



International Civil Aviation Organization

MIDANPIRG Air Traffic Management Sub-Group

Seventh Meeting (ATM SG/7)
(Virtual, 15 – 18 November 2021)

Agenda Item 3: Planning and Implementation issues related to ATM/SAR

MID AIR NAVIGATION STRATEGY and AIR NAVIGATION REPORT

(Presented by the Secretariat)

SUMMARY

The objective of this working paper is to review and update the status of implementation of the priority 1 ASBU Threads/Elements relevant to ATM/SAR; as well as the MID Key Performance Indicators (KPIs 01, 02, 13 &14) at National level.

Action by the meeting is at paragraph 3.

REFERENCE(S)

- MID Doc 002: MID Region Air Navigation Strategy (edition Feb, 2021)
- MIDANPIRG/18 and RASG-MID/8 report

1. INTRODUCTION

1.1 The meeting may wish to recall MIDANPIRG Conclusions 18/11 and 18/12 related to ANS performance and Monitoring, and the revised MID Air Navigation Strategy including the initial list of MID Region Air navigation KPIs, respectively.

MIDANPIRG CONCLUSION 18/11: ANS PERFORMANCE MONITORING

That, in order to optimize allocation and use of resources in the modernization of the air navigation system, States:

a) be urged to:

- i. embrace a performance based approach in line with the 6th Edition of the Global Air Navigation Plan and the six-step performance management process, as described in the Manual on Global Performance of the Air Navigation System (Doc 9883);*
- ii. follow-up a phased approach in the performance monitoring of their air navigation system using as an initial phase the list of KPIs at Appendix 5.2C; and*
- iii. provide ICAO with the results of the KPIs monitoring for the agreed period, as part of the data necessary for the development of the Annual Air Navigation Report, starting with the Report for 2021.*

- b) *be encouraged to start as soon as possible, on an experimental basis, to establish the necessary processes, procedures and systems for the collection of necessary data to measure the selected KPIs.*

MIDANPIRG CONCLUSION 18/12: REVISED MID AIR NAVIGATION STRATEGY

That, the Revised MID Region Air Navigation Strategy (ICAO MID Doc 002) is endorsed and be published on the ICAO MID Office website.

- 1.2 The meeting may also wish to recall MIDANPIRG Conclusion 18/10 related to Air Navigation report 2021:

MIDANPIRG CONCLUSION 18/10: THE MID REGION AIR NAVIGATION REPORT - 2021

That, States be urged to provide the ICAO MID Office, with relevant data necessary for the development of the MID Region Air Navigation Report – 2021, by 30 December 2021.

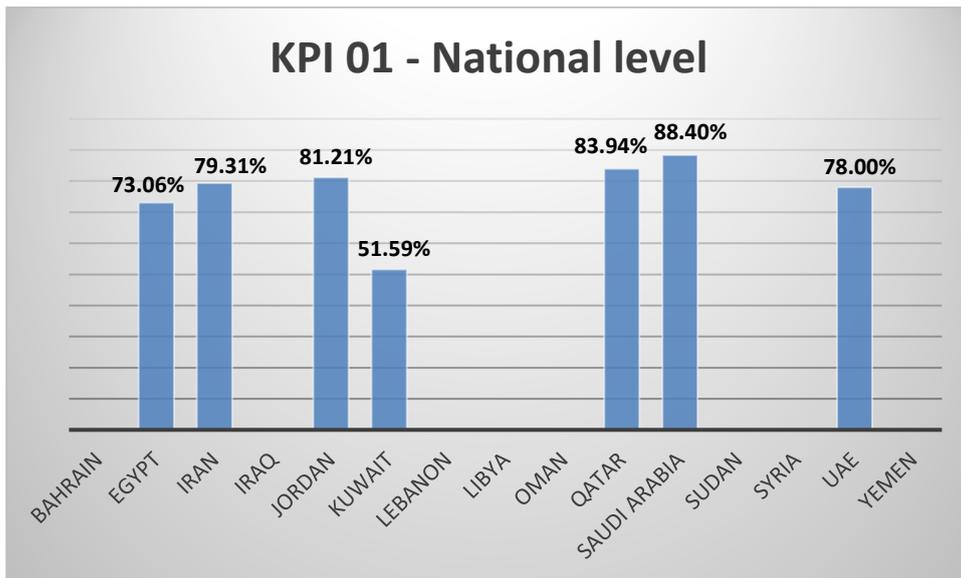
2. DISCUSSION

- 2.1 The MID Region Air Navigation Strategy edition Feb 2021 is available at: <https://www.icao.int/MID/Doc002>. Table 2 at **Appendix A** reflects the Priority 1 Thread/Elements related to ATM.

- 2.2 As a follow up to Conclusion 18/11, ICAO MID Office requested States to provide the necessary data for the measuring of KPIs (01, 02, 13 and 14).

