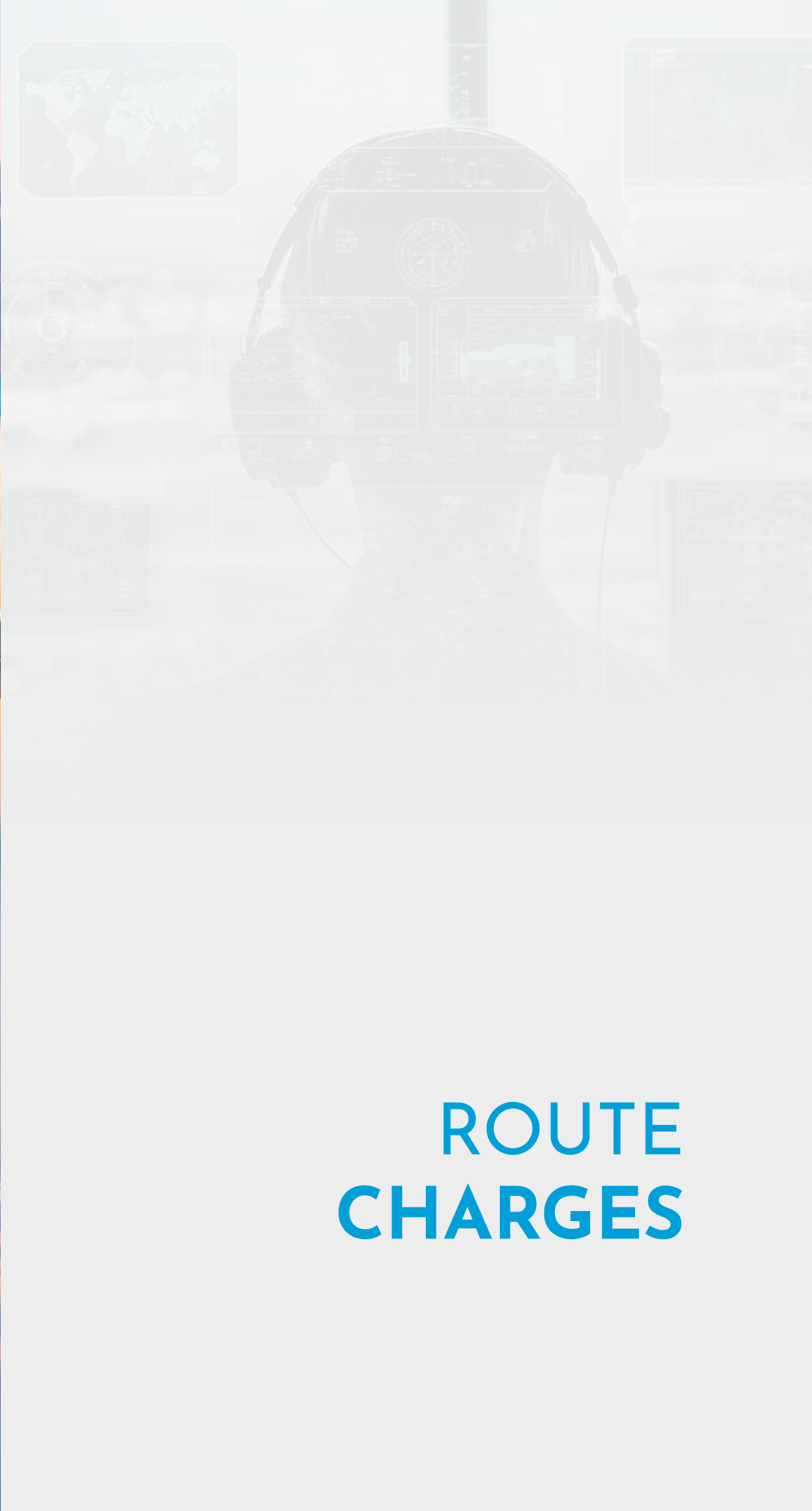
# R&D Systems At Our Airports











# ROUTE CHARGES

## National Cost-Base

DHMI, as the Air Navigation Service Provider in Türkiye, continues to provide the best possible service to airspace users, uses its resources efficiently, sticks to cost-efficiency policies and realizes all these services at the lowest price.

The result is that DHMI's unit ATM/CNS provision costs remain significantly lower than the European system average, with unit costs positioned in the bottom half and in line with underlying economic and traffic demand fundamentals. KPIs showing highest ATCO efficiency, substantial total service units within

EUROCONTROL, minimal ATFM delays and competitive unit rates all clearly indicate a reasonable cost-base.

This achievement is thanks to strict cost containment measures and the strategic transition to Euro-based costing, having a positive impact on cost stability without compromising the provision of service.

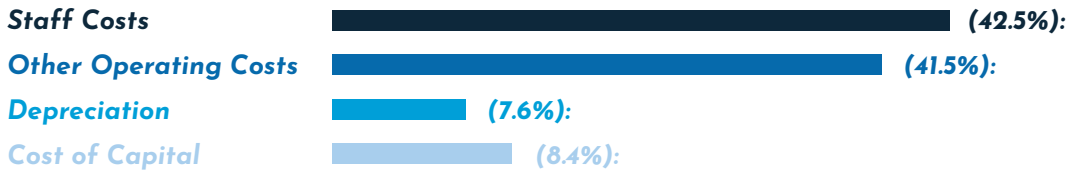
Showing exceptional performance with high cost-efficiency both European wide and regionally continues to be a true tradition of DHMI.

## 2024 Actual Cost-Base

The year 2024 marked a transformative period for DHMI with the successful implementation of cost-base established in Euro, designed to insulate operations from domestic macroeconomic volatility. As

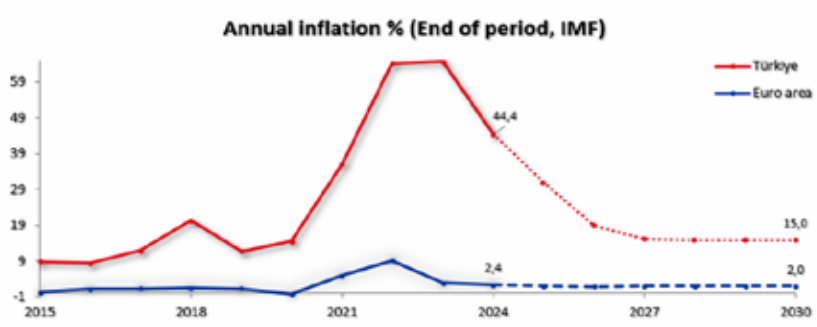
regards the costs by nature, staff costs were established at €268.8 million, other operating costs at €262.0 million, depreciation at €48.0 million, and cost of capital at €53.0 million, resulting in a total cost base of €631.8 million.

### [Cost Structure Chart - 2024 Actual Costs by Category]



DHMI operates in a complex macroeconomic environment with unique challenges that have a profound impact on the cost structure. The strategic transition to Euro-based cost method has proven instrumental in maintaining operational stability and cost

predictability. Factors such as persistent domestic inflation, exchange rate fluctuations, and ongoing reconstruction efforts following the 2023 earthquakes continued to influence the broader economic landscape throughout 2024.



**“Excellent provision of service & low provision costs”**







## National Unit Rate

The 2024 unit rate has been calculated as €31,93 reflecting the careful balance between cost recovery and maintaining competitive pricing for airspace users. This

rate incorporates the benefits of Euro-based costing while accounting for the impact of reduced service units due to geopolitical factors.

### [Unit Rate Projection - 2025-2030, in Euros]

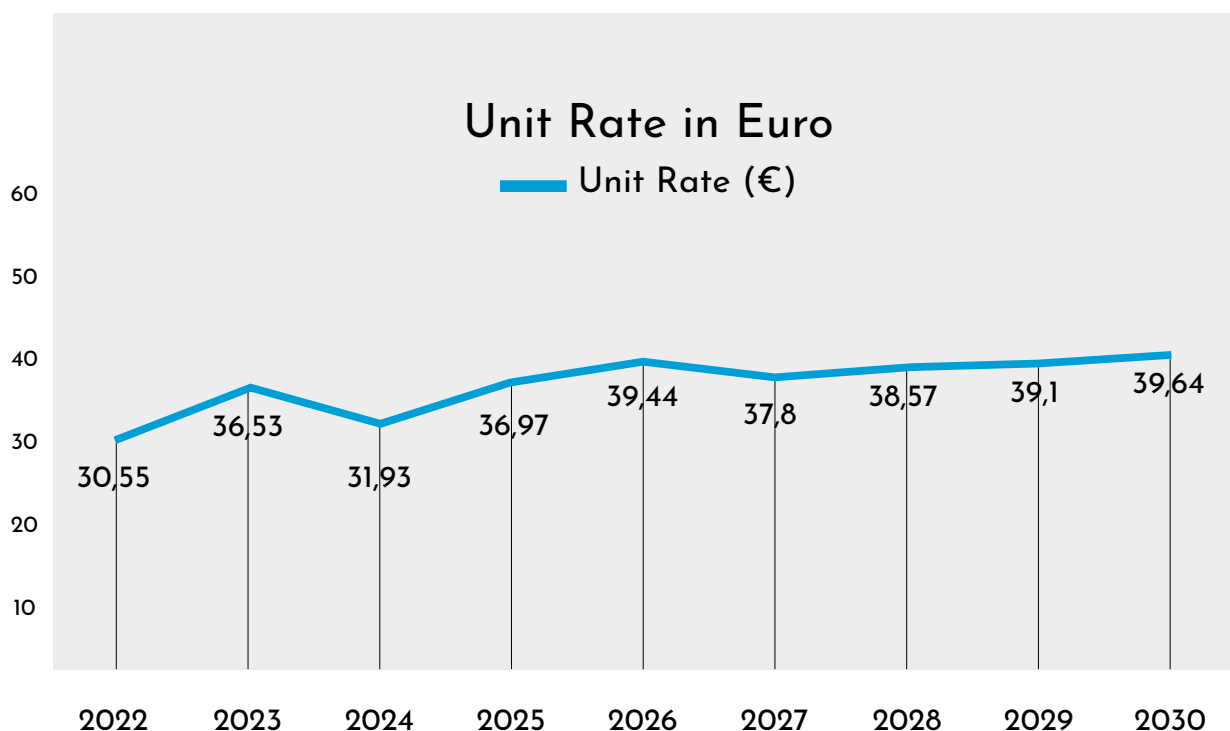
Year	2025	2026	2027	2028	2029	2030
	36,97	39,44	37,80	38,57	39,10	39,64

The forward-looking unit rate projections demonstrate DHMI's commitment to cost stability and predictability.

It is important to highlight that during these challenging times, every effort has been made to optimize costs while ensuring the highest level of safety in service provision. Despite the difficulties faced, DHMI remains committed to its efficiency targets, particularly in maintaining competitive unit rates while upholding excellent aeronautical

performance. The organization's dedication to cost-effectiveness and safety underscores its commitment to providing quality services in the most efficient manner possible.

**"Lowest possible  
unit rates"**



## Forward-Looking Information

The strategic transition to Euro-based costing positions DHMI for enhanced stability and predictability. Forward-looking projections are based on key indicators including GDP growth

trends, Euro Area inflation expectations, forecasts for IFR traffic growth within Turkish airspace, and market price dynamics.

### [Cost Evolution Forecast - 2025-2030, in million Euros]

Est. Cost	2025 F	2026 P	2027 P	2028P	2029 P	2030 P
	692	852	931	997	1.055	1.121

The Euro cost base framework provides a stable foundation for long-term planning, insulating operations from domestic macroeconomic volatility while maintaining alignment with European aviation financial standards. Cost projections reflect controlled growth in line with operational requirements and international price trends, ensuring sustainable service delivery.

Given the continuing and escalating nature of regional conflicts, traffic patterns remain subject to significant uncertainty in the near term. DHMI has developed robust operational frameworks to adapt to varying traffic scenarios while maintaining service excellence.

The organization's operational flexibility and proven resilience enable effective cost management regardless of traffic volatility, ensuring sustainable operations even under challenging geopolitical conditions.

DHMI's commitment to excellence continues to drive performance across all operational dimensions. The successful implementation of Euro-based costing, combined with ongoing operational optimization initiatives, ensures that the organization remains well-positioned to deliver exceptional service quality at the lowest possible cost throughout the forward-looking period.









# COMMUNICATION **NAVIGATION** SURVEILLANCE



## CNS Services (Communication, Navigation, Surveillance)

DHMI, main CNS service provider in Türkiye, provides CNS services by means of Electronics Department at the Headquarters, Electronics Units at 7 Approach Control Centers, 58 Airports and Air Traffic Control Center located at Ankara.

