



Air Traffic Statistics Report

December 2023



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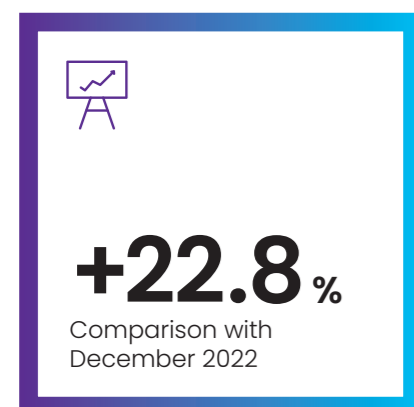
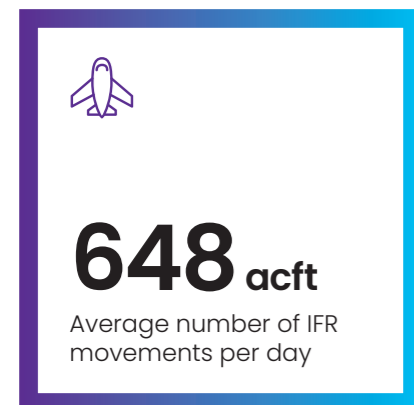
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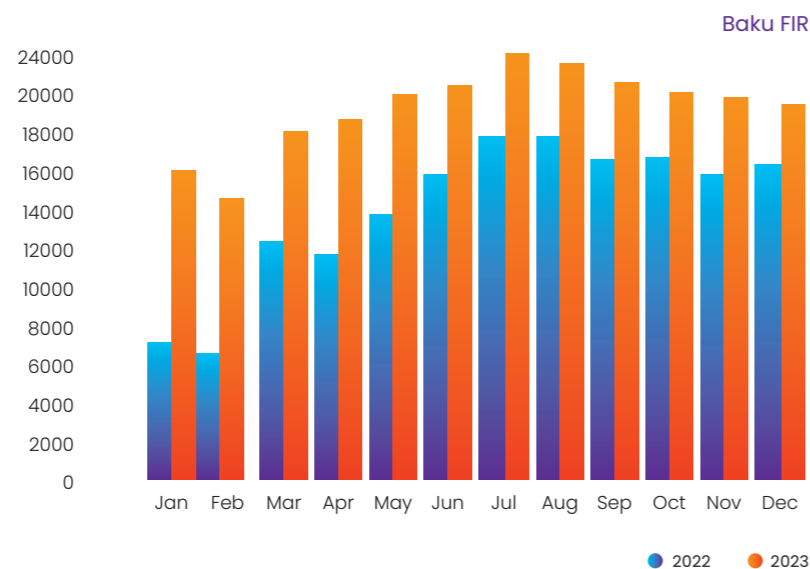
1 Baku FIR Air Traffic Statistics Data (IFR movements)

1.1 General Air Traffic Statistics Data



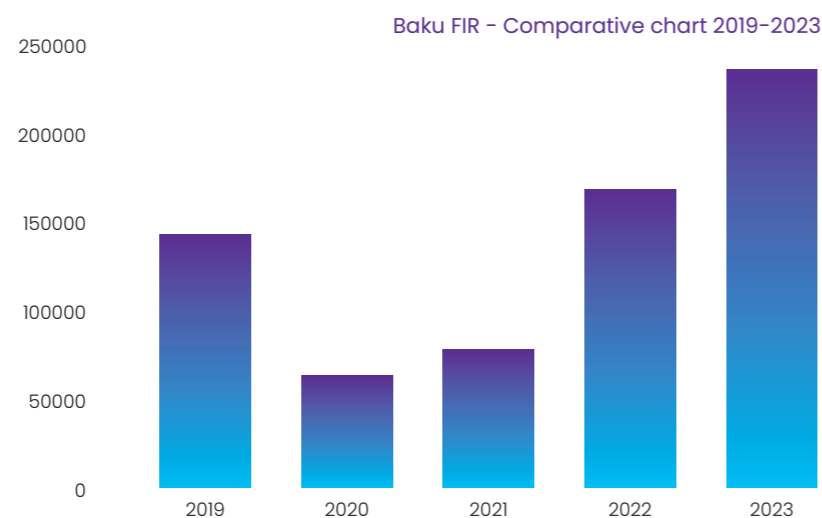
The number of IFR movements within Baku FIR recorded in December is **20090 ACFT**.

Average number of IFR movements per day is **648 ACFT** (Peak day, December 22, 2023 – **693 ACFT**; low day, December 31, 2023 – **571 ACFT**).
Comparison with December 2022 – **+22.8%**.



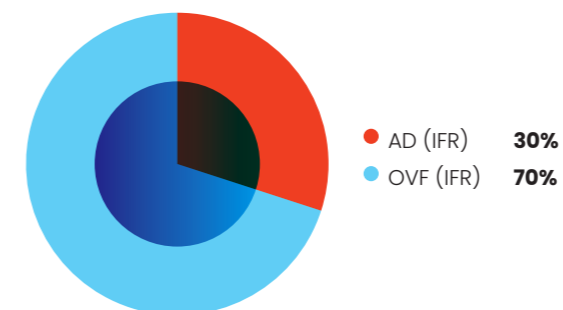
The number of IFR movements within Baku FIR recorded in Y2023 is **236668 ACFT**.

Average number of IFR movements per day is **649 ACFT**.
Comparison with Y2022 – **+39.9%**.



1.2 Traffic Segments

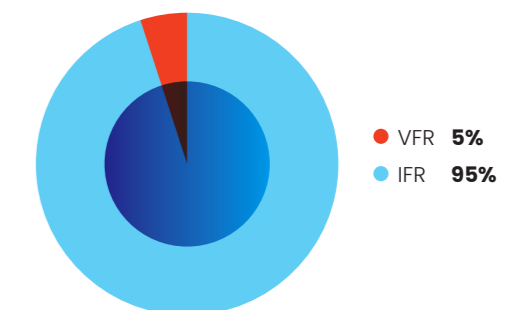
1.2.1 The number of IFR movements within Baku FIR recorded in December is **20090 ACFT**, where **13981 ACFT** are overflight traffic and **6109 ACFT** are aerodrome movements.



1.2.2 Total number of movements within Baku FIR recorded in December is **21190 ACFT**, where 20090 ACFT are IFR movements and **1100 ACFT** are VFR movements.

Average number of movements per day is **684 ACFT**.

Comparison with December 2022 – **+19.4%**.



1.3 Capacity vs traffic demand

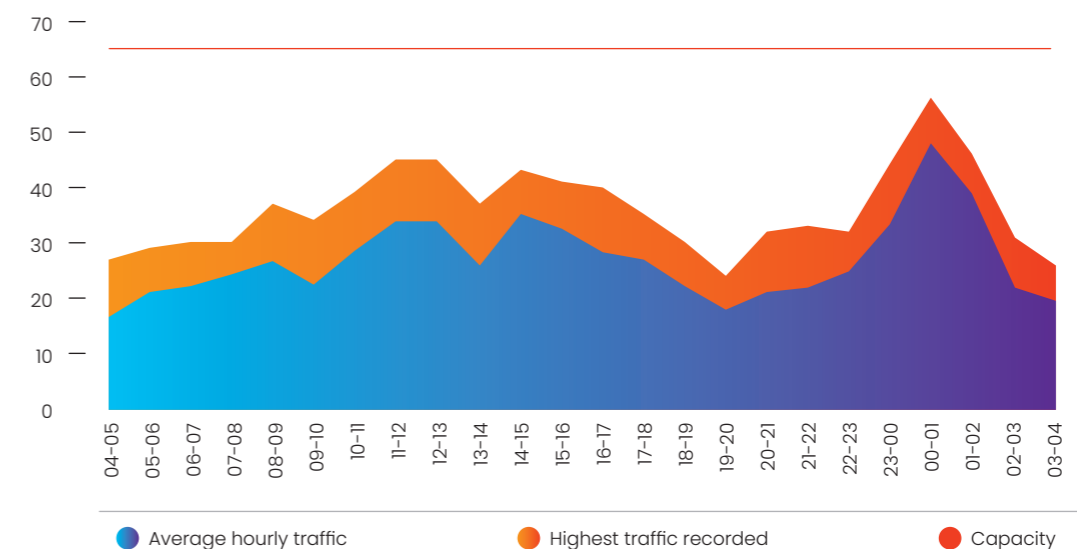
Highest traffic recorded

56 ACFT (December 21, 2023 00:00-01:00)

Peak hour (December average data):

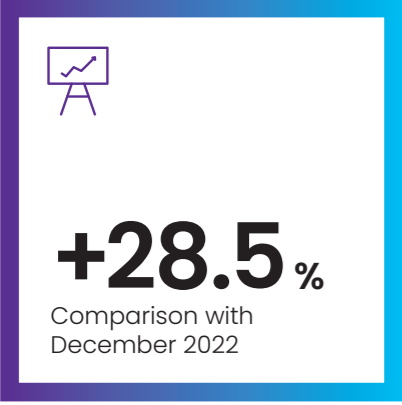
00:00-01:00	48 ACFT
01:00-02:00	39 ACFT
14:00-15:00	35 ACFT
11:00-12:00	34 ACFT
12:00-13:00	34 ACFT

The following picture reflects the traffic demand by hour vs capacity of Baku FIR.

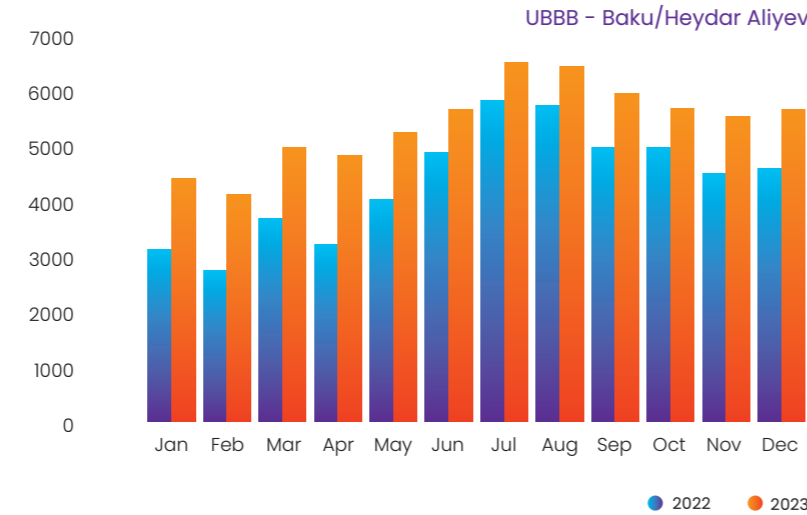


2 Aerodrome Movements Statistics Data

2.1 Heydar Aliyev International airport

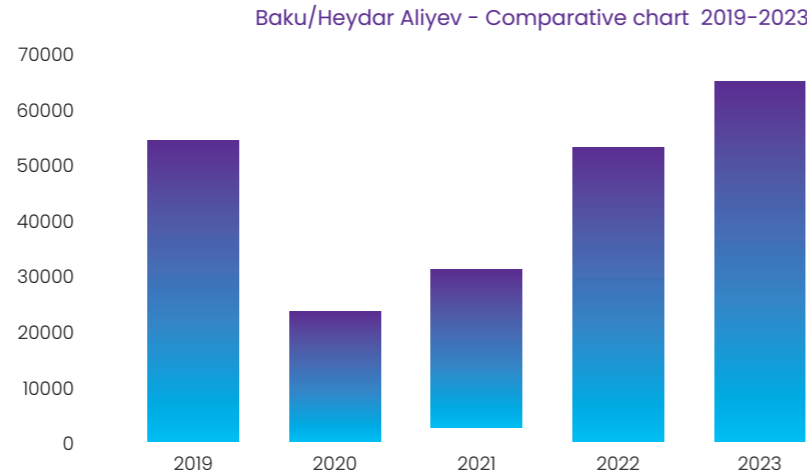


2.1.1 Total number of movements at Baku/Heydar Intl' Aliyev airport recorded in December is **5903 ACFT**. Average number of movements per day is **191 ACFT** (Peak day, December 21, 2023 – **214 ACFT**; low day, December 31, 2023 – **143 ACFT**).
Comparison with December 2022 – **+28.5%**.

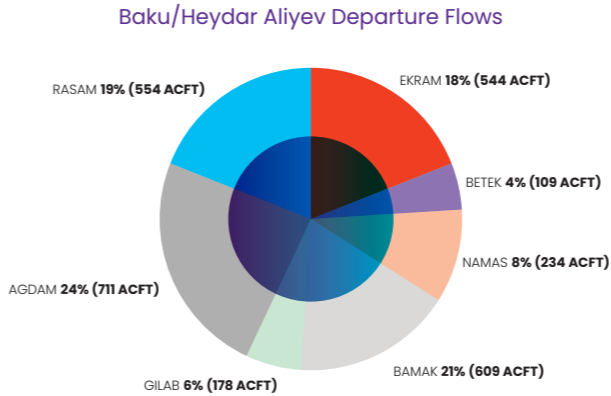


2.1.2 Comparative chart 2019 – 2023

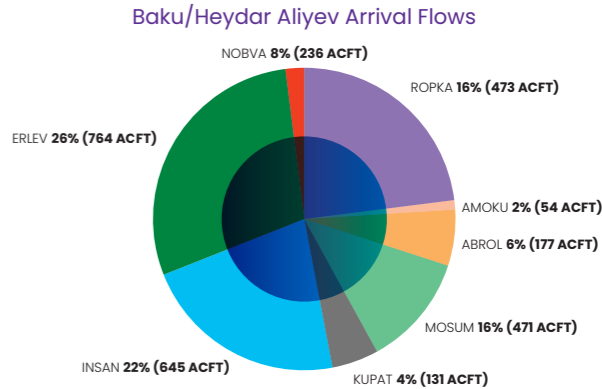
The number of movements at Baku/Heydar Intl' Aliyev airport recorded in Y2023 is **65638 ACFT**.
Average number of movements per day is **180 ACFT**.
Comparison with Y2022 – **+24.8%**.



