

# ATM SG/8

The MIDANPIRG Air Traffic Management Sub-Group, Eighth Meeting

Amman, Jordan 7 - 10 November 2022



# Eighth MIDANPIRG Air Traffic Management Sub-Group Meeting

# ATM SG/8

Amman, Jordan, 7 – 10 November 2022

NS's Restricted Document

ATM SG/8 meeting









# Updates from Saudi Arabia on ATM/SAR Implementation

- Airspace and ATM enhancements projects within your State,
- Status of implementation of the approved PfA MID.II.2201-ATM (Updates, new entries),
- Updated status of implementation of the following topics:
  - o SMS within the ANSPs (Ref. Annex 19, Para 3.3.2),
  - o National Contingency Plan, and relevant Letter of Agreements,
  - o Development of National ATFM Plan,
  - o OLDI/AIDC,
  - o Reduction of longitudinal separation between ACCs,
  - o ASBU/Air Navigation Strategy update, reference webpages: MID Doc 003: Air Navigation Strategy and ICAO MID Air Navigation Report 2021
  - Status of SAR implementation update,
- Any other subject of the meeting interest.









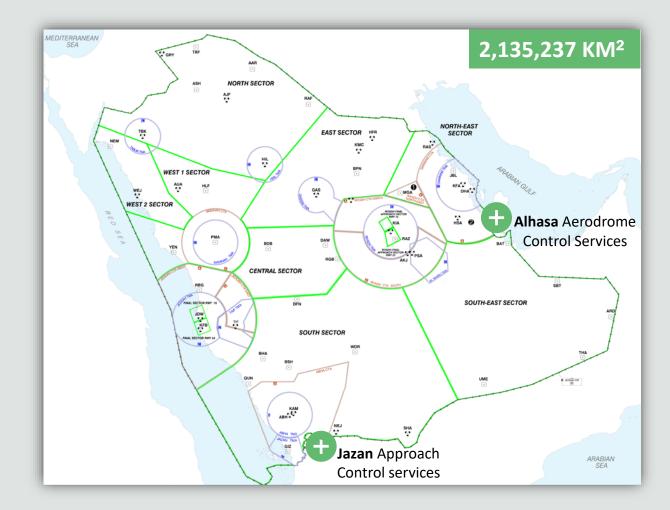
### Saudi Airspace Facts

#### **Routes**

Route	Domestic	International	
RNAV	43	40	83
Conventional	53	21	74

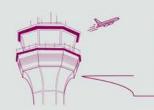
#### **Airspace Sectors**

Sector	#	CWPs
ATZ	4	4
CTR	13	27.5
TMA	10	14
СТА	7	7
ACC	11	11
	45	63.5









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## Air Navigation Plan (Corrective Action Plan)



#### **Action Plan**

Table ATM II-MID-1 MID Region ATS Route Network

#### **Amendments' Requirements**

- ICAO designators for Regional ATS Routes.
- International meetings with Impacted Adjacent FIRs.

<i>F</i> III	ternational meetings with impacted Adjacent Fixs.	1	
S.	Name of Activity	Duration	Requirements
No.		(WW)	
Data (	Collection Stage		
1	Data Collection and analysis	10	Subject to (ATM SG/7-WP/3, Appendix B, ATS routes need more coordination) Following numbers and ATS routes designators need to be changed, 36 (H732), 37 (H741), 38 (J735), 39 (J749), 40 (J852), 41 (J874), 149 (Q21), 150 (143), 151 (Q212), 152 (Q332), 153 (Q510), 166 (T100), 167 (T136), 168 (T142), 177 (V13), 180 (V975), 186 (Y415), 187 (Y511), 188 (Y517),
2	Initial Airspace Study	6	
Adjac	ent FIR Coordination Stage		
1	Coordination with Impacted adjacent FIRs	12	Meetings with impacted adjacent FIRs
2	Amendments in Letter of Agreements	6	
Safety	Assessment Stage		
1	Conduct of SRA for airspace change	12	
Public	ation and Implementation Stage		
1	AIP Publication para (AIP ENR3.1, ENR3.3,)	8	
2	Cycle	4	
3	Amendments in the (Table ATM II-MID-1 MID Region ATS Route Network)	6	
Post I	mplementation Stage		
1	Post Implementation Review	4	

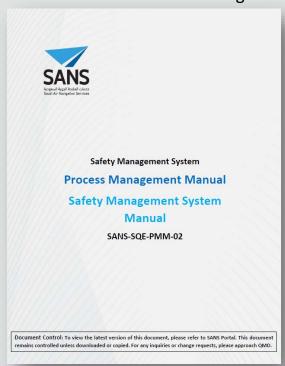






### SMS within the ANSPs (Ref. Annex 19, Para 3.3.2)

**SANS** is fully complied with annex 19 and has fully implemented SMS in compliance with **DOC 9859** and **ICAO annex 19** applicable requirements (including fatigue risk management (FRMS) framework) as part of ANSP certification and license renewal based on **GACA** regulations.



#### **Safety Dashboard**

















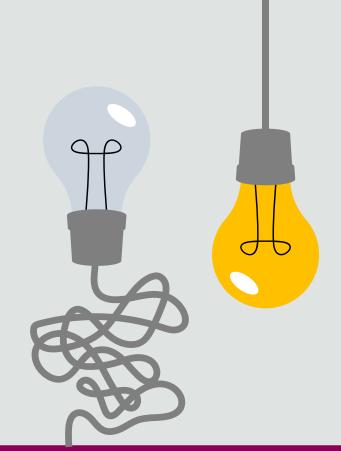
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# **National Contingency Plan**

**Saudi Arabia** has two control centers and they have been established in 2008 out of the strategic vision to ensure air traffic management service continuity.