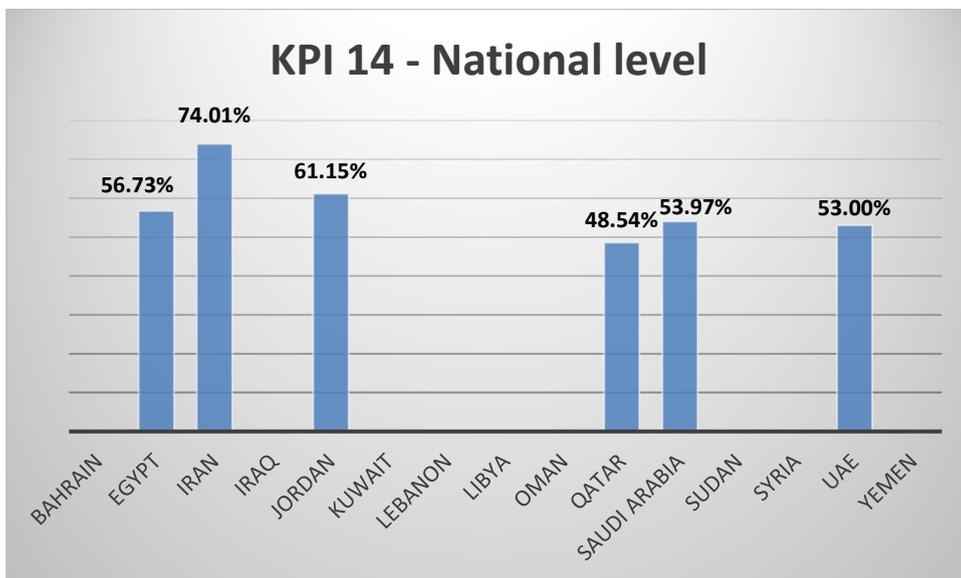
- 2.3 ICAO MID Office analyzed the received data at **Appendix B**; the following is to be highlighted:

- a. The total number of MID States that provided data is seven (7 out of 15), representing 46.7% (Egypt, Iran, Jordan, Kuwait, Qatar, Saudi Arabia and UAE).
- b. The data covered sixteen (16) out of 57 aerodromes international aerodromes, representing 28.1% (HECA, HEBA, HESH, HEGN, HELX, HESN, HEMA, OIIE, OJAI, OKBK, OTHH, OEDF, OEJN, OEMA, OERK and OMDB).
- c. KPI 01 Regional Departure punctuality: The States' reports show the percentage of departure punctuality in Egypt: 73.06%, Iran: 79.31%, Jordan: 81.21%, Kuwait: 51.59%, Qatar: 83.94%, Saudi Arabia: 88.40% and UAE: 78%.



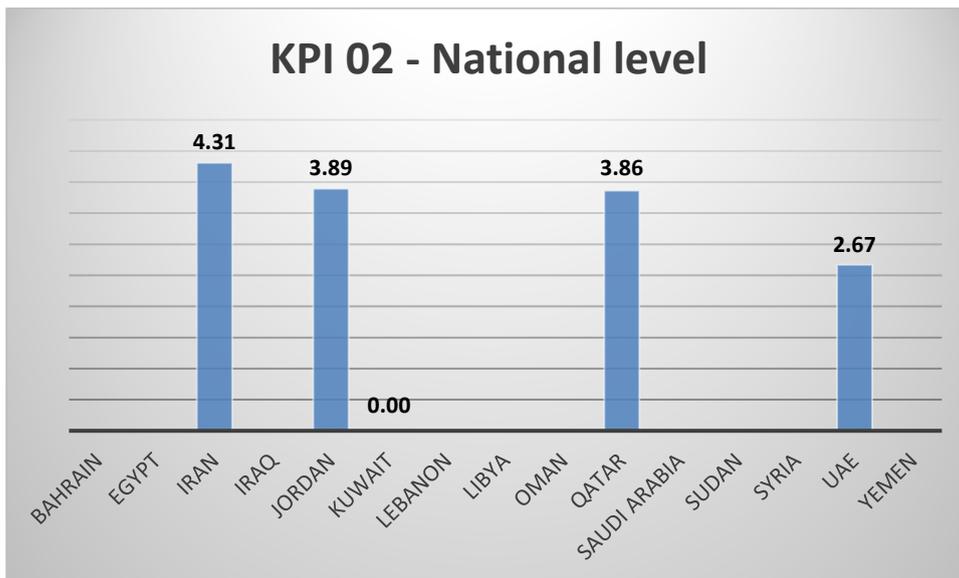
Graph 1 – MID States KPI 01- Departure punctuality-National level

- d. KPI 14 Regional Arrival punctuality: the State’s reports show the percentage of arrival punctuality in Egypt: 56.73%, Iran: 74.01%, Jordan: 61.15%, Qatar: 48.54%, Saudi Arabia: 53.97% and UAE: 53%.



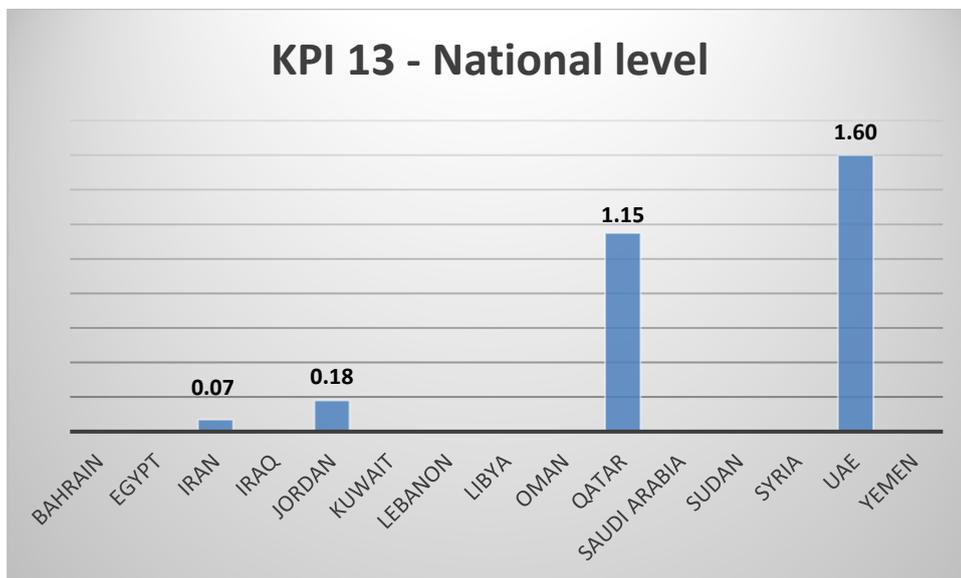
Graph 2 – MID States KPI 14- Arrival punctuality-National level

- e. KPI 02 Regional Taxi-out Additional Time: the State’s reports show the average Taxi-out Additional Time in Iran: 4.31, Jordan: 3.89, Kuwait: 0, Qatar: 3.86 and UAE: 2.67 minutes per flight. In this respect the KPI 02, Taxi-out Additional Time.



