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ICAO MID-ASRG/2

MID Annual Safety Report
9th Edition

Virtual Meeting 8 July 2020

7 July 2020

1



ICAO

SAFETY

2019

9th MID Annual Safety Report

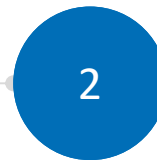
Regional Aviation Safety Group- Middle East
(RASG-MID)



Welcome and Introduction



Agenda item 1: Adoption of the Provisional Agenda



Agenda Item 2: Review of 9th ASR Draft-PPT1



Agenda Item 3: Future work Programme



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Welcome and Introduction





Meeting Notes



Switch off camera if the quality of Internet is not good



Keep mic muted Unmute your mic only when invited to speak



Use "Raise hand" or chat box for questions and comment



MEETING IS RECORDED



1

Adoption of the Provisional Agenda

1.1 The Provisional Agenda for the Second virtual meeting of the Annual Safety Report Group (ASRG/2) was submitted to States and concerned Organizations, as attachment to the ICAO MID Regional Office Invitation Letter Ref: ME 4/1.6–20/126 dated 3 June 2020. The Provisional Agenda is at Appendix A.

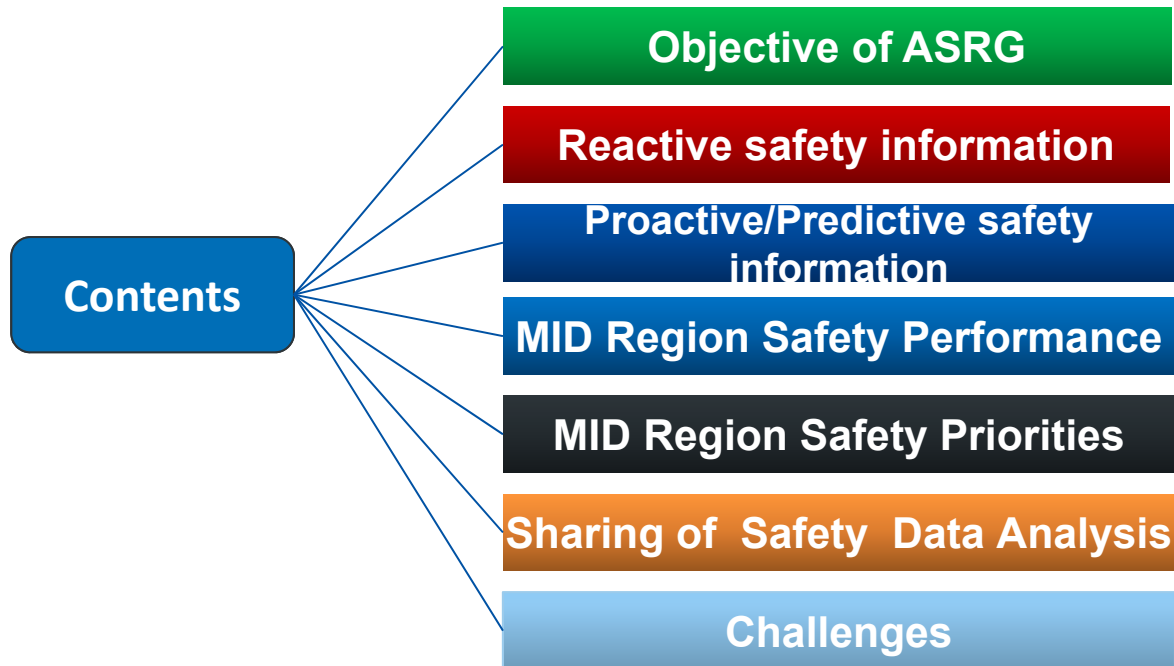
Action by the Meeting

Adopt the Revised Provisional Agenda at **Appendix A**



2

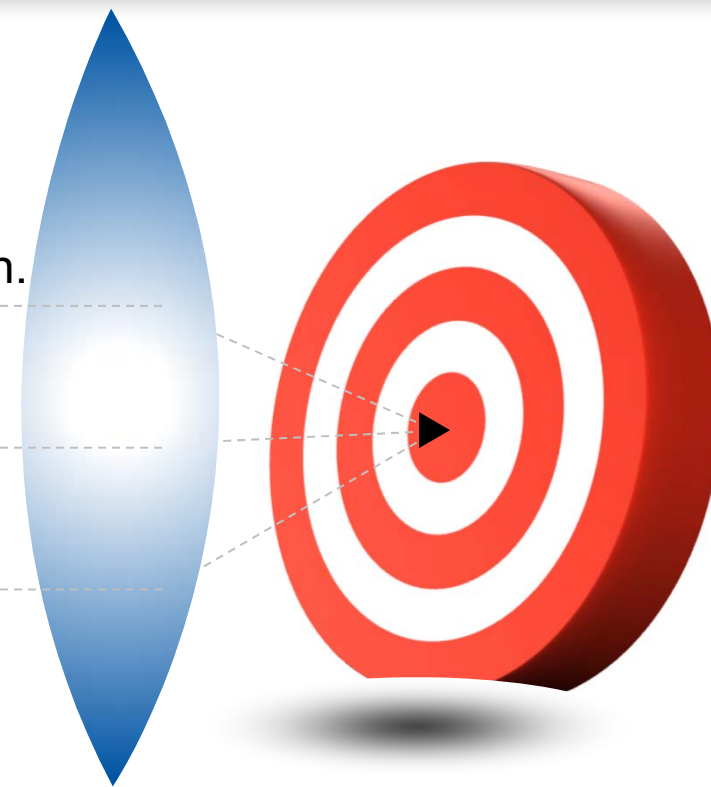
Review of 9th ASR Draft-PPT1





Objective of ASRG

- 1 Gathering and Analyzing safety information.
- 2 MID Region Safety Priorities.
- 3 Production of the annual safety report.





3

Production of the annual safety report



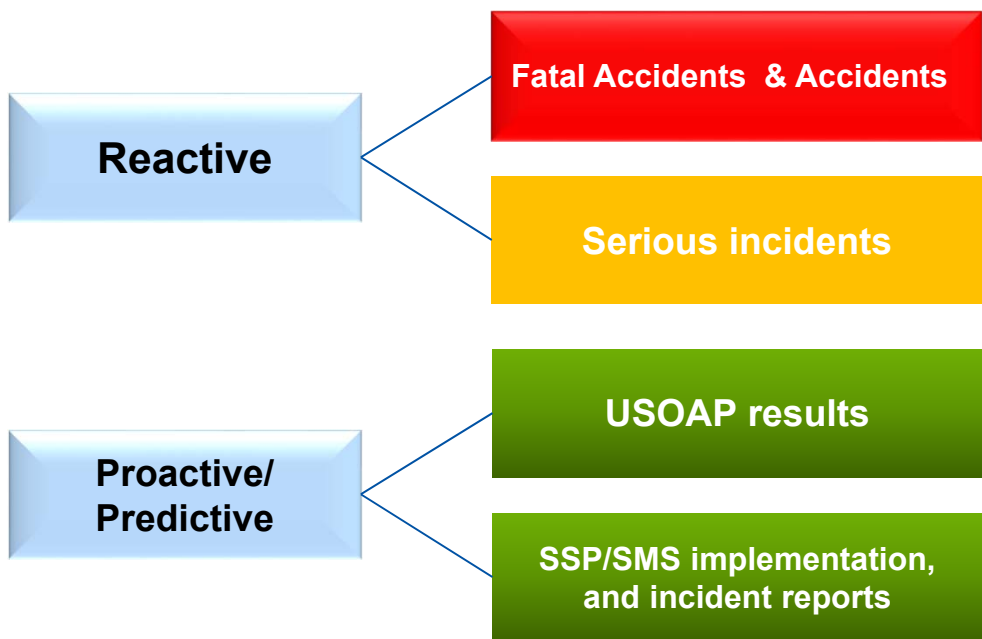


Data for ASR (9th edition)





