

Air Traffic Statistics Report



Content



Baku FIR Air Traffic Statistics Data (IFR movements)

1.1 General Air Traffic Statistics Data 1.2 Traffic Segments 1.3 Capacity vs traffic demand

Aerodrome Movements Statistics Data

2.1 Heydar Aliyev International airport 2.2 Nakhchivan International airport 2.3 Ganja International airport 2.4 Gabala International airport

VFR Movements Statistics data

3.1 Baku/Zabrat airport 3.2 Pirallahi heliport 3.3 Chilov heliport 3.4 Neft Dashlari heliport 3.5 Helipads on the ships and offshore drilling rigs in the Caspian sea

Overflight Air Traffic Statistics Data

4.1 General Air Traffic Statistics Data 4.2 Traffic segments 4.3 Aircraft Operators - Top 20 Airlines

Key Performance Indicators (KPIs)

5.1 KPI – Capacity Utilization 5.2 KPI – Total Distance flown 10 5.3 KPI - Average flown distance per ACFT 5.4 KPI – Total IFR/hours
5.5 KPI – Average IFR/min per ACFT
5.6 KPI – CANSO Productivity KPIs
5.7 KPI – CO2 emissions 13 14 5.8 KPI - CCO/CDO operations 15 5.9 KPI – Number of airspace users 16





Baku FIR Air Traffic Statistics Data (IFR movements)

1.1 General Air Traffic Statistics Data

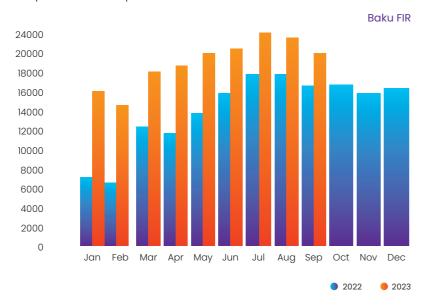






The number of IFR movements within Baku FIR recorded in September is **21129 ACFT.**

Average number of IFR movements per day is **705 ACFT** (Peak day, September 15, 2023 – **756 ACFT**; low day, September 21, 2023 – **621 ACFT**). Comparison with September 2022 – **+26.8%.**



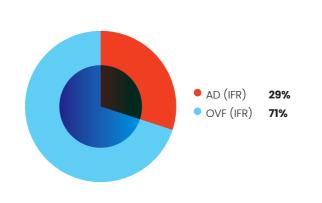
The number of IFR movements within Baku FIR recorded for nine months 2023 is **175303 ACFT.**

Average number of IFR movements per day is **643 ACFT.** Comparison with the same period of 2022 – **+45.9%.**



1.2 Traffic Segments

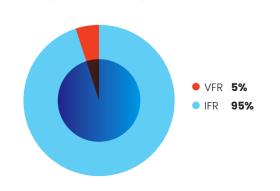
1.2.1 The number of IFR movements within Baku FIR recorded in September is **21129 ACFT**, where **14911 ACFT** are overflight traffic and **6218 ACFT** are aerodrome movements.



1.2.2 Total number of movements within Baku FIR recorded in September is 22225 ACFT, where 21129 ACFT are IFR movements and 1096 ACFT are VFR movements.

Average number of movements per day is **741 ACFT.**

Comparison with September 2022 - +23.6%.

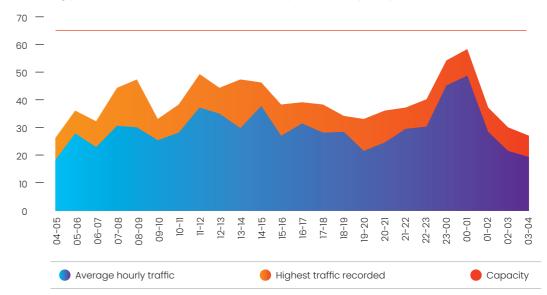


1.3 Capacity vs traffic demand

Highest traffic recorded **58 ACFT** (September 14, 2023 00:00-01:00)

Peak hour (September average data):

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



AZERAERONAVIGATION

16%

1%

Cargo

Other

2 Aerodrome Movements Statistics Data

2.1 Heydar Aliyev International airport

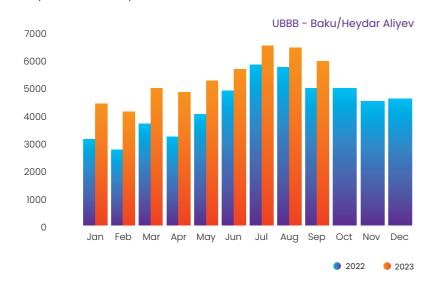






2.1.1 Total number of movements at Baku/Heydar Intl' Aliyev airport recorded in September is **5950 ACFT.** Average number of movements per day is **199 ACFT** (Peak day, September 03, 2023 – **222 ACFT**; low day, September 18, 2023 – **165 ACFT**).