Graph 3 – MID States KPI 02- Taxi-out Additional Time- National level

- f. *KPI 13 Regional Taxi-in Additional Time:* the State’s reports show the average Taxi-in Additional Time in Iran: 4.31, Jordan: 0.18, Qatar: 1.15 and UAE: 1.60 minutes per flight. In this respect the KPI 14, Taxi-out Additional Time.



Graph 4 – MID States KPI 13 Taxi - in Additional Time-National level

2.4 It is important to note that the Traffic Data for the months of June and July 2021 for each of the International Aerodromes (AOP-1 table), is required in order to be able to aggregate the KPIs at National level and then at Regional level. In this respect, the meeting may wish to note that some States provided just the results of their calculations of KPIs; and in some cases, the KPIs 2 and 13 were provided even in percentages instead of time. In addition, it is to be underlined that in the aggregation of the KPIs at the national level, some States used just an average of the KPI calculated for each Aerodrome; however, it is important to use weight factors based on the volume of traffic in each aerodrome.

2.5 Based on the above, the results of KPIs (01, 02, 13 & 14) at National level is summarized in the table below:

States	KPI 01 Dep punctuality		KPI 14 ARR punctuality		KPI 02 Taxi-out Additional Time		KPI 13 Taxi - in Additional Time	
	ICAO	State	ICAO	State	ICAO	State	ICAO	State
Bahrain	-	-	-	-	-	-	-	-
Egypt	73.06%	-	56.73%	-	-	-	-	-
Iran	79.31%	79.31%	74.01%	74.01%	4.31	4.31	0.07	0.07
Iraq	-	-	-	-	-	-	-	-
Jordan	81.21%	81.21%	61.15%	61.15%	3.89	3.89	0.18	0.18
Kuwait	51.59%	51.59%	-	-	0.00	0.00	-	-
Lebanon	-	-	-	-	-	-	-	-
Libya	-	-	-	-	-	-	-	-
Oman	-	-	-	-	-	-	-	-
Qatar	83.94%	83.94%	48.54%	48.54%	3.86	3.86	1.15	1.15
Saudi Arabia	88.40%	-	53.97%	-	-	-	-	-
Sudan	-	-	-	-	-	-	-	-
Syria	-	-	-	-	-	-	-	-
UAE	78.00%	78.00%	53.00%	53.00%	2.67	2.67	1.60	1.60
Yemen	-	-	-	-	-	-	-	-

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review and update the status of implementation of the Priority 1 ASBU Threads/Elements relevant to ATM/SAR, in **Appendix A**;
- b) urge States to provide the necessary data required for the development of the MID Air Navigation Report-2021, before **10 December 2021**;
- c) review the status of the MID Key Performance Indicators (KPIs 01, 02, 13 & 14) at National level at **Appendix B**; and
- d) urge States, that have not yet done so, to provide the MID Office with the required data related to the measurement of the KPIs 01, 02, 13 and 14, including the traffic figures related to the months of June and July 2021 (Departures and Arrivals).

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
AMET B0/1	Meteorological observations products	All states	<p>Indicator*: Regional average implementation status of B0/1 (Meteorological observations products).</p> <p>Supporting Metrics: Number of States that provide the following Meteorological observations products, as required:</p> <ol style="list-style-type: none"> 1. Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, etc.) 8. Vertical wind and temperature profiles 9. Wind shear alerts 	80%	Dec 2021
AMET B0/2	Meteorological forecast and warning products	All states	<p>Indicator*: Regional average implementation status of B0/2 (Meteorological forecasts and warning products)</p> <p>Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required:</p> <ol style="list-style-type: none"> 1. World Area Forecast System (WAFS) gridded products 2. Significant Weather (SIGWX) 3. Aerodrome Forecast (TAF) 4. Trend Forecast (TREND) 5. Take-off Forecast 6. SIGMET 7. Aerodrome Warning 8. Wind Shear Warning 	90%	Dec 2021
AMET B0/3	Climatological and historical meteorological products	All states	<p>Indicator: % of States that provide Climatological and historical meteorological products, as required.</p> <p>Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required</p>	85%	Dec 2021

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
AMET B0/4	Dissemination of meteorological products	All states	Indicator: % of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM) Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)	85%	Dec 2021
FICE					
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area at Attachment A	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70%	Dec 2020
Operational Threads					
APTA					
APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) Supporting metric: Number of Runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV)	100%	Dec 2017
APTA B0/2	PBN SID and STAR procedures (with basic capabilities)	All RWYs ENDS at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities). Supporting Metric: Number of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities).	70%	Dec 2022
APTA B0/4	CDO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSS,	Indicator*: % of International Aerodromes with CDO implemented as required. Supporting Metric: Number of International Aerodromes with CDO implemented as required.	100%	Dec 2021