DHMI Electronics Department is in charge of the following tasks:

- ✈ Procurement and installation of equipment Communication, Navigation and Surveillance services,
- ✈ Preparation and execution of maintenance plans for the CNS equipment,
- ✈ Provision of ground services for flight inspections
- ✈ Calibration of test and measurement devices,
- ✈ Provision of repair service for the CNS equipment,

✈ Planning and execution of training for ATSEP (Air Traffic Safety Electronics Personnel) including Basic, Qualification, On-The-Job and Refreshment training according to the ATSEP License Regulation in place,

✈ Evaluation of the effects of constructions (wind power plants, hydroelectric power plants, solar power plants, power transmission lines, buildings etc) on CNS systems/equipment and provide feedbacks to applicants,

✈ Following of EUROCONTROL, ICAO and EUROCAE publications, regulations and participation in meetings.



CNS services are being provided by 650 ATSEP Licensed technical staff located at the DHMI Headquarters, Ankara ACC and at airports in Türkiye.

In 2024, DHMI hired 18 new technical employees for CNS services.

## SMS & QMS (Safety And Quality Management System)

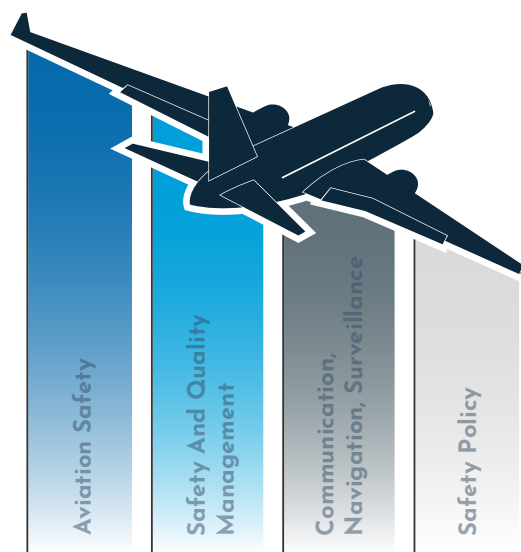
All activities were carried out in accordance with the Integrated Quality Management System (QMS) for Electronic (CNS) Services. Necessary revisions were made to documentation used in CNS services under the Quality Management System (QMS) and the Safety Management System (SMS).

Within the framework of ISO 9001:2015 Quality Management System Standard, internal audits were conducted between October and November 2024. Furthermore, support was provided for the activities conducted by the Strategy Development Department under the Integrated Quality Management System.

Processes and procedures related to CNS services were monitored, and the resulting data were analyzed and shared with the Electronic Directorates of Regional Directorates, the Electronic Divisions of Airport Directorates, and the Strategy Development Department.

To ensure the safe and uninterrupted continuation of air navigation services, the matters

related to CNS services mentioned in the Final Reports of Local Safety Commission meetings—held every April, August, and December at the Regional and Airport Directorates—were reviewed and evaluated.



## Training

Training is one of the key enablers of CNS services and DHMI attaches special importance to training of staff working in the CNS service provision.

Theoretical trainings were moved to digital platforms after Covid-19 pandemic and practical trainings are being provided by

experienced and authorized OJTIs on the system/device platforms.

The table below summarizes the trainings in 2024.

Beside ATSEP training, equipment trainings such as VOR, DME, NDB, VCS etc. were also performed in 2024.

Training	Number of Participants
ATSEP Initial Training	32
ATSEP Communication Qualification Training	24
ATSEP Navigation Qualification Training	33
ATSEP Communication OJT	23
ATSEP Navigation OJT	34



## Communication Services

In the standards published by the International Aviation Organizations (ICAO, FAA, EUROCONTROL, etc.); the modernization and renewal of the systems, as well as the planning and maintenance of the national and international terrestrial/satellite network infrastructure connected to these systems; are carried out within the framework of the schedule every year in order to enable radio communication with each aircraft that flies in Turkish airspace at all flight levels.

Equipment being used for Communication services are mainly as below:

- ✈️ VCS (Voice Communication Systems),
- ✈️ Air/Ground Radios,
- ✈️ Ground/Ground Radios,
- ✈️ AFTN/AMHS (Aeronautical Fixed Telephone Network/Aeronautical Message Handling System)
- ✈️ ATIS/D-ATIS (Automatic Terminal Information Service/Datalink ATIS)
- ✈️ VSAT (Very Small Aperture Terminal)
- ✈️ Cospas - Sarsat System,
- ✈️ VRS (Voice Recording/Playback Systems)
- ✈️ Datalink Systems,
- ✈️ Radiolink Systems,
- ✈️ HF-SSB Radios

Some of works carried out in 2024 in communication services domain;

- ✈️ In parallel with the increase in air traffic, the need for capacity increase and modernization has arisen in Voice Communication Systems in HTKM (Air Traffic Control Center), Istanbul (Yeşilköy APP), İzmir (Menderes APP), Antalya APP, Dalaman APP and Bodrum APP.

The modernization of the VCS and VRS systems at above centers has been completed; and site acceptance process has been finalized.

- ✈️ A project for the supply and installation of four IP-based Voice Communication Systems (VCS) and an IP-based Voice Recording/Listening System (VRS) has been initiated for the Trabzon, Rize-Artvin, Hakkari and Iğdır airports to provide VHF/UHF air/ground voice communication between ATC units (Trabzon TWR and APP, Rize-Artvin TWR, Hakkari TWR and Iğdır TWR) and aircraft, and ground voice communication between ATCs and other ATCs and other media (AIS, MET, ARFF, etc.).

- ✈️ In order to replace of the old-fashioned analogue Ground/Ground Radios with the cutting-edge technology Digital Ground/Ground Radios which offer opportunity of digital voice communication that is more resistant to noise, 1027 radios have been procured and put into operation at the airports defined previously in line with the needs of these airports in the scope of Ground/Ground Digital Communication Project.

- ✈️ Within the scope of the project carried out in 2023, 150 Air Ground (Vehicular, Portable and Last Resort) Radios, which were previously procured, were distributed to airports in need.

- ✈️ 200 Air Ground Mobile Radios were procured and distributed for use at airports where the need was previously identified.

- ✈️ The installation of the systems has begun within the scope of the 1014 Digital Ground Radio procurement project initiated to meet the needs of previously defined airports and the project is planned to be completed by the end of 2025.

Due to the need to enhance the hardware in order to apply required software upgrades in parallel to the decisions taken by the Cospas-Sarsat Council (such as implementation of ELT-DT and second generation beacons, etc.); modernization project of the current Cospas-Sarsat obsolete system has been initiated and is still ongoing.

The new ATIS and D-ATIS software developed by the Electronic Department's staff which supports the ICAO Global Reporting Format (GRF) has been verified and installed at a number of airports such as KKTC Ercan Airport, Trabzon Airport, Muğla Dalaman Airport, Erzurum Airport.

Cybersecurity devices have been procured and put into service at Türkiye's air traffic control center (HTKM) to make it more resilient against any possible cyber attacks.



**DHMI D-ATIS**

**Yedek Server**

BAĞLI!

MAIN

**YUL**

OTURUM AÇILDI 9.05.2024 09:01:30

SSQ 15.05.2024 11:09:04

RTR

**SIN**

OTURUM AÇILDI 9.05.2024 09:01:30

SSQ 15.05.2024 11:09:02

RTR

**Sistemler**

ch1	ch2	info	mesaj
BAĞLI	BAĞLI	K	LTFM ARR ATIS K
BAĞLI	BAĞLI	M	LTFM DEP ATIS M

**Onay Bekleyen İstekler**

Tarih	Ucak	ICAO	Label	İstek	Cevap	Kaynak
-------	------	------	-------	-------	-------	--------

**Contract Listesi**

Ucak	ICAO	Saat	info
FI BG0306/AN S2-AJY	LTFM	1123	K

**Onaylanan İstekler**

Tarih	Ucak	ICAO	Label	İstek	Cevap	Kaynak
15.05.2024 11:04:23	FI TK06NX/AN TC-JTR	LTFM	A	147	939	sin
15.05.2024 11:04:46	FI CA860/AN B-6505	LTFM	D	148	940	sin
15.05.2024 11:04:49	FI TK08VM/AN TC-JNN	LTFM	A	149	941	sin
15.05.2024 11:04:52	FI TK07EM/AN TC-JVL	LTFM	A	150	942	sin
15.05.2024 11:05:29	FI AY8J/AN OH-LTM	LTFM	A	151	943	sin
15.05.2024 11:06:52	FI TK01VR/AN TC-JJF	LTFM	D	152	944	sin
15.05.2024 11:08:09	FI TK01TM/AN TC-JOK	LTFM	A	153	945	sin

A screenshot from D-ATIS developed by DHMI

## Air Navigation AIDS

The air navigation systems, which provide the navigation network across Turkish airspace and ensure safe approach and landing for aircraft, play a vital role in flight safety. These systems are called ILS, VOR/DVOR, and DME.

**ILS (Instrument Landing System):** The ILS, defined as an Instrument Landing System, guides the aircraft both horizontally and vertically, enabling it to land on the runway automatically. It ensures safe landings during conditions with low cloud ceilings and poor visibility such as fog, rain, or snow, and provides not only safety but also comfort during approaches and landings in good weather with high visibility.

**VOR/DVOR (VHF Omnidirectional Radio range/Doppler VOR):** A VOR/DVOR station emits 360 radial lines at one-degree intervals around itself. It transmits signals in all directions to provide pilots with directional and positional information.

**DME (Distance Measuring Equipment):** This system provides the pilot with the distance between the ground station and the aircraft. It is typically used together with VOR and ILS, enabling the pilot to simultaneously receive both direction and distance information.

In accordance with the Ministry's directive and our Directorate General's policy, ILS systems have been installed at all airports where ILS operations are feasible.

As of the end of 2024:

A total of 78 ILS systems are operational at our airports.

Across all our airports and remote stations, there are 77 VOR/DVOR, 158 DME, and 68 NDB systems in service.

In 2024:

A contract was signed with the South Korea-based company Mopiens for the procurement of 9 DVOR/DME systems to be installed at the following locations: Balıkesir Merkez, Hatay, Samsun Çarşamba, Uşak, Çanakkale (Biga), Antalya, and Adana Airports, as well as Erzincan (Vabel) and Esenboğa (Afyon) Air Navigation Stations. The systems are currently in the shipping phase.

A contract was also signed with Mopiens for the procurement of 11 ILS systems for Ankara Esenboğa (2), Samsun Çarşamba (2), Sivas Nuri Demirağ, Kars Harakani, Hatay, Muş, Diyarbakır, and Ağrı Airports, and 1 LLZ/DME system for Van Ferit Melen Airport. These systems are also in the shipping phase.

Obsolete VOR/DME systems at Sinop, Van, Adıyaman, Muş, Malatya, Çanakkale, Sivas, and Kahramanmaraş Airports were replaced with new DVOR/DME systems, and after flight checks, were put into service.



Çukurova International Airport was commissioned along with its DVOR/DME and 2 ILS/DME systems.

ILS/DME systems were commissioned after successful flight checks at:

- Balıkesir Kocaseyit Airport (ILS/DME system),
- Alanya Gazipaşa Airport (LLZ/DME system),
- Şanlıurfa GAP Airport (second ILS/DME system),
- Antalya Airport (2 ILS/DME systems).

An offset Localizer/DME system was installed at Kahramanmaraş Airport and commissioned following flight checks.

Installation work on ILS systems at Elazığ, Rize-Artvin, and Ankara Esenboğa Airports continued, with commissioning planned for 2025. Infrastructure and installation of the LLZ/DME system at Erzincan Y.A. Airport has also begun.

VOR/DME systems at Balıkesir Koca Seyit, Erzincan, Kapadokya, Mardin, Sivas Nuri Demirağ (Gemerek Station), Tekirdağ Çorlu Atatürk, and Tokat Airports were replaced with DVOR/DME systems. Installation began for the DVOR/DME system designated for the new runway under construction at Ankara Esenboğa Airport.

At Sabiha Gökçen Airport, supervisory work continues regarding air navigation systems as part of the runway construction project. Efforts are underway to improve the location, infrastructure, and obstacle clearance criteria of the 2 ILS/DME systems currently serving on the first runway.

The evaluation of numerous requests—such as for Wind Power Plants (WPP), Hydro Power Plants (HPP), Solar Power Plants (SPP), Energy Transmission Lines (ETL), and buildings—was carried out with respect to their impact on CNS (Communication, Navigation, Surveillance) systems and air traffic procedures, and the organization's opinions were consistently communicated to the applicants.