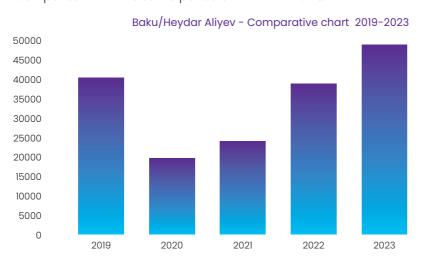
Comparison with September 2022 - +19.5%.



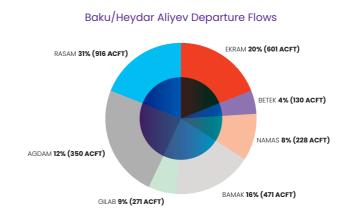
2.1.2 Comparative chart 2019 - 2023

The number of movements at Baku/Heydar Intl' Aliyev airport recorded for nine months 2023 is **48246 ACFT.**

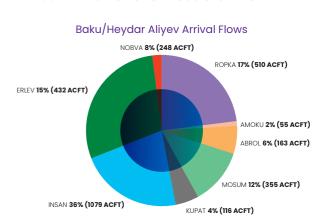
Average number of movements per day is **177 ACFT.** Comparison with the same period of 2022 – **+25.4%.**



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



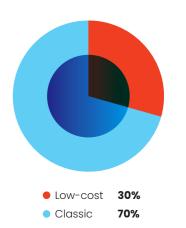
2.1.6 Types of flights

Passanger 78%

Business

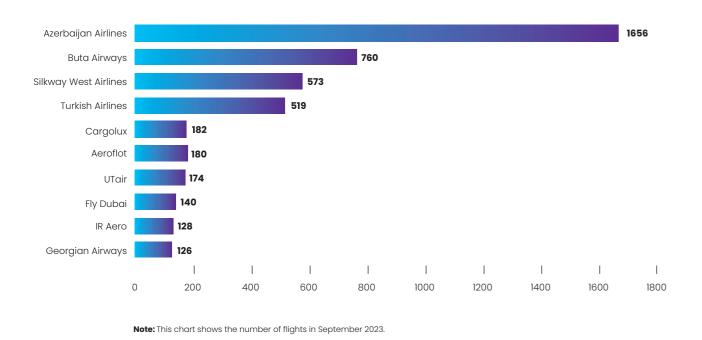
2.1.7 Passenger flights (Budget/low-cost vs classic)

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

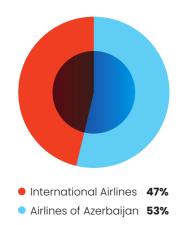


AZERAERONAVIGATIO

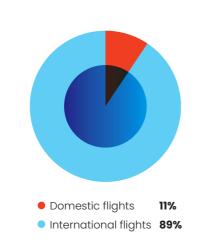
2.1.8 Aircraft Operators – Top 10 Airspace Users



2.1.9 Aircraft Operators – Airlines of Azerbaijan vs international airlines



2.1.10 Traffic segments – Domestic vs International



2.2 Nakhchivan International airport



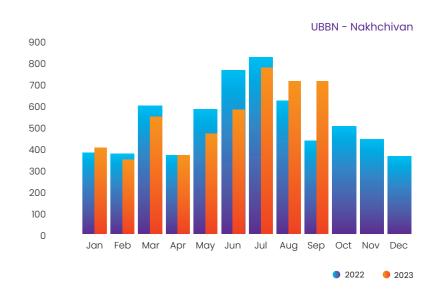




Total number of movements at Nakhchivan International airport recorded in September is **706 ACFT.**

Average number of movements per day is 24 ACFT.

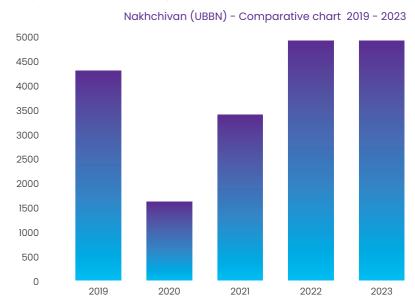
Comparison with September 2022 - +65.3%.



The number of movements at Nakhchivan International airport recorded for nine months 2023 is **4876 ACFT.**

Average number of movements per day is 18 ACFT.

Comparison with the same period of 2022 - +0.5%.



AZERAERONAVIGATIO

2.3 Ganja International airport



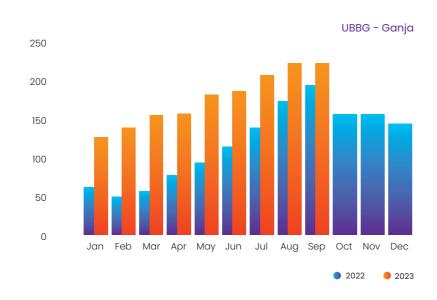




Total number of movements at Ganja International airport recorded in September is **230 ACFT.**

Average number of movements per day is 8 ACFT.