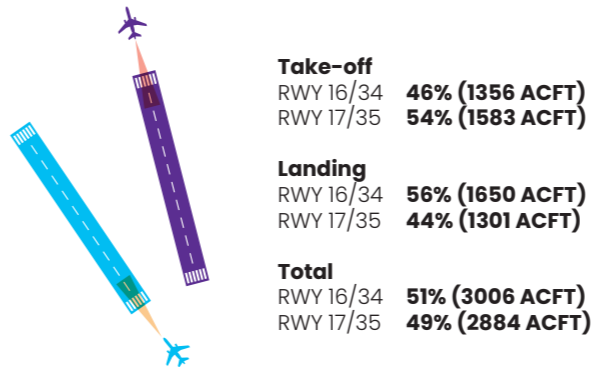
2.1.3 Air traffic flows – Load of SIDs.



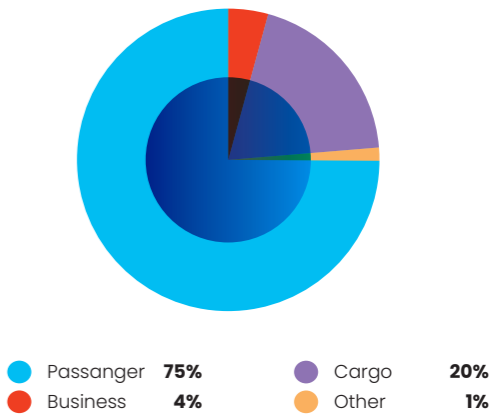
2.1.4 Air traffic flows – Load of STARs



2.1.5 Use of RWY 16/34 and 17/35

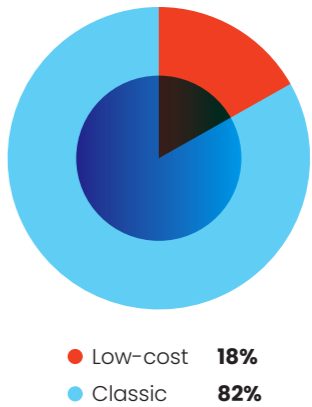


2.1.6 Types of flights

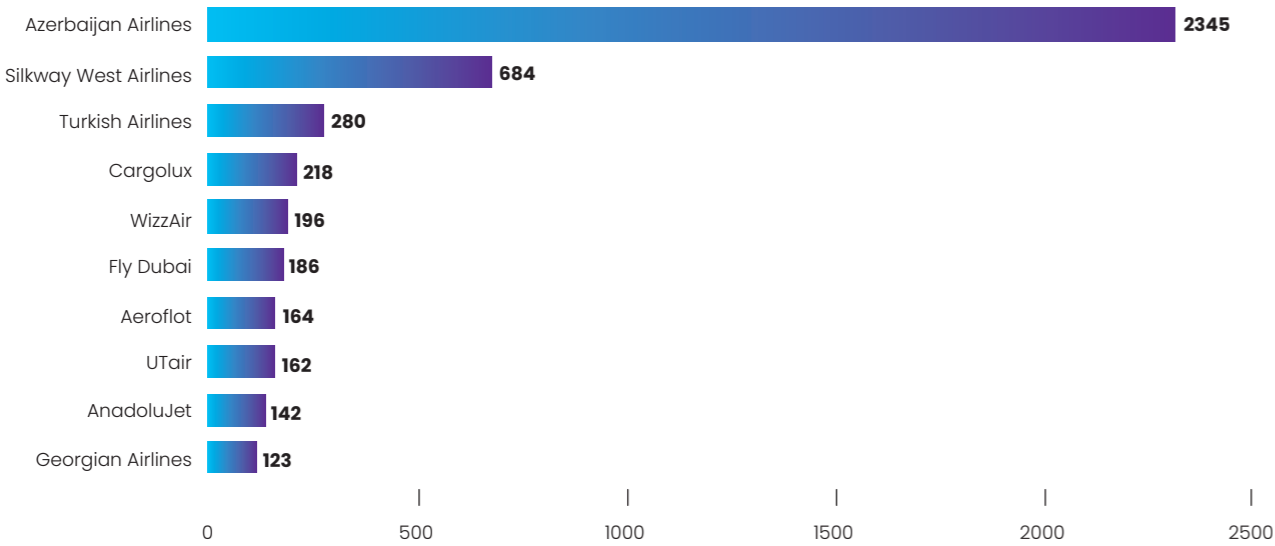


2.1.7 Passenger flights (Budget/low-cost vs classic)

Budget/low-cost airlines: **AnadoluJet, Fly Dubai, Air Arabia, Air Arabia Abu Dhabi, Jazeera Airways, Pegasus Airlines, Flynas, Fly Arystan, WizzAir, WizzAir Malta and WizzAir Abu Dhabi.**



2.1.8 Aircraft Operators – Top 10 Airspace Users

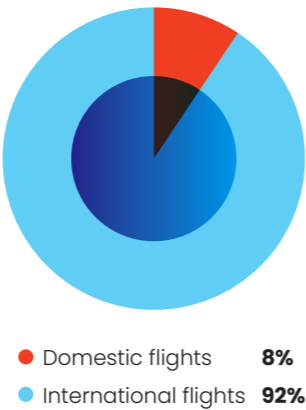


Note: This chart shows the number of flights in December 2023.

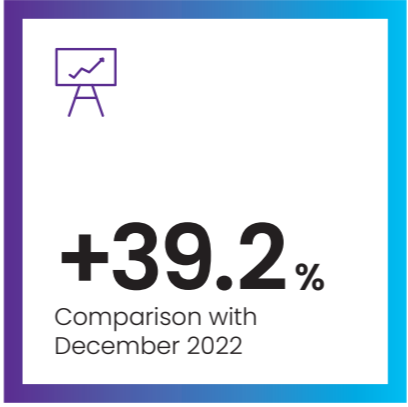
2.1.9 Aircraft Operators – Airlines of Azerbaijan vs international airlines



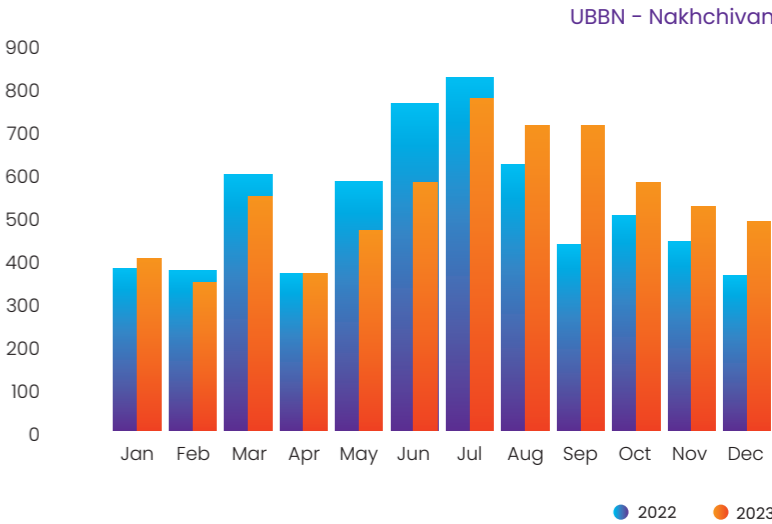
2.1.10 Traffic segments – Domestic vs International



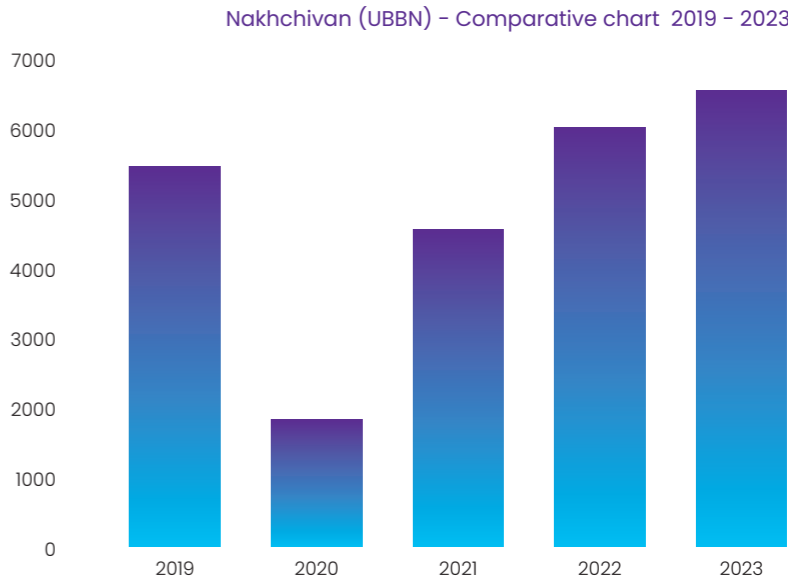
2.2 Nakhchivan International airport



Total number of movements at Nakhchivan International airport recorded in December is **494 ACFT**.
Average number of movements per day is **16 ACFT**.
Comparison with December 2022 – **+39.2%**.



The number of movements at Nakhchivan International airport recorded in Y2023 is **6458 ACFT**.
Average number of movements per day is **18 ACFT**.
Comparison with Y2022 – **+5.3%**.



2.3 Ganja International airport



184

acft


The number of IFR movements within Baku recorded in December



6

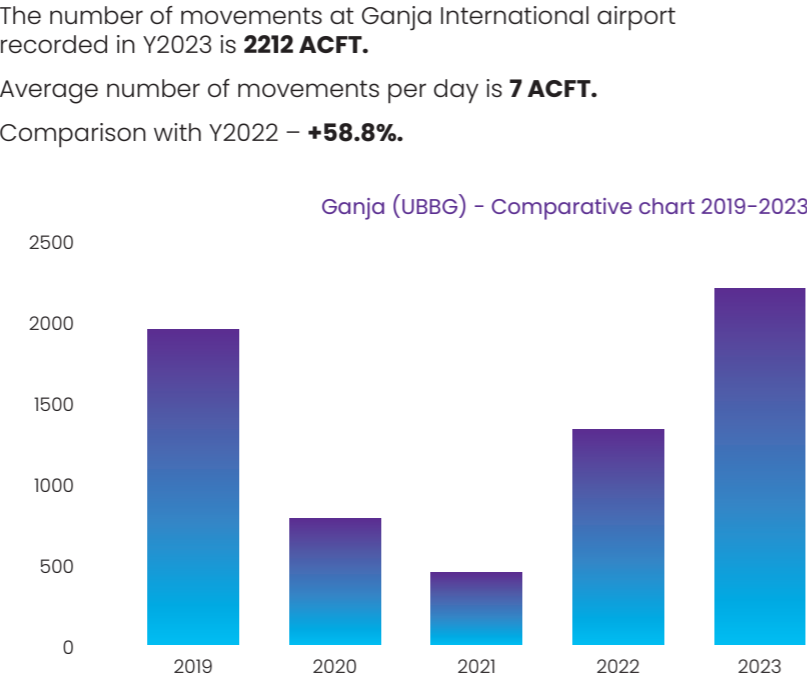
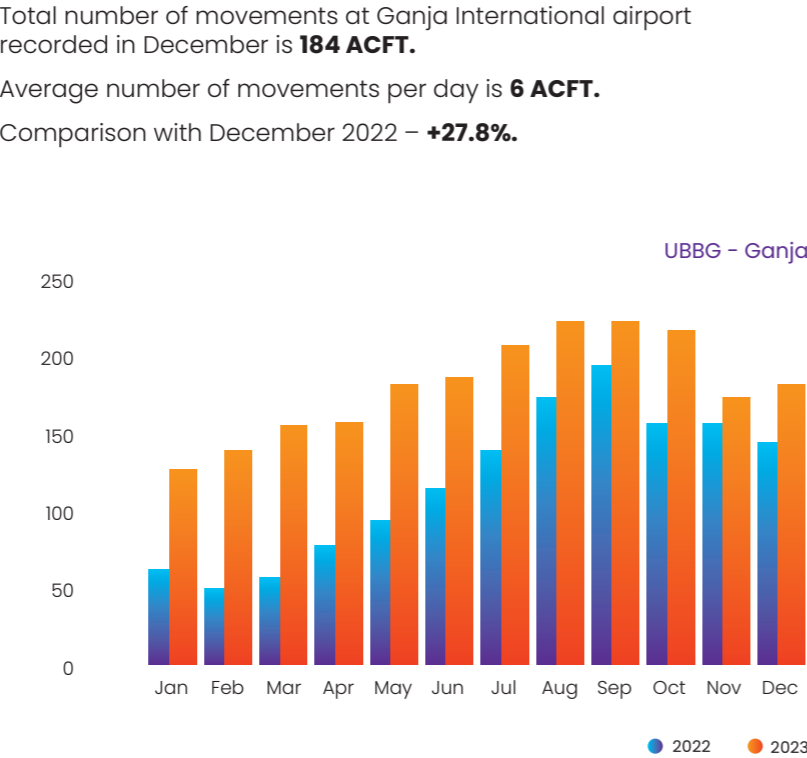
acft