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
		HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	*As per the applicability area		
APTA B0/5	CCO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD, OEJN, OEMA, OEDF, OERK, HSSS, HSPN, OMAA, OMAL, OMAD, OMDW, OMDB, OMSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CCO implemented as required. Supporting Metric: Number of International Aerodromes with CCO implemented as required. *As per the applicability area	100%	Dec 2021
APTA B0/7	Performance based aerodrome operating minima – Advanced aircraft	All States	Indicator: % of States authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft. Supporting Metric: Number of States authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft.	50%	Dec 2021
FRTO					
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA)	Bahrain, Egypt, Jordan, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace. * As per the applicability area	50% Update: Level 1: 5 States fully implemented 10 Other states not implemented yet Level 2: 4 State fully 1 state partially and 10 states not Level 3: 3 states fully	Dec 2022

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
				1 state partially 11 states not	
FRTO B0/4	Basic conflict detection and conformance monitoring	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % States that implemented MTCD and MONA, for ACCs, as required. Supporting metric: The number of States that implemented MTCD and MONA for ACCs, as required. * As per the applicability area	70%	Dec 2021
				-	
NOPS					
NOPS B0/1	Initial integration of collaborative airspace management with air traffic flow management	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process Supporting metric: number of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process. * As per the applicability area	50%	Dec 2022
				Update: 2 states implemented 2 states on going 11 states not implemented	
ACAS					
ACAS B1/1	ACAS Improvements Operational	All States	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons	100%	Dec 2017

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
SNET					
SNET B0/1	Short Term Conflict Alert (STCA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Short-term conflict alert (STCA) Supporting metric: number of States that have implemented Short-term conflict alert (STCA) * As per the applicability area	80 %	Dec 2018
				Update: 80 %	
SNET B0/2	Minimum Safe Altitude Warning (MSAW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, Syria, UAE	Indicator*: % of States that have implemented Minimum safe altitude warning (MSAW) Supporting metric: number of States that have implemented Minimum safe altitude warning (MSAW) * As per the applicability area	80 %	Dec 2018
				Update: 80 %	
SNET B0/3	Area Proximity Warning (APW)	Bahrain, Egypt, Iran, Iraq, Kuwait, Jordan, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Area Proximity Warning (APW) for ACCs, as required Supporting metric: number of States that have Implemented Area Proximity Warning (APW) for ACCs, as required * As per the applicability area	70%	Dec 2021
				Update: -	
GADS					
GADS B1/2	Contact directory service	All States	Indicator: % of States that provided GADSS Point of Contact (PoC) information Supporting Metric: Number of States that provided GADSS Point of Contact (PoC) information	100%	Dec 2021
				Update: -	
RSEQ					
RSEQ B0/1	Arrival Management	OBBI, HECA, HEBA, HELX, HESN, HESH, OTBD, OTHH, OEJN, OEDF, OEMA, OERK OMDB, OMAA	Indicator*: % of Aerodromes that have implemented arrival manager (AMAN), where required/applicable Supporting Metric: Number of Aerodrome that have implemented arrival manager (AMAN), where required/ applicable * As per the applicability area	80%	Dec 2022

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
SURF					
SURF-B0/1	Basic ATCO tools to manage traffic during ground operations	All International Aerodromes	Indicator: % of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations Supporting metric: Number of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations	100%	Dec 2021
SURF-B0/2	Comprehensive situational awareness of surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the surveillance service of A-SMGCS Supporting metric: Number of Airports having implemented the surveillance service of A-SMGCS * As per the applicability area	80%	Dec 2021
SURF-B0/3	Initial ATCO alerting service for surface operations	OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA.	Indicator*: % of Airports having implemented the A-SMGCS alerting service. Supporting metric: Number of Airports having implemented the A- SMGCS alerting service * As per the applicability area	80%	Dec 2021
ACDM					
ACDM B0/1	Airport CDM Information Sharing (ACIS)	OBBI, OIII, OKBK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA	Indicator*: % of Airports having implemented ACIS Supporting metric: number of Airports having implemented ACIS * As per the applicability area	50%	Dec 2021
ACDM B0/2	Integration with ATM Network function	OBBI, OIII, OKBK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA.	Indicator*: % of Airports having integrated ACDM with the ATM Network function. Supporting metric: Number of Airports having integrated ACDM with the ATM Network function * As per the applicability area	50%	Dec 2022

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
ACDM B1/1	Airport Operations Plan (AOP)	OBBI, OIII, OKBK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA.	Indicator*: % of Airports having implemented an Airport Operations Plan (AOP) Supporting metric: having implemented an Airport Operations Plan (AOP) * As per the applicability area	50%	Dec 2021
Technology Threads					
ASUR					
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	(Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Qatar, Sudan, UAE)	Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities * As per the applicability area	80%	Dec 2022
ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)	Bahrain, Egypt, Jordan, Kuwait, Oman, Saudi Arabia, Qatar, UAE	Indicator*: % of States that have implemented Multi-lateration (M-LAT) Supporting Metric: Number of States that have implemented Multi-lateration (M-LAT) * As per the applicability area	80%	Dec 2022
ASUR B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	Bahrain, Egypt, Iran, Iraq, Kuwait, Lebanon, Jordan, Oman, Qatar, Saudi Arabia, Sudan and UAE	Indicator*: % of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) * As per the applicability area	80%	Dec 2021
NAVS					
NAVS B0/3	Aircraft Based Augmentation Systems (ABAS)	All States	Indicator: % of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations Supporting metric: Number of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft	70%	Dec 2021

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
			with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations		
NAVS B0/4	Navigation Minimal Operating Networks (Nav. MON)	All States	Indicator: % of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation Supporting metric: Number of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation	70%	Dec 2022
COMI					
COMI B0/7	ATS Message Handling System (AMHS)	All States	Indicator: % of States that have established AMHS interconnections with adjacent COM Centres Supporting metric: Number of States that have established AMHS interconnections with adjacent COM Centres	90%	Dec 2020
COMI B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	All States	Indicator: % of States that have established National IP Network for voice and data communication Supporting metric: Number of States that have established National IP Network for voice and data communication	80%	Dec 2021