## Surveillance Services

To provide an accurate and reliable air and ground surveillance picture to Air Traffic Controllers, Electronics Department closely follows new technologies, systems and operations; and adapts innovations to existing ATM infrastructure. Every point above FL200 in the Turkish airspace is covered with minimum three secondary surveillance radar systems.

With the two big projects "SMART (Systematic Modernization of ATM Resources in Türkiye)" and "Renovation of Existing Radars and Additional Requirements" DHMI is able to provide Mode S surveillance information and use the latest ATM technologies.

As of 2024, 8 PSR (Primary Surveillance Radar) and 24 Mode S SSR (Secondary Surveillance Radar) are in service to provide air surveillance picture. Some ADS-B (Automatic Dependent Surveillance-Broadcast) ground receiver is installed and used for situational awareness at Airport Tower Control units.



*MGR Gaziantep Radar Station*

DHMI has developed its own ADS-B receivers, which have been installed at Trabzon, Denizli Çardak, and Uşak Airports. The primary aim is to equip all airports with ADS-B receivers. Data from these receivers will be integrated into a non-operational ARTAS tracker and distributed to all users.



*ADS-B antenna installed at Trabzon Airport*

The surveillance data produced by surveillance sensors are transmitted via terrestrial and satellite lines to ATC centers. All sensor data is fed into the WAN network and it is shared between ATC centers through this WAN.

A-SMGCS systems with surveillance and airport safety net services are in operation since 2010 at Ankara Esenboğa, Istanbul Atatürk and Antalya Airports. Also an A-SMGCS system including EFS/DCL functionalities is available for Istanbul Airport (LTFM). Istanbul Airport A-SMGCS is in use with clearance-based stop bar control in addition to surveillance and airport safety nets services. There are ongoing efforts to put into service Routing and Guidance services as well.

A new project for replacement of 2 PSR/ MSSR and 1 MSSR is started by April,2024 and expected to be completed by the end of 2027.

## Air Traffic Control System Infrastructure

SMART ATC systems have been in operation since 7 July 2015 and by the transfer of İstanbul ACC and İzmir ACC sectors to Ankara ACC; Area Control Service in Türkiye has been provided by Turkish Air Traffic Control Center (Ankara).



In addition, İstanbul, Antalya, İzmir Adnan Menderes, Dalaman and Bodrum ATC Centers are established for APP services in the Project.

Since existing configuration and terrestrial digital lines (IP-MPLS-VPN) supported by VSAT allows voice and data network, in case of an emergency/contingency, APP centers

can support each other and roles can be shared among them.

Some of the key functionalities of SMART ATC systems;

- ✈️ Redundant centralized FDPs located at Ankara ACC and Istanbul Ataturk APP providing flight data functionality to ATC units,
- ✈️ Redundant ARTAS located at Ankara ACC and Istanbul Ataturk APP providing track data functionality to ATC units,
- ✈️ Local legacy tracker at ATC centers as backup
- ✈️ Safety Nets (MSAW, APM, APW, STCA)
- ✈️ MTCD, MONA
- ✈️ OLDI connection with adjacent ATC units
- ✈️ More than 200 CWP's
- ✈️ Contingency support

ATC Systems are upgraded to include new functionalities such as free route airspace.

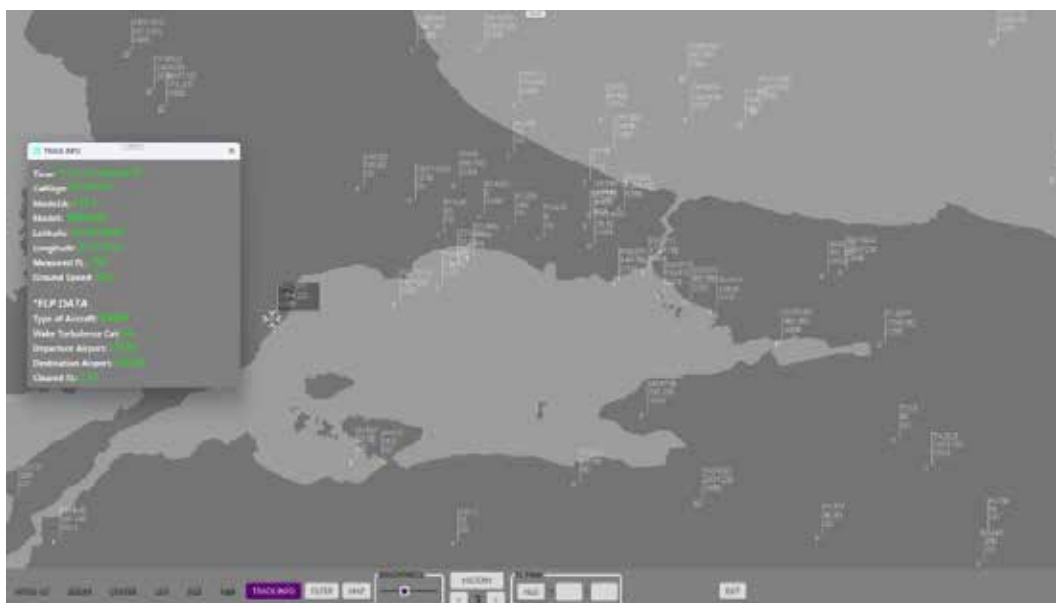
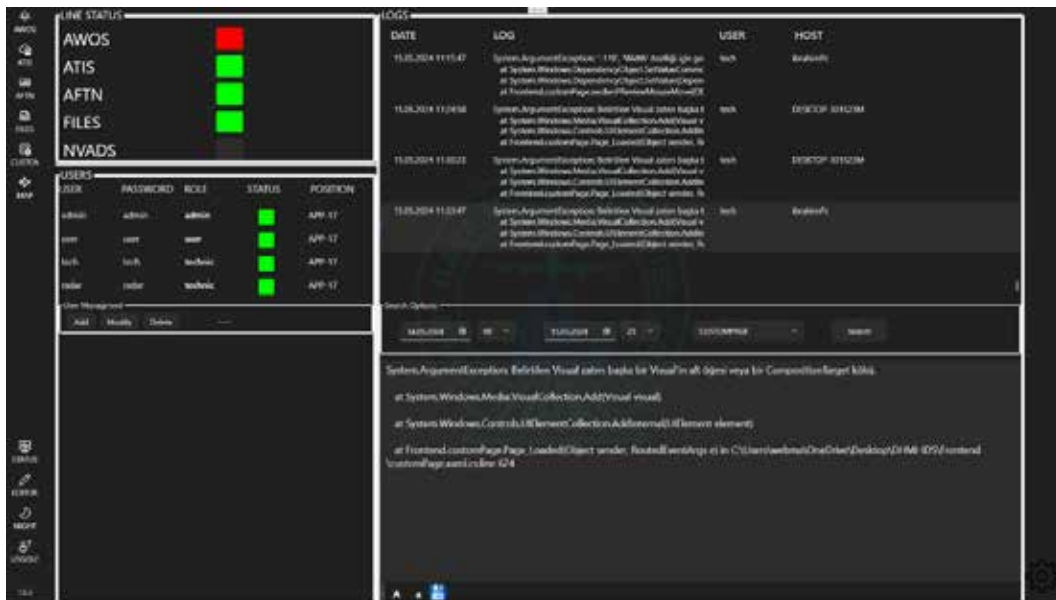




APP services in Trabzon TMA is being provided a stand-alone system which is connected to Ankara and Istanbul FDPs via OLDI.

In order to use the resources (runway, air space etc.) more effectively, AMAN (Arrival Manager) system was installed at Istanbul Atatürk Airport and it is also extended for Istanbul Airport (LTFM) arrival traffics. DMAN system is also being installed at Istanbul Airport (LTFM) as part of A-CDM implementation

DHMI has started a project for development of a data display and analysis system called IRADE (Interactive Radar Analysis and Display Screen) with its own in-house SW developers. AFTN (NOTAMs), AWOS, the track flight plan data is integrated in the tool. IRADE is a perfect solution to reduce the number of displays used by controller by allowing users to configure their interface. IRADE is already being used in some ATC centers and will be used more in coming years.



Some screenshots from IRADE HMI



## Activities for the Installation and Operation of Systems

Within the scope of the responsibilities of the System Installation and Operation Branch Directorate:

Technical support was provided for navigation aid systems (VOR, DME, NDB, ILS) and communication systems that became inoperative while in service at airports and could not be repaired using airport resources. Disassembly and assembly operations were carried out, and site selection studies for the installation of such systems were conducted.

In accordance with the Internal Audit Plan of Airport Operations and Aviation Industries Inc. (HEAŞ), participation was ensured in the CNS (Communication, Navigation, Surveillance) Unit audit conducted on 12 September 2024.

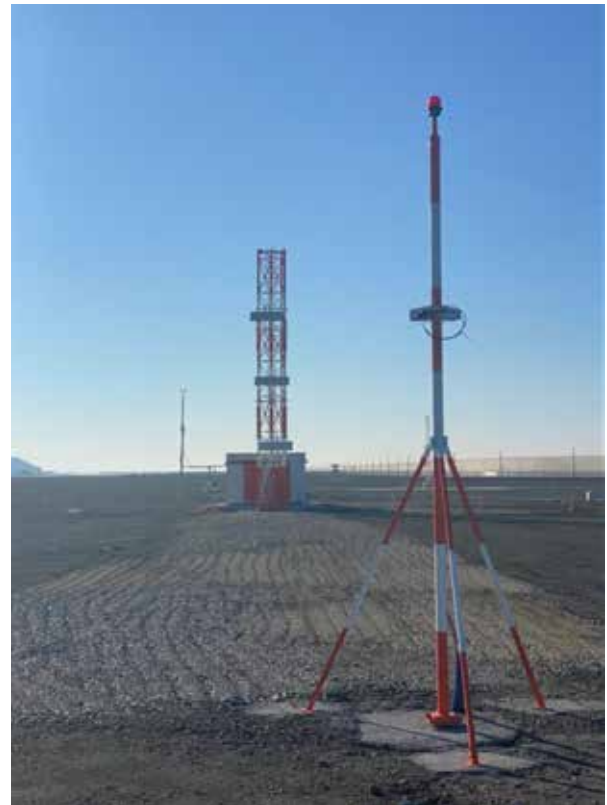
In order to address the issues caused by GPS signal disruptions within our national airspace, efforts are underway to identify and implement necessary measures. As part of these efforts, procedures enabling the use of DME/DME as an alternative to GPS are being developed, with Van Ferit Melen Airport and Gaziantep Airport selected as pilot locations. At Van Airport, flight inspection activities have been completed using mobile DMEs, and installation of the equipment at designated locations is currently ongoing. For Gaziantep Airport, feasibility studies have been conducted for the locations identified through the DEMETER software. Following the planned flight inspection in 2025, installation of the equipment is expected to be completed.



Personnel were assigned to conduct technical inspections at Kabul Airport in Afghanistan, Khojaly Airport in Azerbaijan, and Damascus and Aleppo Airports in Syria.