Average number of IFR movements per day



+27.8%

Comparison with December 2022




2.4 Gabala International airport



4

acft

The number of IFR movements within Baku recorded in December



0.2

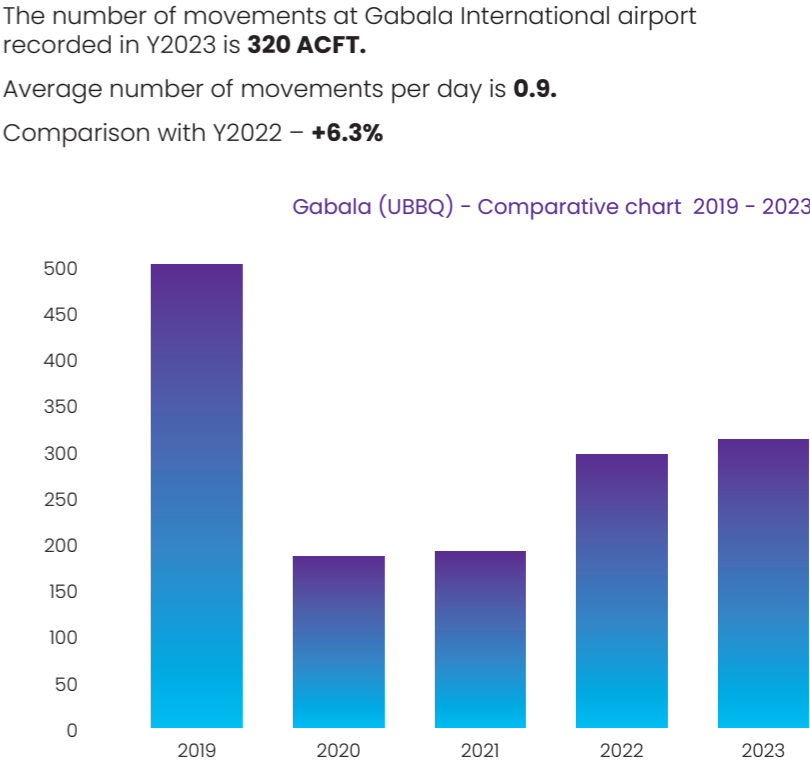
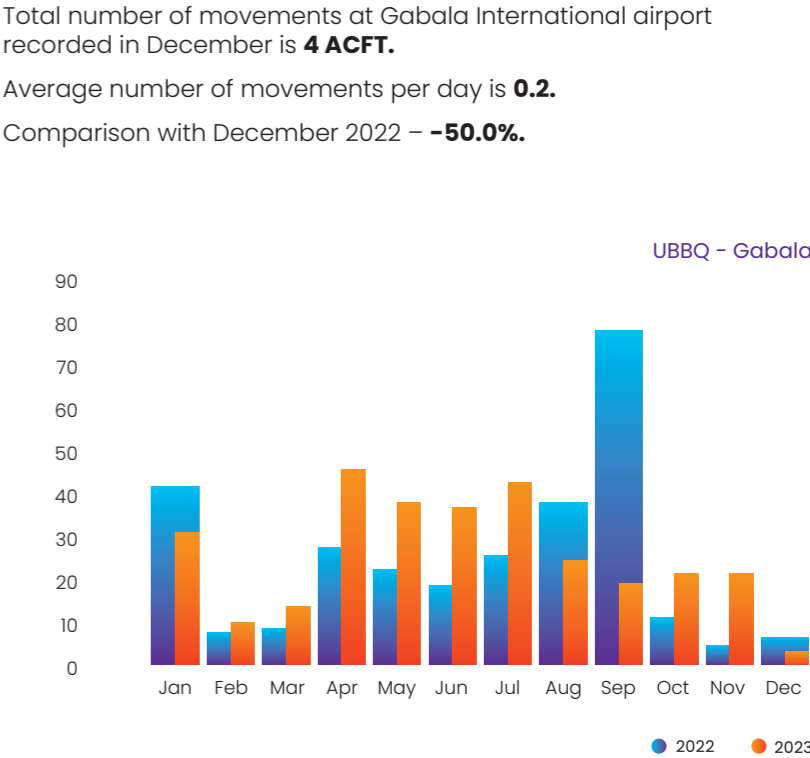
acft

Average number of IFR movements per day



-50.0%

Comparison with December 2022



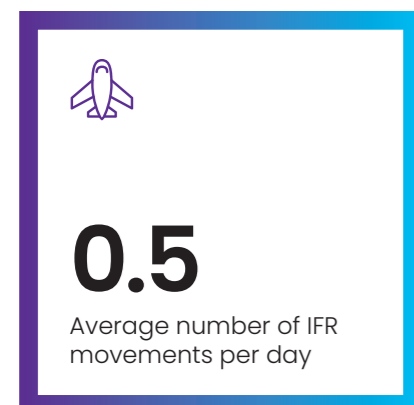
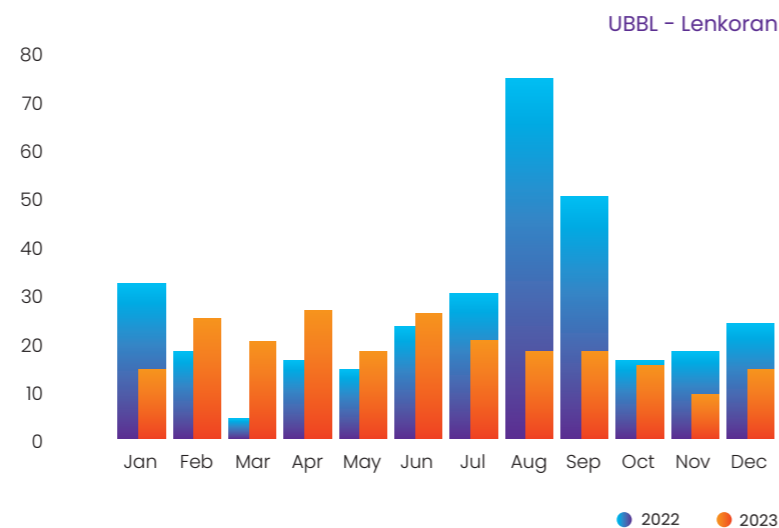
2.5 Lenkoran International airport



Total number of movements at Lenkoran International airport recorded in December is **14 ACFT**.

Average number of movements per day is **0.5**.

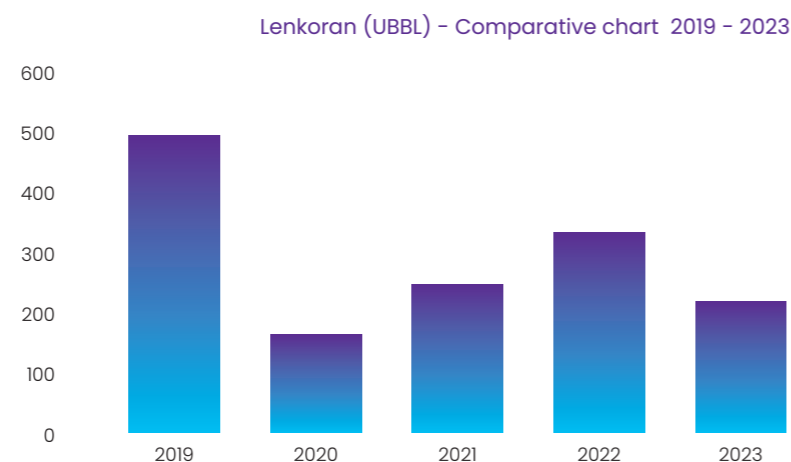
Comparison with December 2022 – **-46.2%**.



The number of movements at Lenkoran International airport recorded in Y2023 is **222 ACFT**.

Average number of movements per day is **0.6**.

Comparison with Y2022 – **-31.9%**.



2.6 Fuzuli International airport.

Total number of movements – **26 ACFT**

Average number of movements per day – **0.8**

2.7 Zagatala International airport.

No movements were recorded.

2.8 Zangilan International airport.

Total number of movements – **4 ACFT**

Average number of movements per day – **0.2**

2.9 Yevlakh airport.

Total number of movements – **60 ACFT**

Average number of movements per day – **2**

3 VFR Movements Statistics data

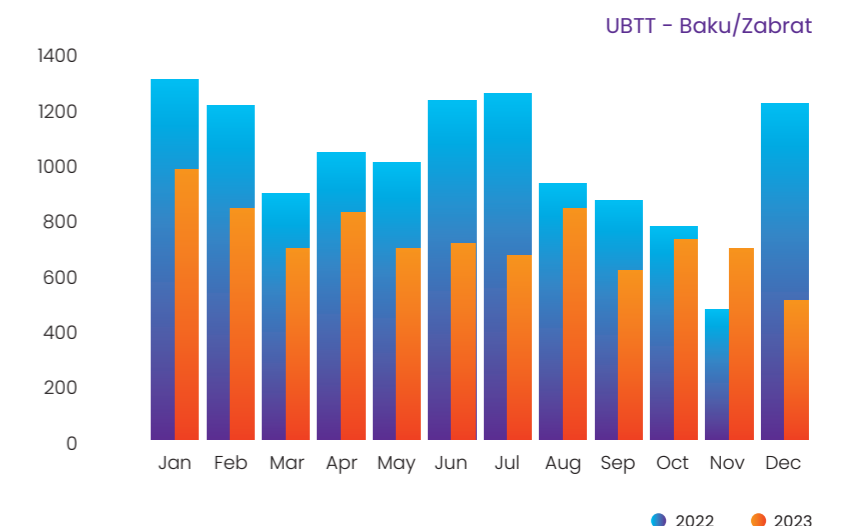
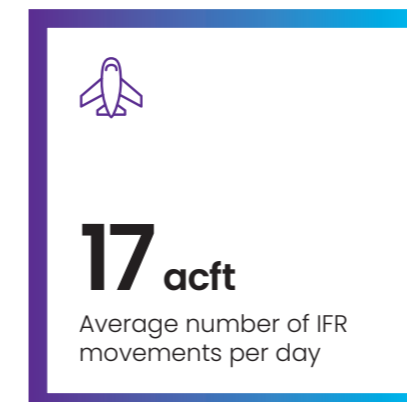
3.1 Baku/Zabrat airport



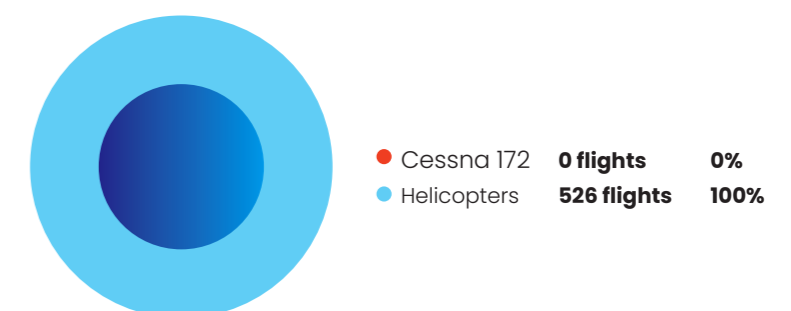
Total number of VFR movements at Baku/Zabrat airport recorded in December is **526 ACFT**.


Average number of movements per day is **17 ACFT**

Comparison with December 2022 – **-57.2%**.




The Baku/Zabrat aerodrome is the base of training flights for student pilots of the National Aviation Academy. The student pilot training program includes en-route flight training and training maneuvers (take-off, landing, go-around) on the Cessna-172 aircraft






454 acft

The number of IFR movements within Baku recorded in December



15 acft

Average number of IFR movements per day

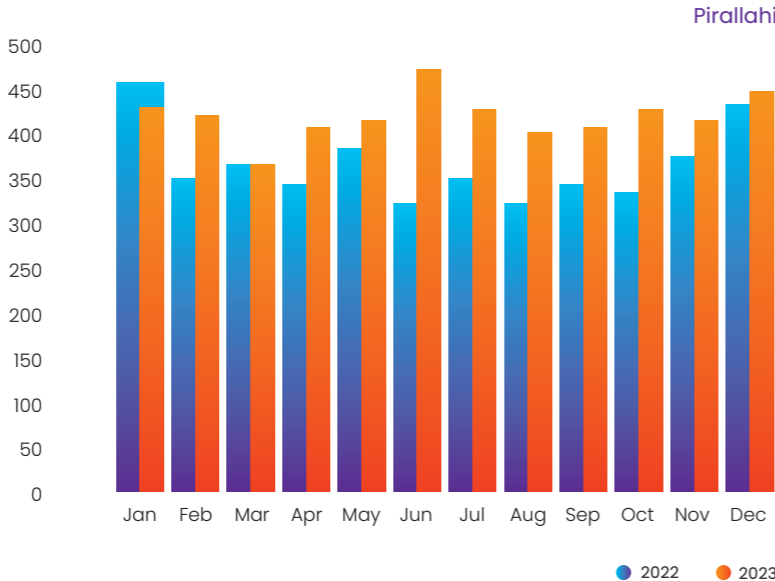


+4.1%

Comparison with December 2022

3.2 Pirallahi heliport

Total number of VFR movements at Pirallahi heliport recorded in December is **454 ACFT**.
Average number of movements per day is **15 ACFT**
Comparison with December 2022 – **+4.1%**.





180 acft

The number of IFR movements within Baku recorded in December



6 acft

Average number of IFR movements per day

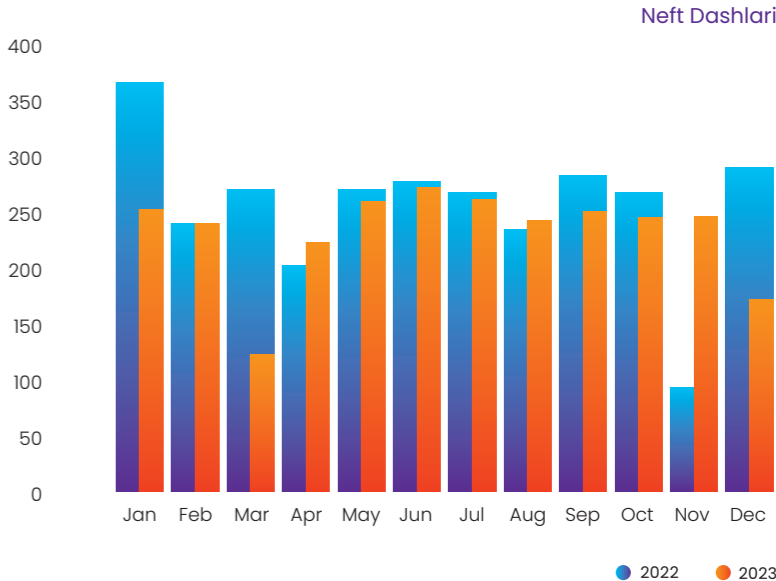



-36.6%

Comparison with December 2022

3.4 Neft Dashlari heliport


Total number of VFR movements at Neft Dashlari heliport recorded in December is **180 ACFT**.
Average number of movements per day is **6 ACFT**
Comparison with December 2022 – **-36.6%**.