States	AD	KPI 01 (Departure punctuality)			KPI 14 (Arrival punctuality)			KPI 02 (Taxi-out Additional Time)				KPI 13 (Taxi-in Additional Time)			
		Total no of DEPs	AD KPI 01 (%)	No of flights meeting KPI01	Total no of ARR	AD KPI 14 (%)	No of flights meeting KPI14	Total no of DEPs	unimpeded/reference taxi out time	AD KPI 02 (min)	Total minutes of delay	Total no of ARR	unimpeded/reference taxi out time	AD KPI 13	No of flight affected
Bahrain	OBBI			0.00			0.00				0.00			0.00	
Egypt	HECA	4011	76.71%	3076.84	4794	52.00%	2492.88	4011		4.43	17768.73	4794		2.15	10307.10
	HEBA	415	70.12%	291.00	630	63.81%	402.00	415		5.65	2344.75	630		8.10	5103.00
	HESH	767	69.75%	534.98	780	70.13%	547.01	767		3.13	2400.71	780		7.97	6216.60
	HEGN	996	65.76%	654.97	1238	57.19%	708.01	996		3.38	3366.48	1238		4.82	5967.16
	HELX	109	55.05%	60.00	92	84.78%	78.00	109		5.10	555.90	92		3.32	305.44
	HESN	73	39.73%	29.00	83	74.70%	62.00	73		2.13	155.49	83		1.92	159.36
	HEMA	160	78.10%	124.96	243	69.70%	169.37	160		2.82	451.20	243		1.20	291.60
Iran	OIKB			0.00			0.00				0.00			0.00	
	OIFM			0.00			0.00				0.00			0.00	
	OIMM			0.00			0.00				0.00			0.00	
	OISS			0.00			0.00				0.00			0.00	
	OITT			0.00			0.00				0.00			0.00	
	OIIE	1068	79.31%	847.03	1158	74.01%	857.04	1067		4.31	4598.77	1164		0.07	81.48
	OIII			0.00			0.00				0.00			0.00	
	OIZH			0.00			0.00				0.00			0.00	
OIYY			0.00			0.00				0.00			0.00		
Iraq	ORBI			0.00			0.00				0.00			0.00	
	ORMM			0.00			0.00				0.00			0.00	
	ORER			0.00			0.00				0.00			0.00	
	ORSU			0.00			0.00				0.00			0.00	
	ORNI			0.00			0.00				0.00			0.00	
	ORBM			0.00			0.00				0.00			0.00	
	OJAI	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	8	3.89	7601.06	1942	6	0.18	349.56
OJAI			0.00			0.00				0.00			0.00		
Kuwait	OKBK	1336	51.59%	689.24			0.00	1342	2	0.00	0.00			0.00	
Lebanon	OLBA			0.00			0.00				0.00			0.00	
Libya	HLLB			0.00			0.00				0.00			0.00	
	HLLS			0.00			0.00				0.00			0.00	
	HLLT			0.00			0.00				0.00			0.00	
Oman	OOMS			0.00			0.00				0.00			0.00	
	OOSA			0.00			0.00				0.00			0.00	
Qatar	OTBD			0.00			0.00				0.00			0.00	
	OTHH	2746	83.94%	2304.99	2851	48.54%	1383.88	2872		3.86	11085.92	2873		1.15	3303.95
	OEDF	2159	90.74%	1959.08	2333	54.78%	1278.02	2159			0.00	2337		0.00	
Saudi Arabia	OEJN	4805	87.60%	4209.18	5220	64.96%	3390.91	4801			0.00	5241		0.00	
	OEMA	679	92.05%	625.02	705	64.96%	457.97	679			0.00	708		0.00	
	OERN	6121	87.80%	5374.24	6321	43.36%	2740.79	6124			0.00	6336		0.00	
	HSNN			0.00			0.00				0.00			0.00	
Sudan	HSSS			0.00			0.00				0.00			0.00	
	HSPN			0.00			0.00				0.00			0.00	
	OSAP			0.00			0.00				0.00			0.00	
Syria	OSLK			0.00			0.00				0.00			0.00	
	OSDI			0.00			0.00				0.00			0.00	
	OSDI			0.00			0.00				0.00			0.00	
UAE	OMAA			0.00			0.00				0.00			0.00	
	OMAD			0.00			0.00				0.00			0.00	
	OMAL			0.00			0.00				0.00			0.00	
	OMDB	6627	78.00%	5169.06	6717	53.00%	3560.01	6622		2.67	17680.74	6717		1.60	10747.20
	OMDW			0.00			0.00				0.00			0.00	
	OMFJ			0.00			0.00				0.00			0.00	
	OMRK			0.00			0.00				0.00			0.00	
	OMSI			0.00			0.00				0.00			0.00	
Yemen	OYAA			0.00			0.00				0.00			0.00	
	OYHD			0.00			0.00				0.00			0.00	
	OYRN			0.00			0.00				0.00			0.00	
	OYSN			0.00			0.00				0.00			0.00	
	OYTZ			0.00			0.00				0.00			0.00	