ASR Structure-9th Ed





Risk Assessments Methodology

Frequency \ Severity	1	2	3	4	5	6
1	1	2	3	4	5	6
2	2	4	6	8	10	12
3	3	6	9	12	15	18
4	4	8	12	16	20	24



☐ Frequency rating: 1 is the most frequent and 6 is the least frequent

☐ Severity: 1 is the most severe and 4 is the least severe

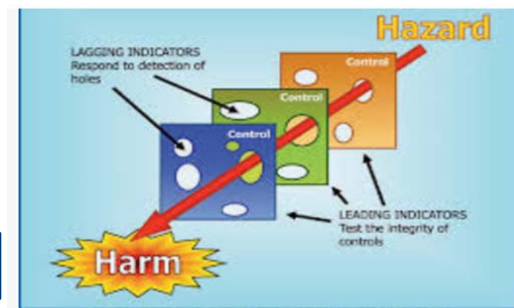
“Feared consequence” of the risk portfolio of DGAC France:

Nb	Identification of Undesirable Event	Accident types						
		CFT	LOC-I	MAC	Ground Collision	RE	Damage to aircraft or injury inflight	Damage to aircraft or injury on ground
UE.1	Unstabilised or non-compliant approach	X	X			X		X
UE.2	Abnormal airplane attitude (Roll, pitch, speed...)		X				X	
UE.3	Events relating to aerodrome conditions (Runway surface condition and aerological parameters)		X			X	X	X
UE.4	En-route encounter of dangerous weather phenomena (Thunderstorm, turbulence, icing)		X	#			X	X
UE.5	Misuse of aircraft system (Weight and Balance, speed track, aircraft config)	X	X	X	X	X	X	X
UE.6	Event pertaining to works/maintenance operations on or close to a runway		#		X	X		X
UE.7	Bad coordination/execution of ground operations (deicing, loading, stowing, line maintenance, etc)	X	X		X		X	X
UE.8	Runway/taxiway incursion				X	X		X
UE.9	Loss of separation in flight/ and/or airspace infringement /level bust		X			X	X	X
UE.10	Wildlife hazard, including bird strike		X		X	X	X	
UE.11	Ground-onboard interface failure (Misunderstanding, unsuitability of transmitted information, etc)	X	X	X	X	X	X	X
UE.12	Aircraft maintenance event	X	X		#	X	X	X
UE.13	Fire/Smoke inflight	#	X				X	X
UE.14	Aircraft system failure resulting in flight management disturbance	X	X		#	X	X	X
UE.15	Loss of cabin pressure		X	#			X	
UE.16	Aircraft damage due to FOD		X			X	X	X

MID Region Safety Performance – Safety Indicators

Goals

- 1 Achieve a Continuous Reduction of Operational Safety Risks
- 2 Strengthen States' Safety Oversight Capabilities
- 3 Improve Aerodrome Safety
- 4 Expand the use of Industry Programmes
- 5 Implementation of Effective SSPs and SMSs
- 6 Increase Collaboration at the Regional Level to Enhance Safety





MID Region Safety Priorities

One of the GASP goals is for States to improve their effective safety oversight capabilities and to progress in the implementation of SSPs. Thus, GASP calls for States to put in place robust and sustainable safety oversight systems that should progressively evolve into more sophisticated means of managing Safety. In addition to addressing organizational issues, GASP addresses high-risk categories of occurrences, which are deemed global safety priorities:



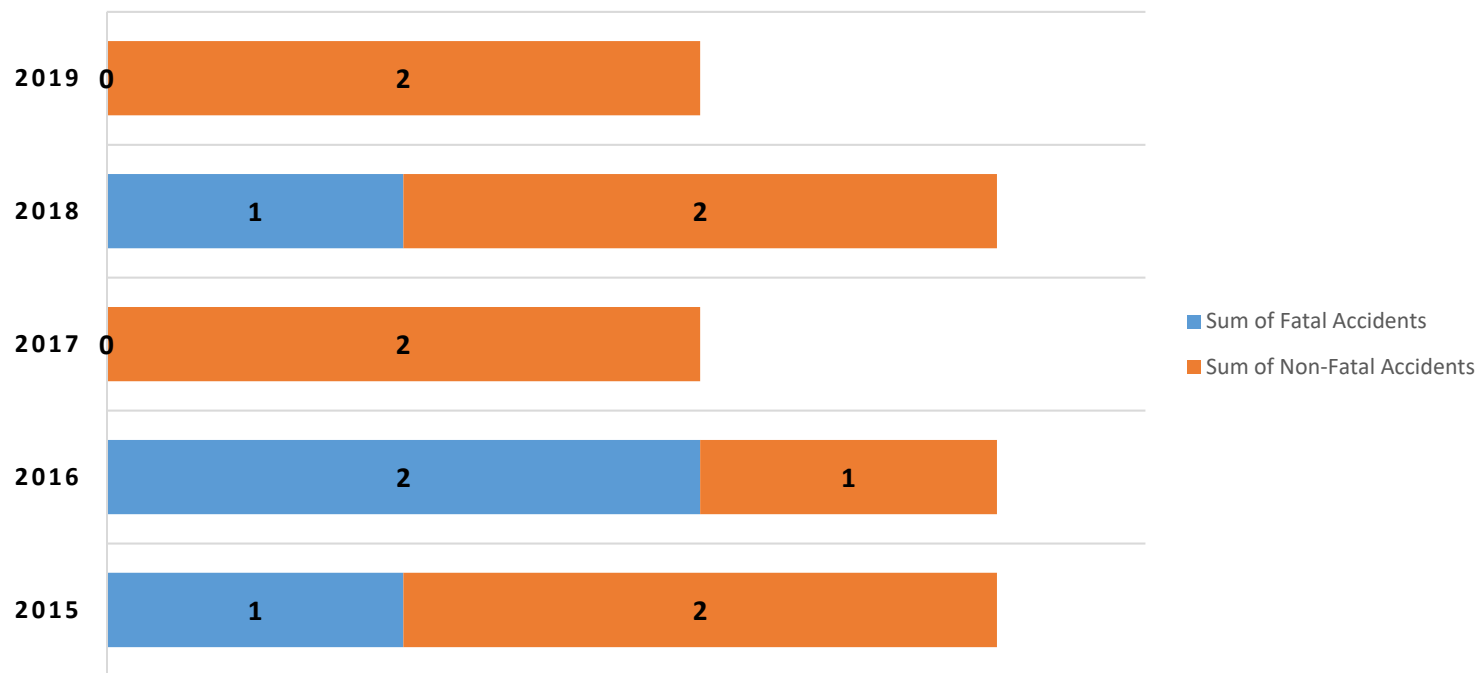


Reactive Safety Information

State of Occurrence



ICAO | UNITING AVIATION **Number of Fatal Accidents & Accidents**

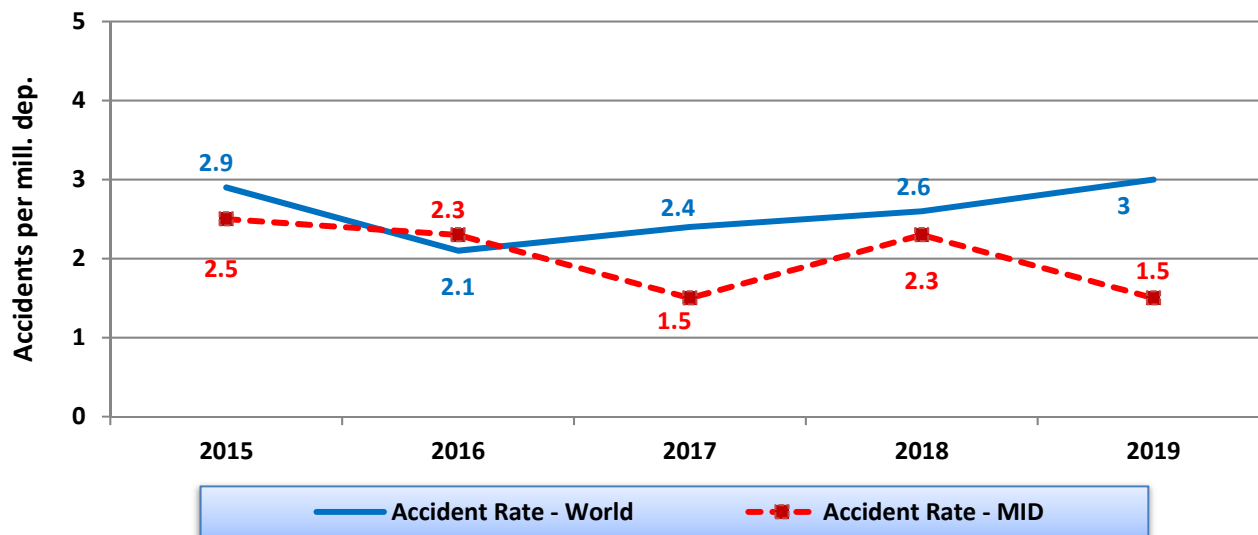


(Source SISG Data and ICAO Report 2019)