396 acft

The number of IFR movements within Baku recorded in December



13 acft

Average number of IFR movements per day

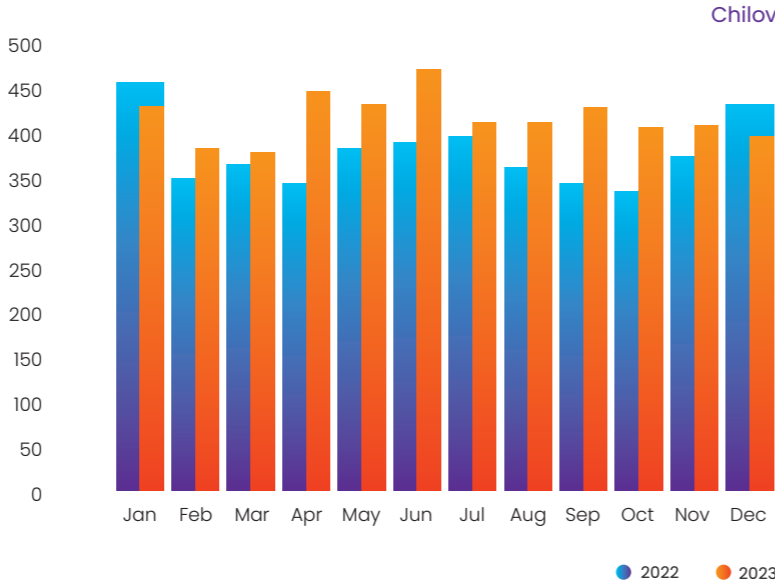


-3.9%

Comparison with December 2022

3.3 Chilov heliport

Total number of VFR movements at Chilov heliport recorded in December is **396 ACFT**.
Average number of movements per day is **13 ACFT**
Comparison with December 2022 – **-3.9%**.





260 acft

The number of IFR movements within Baku recorded in December



9 acft

Average number of IFR movements per day

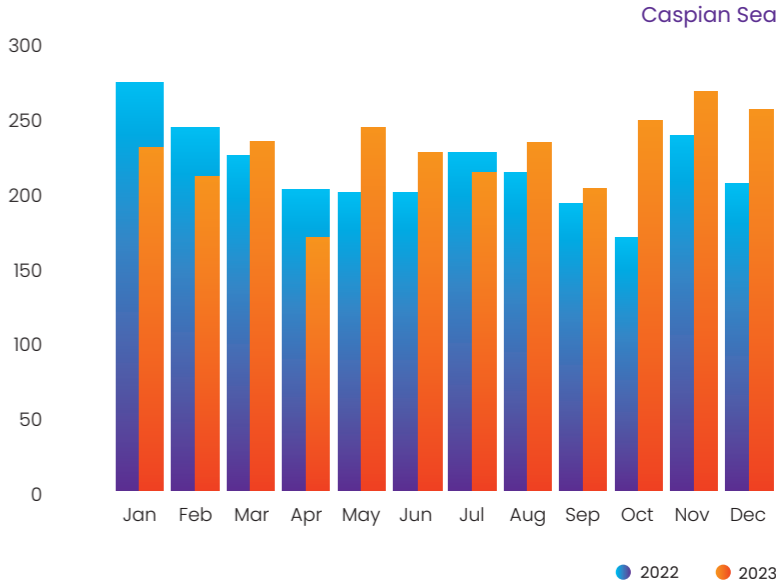


+28.1%

Comparison with December 2022

3.5 Helipads on the ships and offshore drilling rigs in the Caspian Sea

Total number of VFR movements at helipads on the ships and offshore drilling rigs in the Caspian Sea recorded in December is **260 ACFT**.
Average number of movements per day is **9 ACFT**
Comparison with December 2022 – **+28.1%**.

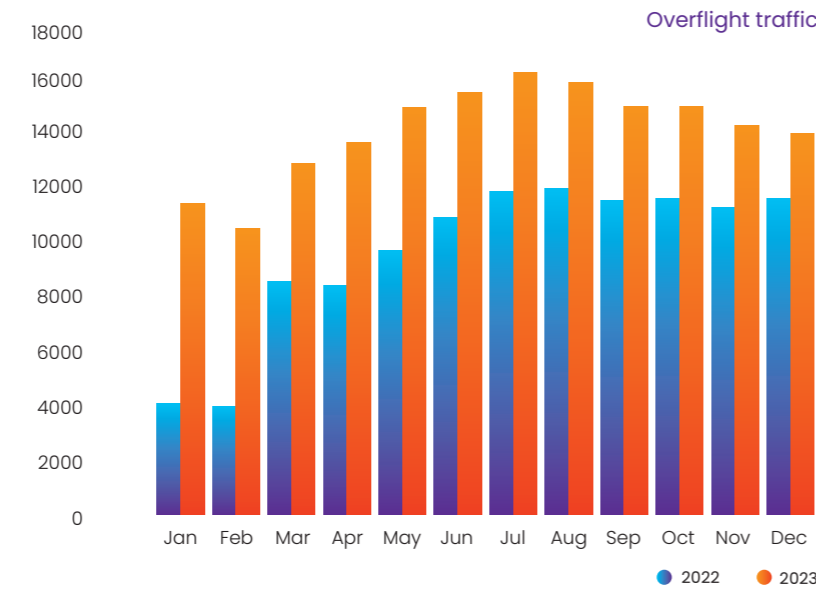


4 Overflight Air Traffic Statistics Data

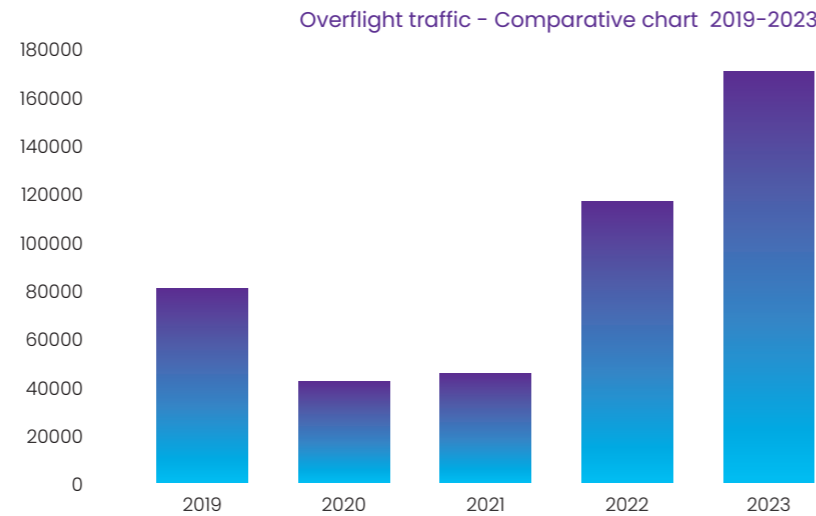
4.1 General Air Traffic Statistics Data



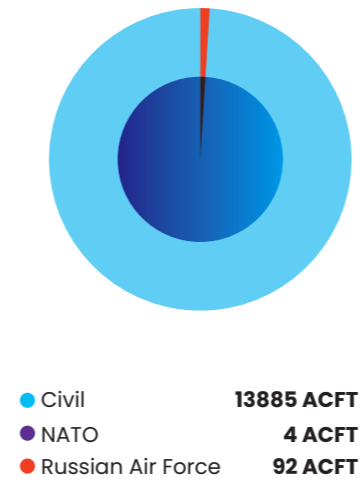
The number of overflights via Baku FIR recorded in December is **13981 ACFT**. Average number of overflights per day is **451 ACFT** (Peak day, December 22, 2023 – **491 ACFT**; low day, December 25, 2023 – **409 ACFT**). Comparison with December 2022 – **+20.9%**.



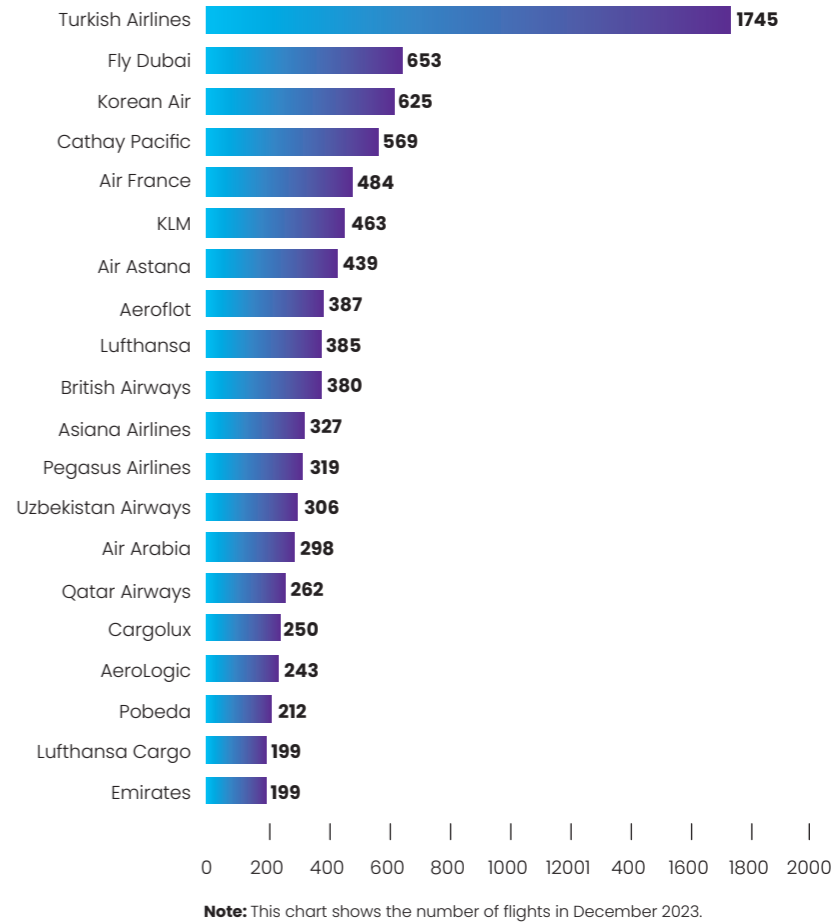
The number of overflights via Baku FIR recorded in Y2023 is **168536 ACFT**. Average number of overflights per day is **462 ACFT**. Comparison with Y2022 – **+46.7%**.



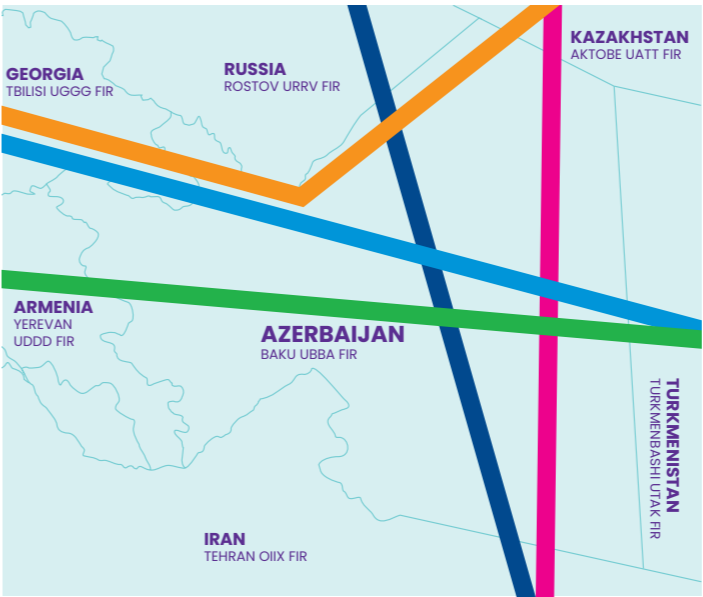
4.2 Traffic segments



4.3 Aircraft Operators – Top 20 Airspace Users



4.4 Air traffic flows – main overflight flows.



Georgia – Turkmenistan and v.v.	37% (5241 ACFT)
Georgia – Kazakhstan and v.v.	29% (4104 ACFT)
Iran – Russia and v.v.	8% (1093 ACFT)
Turkmenistan – Armenia and v.v.	5% (690 ACFT)
Iran – Kazakhstan and v.v.	13% (1795 ACFT)
Other directions (Total)	8% (1058 ACFT)

5 Key Performance Indicators (KPIs)

This report presents Key Performance Indicators (KPIs) to assess the operational efficiency of the “Azeronavigation” ATD in terms of provision of air traffic services. All the calculations are done for “Bakuaeronavigation” due to low traffic at the regional airports.