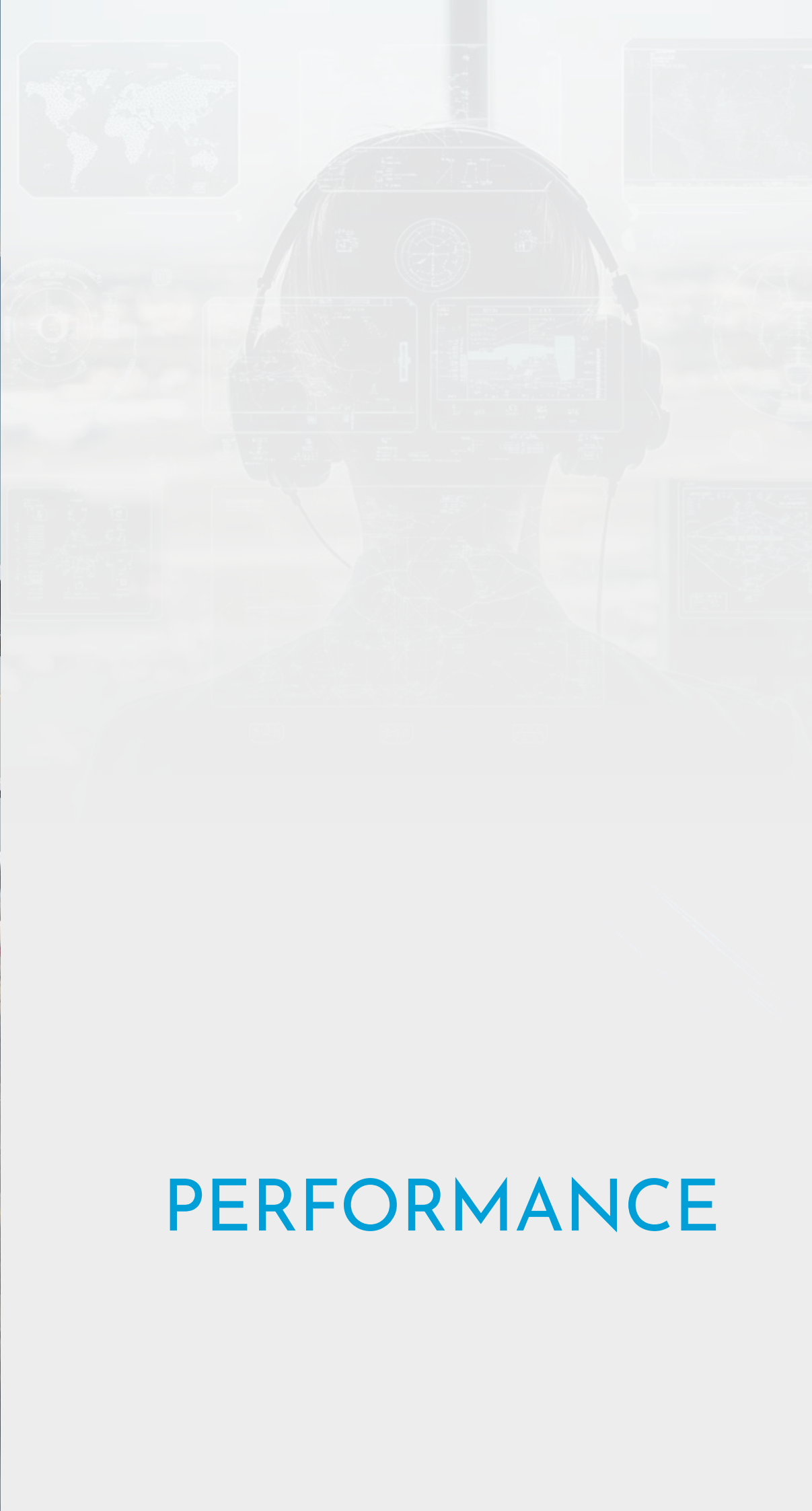
In the CNS Calibration Laboratory operating under the System Installation and Operation Branch Directorate, calibration services were provided for 1,030 devices—including multimeters, wattmeters, and frequency meters—used in the control, maintenance, and operation of CNS systems at the center and at airports. Calibration of the calibrator devices used in this laboratory was carried out at TÜBİTAK UME facilities, and comparison tests were conducted to validate the accuracy of the organization's laboratory against TÜBİTAK UME standards.

In 2024, 70 radios, 20 VOR units, and 3 DME units were repaired within the System Installation and Operation Branch Directorate. Additionally, 37 cards and modules related to VOR, DME, NDB, and communication systems were repaired under insurance coverage.









# PERFORMANCE

## Traffic

The Turkish Airspace located at the cross - roads of the main traffic flows between Europe, Caucasian Region, Middle East, Africa and Asia and DHMI is paying utmost importance to bi-lateral and regional cooperation as being one of the main air navigation service provider in the region.

In 2024, traffic in the Türkiye continued to recover from the COVID pandemic. DHMI air traffic volume increased by 5.6 % compared to the year 2023 and air traffic surpassed 2019 levels. Türkiye was one of the States in Europe with highest increase in international daily flights in 2024 compared to 2019.

Passenger number also increased by 7,8 % and reached approximately 231 million passengers.

The geo-political location of states or airspaces has direct impacts for providing ATM services. Due to geographical location and the neighbouring states surrounding Türkiye, there are some difficulties of providing ATM services in Türkiye and traffic numbers and flows were affected during 2024. Due to the closures of Airspaces of the neighbouring Countries of Türkiye, number of

traffic increased and flow directions changed a lot in year 2024.

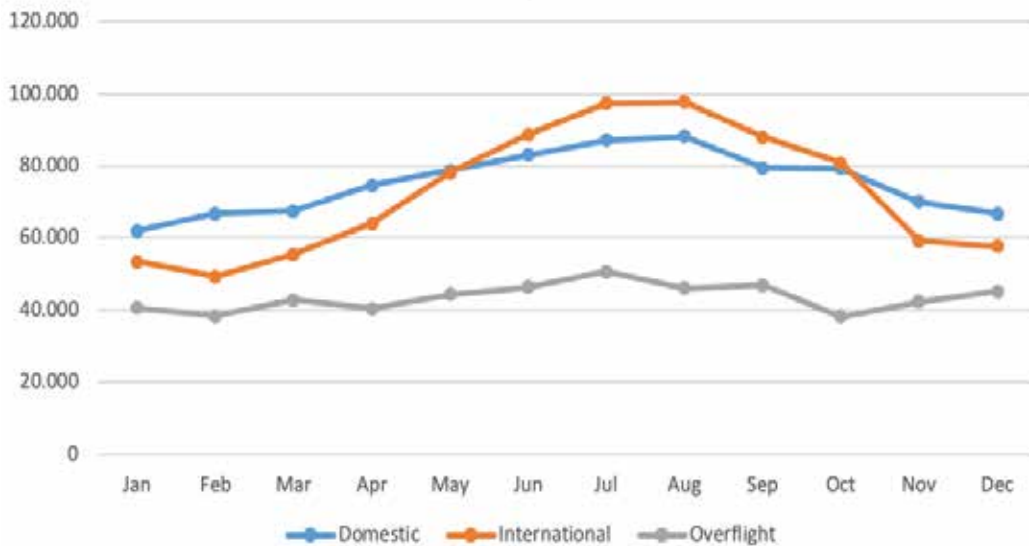
After the COVID-19 crisis recovery also continued in 2024 at Turkish airports, İstanbul, S. Gökçen and Antalya Airports experienced strongest traffic increases. İstanbul Airport is the top airport in Europe according to average daily movements. For the third consecutive year in 2024, For the third consecutive year in 2024, İstanbul claimed the title of the busiest airport in terms of air traffic movements. with 1401 average daily movements.

Moreover, İstanbul Sabiha Gökçen (17th) and Antalya (19th) Airports in the top 30 airports in terms of average daily movements.

To be able to continue to provide ATC Services efficiently, new Airway structure has been studied and implemented together with our neighbours, ICAO and Eurocontrol during year 2024.



Monthly Traffic



## Capacity

Capacity planning is one of the most important aspects in the provision of Air Traffic Services.

DHMI has taken necessary measures to ensure that the system has the capacity and the redundancy to work in a safe and reliable way. In this context, civil/military coordination, communications infrastructure and surveillance infrastructure were improved.

The opening of the new Istanbul airport in 2019, and the subsequent move of traffic, explain the variation at Istanbul/Ataturk airport. Istanbul airport recorded low ATFM delay since its opening. Weather and aerodrome capacity were the main contributors to the delay generated.

In the meantime, to cope with the continuous traffic growth and to satisfy the extra capacity needs, Türkiye has been upgrading the ATM systems through modernization projects and maintenance agreements.

Studies to implement the CDM to enhance the productivity of the Istanbul Airport has been commenced. Study groups were formed and studies have been going on to sign the Memorandum of Understanding. For the implementation of Arrival Manager (AMAN) and Departure Manager (DMAN) Systems at Istanbul Atatürk Airport, tender was completed and contract has been signed on 13th of March 2013. For Atatürk and S.Gökçen Airport AMAN has been operational since last quarter of 2016 and at the First quarter of 2019, Istanbul Airport (LTFM) have been joined into AMAN system. Adjacent ACC sectors within SMART project have been equipped with AMAN supporting systems, including monitors and software for Istanbul, Istanbul Atatürk and S.Gökçen Airports.

Beside these projects/studies to increase the capacity of the Istanbul Airport has been going on. With the opening of the third runway of the Airport in June 2020, the new airport will be one of the biggest airports in world with its 150 Million Passenger Annual Capacity.

Also tender for the establishment/ construction of second parallel Runway to be used for the simultaneous independent parallel approaches for Istanbul Sabiha Gokcen Airport has been done.

DHMI has taken all necessary measures to provide ATC Services to this unexpectedly increasing traffic in Turkish Airspace without causing any remarkable delay.

With the increase of traffic in Türkiye, there is a continuously growing demand for capacity at Istanbul, Antalya, Ankara/ Esenboğa, Istanbul/Sabiha Gökçen Airports. Due to an imbalance between the demand for these airports and the availability of adequate airport facilities/infrastructure and airspace systems, slots have been distributed in an equitable, non-discriminatory and transparent way by DHMI since June 2010. To be operationally successful, DHMI ensures close co-operation and coordination with airport authorities and airlines.

All in all, considering the traffic growth and delay situation, it is assessed that the measures taken to enhance and better manage capacity led to an effective increase of ATM capacity and therefore, the capacity plan was achieved and delays were kept at optimum levels.

As a result of the efficient work, despite the sustained substantial traffic growth over the past years, there were no en route ATFM delays reported in Türkiye.





## Punctuality

According to DHMI's plan, 0,14 minute/flight target has been defined for 2024. There was no en-route ATFM delay for Ankara ACCThey were significantly lower than the target and still remained below the European average.

İstanbul, Sabiha Gökçen and Antalya took part in the airport arrival ATFM delay within the top 30 airports.

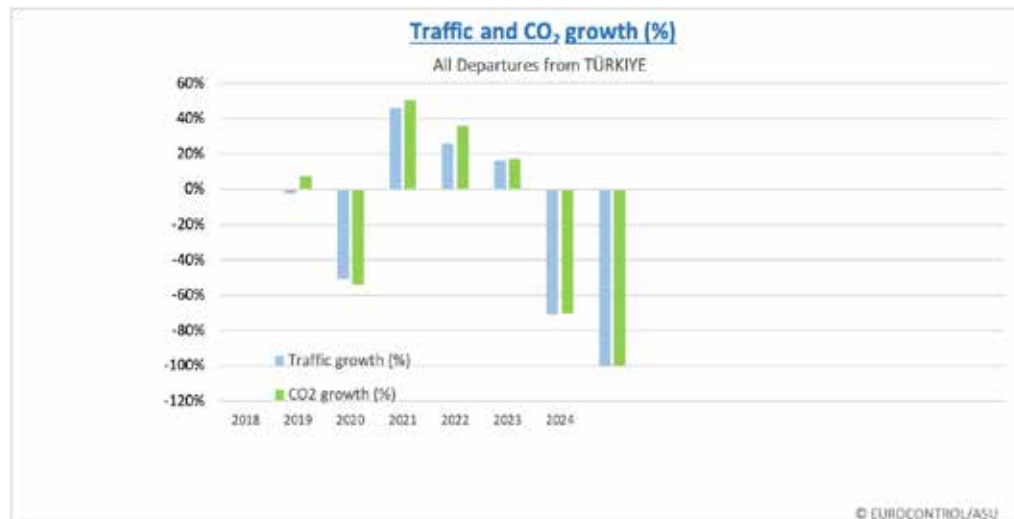
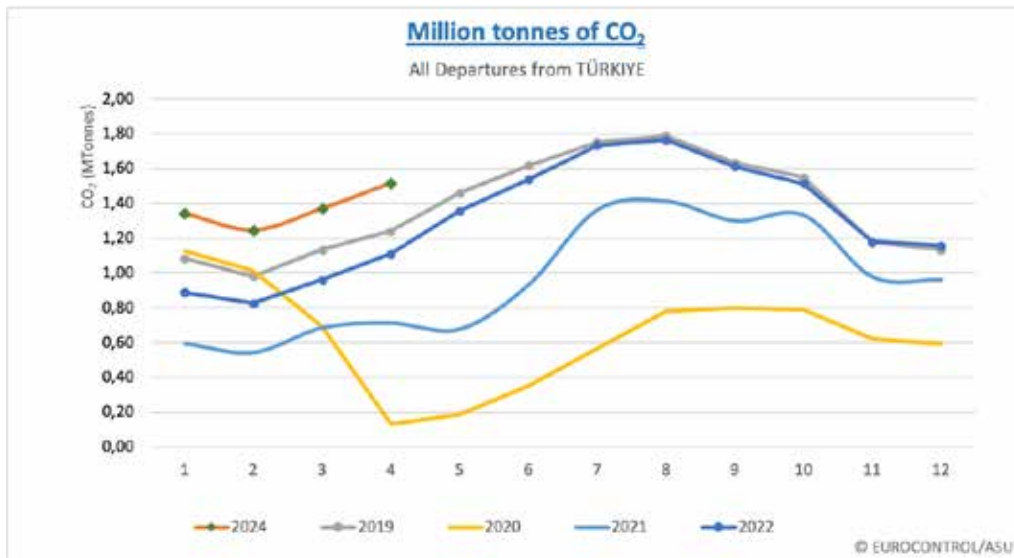
Although traffic is significantly higher than in 2019, Sabiha Gökçen, İstanbul and Antalya airports, delays and inefficiencies in the arrival flow increased. Performance at these airports will be continued to be monitored by DHMI.