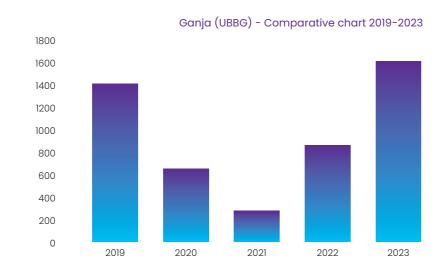
Comparison with September 2022 - +19.8%.



The number of movements at Ganja International airport recorded for nine months 2023 is **1632 ACFT.**

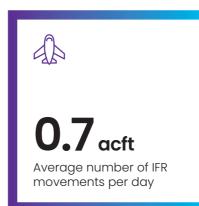
Average number of movements per day is 6 ACFT.

Comparison with the same period of 2022 - +72.7%.



2.4 Gabala International airport







Total number of movements at Gabala International airport recorded in September is **20 ACFT.**

Average number of movements per day is 0.7.

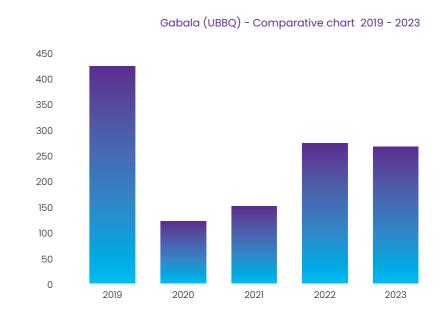
Comparison with September 2022 - -74.4%.



The number of movements at Gabala International airport recorded for nine months 2023 is **264 ACFT.**

Average number of movements per day is 1 ACFT.

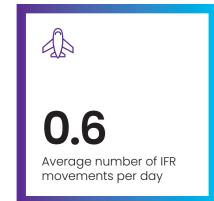
Comparison with the same period of 2022 - -3.6%



DZERAERONAVIGATION

2.5 Lenkoran International airport



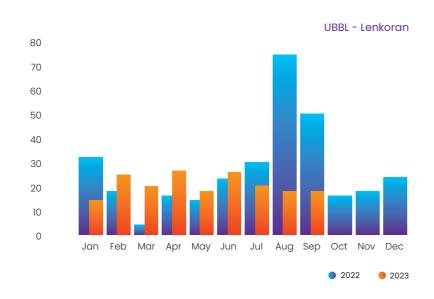




Total number of movements at Lenkoran International airport recorded in September is **18 ACFT.**

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

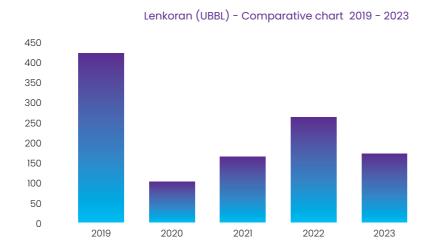
Comparison with September 2022 - -66.0%.



The number of movements at Lenkoran International airport recorded for nine months 2023 is **184 ACFT.**

Average number of movements per day is 0.7.

Comparison with the same period of 2022 - -30.8%.



2.6 Fuzuli International airport.

Total number of movements - 31 ACFT

Average number of movements per day - 1

2.7 Zagatala International airport.

No movements were recorded

2.8 Zangilan International airport.

Total number of movements - 14 ACFT

Average number of movements per day - 0.5

2.9 Yevlakh airport.

Total number of movements - **4 ACFT**Average number of movements per day - **0.2**

VFR Movements Statistics data

3.1 Baku/Zabrat airport

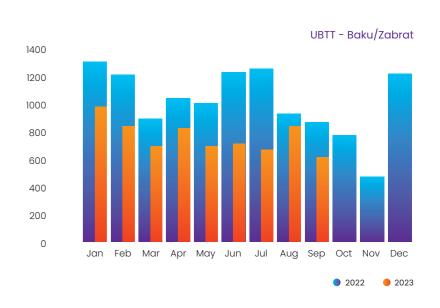




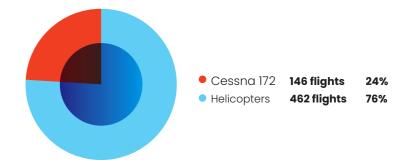


Total number of VFR movements at Baku/Zabrat airport recorded in September is **608 ACFT.**

Average number of movements per day is **21 ACFT** Comparison with September 2022 – **-30.4%.**