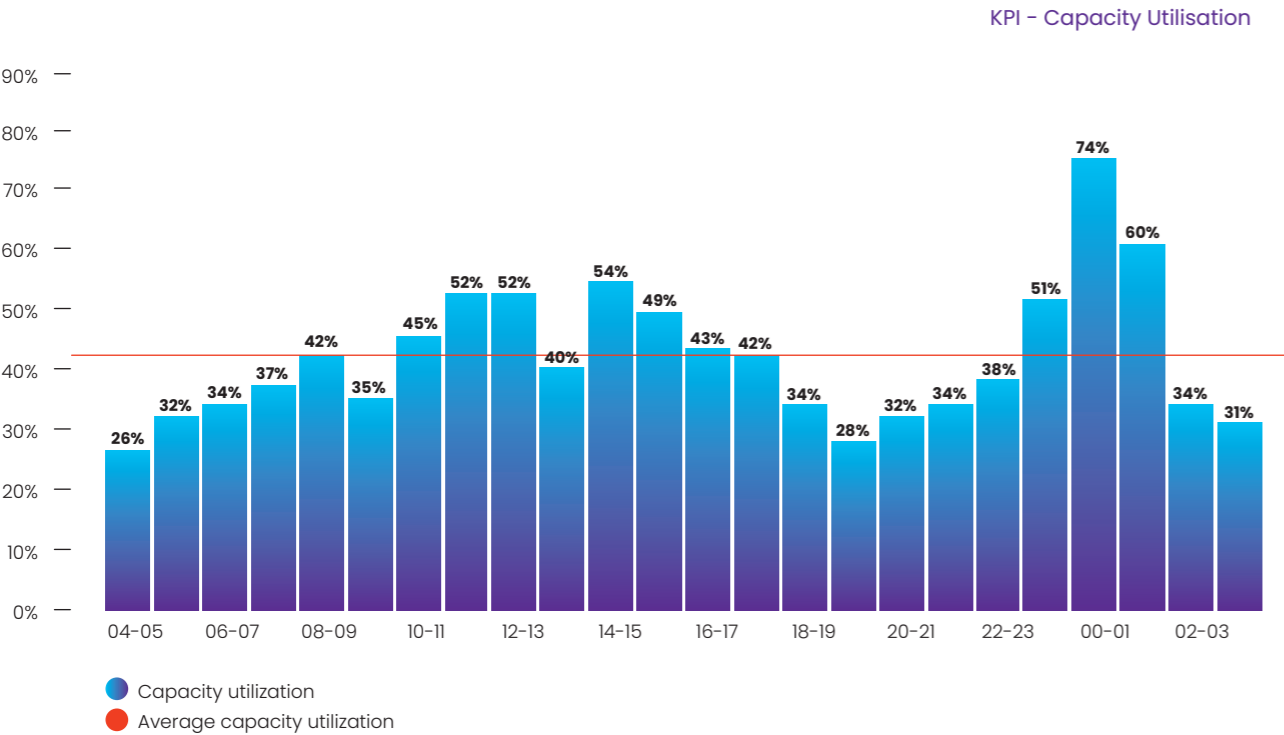
5.1 KPI – Capacity Utilization.

Capacity utilization assesses how effectively capacity is managed. It is a measure of accommodated demand, compared to the available capacity of Baku FIR.

KPI – Capacity Utilization is calculated by the formula: the value of “accommodated demand” is divided by the value of “capacity” and is multiplied by 100%.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	16	16	26	25	29	34	37	37	36	35	34	34
2023	33	33	37	40	41	46	48	47	45	44	43	42

Capacity Utilization December 2023 **42%**



5.2 KPI – Total Distance flown.

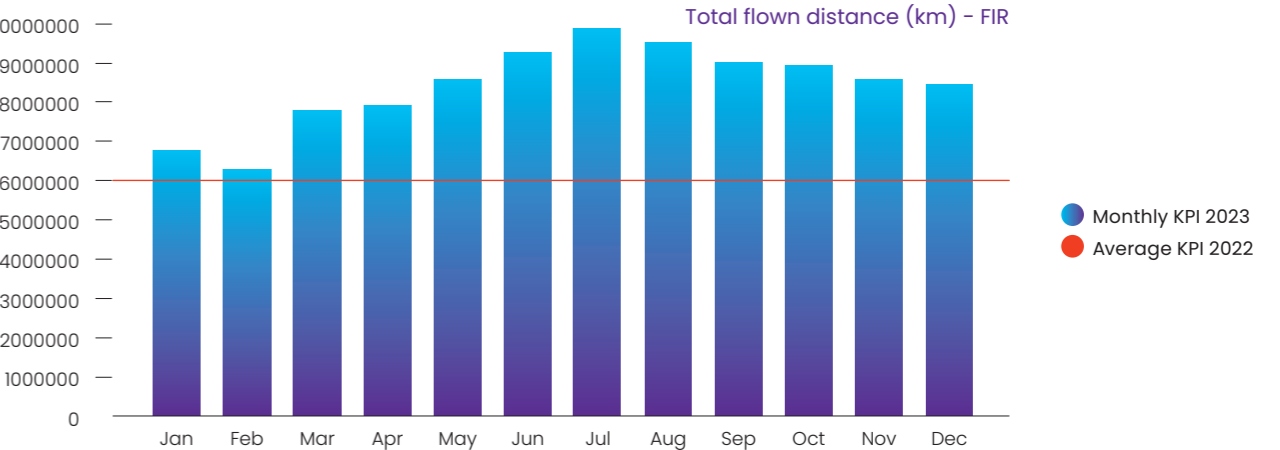
KPI-Flown distance is a total flown distance. KPI is km.

5.2.1 KPI – Total Distance flown – Baku FIR. (Combined en-route traffic and aerodrome movements).

All the traffic data of Baku FIR (overflight and aerodrome movements) is used for calculation of KPI – Total flown distance (FIR).

	Jan	Feb	Mar	Apr	May	Jun
2022	3 017 241	2 828 769	5 247 488	5 021 980	5 855 889	6 700 779
2023	6 826 061	6 226 183	7 721 660	7 971 465	8 590 043	9 172 884

	Jul	Aug	Sep	Oct	Nov	Dec
2022	7 478 958	7 531 786	7 018 478	7 081 076	6 805 131	7 019 174
2023	9 915 145	9 756 530	9 037 916	9 002 809	8 643 707	8 592 830

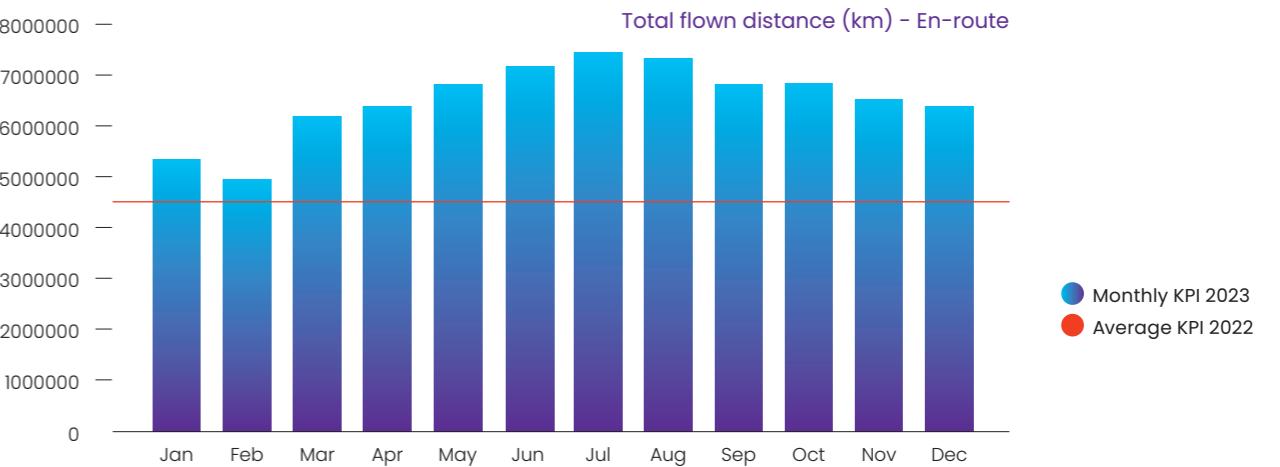


5.2.2 KPI – Total Distance flown – En-route traffic.

Only overflight traffic data is used for calculation of Total flown distance (ENR).

	Jan	Feb	Mar	Apr	May	Jun
2022	1 929 590	1 875 524	3 950 238	3 876 366	4 429 406	4 988 482
2023	5 296 353	4 803 864	5 979 971	6 278 415	6 796 296	7 187 321

	Jul	Aug	Sep	Oct	Nov	Dec
2022	5 440 267	5 509 422	5 281 026	5 341 818	5 228 581	5 412 507
2023	7 572 989	7 453 374	6 945 565	6 986 401	6 691 758	6 543 403

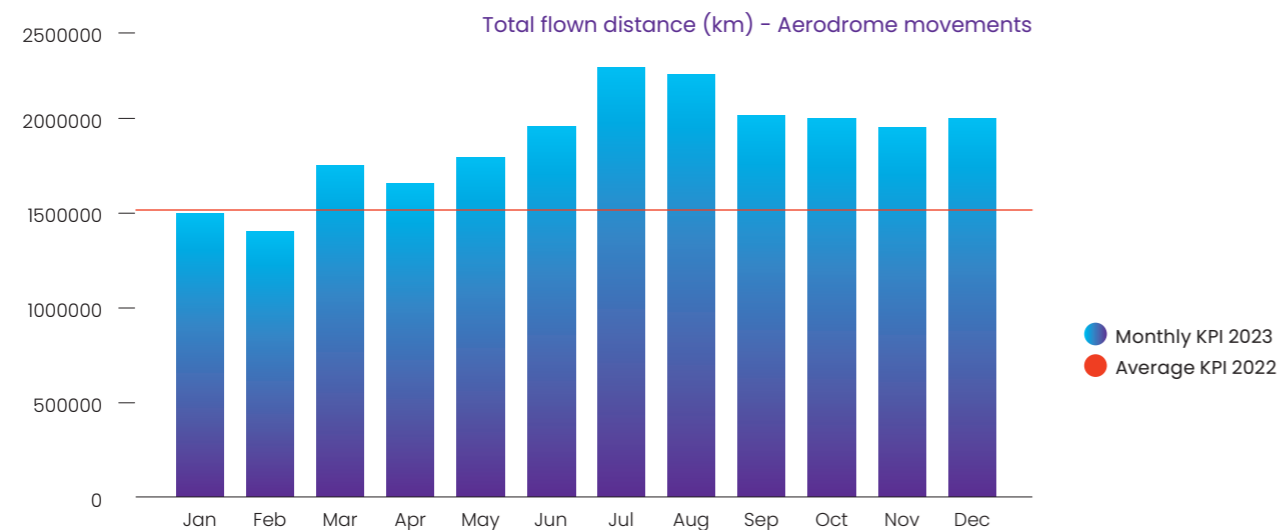


5.2.3 KPI – Total Distance flown – Aerodrome movements.

Only aerodrome movements data is used for calculation of Total flown distance (AD).

	Jan	Feb	Mar	Apr	May	Jun
2022	1 087 652	953 245	1 297 250	1 145 614	1 426 483	1 712 296
2023	1 529 708	1 422 319	1 741 689	1 693 050	1 793 747	1 985 563

	Jul	Aug	Sep	Oct	Nov	Dec
2022	2 038 691	2 022 364	1 737 452	1 739 258	1 576 550	1 606 667
2023	2 342 156	2 303 156	2 092 351	2 016 408	1 951 949	2 049 427



5.3 KPI-Average flown distance per ACFT

KPI- Average flown distance is calculation of average distance flown by ACFT by the following formula: the value of “total flown distance in kilometers” is divided by the value of “number of ACFT”. KPI is km/ACFT.

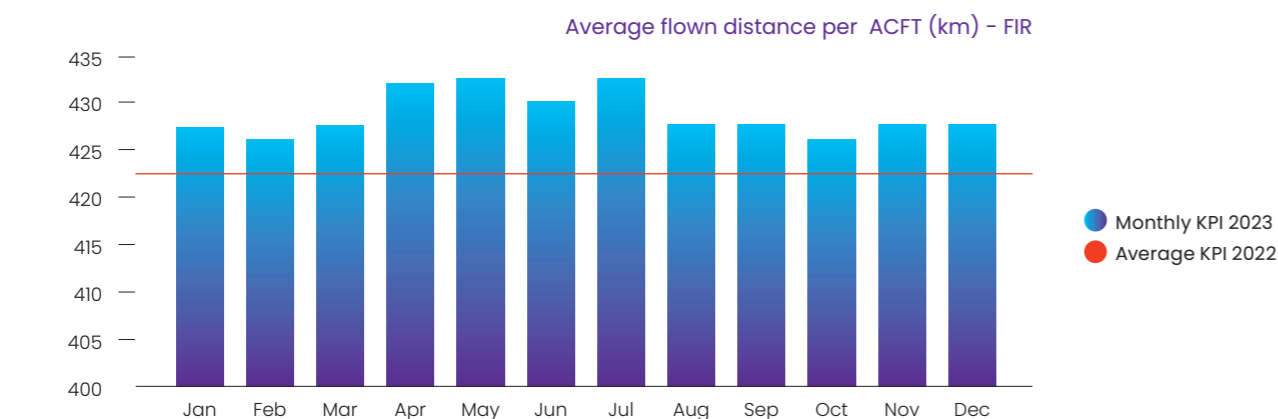
5.3.1 KPI – Average flown distance (FIR)

All the traffic data of Baku FIR (overflight and aerodrome movements) is used for calculation of average flown distance (FIR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	413	419	424	429	424	422	420	422	421	423	427	429
2023	428	427	428	431	431	430	431	428	428	427	428	428