ANS-related inefficiencies on the arrival flow

are measured in terms of arrival ATFM delay.

At Antalya Airport, arrival ATFM delays increased significantly due to aerodrome ATC capacity issues in 2024. S. Gökçen and İstanbul Airport ATFM delays increased significantly due to weather. These delays were eliminated through common actions agreed between our FMPs and the NMOC.

As a result, considering the traffic growth and delay situation, it is assessed that the measures taken to enhance and better manage capacity led to an effective increase of ATM capacity and therefore, the capacity plan was achieved and delays were kept at optimum levels.





## Environment

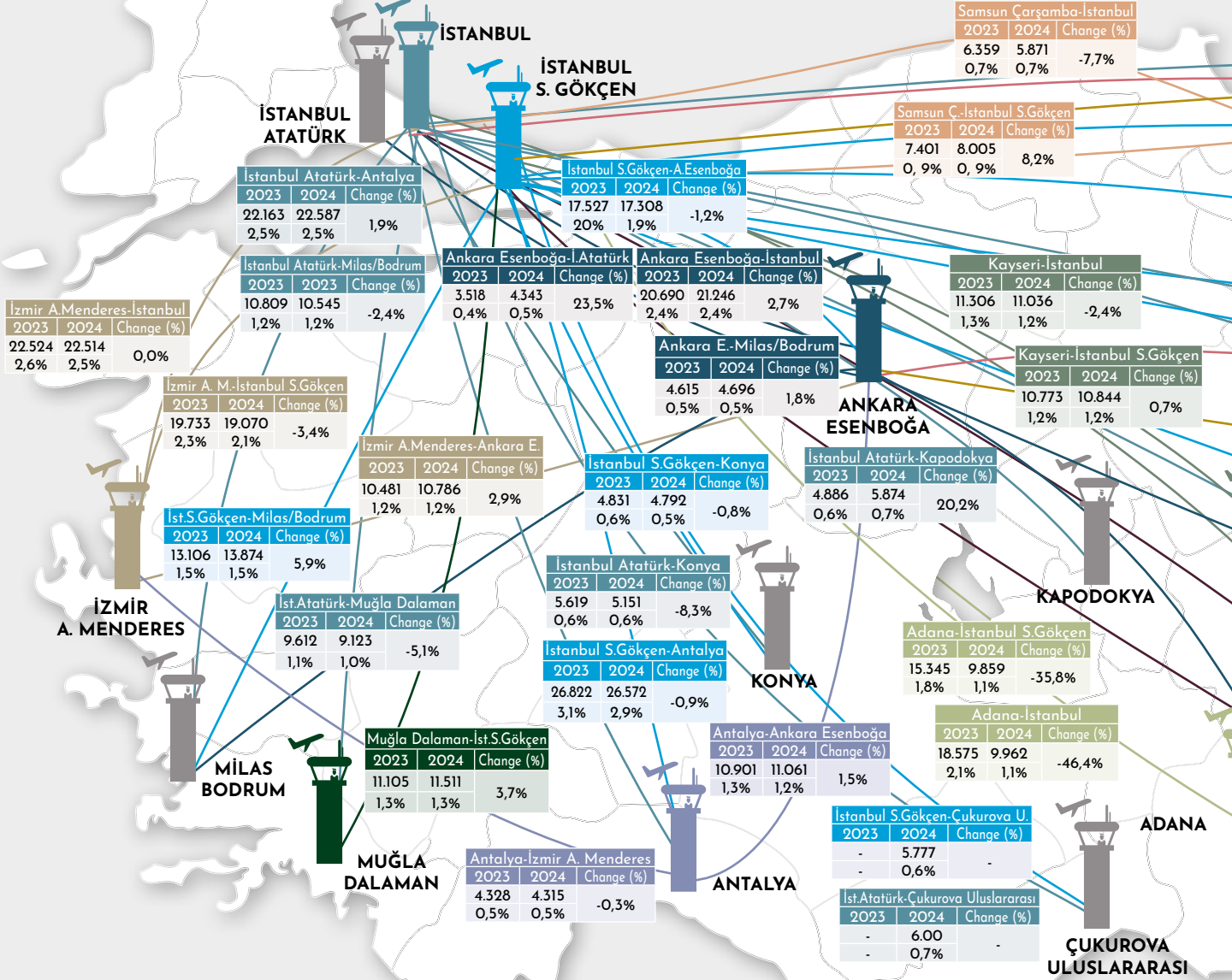
Vertical and Horizontal en-route flight efficiency improved notably in 2024, following the dramatic drop in demand which illustrates the link between capacity provision and operational efficiency.

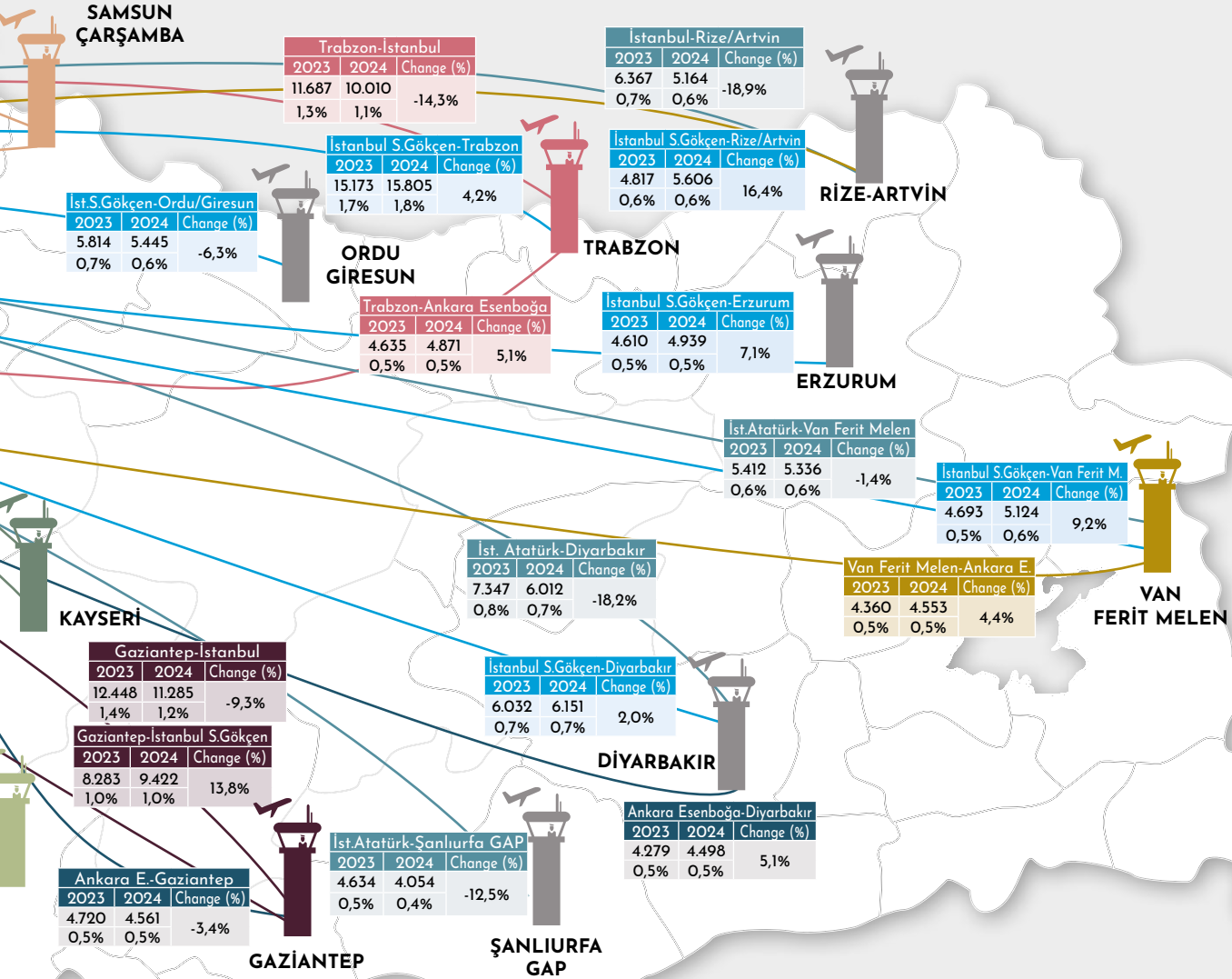
Türkiye SIDs have been designed to provide noise abatement over the most congested areas. Noise monitors have been established

and data is being analysed in a noise map pilot project.

There is a legislation regarding maximum noise levels generated by aircraft but no system of enforcement/punitive measures have been developed as yet. Local traffic regulations have been developed in coordination with airport and airline operators.







# Domestic Flights\*

*Indicates over 4000 flights in total take offs-landings, between two domestic airports.*





# International Flights\*

## GERMANY

2023	2024	Change(%)
125.735	132.842	5,7%
15,4%	15,3%	

## RUSSIAN FEDERATION

2023	2024	Change(%)
71.939	76.349	6,1%
8,8%	8,8%	

## UNITED KINGDOM

2023	2024	Change(%)
59.478	69.896	17,5%
7,3%	8,0%	

## CYPRUS TRNC

2023	2024	Change(%)
26.770	31.041	16,0%
3,3%	3,6%	

## SAUDI ARABIA

2023	2024	Change(%)
28.447	29.963	5,3%
3,5%	3,4%	

## FRANCE

2023	2024	Change(%)
27.202	28.771	5,8%
3,3%	3,3%	

## POLAND

2023	2024	Change(%)
18.613	23.075	24,0%
2,3%	2,7%	

## ITALY

2023	2024	Change(%)
20.110	22.727	13,0%
2,5%	2,6%	

## IRAN (ISLAMIC REPUBLIC OF)

2023	2024	Change(%)
19.723	20.949	6,2%
2,4%	2,4%	

## UNITED ARAB EMIRATES

2023	2024	Change(%)
19.719	19.722	0,0%
2,4%	2,3%	

## UNITED STATES

2023	2024	Change(%)
13.718	15.234	11,1%
1,7%	1,8%	

## NETHERLANDS

2023	2024	Change(%)
13.738	14.807	7,8%
1,7%	1,7%	

## EGYPT

2023	2024	Change(%)
11.516	14.756	28,1%
1,4%	1,7%	

## IRAQ

2023	2024	Change(%)
14.680	14.231	-3,1%
1,8%	1,6%	

## KAZAKHSTAN

2023	2024	Change(%)
15.282	14.142	-7,5%
1,9%	1,6%	

## SWITZERLAND

2023	2024	Change(%)
13.221	13.343	0,9%
1,6%	1,5%	

## SPAIN

2023	2024	Change(%)
11.732	13.272	13,1%
1,4%	1,5%	

## AZERBAIJAN

2023	2024	Change(%)
12.601	13.094	3,9%
1,5%	1,5%	

AUSTRIA		
2023	2024	Change(%)
11.047	12.069	9,3%
1,4%	1,4%	

ROMANIA		
2023	2024	Change(%)
10.541	11.904	24,1%
1,3%	1,4%	

GREECE		
2023	2024	Change(%)
10.239	11.711	14,4%
1,3%	1,3%	

BELGIUM		
2023	2024	Change(%)
10.882	11.460	5,3%
1,3%	1,3%	

DENMARK		
2023	2024	Change(%)
8.367	9.206	10,0%
1,0%	1,1%	

UZBEKISTAN		
2023	2024	Change(%)
7.086	8.904	13,0%
0,9%	0,9%	

GEORGIA		
2023	2024	Change(%)
7.933	8.783	10,7%
1,0%	1,0%	

CZECH REPUBLIC		
2023	2024	Change(%)
7.171	8.350	16,4%
0,9%	1,0%	

REPUBLIC OF MOLDOVA		
2023	2024	Change(%)
5.971	7.935	32,9%
0,7%	0,9%	

KUWAIT		
2023	2024	Change(%)
8.864	7.355	-17,0%
1,1%	0,8%	

JORDAN		
2023	2024	Change(%)
8.653	7.291	-15,7%
1,1%	0,8%	

LEBANON		
2023	2024	Change(%)
8.686	7.167	-17,5%
1,1%	0,8%	

SERBIA		
2023	2024	Change(%)
7.374	7.093	-3,8%
0,9%	0,8%	

QATAR		
2023	2024	Change(%)
7.185	7.054	-1,8%
0,9%	0,8%	

HUNGARY		
2023	2024	Change(%)
6.013	6.943	15,5%
0,7%	0,8%	

ALGERIA		
2023	2024	Change(%)
6.864	6.804	-0,9%
0,8%	0,8%	

SWEDEN		
2023	2024	Change(%)
6.512	6.754	3,7%
0,8%	0,8%	

LIBYA		
2023	2024	Change(%)
5.729	5.922	3,4%
0,7%	0,7%	

CHINA		
2023	2024	Change(%)
3.447	5.858	69,9%
0,4%	0,7%	

KYRGYZSTAN		
2023	2024	Change(%)
5.113	5.370	5,0%
0,6%	0,6%	

BULGARIA		
2023	2024	Change(%)
4.909	5.299	7,9%
0,6%	0,6%	

OTHER (BELOW 5000)**		
2023	2024	Change(%)
133.663	125.138	-1,2%
16,4%	15,2%	

*\* Indicates over 5000 flights in total take offs-landings, between Türkiye and other countries.*