The ACC centers are designed identical to each other to support each other in case of any failure in one of them.



**SANS** has conducted contingency exercise between JED and RUH to ensure mitigating any risk in case of any failure in one of the area control centers , the exercise was conducted on two phases.

#### Phase 1

Jeddah take over Riyadh 14<sup>th</sup> October 2021



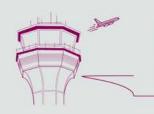
#### Phase 2

Riyadh take over Jeddah 30<sup>th</sup> May 2022









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# OLDI (Online Data Interchange)

**SANS Plan** is to connect OLDI with all adjacent FIRs according to the neighboring country systems reliability.





Bahrain OLDI and radar exchange will be in Q1 2023 / AMHS in operation.





UAE OLDI and radars were connected to Jeddah Simulator , the official exchange will be in Q2 2023 / AMHS in operation.





Oman OLDI and radar exchange will be in Q3 2023 / AMHS is ready waiting for signatures.

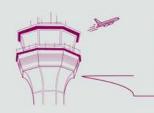




Qatar OLDI and radar exchange will be in Q1 2023 / AMHS is ready waiting for signatures..





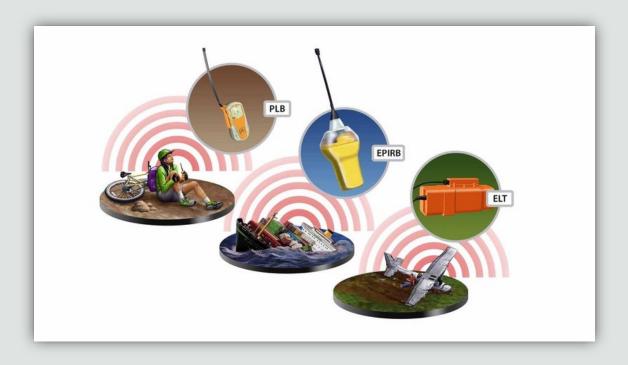


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# SAR implementation update

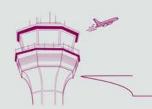
- SMACC organized awareness and briefing sessions at Riyadh, Jeddah ACCs, and Dammam approach Centre covered Search and Rescue arrangements with an overview on the ICAO Global Aeronautical Distress and Safety System (GADSS) and related provisions.
- Saudi Air Navigation Services (SANS) took the initiative to develop an online **406 MHz distress beacons database to register** the information related to the beacons and their owners/operators.











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# Jeddah Route Availability Document

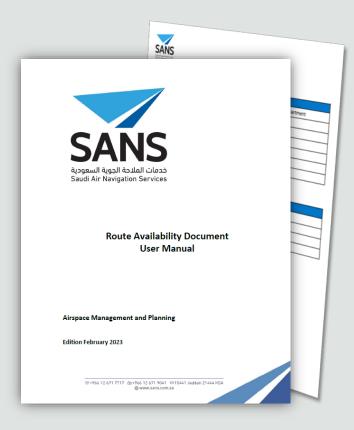
Facilitates flight
planning in order to
improve Flow and
Capacity Management
while allowing airline
operator's flight
planning flexibility.

Provide **routing options**by RAD tables with
routing restrictions and
requirements for the
airspace users.

Support to enhance capacity and reduce complexity by defining restrictions that prevent disruption through the congested areas.

- Publication Target February 2023 (AIC will be published with full info)
- Jeddah FIR

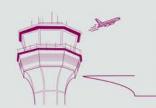
  RAD User Manual







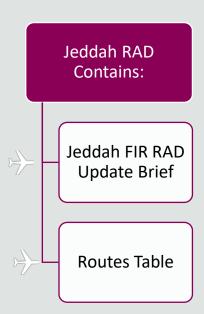




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# Jeddah Route Availability Document



Publication	T	ype of Ch	ange	The	change	Implementation				
Date	New	Delete	Update	Entry Exit Point Point		Date	Note			
11/11/1111			٧	JDW	PASAM	12/12/1122				
Publication date of the changes in RAD tables	М	arked the	type	Waypo	ends on pints not IRs	Implementation Date of changes in RAD tables	If there are any notes will be written here			

FIR/ADEP	FIR/ADES	Entry Point	Routes	Exit Point	Levels	Availability	Remarks	Operational Hours Restrictions
Entry FIR or Departure AD	Exit FIR or Destination AD	Entry waypoint of Jeddah FIR/ Waypoint or Departure VOR	Detail of ATS routes	Exit waypoint of Jeddah FIR/Waypoint or Destination VOR	Availability of levels in planned ATS route	Availability of ATS Routes	Any notes or remarks	Any Restriction on operational hours availability of Routes

Tel: 966 12 671 7717 EXT. 1755 & 1730 966 12 6290561 Fax: 966 12 640 5622 966 12 671 7717 EXT.

1749 AFS OEJDYKYX

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MANAGEMENT
P. O. BOX 929, JEDDAH - 21421

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#### Route Availability Document (RAD)

#### 1 Purpose

The purpose of this circular is to provide information on application of Route Availability Document (RAD) in Jeddah FIR. The publication of Jeddah FIR Route Availability Document (RAD) in KSA AIP replaces the publication of ATS routes through JEDDAH (OEJD) FIR Special Procedures and Requirements in AIP Supplement.