KPI – Average flown distance (FIR) December 2023

428 km/ACFT



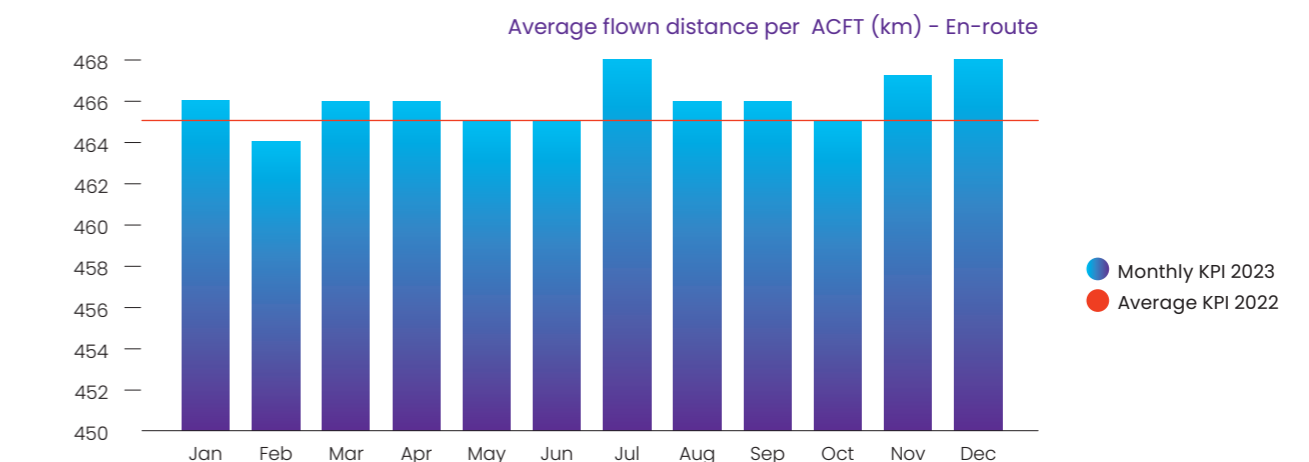
5.3.2 KPI – Average flown distance (ENR)

Only overflight traffic data is used for calculation of KPI – Average flown distance (ENR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	475	478	462	462	459	460	461	462	461	464	467	468
2023	466	464	466	466	465	465	468	466	466	465	467	468

KPI – Average flown distance (ENR) December 2023

468 km/ACFT



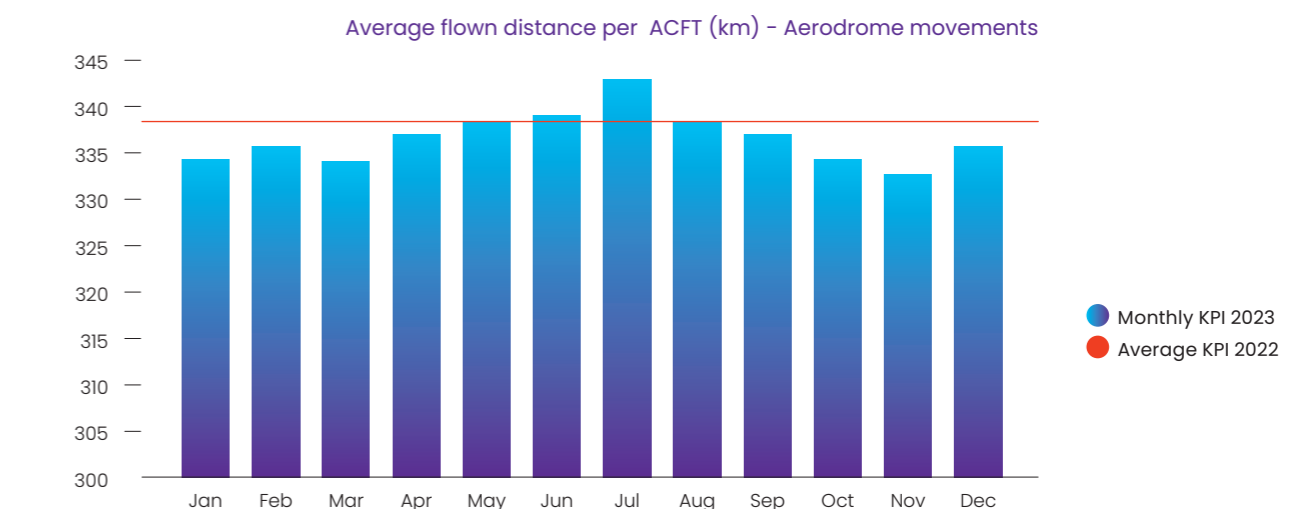
5.3.3 KPI- Average flown distance (AD)

Only aerodrome movements data is used for calculation of Average flown distance (AD).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	335	337	340	345	342	340	339	340	334	333	334	335
2023	334	336	333	337	338	339	343	338	337	334	332	336

KPI – Average flown distance (AD) December 2023

336 km/ACFT



5.4 KPI –Total IFR/hours

KPI- IFR/hours is a total flown IFR/hours. KPI is IFR/hours.

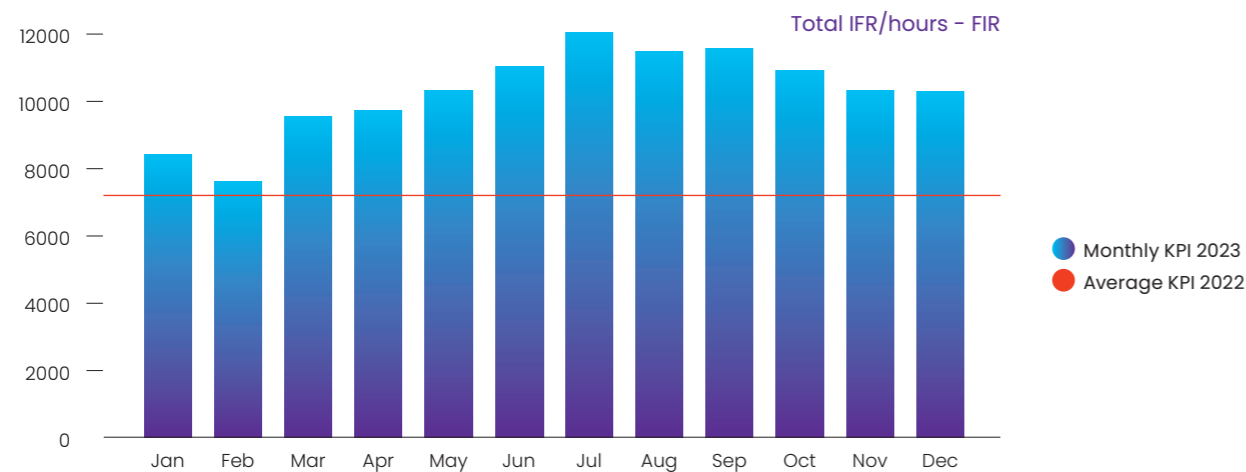
5.4.1 Total IFR/hours –FIR Baku

All the traffic data of Baku FIR (overflight and aerodrome movements) is used for calculation of KPI – IFR/hours (FIR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	3863	3610	6510	6153	7216	8287	9204	9218	8609	8728	8343	8616
2023	8388	7665	9484	9709	10425	11145	12000	11815	10922	11020	10577	10554

KPI – Total IFR/hours (FIR) December 2023

10554 IFR/hours



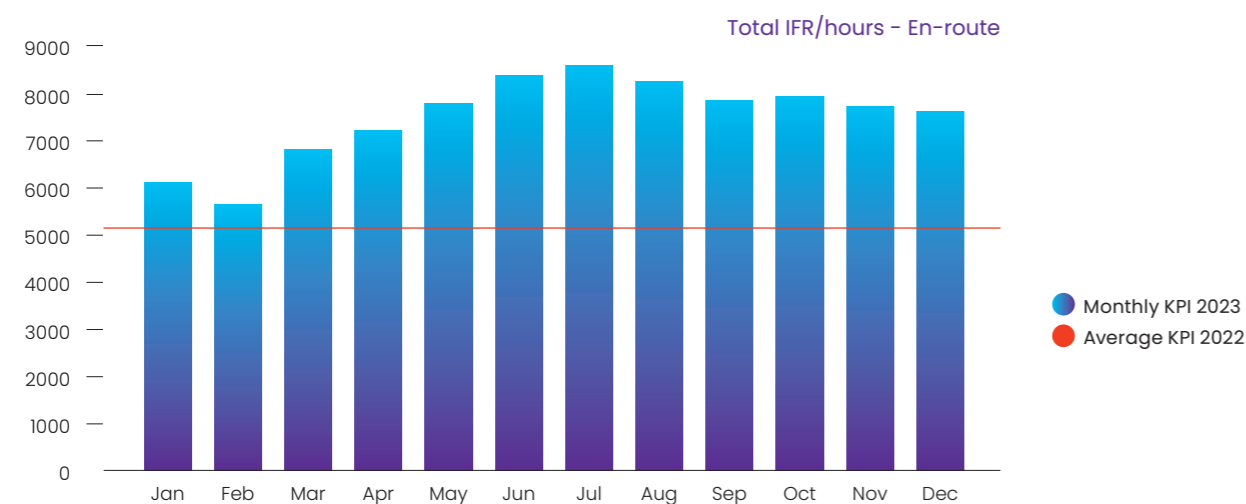
5.4.2 Total IFR/hours –Enroute

Only overflight traffic data is used for calculation of KPI – IFR/hours (ENR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	2257	2183	4569	4477	5098	5727	6192	6272	6061	6157	6035	6271
2023	6147	5579	6908	7236	7798	8213	8557	8430	7906	8026	7698	7553

KPI – Total IFR/hours (ENR) December 2023

7553 IFR/hours



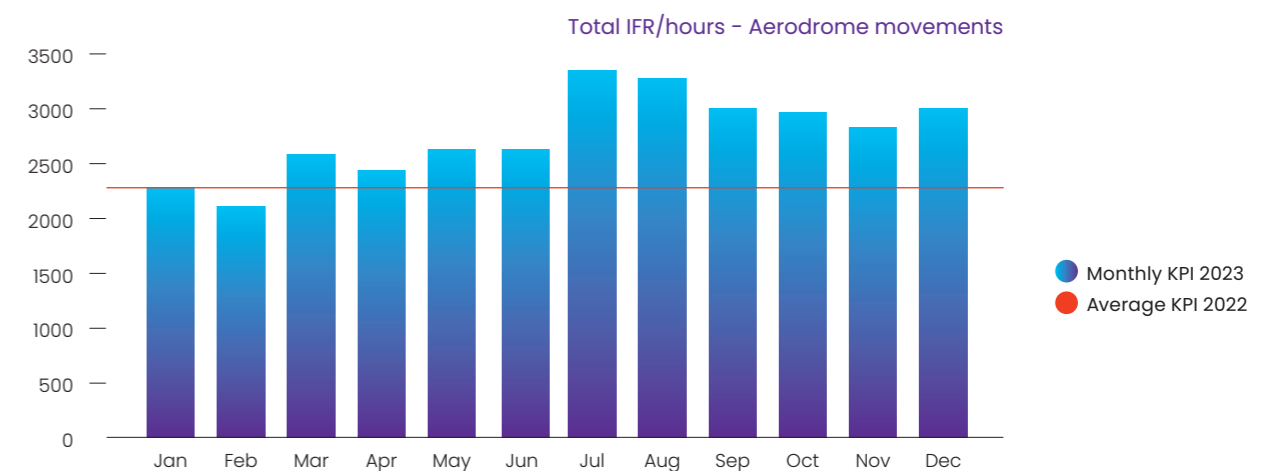
5.4.3 Total IFR/hours –Aerodrome movements

Only aerodrome movements data is used for calculation of KPI – IFR/hours (AD).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	1607	1427	1941	1676	2118	2560	3012	2947	2548	2572	2308	2346
2023	2241	2086	2576	2473	2931	2931	3443	3385	3017	2994	2879	3001

KPI – Total IFR/hours (AD) December 2023

3001 IFR/hours



5.5 KPI – Average IFR/min per ACFT

KPI – IFR/min per ACFT is an average flown IFR/min per ACFT. KPI is IFR/hours.

KPI – Average flown IFR/min per ACFT is calculation of average time flown by ACFT by the following formula: the value of “total flown time in minutes” is divided by the value of “number of ACFT”. KPI is min/ACFT.