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







412 acft

The number of IFR movements within Baku recorded in September



14 acf

Average number of IFR movements per day



+18.4

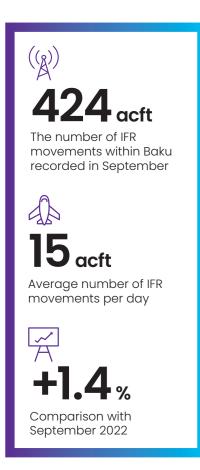
Comparison with September 2022

3.2 Pirallahi heliport

Total number of VFR movements at Pirallahi heliport recorded in September is **412 ACFT.**

Average number of movements per day is **14 ACFT** Comparison with September 2022 – **+18.4%.**

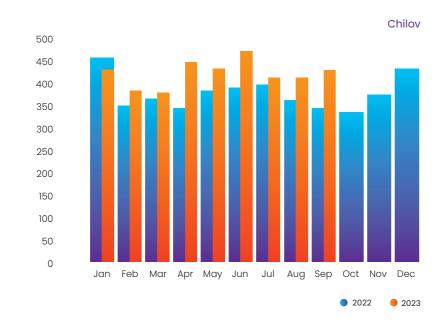




3.3 Chilov heliport

Total number of VFR movements at Chilov heliport recorded in September is **424 ACFT.**

Average number of movements per day is **15 ACFT** Comparison with September 2022 – **+1.4%.**

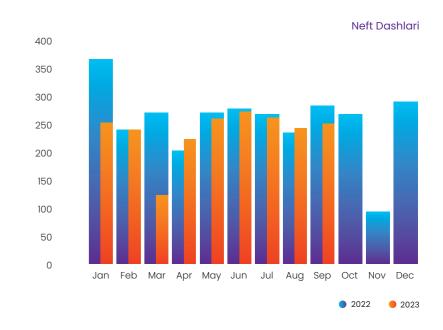




3.4 Neft Dashlari heliport

Total number of VFR movements at Neft Dashlari heliport recorded in September is **242 ACFT.**

Average number of movements per day is **8 ACFT** Comparison with September 2022 – **-12.3%.**

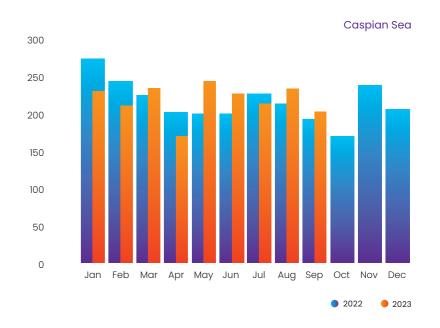




3.5 Helipads on the ships and offshore drilling rigs in the Caspian Sea

Total number of VFR movements at helipads on the ships and offshore drilling rigs in the Caspian Sea recorded in September is **204 ACFT.**

Average number of movements per day is **7 ACFT** Comparison with September 2022 – **+7.9%.**

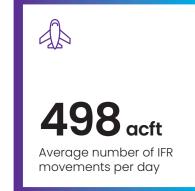




4 Overflight Air Traffic Statistics Data

4.1 General Air Traffic Statistics Data

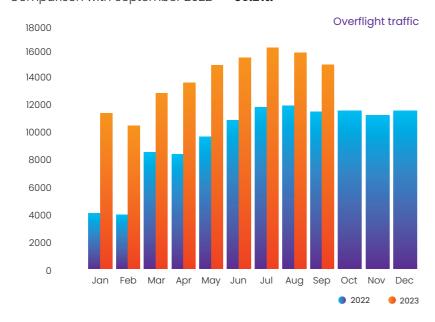






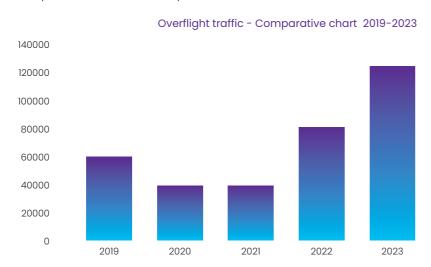
The number of overflights via Baku FIR recorded in September is **14911 ACFT.** Average number of overflights per day is **498 ACFT** (Peak day, September 16, 2023 – **545 ACFT**; low day, September 20, 2023 – **433 ACFT**).

Comparison with September 2022 - +30.2%.