#### 2 Description of Route Availability Document (RAD)

- 2.1 The Jeddah FIR Route Availability Document (RAD) is developed to provide information for ATS routes to facilitate flight planning in Jeddah FIR for arrivals, departures, and overflying aircraft.
- 2.2 This RAD will replace the publication of preferred ATS routes through JEDDAH (OEJD) FIR Special Procedures and Requirements in AIP Supplement.
- 2.3 Jeddah FIR Route Availability Document (RAD) tables are developed in Microsoft Excel to easy access and user-friendly manner. The link to the Jeddah FIR RAD excel sheet and the RAD user manual will be published in AIP Supplement.
- 2.4 Changes and updates/amendments of the RAD will be reflected in updated AIP SUP.

#### 3 Conta

3.1 For further information on this AIC, please contact Airspace Management and Planning by E-mail: asm@sans.com.sa.







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Riyadh CTA Realignment and Establishment of

**Final Sectors** 

#### **Riyadh CTA**

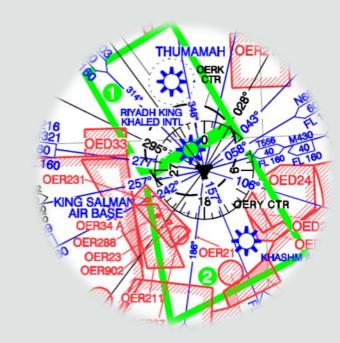
Sectorization of Riyadh CTA into North and South instead of upper and lower

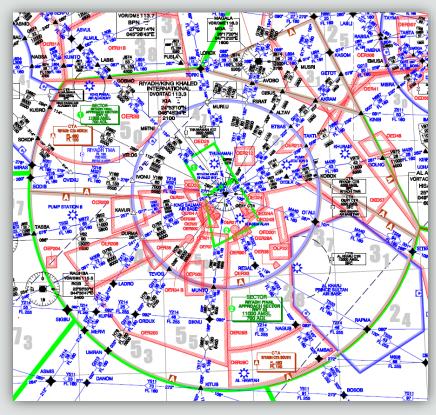
#### **Riyadh TMA**

Upper level changed from FL155 to FL195

#### **Riyadh Final Sectors**

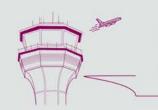
Final Approach (director) as additional Sectors for runway 15 & 33.











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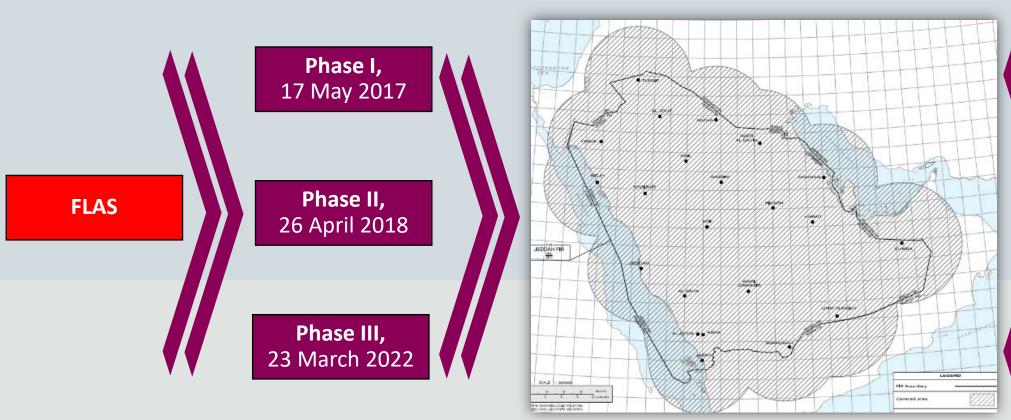
### **Empty Quarter**

#### **CNS Investment**

- 3 RADARs
- 2 RCAG

#### **ATS Routs**

- **New Routs**
- Realignment



Phase 4, Q2, 2023

**10 NM** 

12









# Reduction of longitudinal Separation

Application of minimum longitudinal radar separation with following FIRs:





UAE FIR from 30NM to 20NM





Muscat FIR from 5 Minutes to 20NM





Doha FIR from 10 Minutes to 10NM





Cairo FIR from 20NM to 15NM

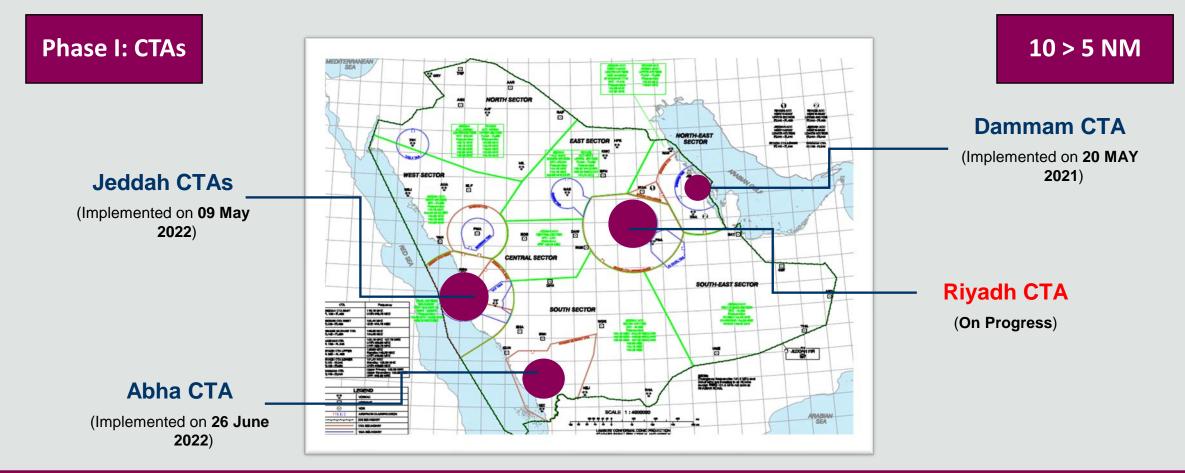








### Reduction of longitudinal Separation IN JED FIR



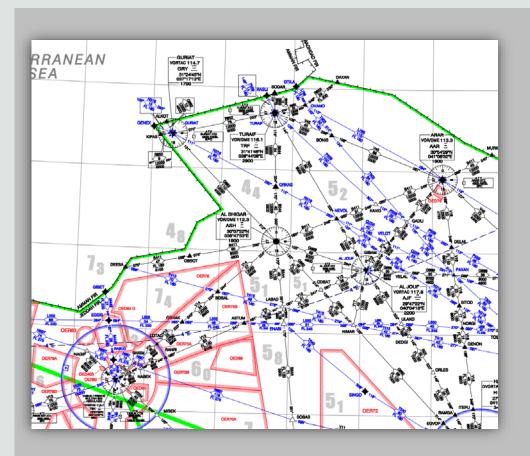


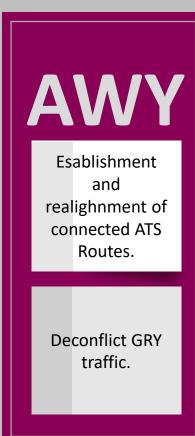


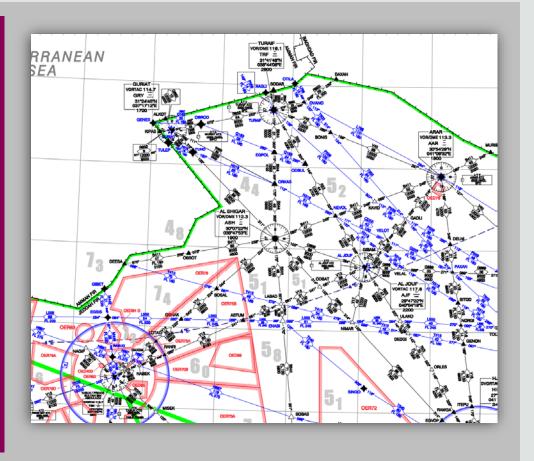




### **JED-AMMAN FIR Routes**

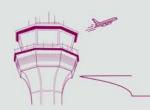












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#### **ATFM Plan**

Define the **organization structure** in order to establish the ATFM function.

Assess the foundation requirement for ATFM function

Assess and declare ATC **sector capacity** for all ACC and APP sectors Assess and declare runway acceptance rate for all controlled aerodromes

Implementation of centralized flight plan management system IFPS to support ATFM function

Development of **ATFM Dashboard** to support the function of planning, analyzing , reporting and achieving objectives

ICAO KPIs 1,2 ,13,14 are measured

Capacity monitoring mechanism developed and implemented

**ATFM Regulation** Development

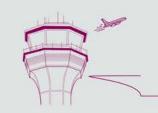
Develop **Operational manual** for ATFM

Enhance **ATFM function** elaboration in ACDM process

**ATFM Automation system** 







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# **Statistics Report**

**SANS ATFM** is holding accountability on processing and disseminating statistics reports as per required regulation and operation needs. ATFM section has developed a dashboard to support in balancing traffic demand Vs. capacity monitor workload and optimize airspace utilization.









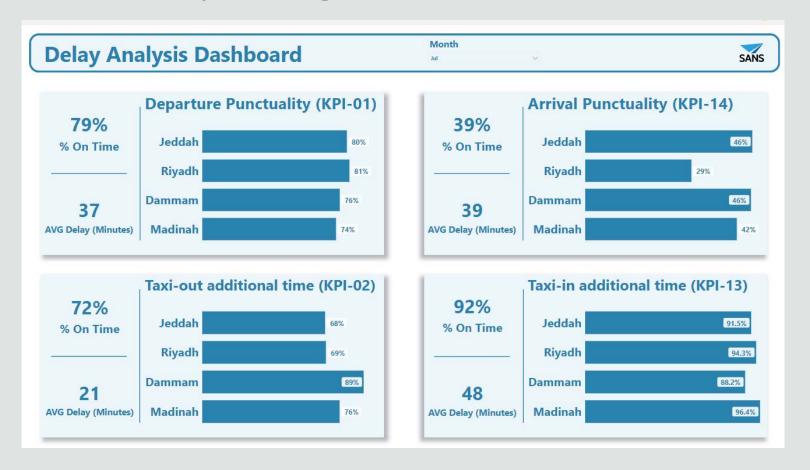




### ATFM KPI Measurements & Reporting

#### **ATFM KPIs**

- KPI 01
   percentage for all flight departing the gate on time compared to schedule
- KPI 02
   measuring the actual taxi-out time
   compared to the reference taxi-out
   time
- KPI 13
   actual taxi-in time compared to the reference taxi-in time
- KPI 14
   percentage of all arriving flight to the
   gate on time compared to schedule