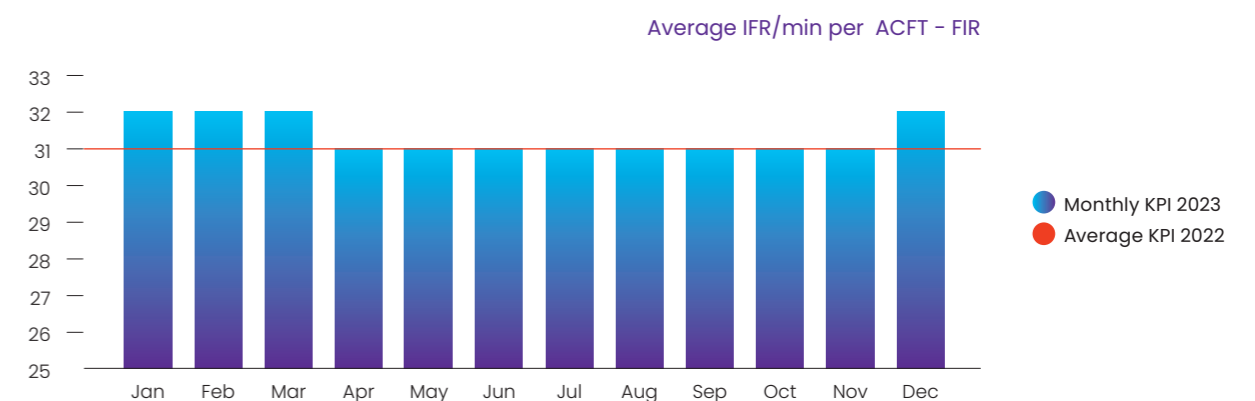
5.5.1 Average IFR/min per ACFT – FIR Baku

All the traffic data of Baku FIR (overflight and aerodrome movements) is used for calculation of KPI – Average IFR/min per ACFT (FIR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	32	32	32	32	31	31	31	31	31	31	31	32
2023	32	32	32	31	31	31	31	31	31	31	31	32

KPI – Average IFR/min per ACFT (FIR) December 2023

32 min/ACFT

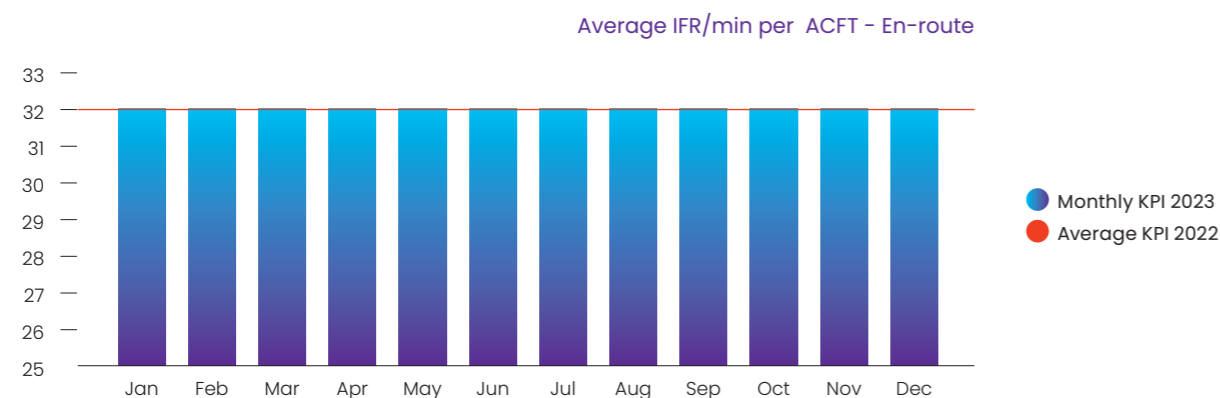


5.5.2 Average IFR/min per ACFT – En-route

Only overflight traffic data is used for calculation of KPI – Average IFR/min per ACFT (ENR).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	33	33	32	32	32	32	32	32	32	32	32	33
2023	32	32	32	32	32	32	32	32	32	32	32	32

KPI – Average IFR/min per ACFT (ENR) December 2023 **32 min/ACFT**

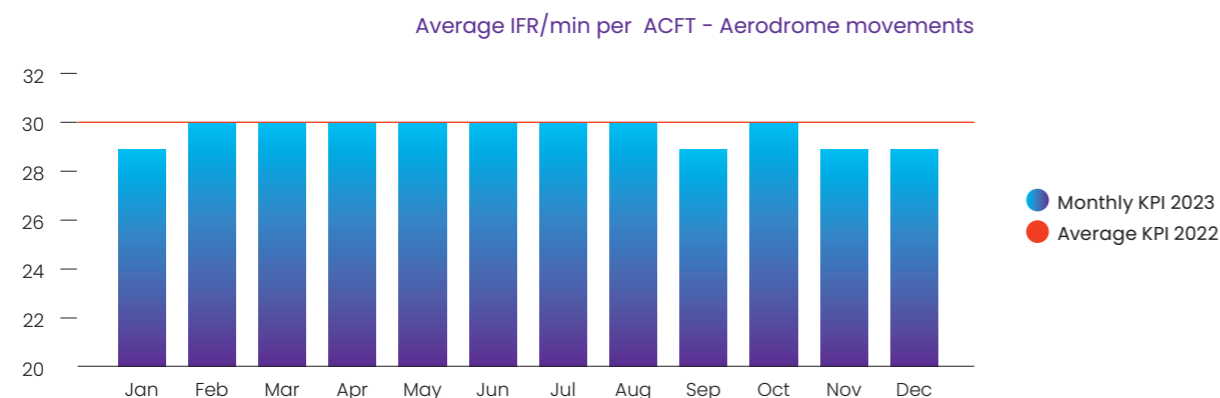


5.5.3 Average IFR/min per ACFT – Aerodrome movements

Only aerodrome movements data is used for calculation of KPI – Average IFR/min per ACFT (AD).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	30	30	31	30	31	30	30	30	29	30	29	29
2023	29	30	30	30	30	30	30	30	29	30	29	29

KPI – Average IFR/min per ACFT (AD) December 2023 **29 min/ACFT**



5.6 CANSO Productivity KPIs

The key indicator of ANS productivity is IFR flight hours per ATCO in OPS hour, often described as “ATCO in OPS productivity”.

Although generally reflective of ANSPs’ performance, factors beyond the control of the ANSP can cause low levels of productivity—for example a geopolitical event that alter traffic demand.

ATCO in OPS productivity is driven by traffic levels and an ANSP’s ability to utilize its ATCOs in operations (OPS) resources. Although they cannot affect traffic demand, ANSPs may improve productivity by utilizing flexible rostering and adapting airspace configuration to open and close sectors according to evolving traffic patterns.

Furthermore, advances in technology are now focusing more than ever on reducing the workload of ATCOs in OPS to enable them to safely manage higher levels of traffic in a given volume of airspace. Training associated with the introduction of technology, however, can lead to short-term reductions in productivity.

Airspace complexity also affects ATCO in OPS productivity. Lower airspace will typically have lower levels of ATCO in OPS productivity than upper airspace where aircraft are flying at more consistent altitudes and on non-crossing routes. Therefore, an ANSP operating a high proportion of sectors in lower airspace, or with numerous busy airports with complex approach sectors, is likely to have lower ATCO in OPS productivity than an ANSP with more overflights at higher altitude.

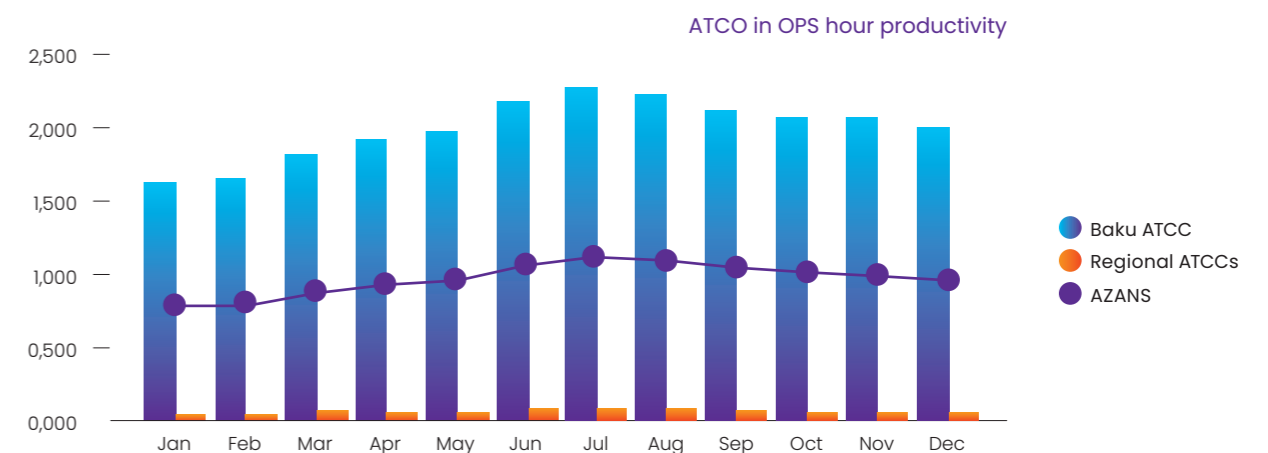
5.6.1 ATCO in OPS hour productivity (CANSO KPI 2B)

KPI “ATCO in OPS hour productivity” is calculated by formula “IFR flight hours” divided by “ATCOs in OPS hours”

ATCO in OPS hour productivity (AZANS) December 2023 **0.951**

ATCO in OPS hour productivity (Baku ATCC) December 2023 **1.965**

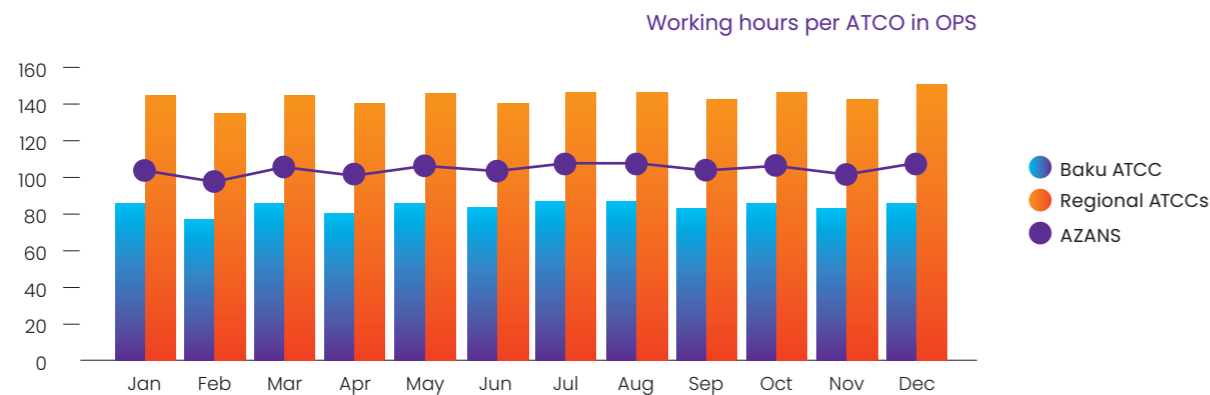
ATCO in OPS hour productivity (Regional ATCCs) December 2023 **0.067**



5.6.2 Working hours per ATCO in OPS (CANSO KPI 3B)

KPI "Working hours per ATCO in OPS" is calculated by formula "ATCO in OPS hours" divided "No of ATCO in OPS"

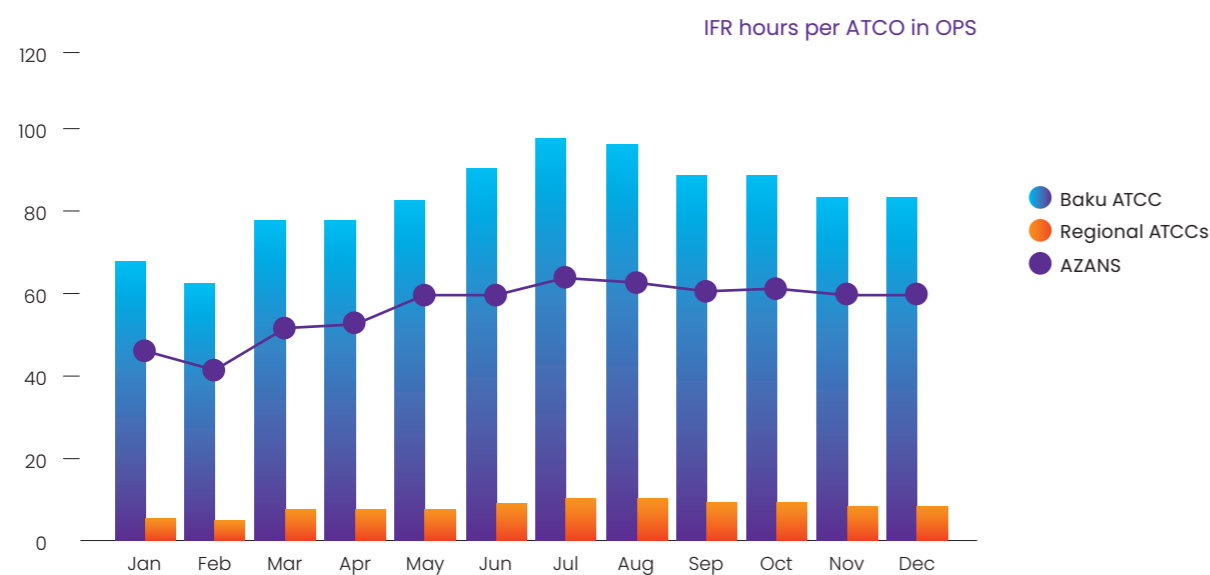
Working hours per ATCO in OPS (AZANS) December 2023	108.5
Working hours per ATCO in OPS (Baku ATCC) December 2023	87.7
Working hours per ATCO in OPS (Regional ATCCs) December 2023	153.4



5.6.3 IFR hours per ATCO in OPS (CANSO KPI 3C)

KPI "IFR hours per ATCO in OPS" is calculated by formula "IFR flight hours" divided by "No of ATCO in OPS"

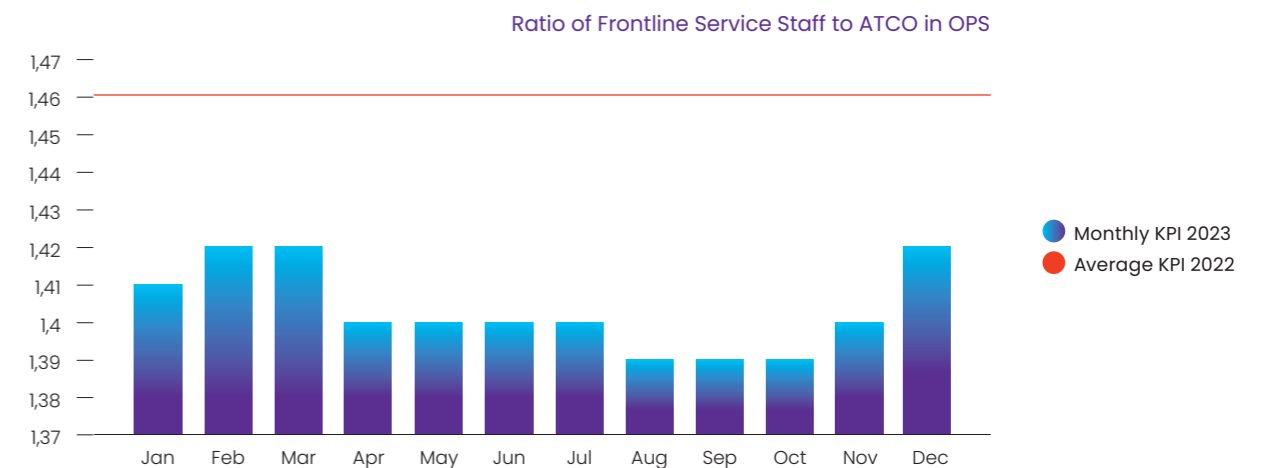
IFR hour per ATCO in OPS (AZANS) December 2023	58.6
IFR hour per ATCO in OPS (Baku ATCC) December 2023	85.2
IFR hour per ATCO in OPS (Regional ATCCs) December 2023	6.8