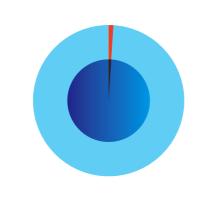


The number of overflights via Baku FIR recorded for nine months 2023 is **125207 ACFT.**

Average number of overflights per day is **459 ACFT.** Comparison with the same period of 2022 – **+55.4%.**

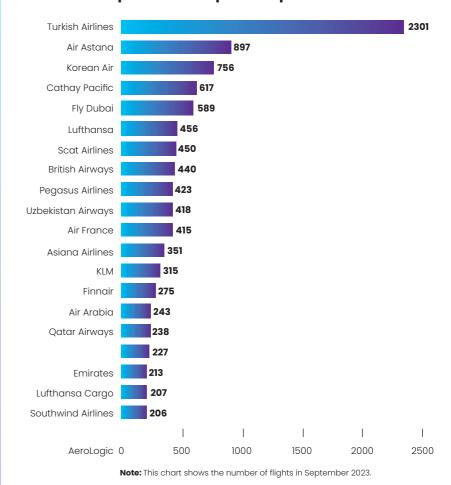


4.2 Traffic segments





4.3 Aircraft Operators - Top 20 Airspace Users



4.4 Air traffic flows - main overflight flows.



Georgia - Turkmenistan and v.v.
Georgia - Kazakhstan and v.v.
Iran - Russia and v.v.
Turkmenistan - Armenia and v.v.
Kazakxstan - Armenia and v.v.
Iran - Kazakhstan and v.v.
Other directions (Total)
33% (4954 ACFT)
37% (5536 ACFT)
5% (714 ACFT)
7% (1015 ACFT)
11% (1628 ACFT)
4% (578 ACFT)

Key Performance Indicators (KPIs)

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

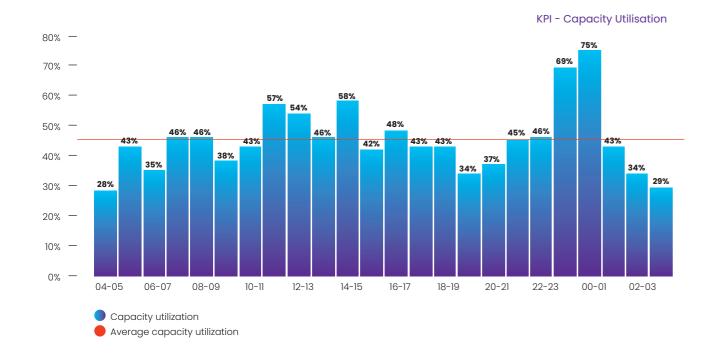
5.1 KPI – Capacity Utilization.

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			

Capacity Utilization September 2023 45%





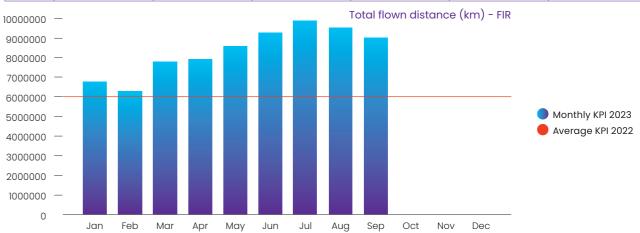
5.2 KPI – Total Distance flown.

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).

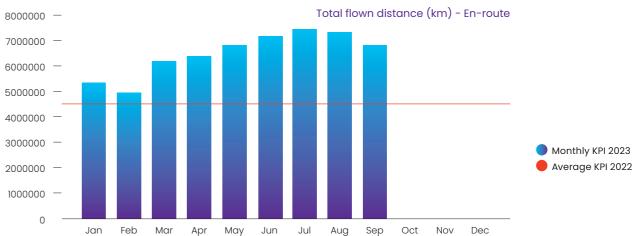
	Jan	Feb	Mar	Apr	May	Jun
2022	3 017 241	2 828 769	5 247 488	5 021 980	5 855 889	6 700 779
2023	6 826 061	6 226 183	7 721 660	7 971 465	8 590 043	9 172 884
	Jul	Aug	Sep	Oct	Nov	Dec
2022	Jul 7 478 958	Aug 7 531 786	Sep 7 018 478	Oct 7 081 076	Nov 6 805 131	Dec 7 019 174



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

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

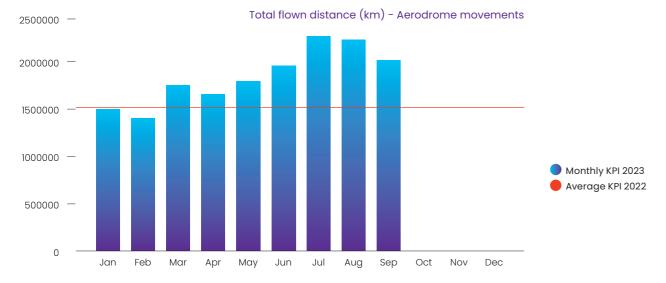
	Jan	Feb	Mar	Apr	May	Jun
2022	1929 590	1 875 524	3 950 238	3 876 366	4 429 406	4 988 482
2023	5 296 353	4 803 864	5 979 971	6 278 415	6 796 296	7 187 321
	_					
	Jul	Aug	Sep	Oct	Nov	Dec
2022	Jul 5 440 267	Aug 5 509 422	Sep 5 281 026	Oct 5 341 818	Nov 5228581	Dec 5412507



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	Jul 2 038 691	Aug 2 022 364	Sep 1 737 452	Oct 1 739 258	Nov 1 576 550	Dec 1 606 667



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.