Accident Rate

Accident Rate
Scheduled Commercial above 5700 kg



Average 2015-2019

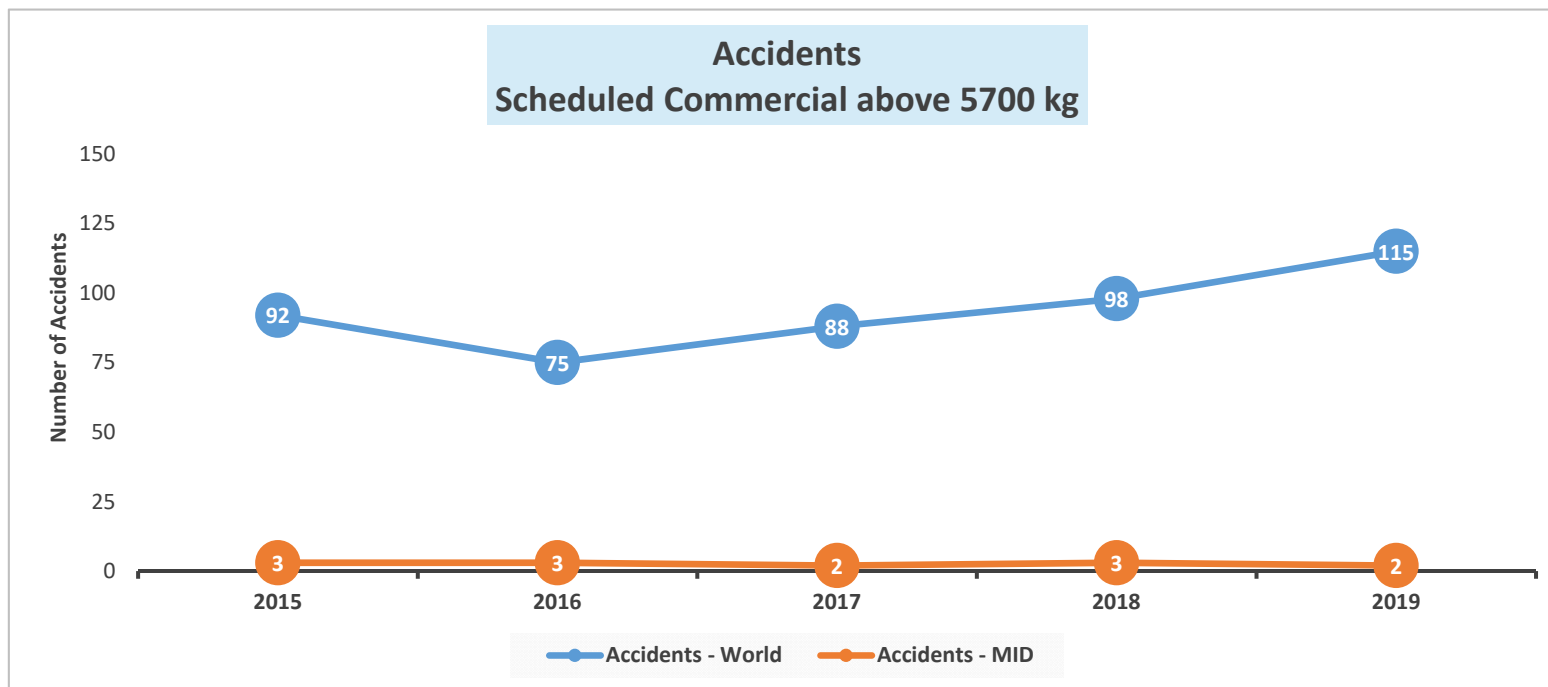
Average MID
2.02

Average Global
2.6

(Source: SISG Data as of March 20 & ICAO ASR)