5.6.4 Ratio of Frontline Service Staff to ATCO in OPS (CANSO KPI 3D)

KPI "Ratio of Frontline Service Staff to ATCO in OPS" is calculated by formula "No. Frontline Service Support Staff" divided by "No of ATCO in OPS"

Ratio of Frontline Service Staff to ATCO in OPS December 2023	1.42
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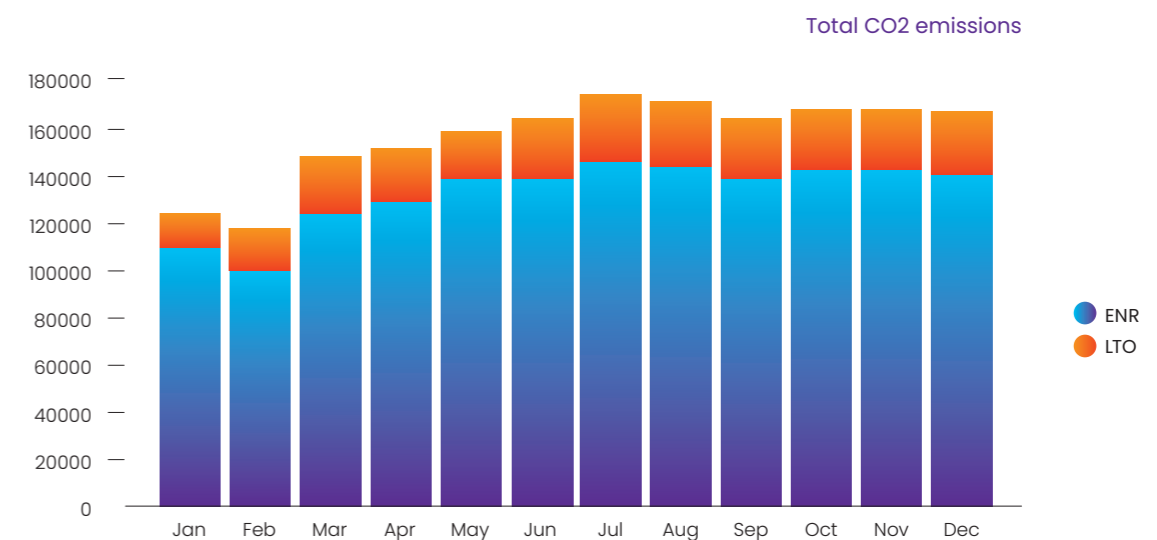


5.7 CO2 emissions

5.7.1 Total CO2 emissions

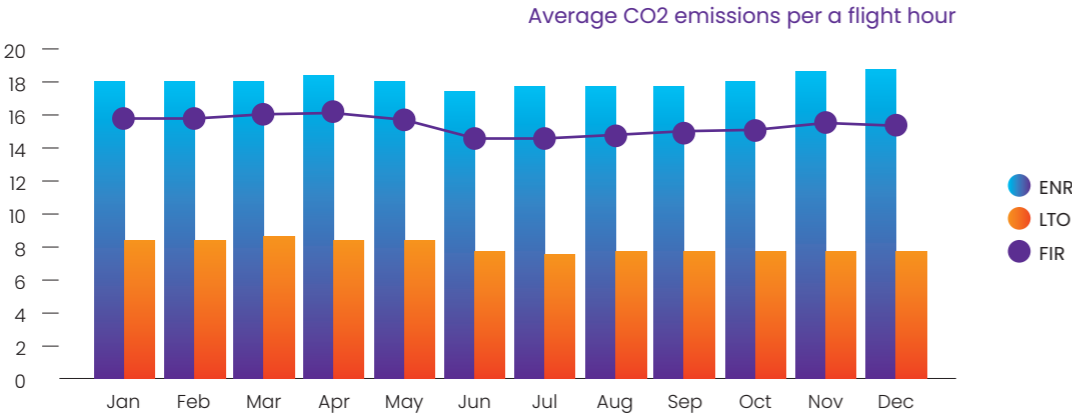
All the KPI's for CO2 emissions are calculated for FIR, En-route (ENR) and Landing-take-off Operations (LTO).

Total CO2 emissions (FIR) December 2023	166 175 tons
Total CO2 emissions (ENR) December 2023	141 392 tons
Total CO2 emissions (LTO) December 2023	24 783 tons



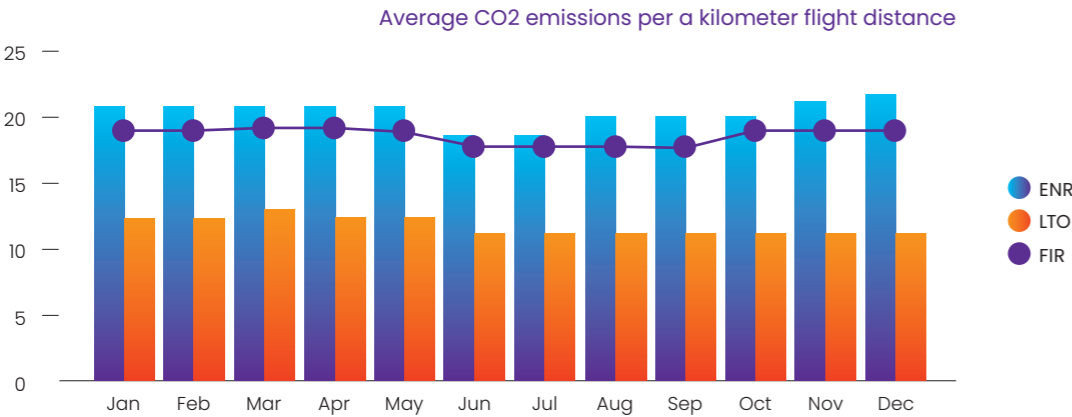
5.7.2 CO2 emissions per a flight hour

CO2 emissions per a flight hour (FIR) December 2023 **15.7 ton/hour**
CO2 emissions per a flight hour (ENR) December 2023 **18.7 ton/hour**
CO2 emissions per a flight hour (LTO) December 2023 **8.3 ton/hour**



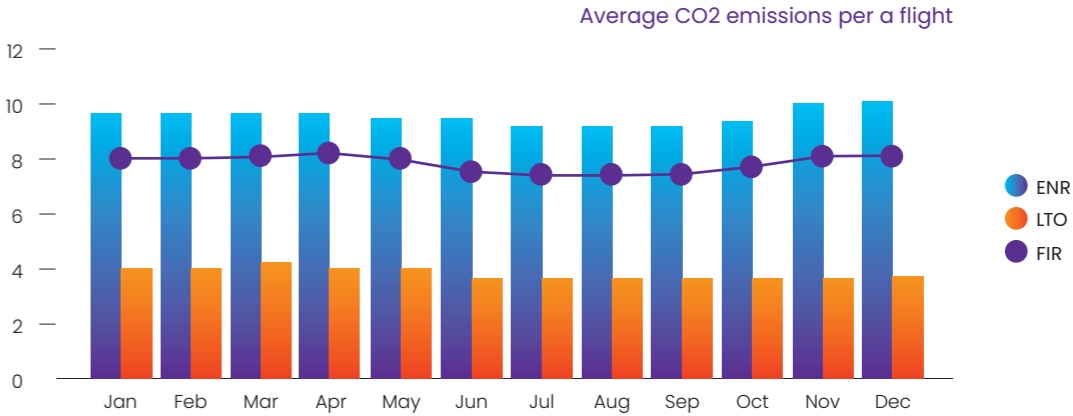
5.7.3 CO2 emissions per a kilometer flight distance

CO2 emissions per a kilometer flight distance (FIR) December 2023 **19 kg/km**
CO2 emissions per a kilometer flight distance (ENR) December 2023 **22 kg/km**
CO2 emissions per a kilometer flight distance (LTO) December 2023 **12 kg/km**



5.7.4 CO2 emissions per a flight

CO2 emissions per a flight (FIR) December 2023 **8.3 ton/flight**
CO2 emissions per a flight (ENR) December 2023 **10.1 ton/flight**
CO2 emissions per a flight (AD) December 2023 **4.1 ton/flight**

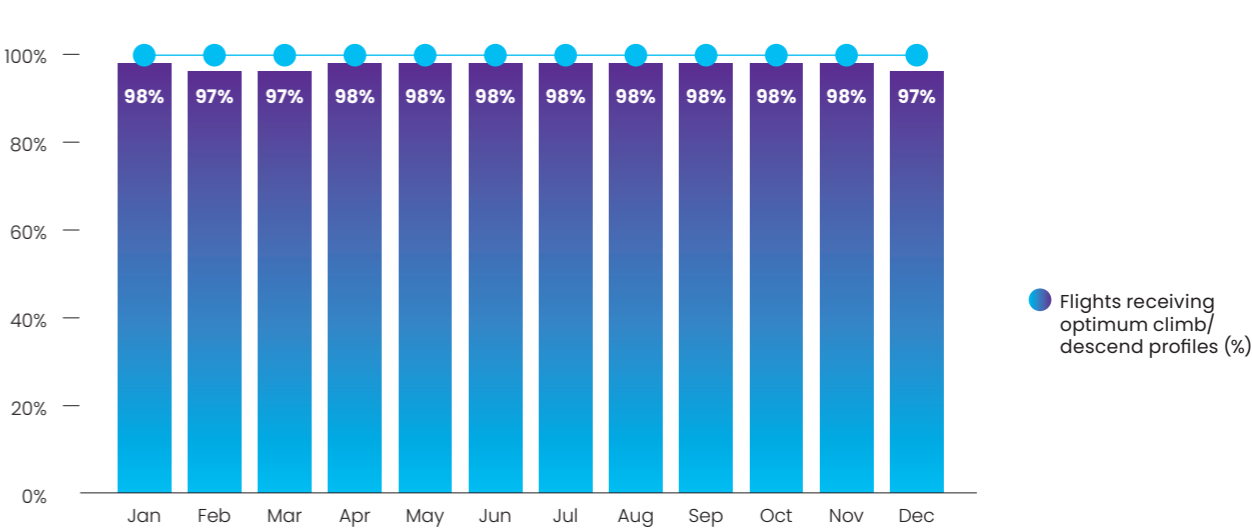


5.8 KPI – CCO/CDO operations

Introducing of CCO (Continues Climb Operations) and CDO (Continues Descend Operations) is an initiative to improve ATM efficiency, decrease fuel use and CO2 reduction.

«KPI – CCO/CDO operations » measures percentage of ACFT flown as CCO/CDO at airport Baku/Heydar Aliyev.

KPI – CCO/CDO operations December 2023 **98%**

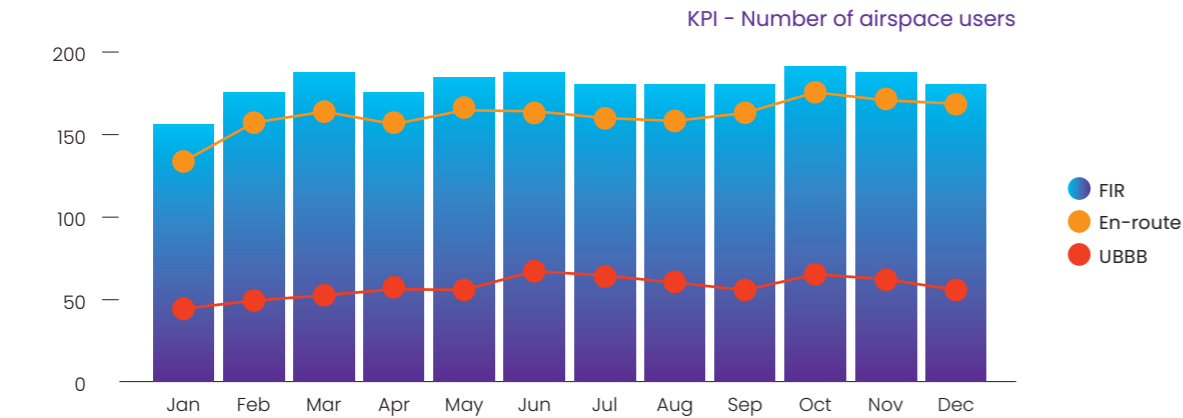


5.9 KPI – Number of airspace users

The main goal of AZANS, as an air navigation services provider, is to ensure flight safety and provide high-quality air navigation services. One of the indicators is the preservation and increase in the number of the service users – airlines.

Only commercial airlines operating cargo and passenger transportation were used to measure KPI – Number of airspace users. State and general aviation were not taken into account.

KPI – Number of airspace users (FIR) December 2023 **189 Airlines**
KPI – Number of airspace users (ENR) December 2023 **171 Airlines**
KPI – Number of airspace users (AD) December 2023 **56 Airlines**



AIR TRAFFIC DEPARTMENT
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