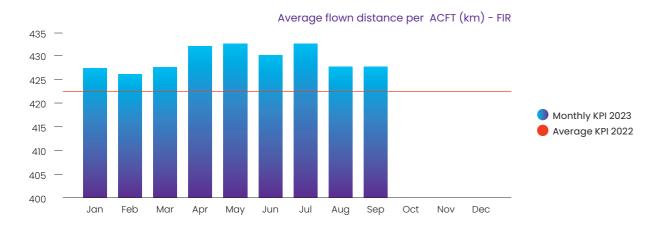
5.3.1 KPI - Average flown distance (FIR)

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			

KPI - Average flown distance (FIR) September 2023







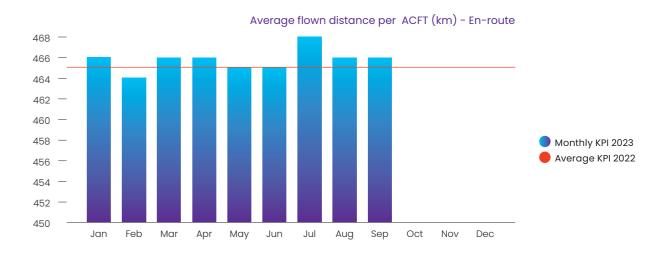
5.3.2 KPI - Average flown distance (ENR)

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			

KPI - Average flown distance (ENR) September 2023

466 km/ACFT



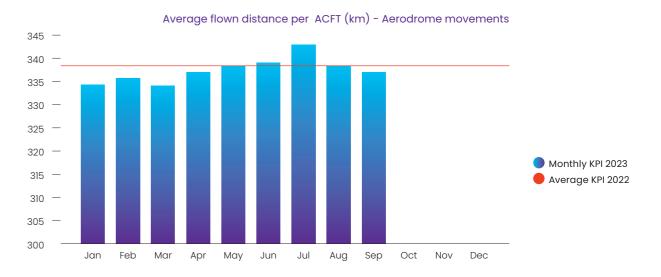
5.3.3 KPI- Average flown distance (AD)

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
2	022	335	337	340	345	342	340	339	340	334	333	334	335
2	023	334	336	333	337	338	339	343	338	337			

KPI - Average flown distance (AD) September 2023

338 km/ACFT



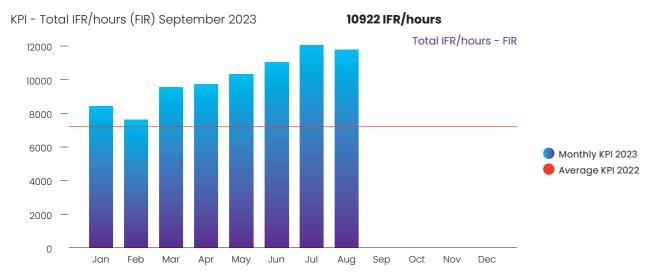
5.4 KPI -Total IFR/hours

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).

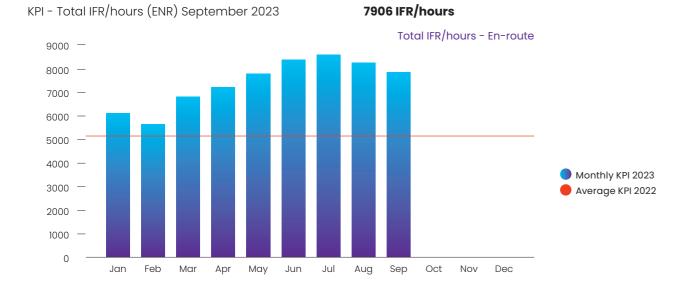
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	3863	3610	6510	6153	7216	8287	9204	9218	8609	8728	8343	8616
2023	8388	7665	9484	9709	10425	11145	12000	11815	10922			



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			

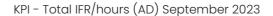




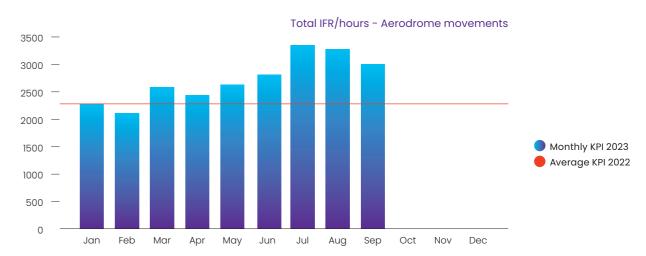
5.4.3 Total IFR/hours -Aerodrome movements

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			



3017 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

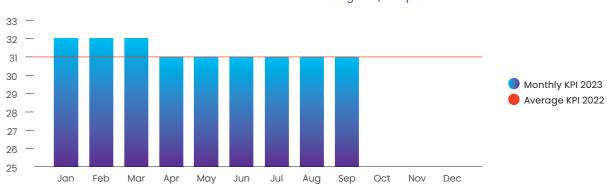
All the traffic data of Baku FIR (overflight and aerodrome movements) is used for calculation of KPI – Average IFR/min per ACFT (FIR).