*\*\*Represents all the 117 countries with below 5000 flights in total take offs-landings.*



**Grand Total**  
**825.204**

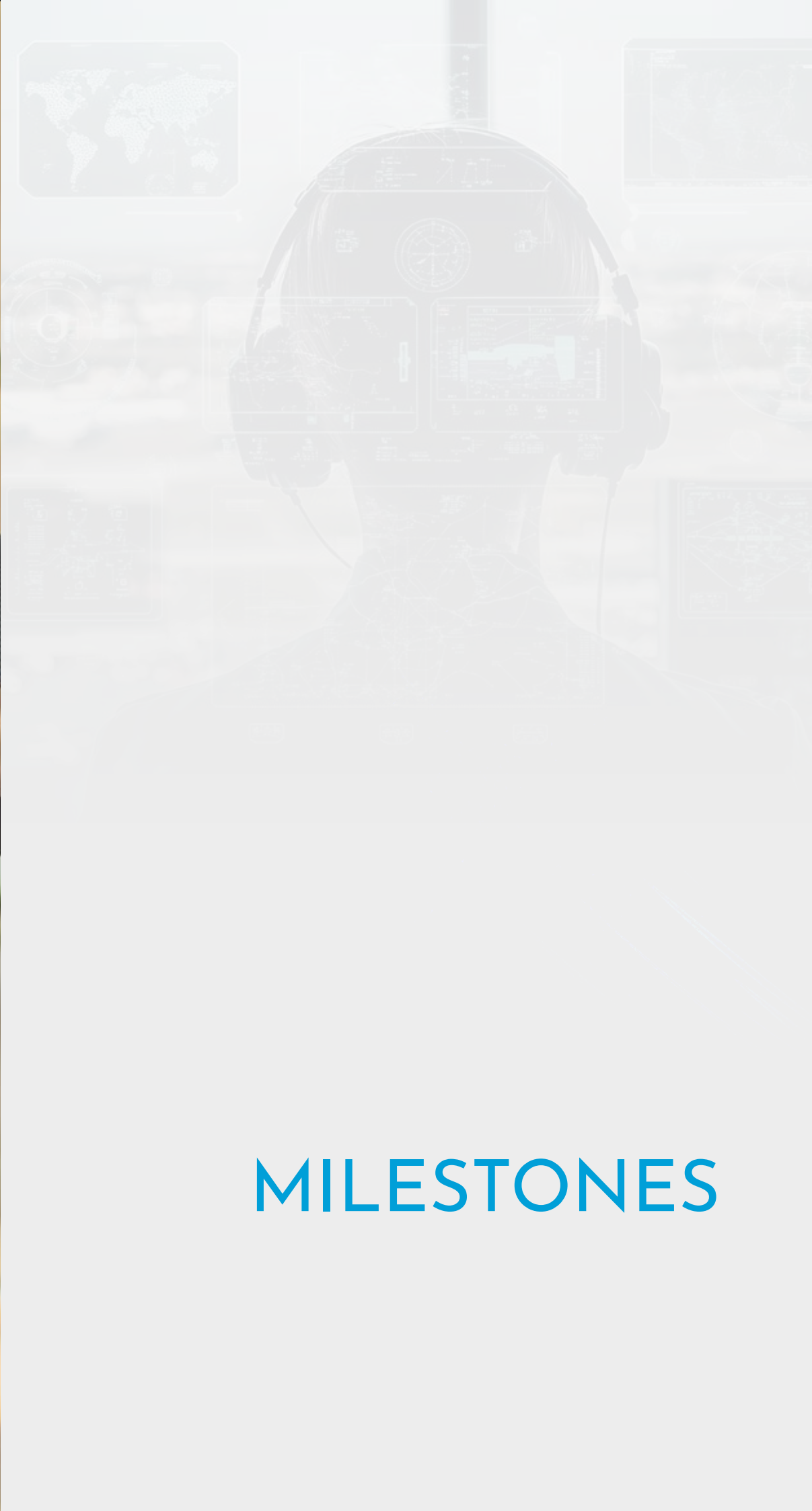
**Distribution of Total  
International Commercial  
Aircraft Movements by  
Continent - 2024**

Statistics & Forecasts	ACTUAL (2023-2024)		FORECASTED (2025-2027)*		
YEARS	2023	2024	2025	2026	2027
Commercial Passengers (Including Direct Transit Passengers)	214.136.575	230.833.911	244.759.355	255.932.464	261.626.874
<b>Commercial Passengers</b>	213.693.163	230.291.231	244.205.152	255.350.922	261.017.539
- Domestic	90.390.766	95.356.111	98.852.768	104.526.035	107.413.932
- International	123.302.397	134.935.120	145.352.384	150.824.887	153.603.607
Direct Transit Passengers	443.412	542.680	554.203	581.542	609.335
Aircraft Movements (Including Overflight)	2.171.330	2.294.225	2.468.060	2.595.771	2.682.657
<b>Aircraft Movements</b>	1.685.877	1.772.610	1.878.279	1.964.247	2.007.115
- Domestic	869.404	903.060	946.390	992.924	1.017.515
- International	816.473	869.550	931.889	971.323	989.600
- Overflight	485.453	521.615	589.781	631.524	675.542
<b>Freight (Cargo+Mail+Baggage) (Ton)</b>	4.447.865	5.156.701	5.292.416	5.675.962	6.047.634
- Domestic	838.757	898.648	896.264	918.408	948.414
- International	3.609.108	4.258.053	4.396.152	4.757.554	5.099.220
<b>Cargo (Ton)</b>	1.670.078	2.166.797	2.137.588	2.240.877	2.340.950
- Domestic	109.461	115.861	110.141	116.334	118.568
- International	1.560.617	2.050.937	2.027.447	2.124.543	2.222.382

\*Revised in May 2025, according to preliminary numbers at the end of April 2025







# MILESTONES



## January 4, 2024

A 40-kilometer pipeline was commissioned to deliver jet fuel directly from Antalya's seaport to its airport, eliminating around 60,000 annual tanker trips and reducing traffic and pollution.

The project is part of an €800 million airport expansion set to boost passenger capacity from 35 to 82 million by 2025.



## January 31, 2024

Celebrating its 7th anniversary, Türkiye's DHMİ Aviation Academy has trained over 266,000 individuals since its founding, offering

internationally accredited programs aligned with ICAO and EUROCONTROL standards.



## February 7, 2024

The ICAO EUR/MID Radio Navigation Symposium, hosted in Antalya by DHMİ and ICAO's EUR/MID Office, brought together global aviation authorities and industry leaders to discuss advancements in radio navigation, GNSS

disruptions, satellite-based navigation, and flight procedure validation. The event ran through February 8 with participation from ICAO member states and organizations including IATA, EASA, FAA, and EUROCONTROL.





## February 9, 2024

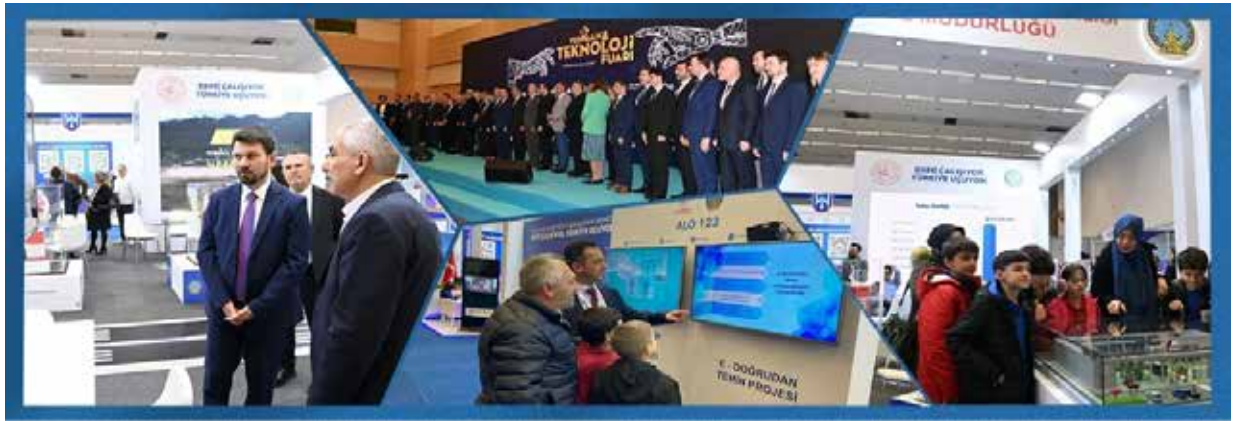
President Recep Tayyip Erdoğan officially inaugurated the Antalya Airport State Guesthouse, highlighting the expansion project that will increase the airport's annual passenger capacity from 35 million to 82 million. The €927 million investment, implemented without state expenditure, includes terminal expansions, a

new VIP terminal, and various aviation facilities. In 2023, the airport served over 37 million passengers, with projections exceeding 40 million in 2024. Antalya's growing global prominence and reiterated the government's commitment to infrastructure investment under the "Century of Türkiye" vision was emphasized.

## February 9, 2024

At the 6th Productivity and Technology Fair in Ankara, DHMİ unveiled a portfolio of entirely domestically developed aviation systems—ranging from multi-purpose and surveillance radars (ÇARE, MGR), simulators (atcTRsim), and debris/bird-detection radars (FODRAD,

KUŞRAD) to digital platforms (EYS, FIDS, AIS Portal), mobile apps (Uçuş Rehberim, Uçuş İzle) and crisis-management tools—highlighting its role in Türkiye's Century vision by cutting foreign dependency and boosting sector innovation.



## February 18, 2024

Minister of Transport and Infrastructure Abdulkadir Uraloğlu announced that Türkiye's first fully domestic and national Civil Surveillance Radar (Milli Gözetim Radarı - MGR), developed

by Turkish engineers in collaboration with DHMİ and TÜBİTAK, has successfully completed field acceptance and is ready for service at Gaziantep Airport.







## February 24, 2024

The 5th Global Action Plan for the Prevention of Runway Incursions (GAPPRI) meeting was held in Istanbul on February 22-23, 2024. The event was

organized by EUROCONTROL and the Flight Safety Foundation.



## March 29, 2024

Hatay Airport resumed operations with incoming and outgoing flights after completion of runway works. Full seismic-resistant infrastructure upgrades

will be completed by early 2026, alongside major highway and railway tunnel projects connecting Hatay to neighbouring regions.

## April 19, 2024

Türkiye has become a global aviation hub, now reaching 346 destinations in 130 countries. Türkiye has a strategic position within 4 hours of 67

countries and its passenger number has grown from 34.5 million in 2002 to over 214 million in 2023.

## May 17, 2024

Kyrgyzstan's air navigation service provider, Kyrghyzaeronavigatsia, joined SOCEA, led by

DHMI, strengthening cooperation between Europe and Asia.

## June 15, 2024

Türkiye reached a new milestone with 5,573 flights handled in its airspace on June 15, becoming Europe's 3rd busiest country in air traffic. The

number of aircraft movements at Turkish airports also hit 4,227 – a 17.8% increase from the same day in 2023.



## July 19, 2024

At its first annual general meeting in Istanbul, the regional air navigation safety coordination platform SOCEA welcomed Tajikistan's air

navigation service provider, Tajikairnavigation, as its fifth member.