Number of Accident

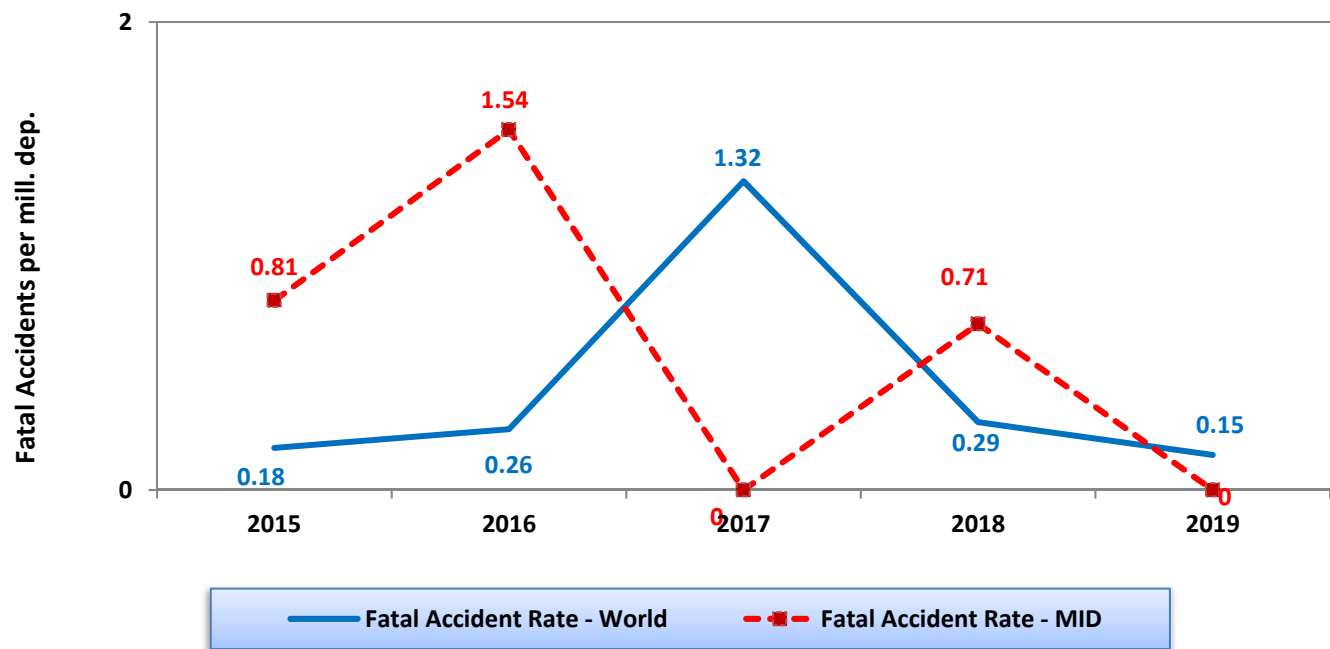


(Number of MID Accidents Vs. Number of Global Accidents Per Year Source SISG Data and ICAO Report 2019)