	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			

KPI - Average IFR/min per ACFT (FIR) September 2023

31 min/ACFT

Average IFR/min per ACFT - FIR

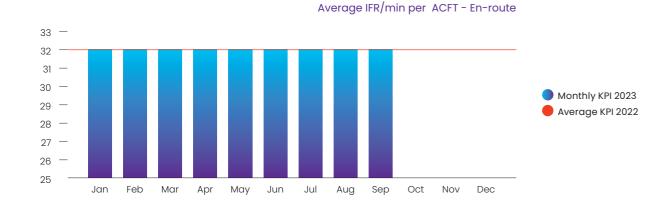


5.5.2 Average IFR/min per ACFT - En-route

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			

KPI - Average IFR/min per ACFT (ENR) September 2023 32 min/ACFT

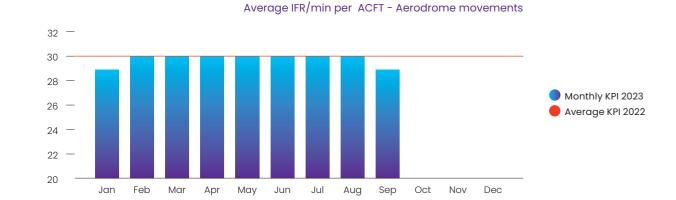


5.5.3 Average IFR/min per ACFT - Aerodrome movements

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			

KPI - Average IFR/min per ACFT (AD) September 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.

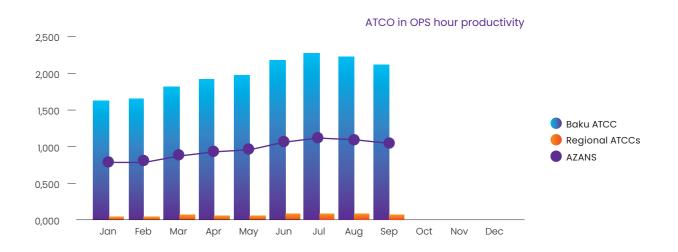
Furthermore, advances in technology are now focusing more than ever on reducing the workload of ATCOSs in OPS to enable them to safely manage higher levels of traffic in a given volume of airspace. Training associated with the introduction of technology, however, can lead to short-term reductions in 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) September 2023 1.017
ATCO in OPS hour productivity (Baku ATCC) September 2023 2.097
ATCO in OPS hour productivity (Regional ATCCs) September 2023 0.078



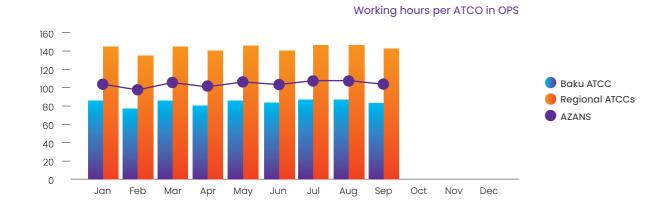
5.6.2 Working hours per ATCO in OPS (CANSO KPI 3B)

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) September 2023 103.3

Working hours per ATCO in OPS (Baku ATCC) September 2023 84.2

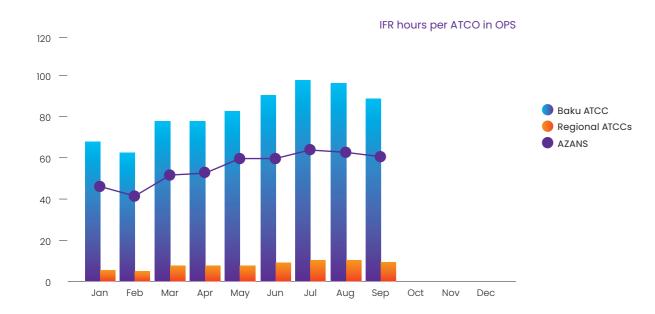
Working hours per ATCO in OPS (Regional ATCCs) September 2023 143.4



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) September 2023	59.7
IFR hour per ATCO in OPS (Baku ATCC) September 2023	87.3
IFR hour per ATCO in OPS (Regional ATCCs) September 2023	7.4