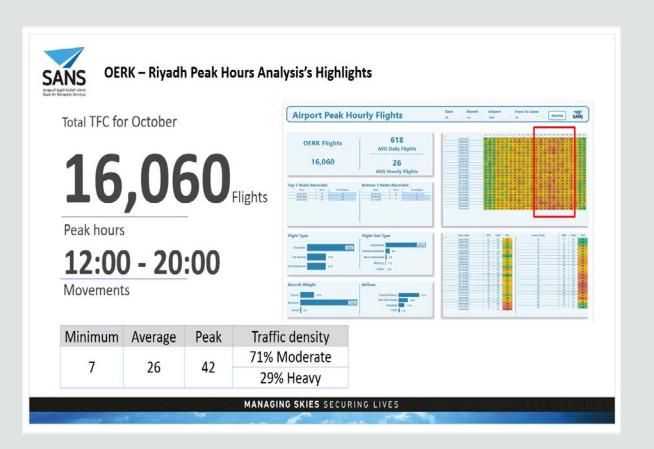


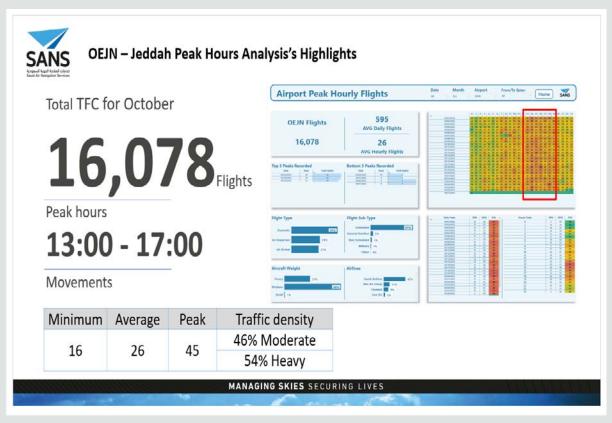






# Airport Peak hours Assessment and Reporting









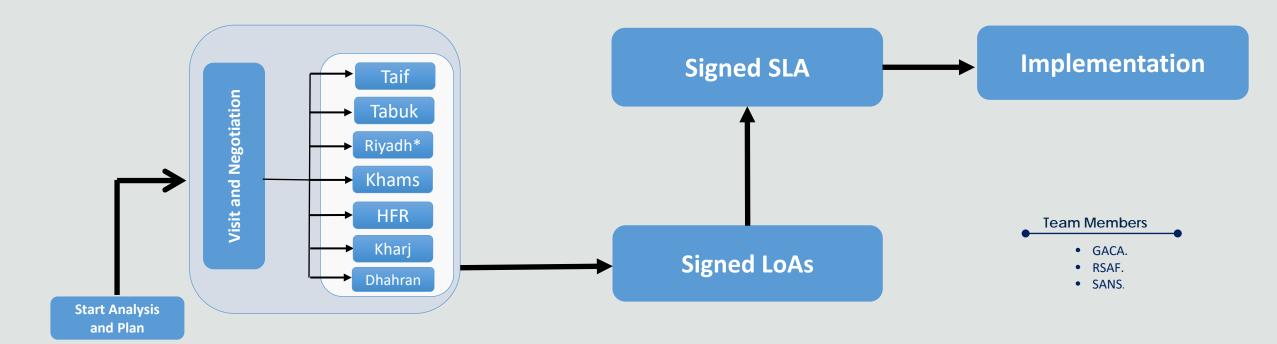




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### Civil Military Cooperation - CMC







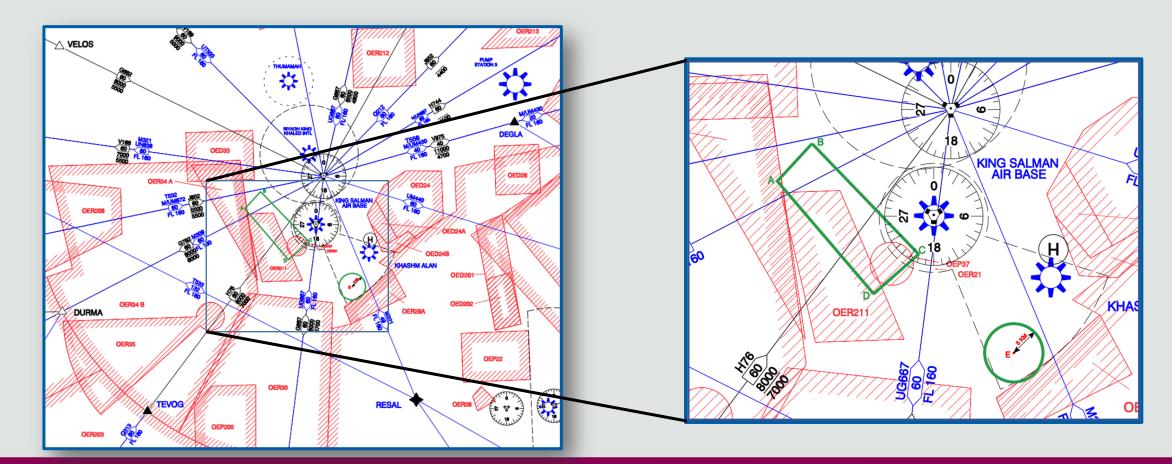




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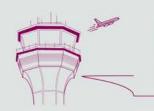
#### CMC - OER 901 + OER 902







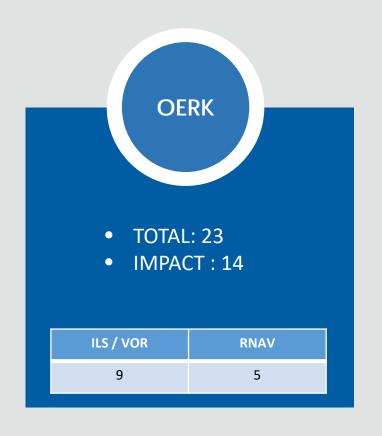


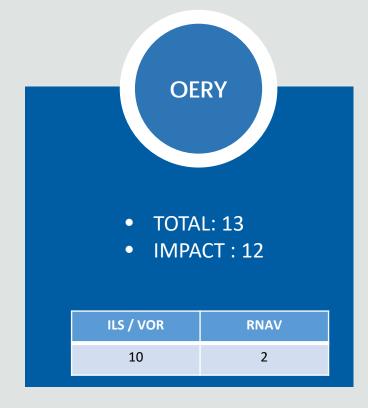




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#### CMC - OER 901 + OER 902