States	KPI 01			KPI 14			KPI 02			KPI 13		
	Total flights per State	KPI 01 National	No of flight affected	Total flights per State	KPI 14 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected
Bahrain	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	0	0.00	0.00	0	0.00	0
Egypt	6531	73.06%	4771.76	7860	56.73%	4459.28	6531	4.14	27043.26	7860	3.61	28350.26
Iran	1068	79.31%	847.03	1158	74.01%	857.04	1067	4.31	4598.77	1164	0.07	81.48
Iraq	0	#DIV/0!	#DIV/0!									
Jordan	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	3.89	7601.06	1942	0.18	349.56
Kuwait	1336	51.59%	689.24	0	#DIV/0!	#DIV/0!	1342	0.00	0.00	0	0.00	0
Lebanon	0	#DIV/0!	#DIV/0!	0	#DIV/0!	#DIV/0!	0	0.00	0.00	0	0.00	0
Libya	0	#DIV/0!	#DIV/0!									
Oman	0	#DIV/0!	#DIV/0!									
Qatar	2746	83.94%	2304.99	2851	48.54%	1383.88	2872	3.86	11085.92	2873	1.15	3303.95
Saudi Arabia	13764	88.40%	12167.51	14579	53.97%	7867.68	13763	0.00	0.00	14622	0.00	0
Sudan	0	#DIV/0!	#DIV/0!									
Syria	0	#DIV/0!	#DIV/0!									
UAE	6627	78.00%	5169.06	6717	53.00%	3560.01	6622	2.67	17680.74	6717	1.60	10747.2
Yemen	0	#DIV/0!	#DIV/0!									

states	KPI 01	KPI 14	KPI 02	KPI 13
Bahrain	#DIV/0!	#DIV/0!	0.00	0.00
Egypt	73.06%	56.73%	4.14	3.61
Iran	79.31%	74.01%	4.31	0.07
Iraq	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Jordan	81.21%	61.15%	3.89	0.18
Kuwait	51.59%	#DIV/0!	0.00	0.00
Lebanon	#DIV/0!	#DIV/0!	0.00	0.00
Libya	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Oman	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Qatar	83.94%	48.54%	3.86	1.15
Saudi Arabia	88.40%	53.97%	0.00	0.00
Sudan	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Syria	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
UAE	78.00%	53.00%	2.67	1.60
Yemen	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Regional KPI	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

KPI 01 & 14 (DEP/ARR punctuality)

Definition Percentage of flights DEP/ARR from/to the gate on-time (compared to schedule).

Measurement Units: % of scheduled flights

Operations Measured:

on-time DEP/ARR: within ± 15 minutes"

KPI 02 (Taxi-out Additional Time)

Definition: Actual taxi-out time compared to an unimpeded/reference taxi-out time.

Measurement Units: Minutes/flight

Operations Measured

The duration of the taxi-out phase of departing flights

States	AD	KPI 01			KPI 14			KPI 02			KPI 13		
		Total no of flight	AD KPI 01	No of flight affected	Total no of flight	AD KPI 14	No of flight affected	Total no of flight	AD KPI 02	Total minues of delay	Total no of flight	AD KPI 13	No of flight affected
Bahrain	OBBI	223	35.00%	78.05	4327	62.24%	2693.12	4328	2.80	12118.40	6543	3.12	20414.16
Egypt	HECA	4011	76.71%	3076.84	4794	52.00%	2492.88	1212	4.43	5369.16	3765	2.15	8094.75
	HEBA	415	70.12%	291.00	630	63.81%	402.00	1313	5.65	7418.45	2323	8.10	18816.30
	HESH	767	69.75%	534.98	780	70.13%	547.01	1414	3.13	4425.82	3333	7.97	26564.01
	HEGN	996	65.76%	654.97	1238	57.19%	708.01	1515	3.38	5120.70	2313	4.82	11148.66
	HELX	109	55.05%	60.00	92	84.78%	78.00	2323	5.10	11847.30	1122	3.32	3725.04
	HESN	73	39.73%	29.00	83	74.70%	62.00	1565	2.13	3333.45	5423	1.92	10412.16
	HEMA	160	78.10%	124.96	243	69.70%	169.37	1342	2.82	3784.44	1463	1.20	1755.60
Iran	OIKB			0.00			0.00			0.00			0.00
	OIFM			0.00			0.00			0.00			0.00
	OIMM			0.00			0.00			0.00			0.00
	OISS			0.00			0.00			0.00			0.00
	OITT			0.00			0.00			0.00			0.00
	OIE	1068	79.31%	847.03	1158	74.01%	857.04	1067	4.31	4598.77	1164	0.07	81.48
	OIII			0.00			0.00			0.00			0.00
	OIZH			0.00			0.00			0.00			0.00
OIYY			0.00			0.00			0.00			0.00	
Iraq	ORBI	4532	68.20%	3090.82	2288	36.98%	846.10	4987	3.21	16008.27	4538	1.04	4719.52
	ORMM			0.00			0.00			0.00			0.00
	ORER			0.00			0.00			0.00			0.00
	ORSU			0.00			0.00			0.00			0.00
	ORNI			0.00			0.00			0.00			0.00
	ORBMM			0.00			0.00			0.00			0.00
Jordan	OJAI	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	3.89	7601.06	1942	0.18	349.56
	OJQA			0.00			0.00			0.00			0.00
Kuwait	OKBK	1336	51.59%	689.24	7623	79.40%	6052.66	1342	0.00	0.00	5645	1.8	10161.00
Lebanon	OLBA	458	29.03%	132.96	178	80.01%	142.42	432	0.60	259.20	1834	0.3	550.20
Libya	HLLB	653	89.93%	587.24	734	56.32%	413.39	3452	1.93	6662.36	3526	1.94	6840.44
	HLLS			0.00			0.00			0.00			0.00
	HLLT			0.00			0.00			0.00			0.00
Oman	OOMS	6432	79.35%	5103.79	8745	63.12%	5519.84	7623	2.66	20277.18	6639	4.7	31203.30
	OOSA			0.00			0.00			0.00			0.00
Qatar	OTBD			0.00			0.00			0.00			0.00
	OTHH	2746	83.94%	2304.99	2851	48.54%	1383.88	2872	3.86	11085.92	2873	1.15	3303.95
Saudi Arat	OEDF	2159	90.74%	1959.08	2333	54.78%	1278.02	2159	1.70	3670.30	2337	3.20	7478.40
	OEJN	4805	87.60%	4209.18	5220	64.96%	3390.91	4801	2.10	10082.10	5241	2.07	10848.87
	OEMA	679	92.05%	625.02	705	64.96%	457.97	679	4.02	2729.58	708	1.49	1054.92
	OERK	6121	87.80%	5374.24	6321	43.36%	2740.79	6124	2.12	12982.88	6336	3.06	19388.16
Sudan	HSNN	628	69.15%	434.26	1789	62.10%	1110.97	1648	3.14	5174.72	2567	4.28	10986.76
	HSSS			0.00			0.00			0.00			0.00
	HSPN			0.00			0.00			0.00			0.00
Syria	OSAP			0.00			0.00			0.00			0.00
	OSLK			0.00			0.00			0.00			0.00
	OSDI	1095	55.90%	612.11	1589	47.32%	751.91	1414	2.76	3902.64	1773	3.01	5336.73
UAE	OMAA			0.00			0.00			0.00			0.00
	OMAD			0.00			0.00			0.00			0.00
	OMAL			0.00			0.00			0.00			0.00
	OMDB	6627	78.00%	5169.06	6717	53.00%	3560.01	6622	2.67	17680.74	6717	1.60	10747.20
	OMDW			0.00			0.00			0.00			0.00
	OMFJ			0.00			0.00			0.00			0.00
	OMRK			0.00			0.00			0.00			0.00
	OMSJ			0.00			0.00			0.00			0.00
Yemen	OYAA	999	48.05%	480.02	491	88.56%	434.83	1332	3.34	4448.88	1639	2.39	3917.21
	OYHD			0.00			0.00			0.00			0.00
	OYRN			0.00			0.00			0.00			0.00
	OYSN			0.00			0.00			0.00			0.00
	OYZT			0.00			0.00			0.00			0.00