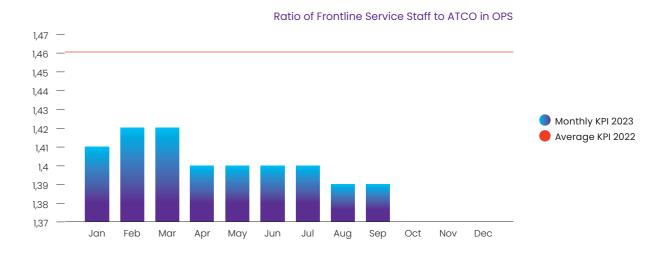




5.6.4 Ratio of Frontline Service Staff to ATCO in OPS (CANSO KPI 3D)

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"

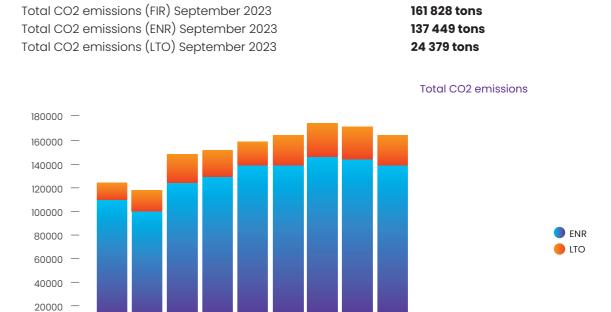
Ratio of Frontline Service Staff to ATCO in OPS September 2023 1.39



5.7 CO₂ emissions

5.7.1 Total CO2 emissions

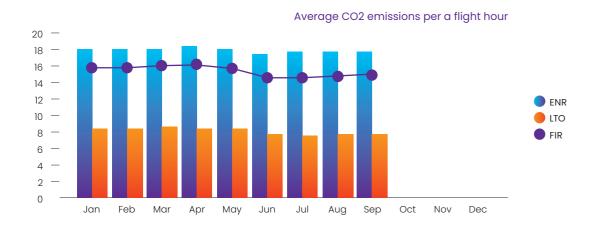
All the KPI's for CO2 emissions are calculated for FIR, En-route (ENR) and Landing-take-off Operations (LTO).



Feb Mar Apr May Jun Jul Aug Sep Oct

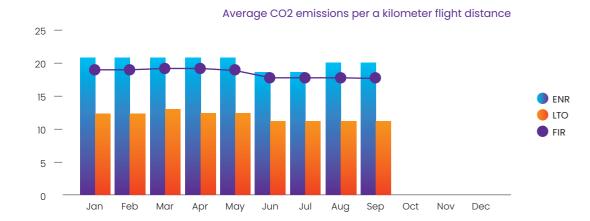
5.7.2 CO2 emissions per a flight hour

CO2 emissions per a flight hour (FIR) September 2023 CO2 emissions per a flight hour (ENR) September 2023 CO2 emissions per a flight hour (LTO) September 2023 14.8 ton/hour 17.4 ton/hour 8.1 ton/hour



5.7.3 CO2 emissions per a kilometer flight distance

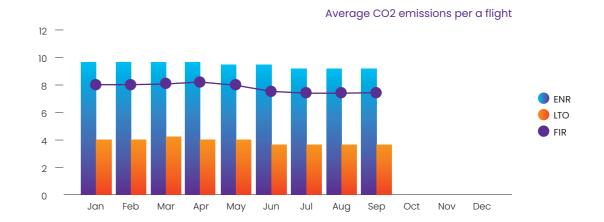
CO2 emissions per a kilometer flight distance (FIR) September 2023 18 kg/km
CO2 emissions per a kilometer flight distance (ENR) September 2023 20 kg/km
CO2 emissions per a kilometer flight distance (LTO) September 2023 12 kg/km





5.7.4 CO2 emissions per a flight

CO2 emissions per a flight (FIR) September 2023 7.7 ton/flight
CO2 emissions per a flight (ENR) September 2023 9.2 ton/flight
CO2 emissions per a flight (AD) September 2023 3.9 ton/flight

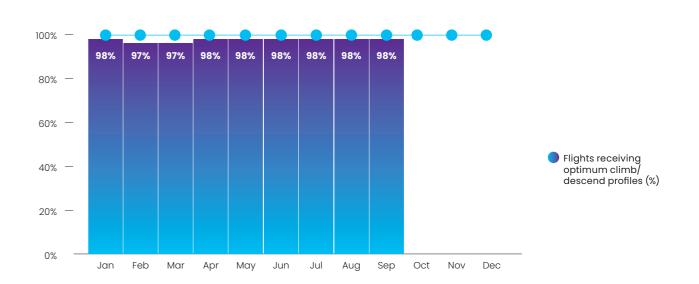


5.8 KPI – CCO/CDO operations

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 September 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) September 2023
 KPI - Number of airspace users (ENR) September 2023
 KPI - Number of airspace users (AD) September 2023
 56 Airlines