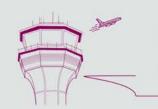












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### CMC - OER 901 + OER 902

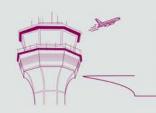
OER000 OERK Circle of radius 2.7 NM centered on point 243023N 0465105E	FL160 / SFC	Permanent
OER000 OERK Area bounded by lines joining the following points: 244704N 0462741E 245027N 0463120E 243951N 0464147E 243619N 0463705E 244704N 0462741E	FL160 / SFC	Permanent

OER901 OERK Circle of radius 2.7 NM centered on point 243023N 0465105E	5000 FT AMSL / SFC	Permanent
OER902 OERK Area bounded by lines joining the following points: 244704N 0462741E 245027N 0463120E 243951N 0464147E 243619N 0463705E 244704N 0462741E	5000 FT AMSL / SFC	Permanent









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### **Civil Military Cooperation History**

2018		20	19	202	20	202	21	2022		
OEP61	Realigned	OER79A	Realigned	OED57	Create	OED25	Level change	OED64G	Realigment	
OER408	Create	OER79B	Realigned	OER23	Create	OED201/202	Realigned to OED201	OED10	Remove	
OER409	Create	OER79C	Realigned	OER231	Create	OED33	Level change	OER36	Remove	
OER79	Realigned to OER79A, B, C	OER05	Realigned to OER288 Cre		Create	OED74 Remove		OER87	Remove	
		OER70A	Realigned	OER410	Create	OED80	Remove	OER207	Remove	
				OER79D	Create	OER305	Remove	OER210	Remove	
				OER79F	Create	OER51	Remove	OED26	Remove	
						OER31A	create	OER901	Create	
						OER31B	create	OER902	Create	
						OER31C	create	OER411	Realigned	
						OER29	Realigned to OER29A, B, C	OEP209	Create	









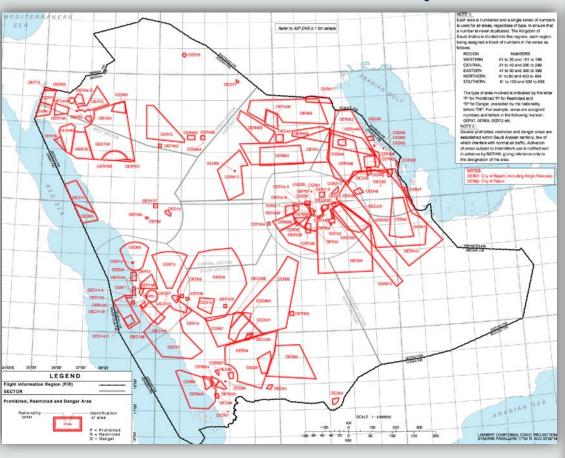
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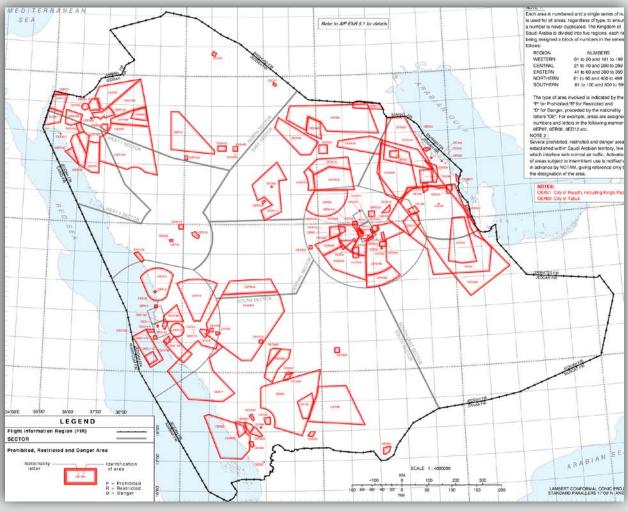
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# Flexible Use of Airspace