States	KPI 01			KPI 14			KPI 02			KPI 13		
	Total flights per State	KPI 01 National	No of flight affected	Total flights per State	KPI 14 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected
Bahrain	223	35.00%	78.05	4327	62.24%	2693.12	4328	2.80	12118.40	6543	3.12	20414.16
Egypt	6531	73.06%	4771.76	7860	56.73%	4459.28	10684	3.87	41299.32	19742	4.08	80516.52
Iran	1068	79.31%	847.03	1158	74.01%	857.04	1067	4.31	4598.77	1164	0.07	81.48
Iraq	4532	68.20%	3090.82	2288	36.98%	846.10	4987	3.21	16008.27	4538	1.04	4719.52
Jordan	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	3.89	7601.06	1942	0.18	349.56
Kuwait	1336	51.59%	689.24	7623	79.40%	6052.66	1342	0.00	0.00	5645	1.80	10161
Lebanon	458	29.03%	132.96	178	80.01%	142.42	432	0.60	259.20	1834	0.30	550.2
Libya	653	89.93%	587.24	734	56.32%	413.39	3452	1.93	6662.36	3526	1.94	6840.44
Oman	6432	79.35%	5103.79	8745	63.12%	5519.84	7623	2.66	20277.18	6639	4.70	31203.3
Qatar	2746	83.94%	2304.99	2851	48.54%	1383.88	2872	3.86	11085.92	2873	1.15	3303.95
Saudi Arab	13764	88.40%	12167.51	14579	53.97%	7867.68	13763	2.14	29464.86	14622	2.65	38770.35
Sudan	628	69.15%	434.26	1789	62.10%	1110.97	1648	3.14	5174.72	2567	4.28	10986.76
Syria	1095	55.90%	612.11	1589	47.32%	751.91	1414	2.76	3902.64	1773	3.01	5336.73
UAE	6627	78.00%	5169.06	6717	53.00%	3560.01	6622	2.67	17680.74	6717	1.60	10747.2
Yemen	999	48.05%	480.02	491	88.56%	434.83	1332	3.34	4448.88	1639	2.39	3917.21

states	KPI 01	KPI 14	KPI 02	KPI 13
Bahrain	35.00%	62.24%	2.80	3.12
Egypt	73.06%	56.73%	3.87	4.08
Iran	79.31%	74.01%	4.31	0.07
Iraq	68.20%	36.98%	3.21	1.04
Jordan	81.21%	61.15%	3.89	0.18
Kuwait	51.59%	79.40%	0.00	1.80
Lebanon	29.03%	80.01%	0.60	0.30
Libya	89.93%	56.32%	1.93	1.94
Oman	79.35%	63.12%	2.66	4.70
Qatar	83.94%	48.54%	3.86	1.15
Saudi Arab	88.40%	53.97%	2.14	2.65
Sudan	69.15%	62.10%	3.14	4.28
Syria	55.90%	47.32%	2.76	3.01
UAE	78.00%	53.00%	2.67	1.60
Yemen	48.05%	88.56%	3.34	2.39
Regional KPI	77.59%	59.30%	2.84	2.79