## August 10, 2024

President Erdoğan inaugurated Çukurova International Airport, Türkiye's 58th airport, built without any state budget expenditure and expected to generate €297.1 million in rental income over 25 years. Strategically located

between Adana and Mersin, the airport will boost regional trade, tourism, and employment, and will be integrated with the high-speed train line to significantly reduce travel times.

## August 27, 2024

New service buildings and a 100-meter connection road at Trabzon Airport have opened, offering passengers better and more modern facilities.

September 16, 2025 - Enes Çakmak has officially

taken over as Chairman and Director General of DHMİ. At the handover ceremony attended by senior officials and staff, the leadership transition was marked as a step toward further strengthening Türkiye's role in global civil aviation.





## October 2, 2024

Türkiye's largest aviation, space, and technology festival TEKNOFEST opened at Adana Airport, showcasing local and national projects developed by DHMI. The festival featured many institutions

and highlights DHMI's advanced systems like ATC simulators, radar technologies, digital ATIS, flight tracking apps, and emergency management tools, attracting great interest from visitors.



## October 16, 2024

The second CANSO Euro-Asia CEO Summit was held on October 15, 2024, at Istanbul Airport, bringing together CEOs and experts from European and Asian air navigation service providers. The summit focused on

regional cooperation, innovation, and air traffic management to enhance safety, efficiency, and capacity in response to growing air traffic demands.



## October 18, 2024

Kazakhstan's "RSE Kazaeronavigatsia" officially joined the Regional Air Navigation Safety Coordination Platform (SOCEA) during a signing ceremony in Istanbul on October 16, 2024. This

membership strengthens regional cooperation to improve air navigation safety and operational efficiency across Europe and Central Asia.





### November 17, 2024

The first fully Turkish-developed national air traffic visualization software, İRADE (Interactive Radar Analysis and Data Screen), has started operating at Çukurova and Atatürk Airports. The

software integrates critical data from multiple sources into a single screen, reducing controller workload and enhancing air traffic safety across Turkish airspace.

### November 30, 2024

DHMI Deputy General Manager Dr. Cengiz Paşaoğlu was elected Vice Chair of the EUROCONTROL Provisional Council for a two-year term. In this role, he will represent Türkiye's

internationally and support strategic decision-making to enhance the safety and efficiency of European air navigation services.



### December 13, 2024

The capacity of Esenboğa Airport is set to increase to 30 million passengers with the completion of the third runway and new control tower, expected by early 2025. The ongoing modernization project

will also expand the terminal building to 40,000 square meters to better accommodate growing passenger and aircraft traffic.

### December 20, 2024

DHMI Aviation Academy provided a 30-hour air traffic management training to 16 UAV operators from various regions at the request of the General Directorate of Forestry. This first-of-

its-kind program aims to improve airspace safety and coordination, with plans to expand training to other UAV-using institutions.









# FINANCIAL STATEMENTS

## Financial Statements

The General Directorate of State Airports Administration's (DHMI) balance sheet and income statement for the financial year 2024 were drawn up in accordance with the regulations laid down in the Turkish Uniform Accounting System.

In line with civil aviation activities, our Administration is responsible for air transport, aerodrome operation, aerodrome ground services, air traffic control services, installation and operation of navigation systems and facilities in compliance with economic and social requirements in parallel to the principle of efficiency.

The methods and principles used for the recording of accrual and income obtained for services provided by the Administration are specified in the directive, and all the commercial transactions have been carried out under that directive.




Our Administration's service sales income obtained from air traffic control services, aerodrome ground services and terminal

services as required by Civil Aviation Activities, plus other proceeds and profits. At the end of the period, a total gross income of 83.258.553 thousand TRY was obtained, of which 73.067.537 thousand TRY was income from service sales, 10.041.471 thousand TRY was ordinary revenue and profit from other operations and 149.545 thousand TRY was extraordinary revenues and profits. When sales deduction of 7.194.534 thousand TRY is deducted from this, our income decreases to 76.064.019 thousand TRY which represents an increase of 31,11% when compared to the net income of 2023.

Under the Uniform Accounting System, service sales are provided in detail according to their respective codes of expenditure. Every service heading is followed by three sub-headings (Air Navigation Services, Ground Services and Terminal Services) as "type of category". Foreign sales represent 20 % of the total sales.



The services rendered in 2024 are gathered in three groups.

-  Air Navigation Services: Air Navigation, AIS publications and other unclassified navigation services.
-  Terminal (Runway, Apron and Taxi-Route) Services: Landing, parking, approach and lighting services, safety precautions against aircraft fire, follow-me services, ground handling, other runway, apron and taxi-route services.
-  Operating Services: Passenger service, service allocation (Office, check-in desks, land etc), electricity-heating-cooling, telephone, diaphone, telex and public address system, Build-Operate-Transfer (B.O.T), load bridge, 400Hz electricity and water, other terminal services.





## STATEMENT OF INCOME

(K TL)

	2023	2024
<b>A. GROSS SALES</b>	<b>51.239.511</b>	<b>73.067.537</b>
1. Domestic Sales	41.916.587	58.186.601
2. Export Sales	9.322.924	14.880.936
3. Other Sales	0	0
<b>B. SALES DEDUCTIONS (-)</b>	<b>5.343.075</b>	<b>7.194.534</b>
1. Sales Returns (-)	0	0
2. Sales Discounts (-)	0	0
3. Other Deductions (-)	5.343.075	7.194.534
<b>C. NET SALES</b>	<b>45.896.436</b>	<b>65.873.003</b>
<b>D. COST OF SALES</b>	<b>14.551.043</b>	<b>29.009.048</b>
1. Cost of Products Sold (-)	0	0
2. Cost of Merchandise Sold (-)	0	0
3. Cost of Services Rendered (-)	14.551.043	29.009.048
4. Cost of Other Sales (-)	0	0
<b>GROSS PROFIT OR (LOSS)</b>	<b>31.345.393</b>	<b>36.863.955</b>
<b>E. ADMINISTRATIVE EXPENSES (-)</b>	<b>1.378.790</b>	<b>2.837.476</b>
1. Research and Development Expenses	49.044	86.073
2. Marketing, Selling and Distribution Expenses	56.108	98.664
3. General Administration Expenses (-)	1.273.638	2.652.739
<b>OPERATING PROFIT OR (LOSS)</b>	<b>29.966.603</b>	<b>34.026.479</b>





STATEMENT OF INCOME		(K TL)
	2023	2024
<b>F. INCOME AND PROFIT FROM OTHER ORDINARY OPERATIONS</b>	<b>12.020.839</b>	<b>10.041.471</b>
1. Dividend Income from Affiliates	0	0
2. Dividend Income from Subsidiaries	0	0
3. Interest Income	7.512.694	5.065.772
4. Commission Income	0	0
5. Provisions No Longer Required	793	2.504
6. Profit on Sale of Marketable Securities	0	0
7. Foreign Currency Transaction Gain Exchange	4.287.855	4.534.887
8. Rediscount Income	0	0
9. Other Income and Profit	219.497	438.308
<b>G. EXPENSES AND LOSSES FROM OTHER ORDINARY OPERATIONS(-)</b>	<b>26.927.311</b>	<b>14.844.941</b>
1. Commission Expenses (-)	0	0
2. Provisions (-)	16.888	31.014
3. Loss on Sale of Marketable Securities	0	0
4. Loss from Foreign Currency Exchanges	26.888.758	12.307.383
5. Rediscount Interest Expenses	0	0
6. Loss from Inflation Adjustments (-)	0	2.438.085
7. Other Ordinary Expense and Losses	21.665	68.459
<b>H. FINANCIAL EXPENSES (-)</b>	<b>0</b>	<b>0</b>
1. Short-Term Borrowing Expenses	0	0
2. Long-Term Borrowing Expenses	0	0
<b>ORDINARY PROFIT OR (LOSS)</b>	<b>15.060.131</b>	<b>29.223.009</b>
<b>I. EXTRAORDINARY REVENUES AND PROFITS</b>	<b>98.498</b>	<b>149.545</b>
1. Prior Period Revenues and Profit	50	740
2. Other Extraordinary Revenues and Profit	98.448	148.805
<b>J. EXTRAORDINARY EXPENSES AND LOSSES</b>	<b>361.144</b>	<b>2.364.848</b>
1. Idle Department Expenses and Losses	0	0
2. Prior Period Expenses and Losses	207.404	173.563
3. Other Extraordinary Expenses and Losses	153.740	2.191.285
<b>PROFIT OR (LOSS) FOR THE PERIOD</b>	<b>14.797.485</b>	<b>27.007.706</b>
<b>K. PROVISIONS FOR INCOME TAXES AND OTHER LEGAL DUTIES (-)</b>	<b>1.343.528</b>	<b>7.425.528</b>
<b>NET PROFIT OR (LOSS) OF THE PERIOD</b>	<b>13.453.957</b>	<b>19.582.178</b>

INCOME		(K TL)	
	2023	2024	
<b>1. GROSS SALES</b>	<b>51.239.511</b>	<b>73.067.537</b>	
a. Domestic Sales	41.916.587	58.186.601	
b. Export Sales	9.322.924	14.880.936	
c. Other Sales	0	0	
<b>2. INCOME AND PROFIT FROM OTHER ORDINARY OPERATIONS</b>	<b>12.020.839</b>	<b>10.041.471</b>	
a. Interest Income	7.512.694	5.065.772	
b. Provisions No Longer Required	793	2.504	
c. Profit on Sale of Marketable Securities	0	0	
d. Profit from Foreign Currency Exchanges	4.287.855	4.534.887	
e. Other Income or Profit	219.497	438.308	
<b>3. EXTRAORDINARY REVENUES AND PROFITS</b>	<b>98.498</b>	<b>149.545</b>	
a. Prior Period Revenues and Profit	50	740	
b. Other Extraordinary Revenue and Profit	98.448	148.805	
<b>TOTAL:</b>	<b>63.358.848</b>	<b>83.258.553</b>	
EXPENSES AND LOSSES		(K TL)	
	2023	2024	
<b>1. COST OF SALES AND OPERATING EXPENSES</b>	<b>15.929.832</b>	<b>31.846.524</b>	
a. Raw Materials and Supplies	573.902	775.308	
b. Staff Wages and Costs Salaries and Other Staff Expenses	8.486.262	14.512.200	
c. Outsource Services Expenditures External Utilities and Services	4.648.465	7.607.604	
d. Various Costs Miscellaneous Expenses	1.239.325	1.898.309	
e. Taxes, Duties and Similar Charges Taxes and Other Fiscal Duties	23.557	24.787	
f. Amortization and Depletion Expenses Depreciations and Amortisations	958.321	7.028.316	
<b>2. EXPENSES AND LOSSES FROM OTHER ORDINARY OPERATIONS(-)</b>	<b>26.927.311</b>	<b>14.844.941</b>	
a. Provisions (-)	16.888	31.014	
b. Loss on Sale of Marketable Securities	0	0	
c. Loss from Foreign Currency Exchanges (-)	26.888.758	12.307.383	
d. Loss from Inflation Adjustments (-)	0	2.438.085	
e. Other Ordinary Expenses and Losses	21.665	68.459	
<b>3. FINANCIAL EXPENSES (-)</b>	<b>0</b>	<b>0</b>	
a. Short-Term Borrowing Expenses (-)	0	0	
b. Long-Term Borrowing Expenses (-)	0	0	
<b>4. EXTRAORDINARY EXPENSES AND LOSSES</b>	<b>361.144</b>	<b>2.364.848</b>	
a. Idle Department Expenses and Losses (-)	0	0	
b. Prior Period Expenses and Losses (-)	207.404	173.563	
c. Other Extraordinary Expenses and Losses (-)	153.740	2.191.285	
<b>TOTAL:</b>	<b>43.218.287</b>	<b>49.056.313</b>	



ASSETS	(K TL)	
	2023	2024
<b>1. CURRENT ASSET</b>	<b>86.743.514</b>	<b>119.830.194</b>
A. Liquid Assets	20.678.965	16.362.054
B. Marketable Securities	0	0
C. Trade Receivables	23.963.791	41.838.447
D. Other Receivables	40.324.659	59.998.173
E. Inventories	720.538	849.159
F. Contract Progress Costs	0	0
G. Prepaid Expenses for Future Months	999.298	781.496
H. Other Current Assets	56.263	865
<b>2. LONG-TERM ASSETS FIXED ASSETS</b>	<b>103.417.198</b>	<b>133.505.197</b>
A. Trade Receivables	691	3.272
B. Other Receivables	0	0
C. Financial Fixed Assets	0	0
D. Tangible Fixed Assets	102.972.378	133.005.935
E. Intangible Fixed Assets	444.128	495.989
F. Assets Subjects to Amortization	0	0
G. Prepaid Expenses for Future Years	0	0
H. Other Fixed Assets	1	1
<b>TOTAL ASSETS:</b>	<b>190.160.712</b>	<b>253.335.391</b>