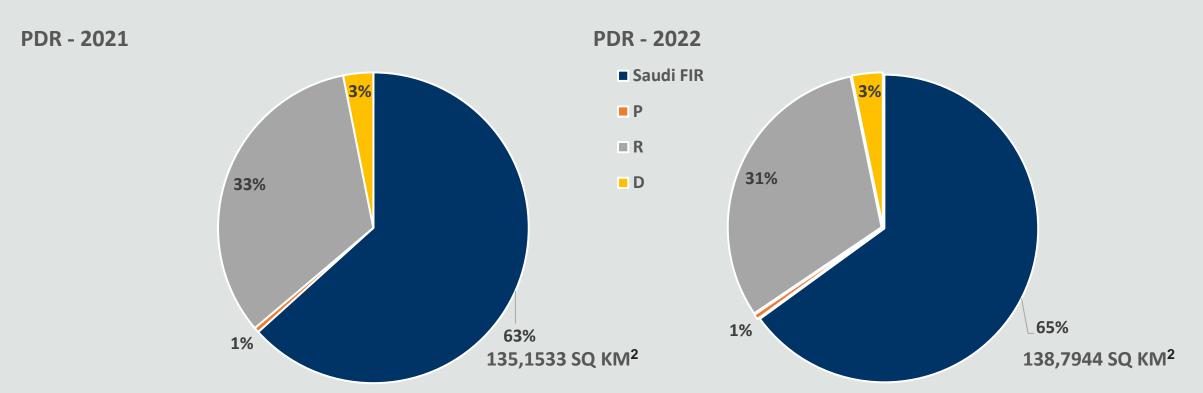








## Flexible Use of Airspace



Name	Lower Limits	Upper Limits	30000	31000	32000	33000	34000	35000	36000	37000	38000	39000	40000	41000	42000	43000	44000	45000	46000	ALT/FL
OED25	1000	4200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
OED48	1000	19000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
OED50	1000	2700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
OED500	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OED501	1000	12000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
OED53	1000	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
OED55	1000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
OED56	1000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
OED57	1000	45000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	44
OED65	1000	13000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
OED69	1000	33000	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	32
OED76	1000	3600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
OED77	1000	3300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
OED86	1000	8500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
OED89	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OED91	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OED96A	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OED96B	1000	10000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
OED97	1000	1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
OED99	1000	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
OED03	1000	8000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
OED20	1000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
OED52	1000	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
OED64G	1000	19500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
OED403	1000	1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
OEP01	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OEP300	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OEP37	1000	15000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
OEP402	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OEP61	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OEP71	1000	24000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
OEP73	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OER05A	1000	33000	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	32
OER05B	1000	46000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	45
OER11	1000	7000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
OER12	1000	5000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
OER13	1000	3000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
OER17	1000	10000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
		PDR	42	39	39	42	37	37	37	37	35	35	35	34	34	34	34	34	33	
		%	29.8	27.7	27.7	29.8	26.2	26.2	26.2	26.2	24.8	24.8	24.8	24.1	24.1	24.1	24.1	24.1	23.4	





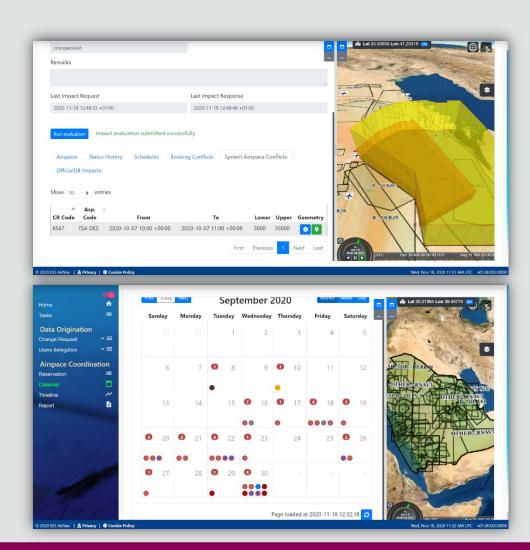


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# Airspace Reservation Booking Tool

- Collect Airspace reservation Requests (AIM Portal Integration)
- Automated impact analysis of requests against the airspace structure, the other active reservations, NOTAMs
- Pre-fill NOTAM proposals (CRONOS integration)











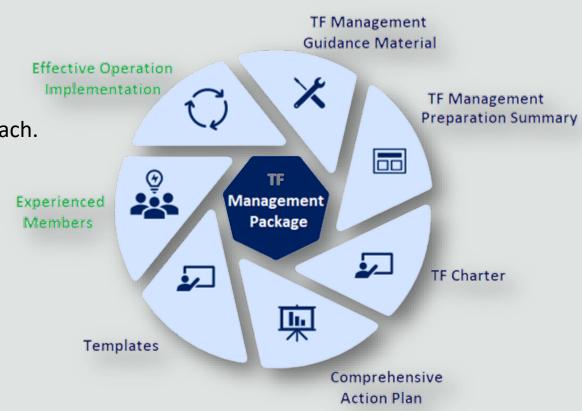
### **ATM Task forces**

#### Task Force Objectives.

- Increase the efficiency of business **processes**.
- Enhance decision-making and problem-solving.
- Encourage staff **involvement and empowerment** in a new approach.
- Reduce **defects**, **waste**, **and variation** from an existing process.
- Increase **communication** across ATM departments and Units.
- Develop **leadership** as an additional opportunity.
- Improving quality.
- Increase **Customer satisfaction**.

More than **300** ATCOs Join requests

**111** ATCOs got involved



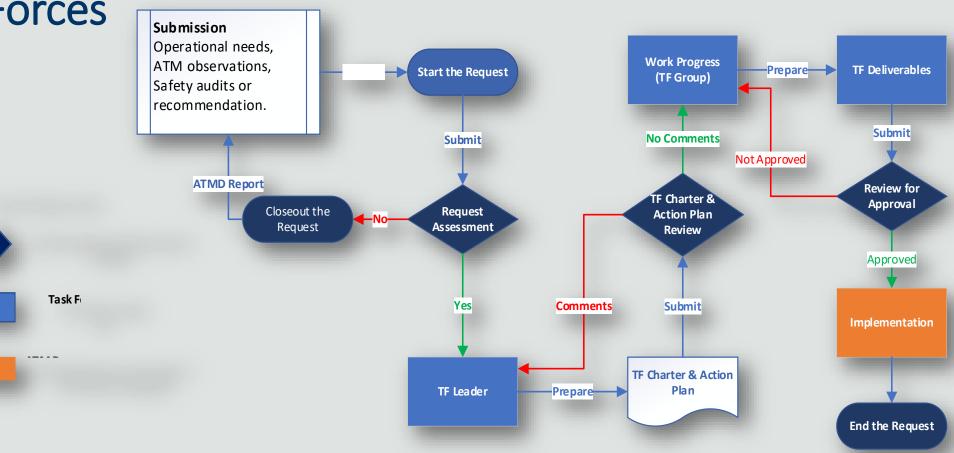
29







### **ATM Task Forces**



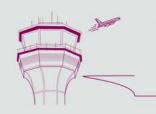


Weekly meeting with ATM Development Manager. Monthly meeting with ATM Executive Director. Quarterly meeting with Chief Operation Officer.