States	AD	KPI 01			KPI 14			KPI 02			KPI 13		
		Total no of flight	AD KPI 01	No of flight affected	Total no of flight	AD KPI 14	No of flight affected	Total no of flight	AD KPI 02	Total minues of delay	Total no of flight	AD KPI 13	No of flight affected
Bahrain	OBBI			0.00			0.00			0.00			0.00
Egypt	HECA	4011	76.71%	3076.84	4794	52.00%	2492.88		4.43	0.00		2.15	0.00
	HEBA	415	70.12%	291.00	630	63.81%	402.00		5.65	0.00		8.10	0.00
	HESH	767	69.75%	534.98	780	70.13%	547.01		3.13	0.00		7.97	0.00
	HEGN	996	65.76%	654.97	1238	57.19%	708.01		3.38	0.00		4.82	0.00
	HELX	109	55.05%	60.00	92	84.78%	78.00		5.10	0.00		3.32	0.00
	HESN	73	39.73%	29.00	83	74.70%	62.00		2.13	0.00		1.92	0.00
	HEMA	160	78.10%	124.96	243	69.70%	169.37		2.82	0.00		1.20	0.00
Iran	OIKB			0.00			0.00			0.00			0.00
	OIFM			0.00			0.00			0.00			0.00
	OIMM			0.00			0.00			0.00			0.00
	OISS			0.00			0.00			0.00			0.00
	OITT			0.00			0.00			0.00			0.00
	OIE	1068	79.31%	847.03	1158	74.01%	857.04	1067	4.31	4598.77	1164	0.07	81.48
	OIII			0.00			0.00			0.00			0.00
	OIZH			0.00			0.00			0.00			0.00
OIYY			0.00			0.00			0.00			0.00	
Iraq	ORBI			0.00			0.00			0.00			0.00
	ORMM			0.00			0.00			0.00			0.00
	ORER			0.00			0.00			0.00			0.00
	ORSU			0.00			0.00			0.00			0.00
	ORNI			0.00			0.00			0.00			0.00
	ORBM			0.00			0.00			0.00			0.00
Jordan	OJAI	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	3.89	7601.06	1942	0.18	349.56
	OJAQ			0.00			0.00			0.00			0.00
Kuwait	OKBK	1336	51.59%	689.24			0.00	1342	0.00	0.00			0.00
Lebanon	OLBA			0.00			0.00			0.00			0.00
Libya	HLLB			0.00			0.00			0.00			0.00
	HLLS			0.00			0.00			0.00			0.00
	HLLT			0.00			0.00			0.00			0.00
Oman	OOMS			0.00			0.00			0.00			0.00
	OOSA			0.00			0.00			0.00			0.00
Qatar	OTBD			0.00			0.00			0.00			0.00
	OTHH	2746	83.94%	2304.99	2851	48.54%	1383.88	2872	3.86	11085.92	2873	1.15	3303.95
Saudi Arat	OEDF	2159	90.74%	1959.08	2333	54.78%	1278.02	2159		0.00	2337		0.00
	OEJN	4805	87.60%	4209.18	5220	64.96%	3390.91	4801		0.00	5241		0.00
	OEMA	679	92.05%	625.02	705	64.96%	457.97	679		0.00	708		0.00
	OERK	6121	87.80%	5374.24	6321	43.36%	2740.79	6124		0.00	6336		0.00
Sudan	HSNN			0.00			0.00			0.00			0.00
	HSSS			0.00			0.00			0.00			0.00
	HSPN			0.00			0.00			0.00			0.00
Syria	OSAP			0.00			0.00			0.00			0.00
	OSLK			0.00			0.00			0.00			0.00
	OSDI			0.00			0.00			0.00			0.00
UAE	OMAA			0.00			0.00			0.00			0.00
	OMAD			0.00			0.00			0.00			0.00
	OMAL			0.00			0.00			0.00			0.00
	OMDB	6627	78.00%	5169.06	6717	53.00%	3560.01	6622	2.67	17680.74	6717	1.60	10747.20
	OMDW			0.00			0.00			0.00			0.00
	OMFJ			0.00			0.00			0.00			0.00
	OMRK			0.00			0.00			0.00			0.00
OMSJ			0.00			0.00			0.00			0.00	
Yemen	OYAA			0.00			0.00			0.00			0.00
	OYHD			0.00			0.00			0.00			0.00
	OYRN			0.00			0.00			0.00			0.00
	OYSN			0.00			0.00			0.00			0.00
	OYZT			0.00			0.00			0.00			0.00

States	KPI 01			KPI 14			KPI 02			KPI 13		
	Total flights per State	KPI 01 National	No of flight affected	Total flights per State	KPI 14 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected	Total flights per State	KPI 02 National	No of flight affected
Bahrain												
Egypt	6531	73.06%	4771.76	7860	56.73%	4459.28						
Iran	1068	79.31%	847.03	1158	74.01%	857.04	1067	4.31	4598.77	1164	0.07	81.48
Iraq												
Jordan	1953	81.21%	1586.03	1951	61.15%	1193.04	1954	3.89	7601.06	1942	0.18	349.56
Kuwait	1336	51.59%	689.24				1342	0.00	0.00			
Lebanon												
Libya												
Oman												
Qatar	2746	83.94%	2304.99	2851	48.54%	1383.88	2872	3.86	11085.92	2873	1.15	3303.95
Saudi Arabi	13764	88.40%	12167.51	14579	53.97%	7867.68						
Sudan												
Syria												
UAE	6627	78.00%	5169.06	6717	53.00%	3560.01	6622	2.67	17680.74	6717	1.60	10747.2
Yemen												

states	KPI 01	KPI 14	KPI 02	KPI 13
Bahrain				
Egypt	73.06%	56.73%		
Iran	79.31%	74.01%	4.31	0.07
Iraq				
Jordan	81.21%	61.15%	3.89	0.18
Kuwait	51.59%		0.00	
Lebanon				
Libya				
Oman				
Qatar	83.94%	48.54%	3.86	1.15
Saudi Arabi	88.40%	53.97%		
Sudan				
Syria				
UAE	78.00%	53.00%	2.67	1.60
Yemen				
Regional KPI	80.93%	55.02%	2.96	1.14