LIABILITIES		(K TL)	
		2023	2024
<b>I. SHORT-TERM LIABILITIES</b>		<b>12.779.288</b>	<b>23.850.125</b>
A. Financial Liabilities		0	0
B. Trade Payables		1.398.812	2.153.671
C. Other Liabilities		97.922	241.764
D. Advances Received		662.458	215.041
E. Contract Progress Income		0	0
F. Taxes Payable and Other Fiscal Duties		5.590.498	9.720.044
G. Provisions for Liabilities and Expenses		1.522.683	7.244.153
H. Income Relating to Future Months		3.506.909	4.275.446
I. Other Short-Term Liabilities		6	6
<b>II. LONG-TERM LIABILITIES</b>		<b>67.673.445</b>	<b>76.394.880</b>
A. Financial Liabilities		0	0
B. Trade Payables		0	0
C. Other Liabilities		0	0
D. Advances Received		0	0
E. Provisions for Debts Expenses		2.430.070	2.470.126
F. Income Relating to Future Years		65.243.375	73.924.754
G. Other Long-Term Liabilities		0	0
<b>III. SHAREHOLDERS EQUITY CAPITAL</b>		<b>109.707.979</b>	<b>153.090.386</b>
A. Paid-In Capital		10.647.912	10.647.912
B. Positive Distinction from Share Capital Adjustment		90.845.351	119.795.645
B. Capital Reserves		0	0
C. Profit Reserves		0	1.342.329
D. Retained Earnings		8.214.716	1.722.322
E. Losses from Previous Years (-)		0	0
<b>F. Net Profit (Loss) for the Period</b>		<b>0</b>	<b>19.582.178</b>
<b>TOTAL LIABILITIES (SOURCES):</b>		<b>190.160.712</b>	<b>253.335.391</b>





CASH FLOW STATEMENT		(K TL)
	2023	2024
<b>A. CASH AT THE BEGINING OF THE PERIOD</b>	<b>19.454.664</b>	<b>20.678.965</b>
<b>B. CASH INFLOWS WITHIN THE PERIODS</b>	<b>46.098.456</b>	<b>66.619.513</b>
<b>1. Cash from Sales</b>	<b>25.597.104</b>	<b>47.908.143</b>
Net Sales	45.896.435	65.873.003
Decrease in Trade Receivables	0	0
Increase in Trade Receivables (-)	20.299.331	17.964.860
<b>2. Cash from Other Operations</b>	<b>7.732.191</b>	<b>6.867.050</b>
<b>3. Cash Received from Extraordinary Income and Profit</b>	<b>98.498</b>	<b>149.545</b>
<b>4. Cash from Increase in Short-Term Liabilities</b>	<b>7.016.328</b>	<b>1.006.249</b>
Securities Issued	0	0
Credits Obtained	0	0
Other Increase	7.016.328	1.006.249
<b>5. Cash Received from Increase in Long-Term Liabilities</b>	<b>0</b>	<b>8.682.178</b>
Issuance of Securities	0	0
Credits Obtained	0	0
Other Increases	0	8.682.178
<b>6. Cash Received from Share Capital Increase</b>	<b>0</b>	<b>0</b>
<b>7. Cash Received from Share Premium</b>	<b>0</b>	<b>0</b>
<b>8. Other Cash Received from Cash Inflows</b>	<b>5.654.335</b>	<b>2.006.348</b>
<b>C. CASH OUTFLOWS WITHIN THE PERIOD</b>	<b>44.874.155</b>	<b>70.936.424</b>
<b>1. Cash Outflows Due to Costs</b>	<b>13.324.307</b>	<b>21.816.379</b>
Costs of Sales	14.551.043	29.009.048
Increase in Inventories	125.087	128.621
Decrease in Trade Payables	0	0
Increase in Trade Payables (-)	520.650	754.859
Expenses not Requiring Cash Payments such as Depreciation and Provisions (-)	831.173	6.566.431
Decrease in Inventories (-)	0	0

CASH FLOW STATEMENT		(K TL)
	2023	2024
<b>2. Cash Outflows Due to Administrative Expenses</b>	<b>1.251.642</b>	<b>2.375.591</b>
Research and Development Expenses	49.044	86.073
Marketing, Selling and Distribution Expenses	56.108	98.664
General and Administrative Expenses	1.273.638	2.652.739
Expenses not Requiring Cash Payments such as Depreciation and Provisions (-)	127.148	461.885
<b>3. Cash Outflows Related to other Expenses and Losses</b>	<b>1.134.138</b>	<b>3.737.471</b>
Ordinary Expenses and Losses	26.927.311	14.844.940
Other Expenses and Losses not Requiring Cash Payments (-)	25.793.173	11.107.469
<b>4. Cash Outflows Due to Financial Expenses</b>	<b>0</b>	<b>0</b>
<b>5. Cash Outflows Due to Extraordinary Expenses and Losses</b>	<b>337.144</b>	<b>2.081.066</b>
Extraordinary Expenses and Losses	361.144	2.364.848
Expenses and Losses Not Requiring Cash Payments (-)	24.000	283.782
<b>6. Cash Outflows Due to Investment in Non-current Assets</b>	<b>4.768.311</b>	<b>8.824.280</b>
<b>7. Cash Outflows Due to Short-Term Liability Payments</b>	<b>0</b>	<b>0</b>
Current Maturities of Marketable Securities	0	0
Principal Payments of Marketable Securities	0	0
Other Payments	0	0
<b>8. Cash Outflows Due to Long-Term</b>	<b>0</b>	<b>0</b>
Current Maturities of Marketable Securities	0	0
Principal Payments of Marketable Securities	0	0
Other Payments	0	0
<b>9. Taxes and Other Similar Charges Paid</b>	<b>58.613</b>	<b>6.101.637</b>
<b>10. Dividends Paid</b>	<b>0</b>	<b>0</b>
<b>11. Other Cash Outflows</b>	<b>24.000.000</b>	<b>26.000.000</b>
<b>D. CASH AT THE END OF THE PERIOD (A+B-C)</b>	<b>20.678.965</b>	<b>16.362.054</b>
<b>E. INCREASE OR DECREASE IN CASH (D-A)</b>	<b>1.224.301</b>	<b>-4.316.911</b>



## Grant Thornton

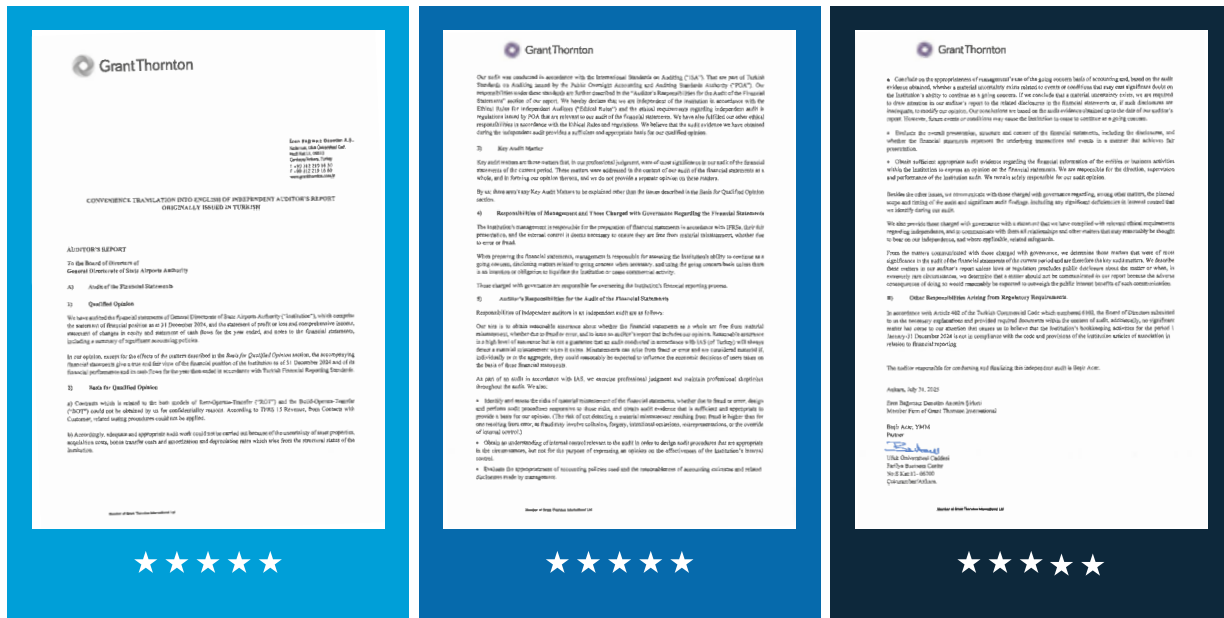
### Independent Audit Report

The independent audit was conducted by the audit and accounting firm Grant Thornton, in accordance with the Independent Auditing Standards, which form part of the Turkish Auditing Standards issued by the Public Oversight, Accounting and Auditing Standards Authority (KKG), established under Decree Law No. 660.

According to the resulting audit report, aside from certain minor issues concerning the confidential BOT and ROT contracts—which have not been disclosed due to confidentiality requirements—the attached

financial statements accurately reflect the financial position of DHMI as of 31 December 2024. Furthermore, they fairly present, in all material respects, the financial performance and cash flows for the accounting period ending on that date, in compliance with the Turkish Financial Reporting Standards.

Signed and stamped by  
Grant Thornton Independent  
Auditors



\*Motto of the year



“Do not be satisfied  
with the stories that  
come before you.  
**Unfold your own myth.**”

Mevlana Jelaluddin Rumi



## Ali Kuşçu (1403-1474)

Five and a half centuries ago, a brilliant mind emerged who would forever change the course of astronomical science and influence even Copernicus. Ala al-Din Ali ibn Muhammed, known to history as Ali Kuşçu (The Falconer), stands as one of the most remarkable figures in the golden age of Islamic science and the early Ottoman intellectual renaissance.

Born in 1403 in what is now Uzbekistan, Ali Kuşçu's surname literally means "falconer" - a reference to his father's prestigious position as the royal falconer who trained birds for Ulugh Beg's court. However, young Ali was destined to soar even higher than the birds his family trained, reaching for the stars themselves.

Growing up in the cosmopolitan city of Samarkand, Kuşçu received his education under the tutelage of legendary scholars including Qazi Zadeh al-Rumi, Ghiyath al-Din Jamshid al-Kashani, and most importantly, the astronomer-prince Ulugh Beg. This stellar academic environment shaped him into a polymath who would excel in mathematics, astronomy and theology.

Kuşçu's greatest achievement lay in his groundbreaking approach to astronomy. He became the first scholar to successfully separate astronomical physics from Aristotelian natural philosophy, arguing that mathematical astronomy could stand independently. This revolutionary concept would later influence Copernicus and help pave the way for modern scientific methodology.

His most famous work, "Concerning the Supposed Dependence of Astronomy upon Philosophy," provided empirical evidence for the Earth's rotation - a concept that challenged centuries of accepted wisdom. He also wrote extensively on lunar periods in his treatise "Hall-e Eshkal-i Ghammar" (Explanations on the Periods of the Moon), which so impressed Ulugh Beg that he appointed Kuşçu as the

head of the Samarkand Observatory.

In 1472 Kuşçu embarked on a pilgrimage to Mecca. During his journey, he was invited by Sultan Mehmed II (the Conqueror) to join the Ottoman court. This invitation marked a pivotal moment in both his life and Ottoman intellectual history.

In 1473, Kuşçu became a lecturer at the prestigious Hagia Sophia Madrasa in today's Istanbul, transforming this place into a beacon of scientific learning. His presence marked a turning point for astronomy and mathematics in Istanbul as he brought with him the accumulated knowledge of the Samarkand school and his own revolutionary ideas.

His legacy reminds us that great minds know no borders, and that the pursuit of knowledge creates connections that outlast empires and transform our understanding of the universe.

## The Astronomer Who Bridged Civilizations

**"Mathematics and astronomy should be freed from the constraints of natural philosophy."**







Mevlana Bulvarı No:32 Etiler 06560  
Yenimahalle / Ankara - TÜRKİYE  
dhmi@dhmi.gov.tr - www.dhmi.gov.tr  
Call Center: 444 3464



DHMI Annual Report



Discover TÜRKİYE