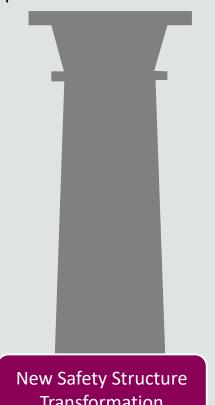
ATM SG/8

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### **ATM Task Forces**

Completed ATM TF 2021 is Aligned with 3 SANS Strategic Pillars



Transformation

Standardize the Process & Procedures

**ATM SOP Enhancement & Development Short** Term

**Unit Operation Tasks** 

Designation of OJTIs, **ATCIs and ATC** Examiner

ATM JDs Review and **Implementation** 

> Operational HR **Policies**

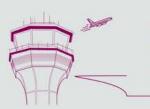
FIS Flight Information Service







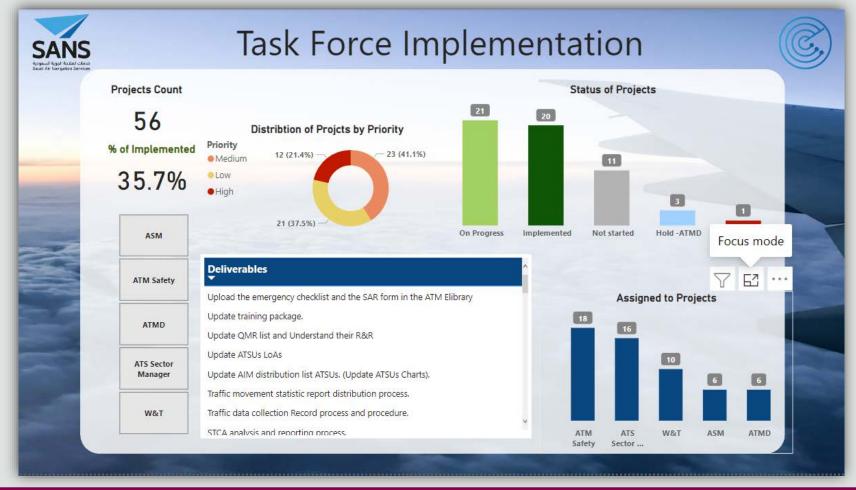




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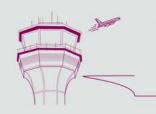
### **ATM Task Forces**











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### **ATM Task Forces**

Completed ATM TF 2021 is Aligned with 2 SANS Strategic Pillars







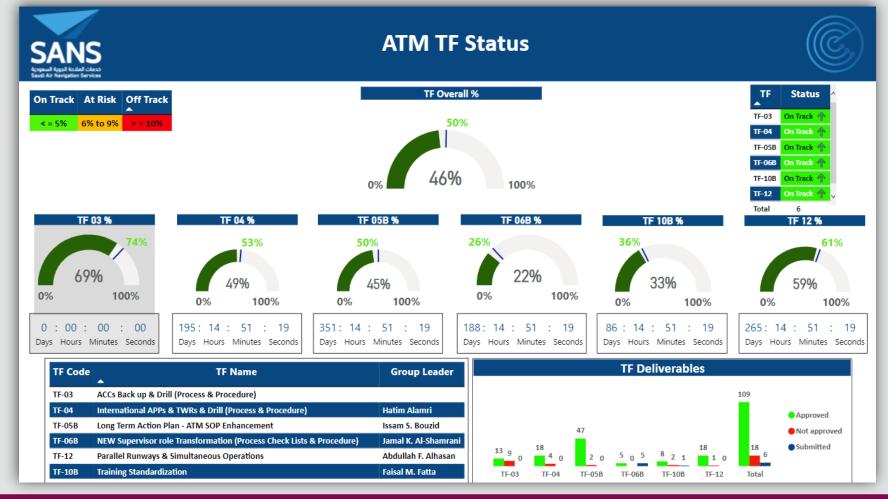




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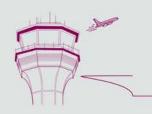


### **ATM Task Forces**







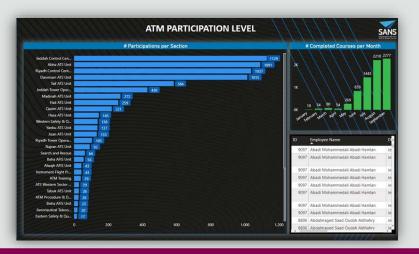


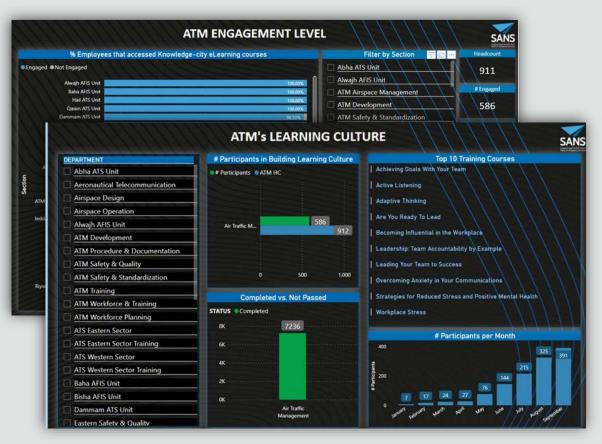
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# Knowledge City (E-learning System)

- SANS has lunched the e-learning library by Knowledge-City since Q2 2021 with +800 training programs in different subjects and areas to help SANS employees expand their knowledge in business, leadership, safety, computer software and financial skills.
- SANS-ATM has initiated a campaign to participate in the building of learning culture initiative. ATM's employees has completed
   +7235 training courses in 10 months with an engagement of 75% of its staff.





ATM SG/8 meeting

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ATM SG/8

The MIDANPIRG Air Traffic Management Sub-Group, Eighth Meeting

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# THANK YOU