Fatal Accident Rate

Fatal Accident Rate
Scheduled Commercial above 5700 kg



Average 2015-2019

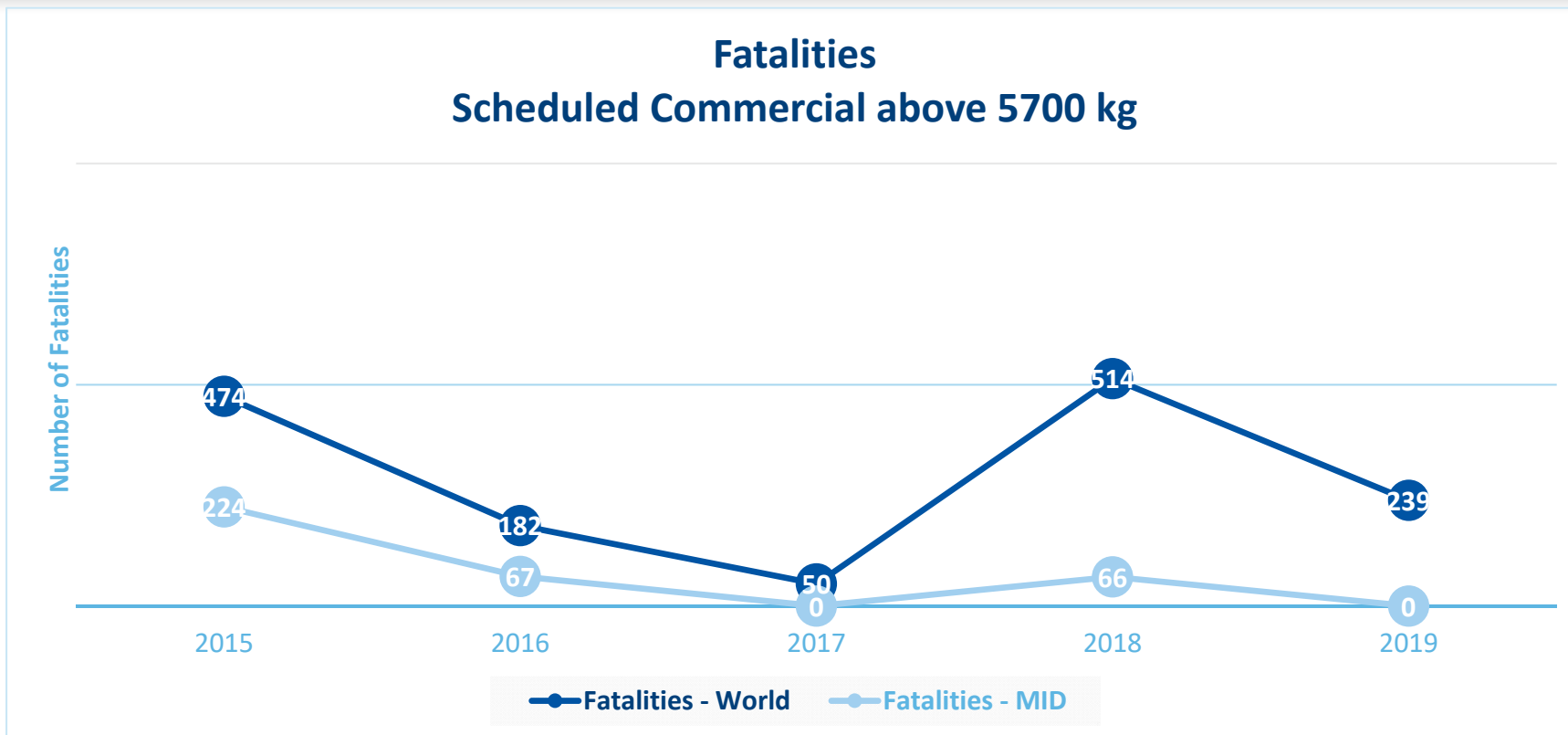
Average MID
0.61

Average Global
0.44

(Source: SISG Data and ICAO Reports)



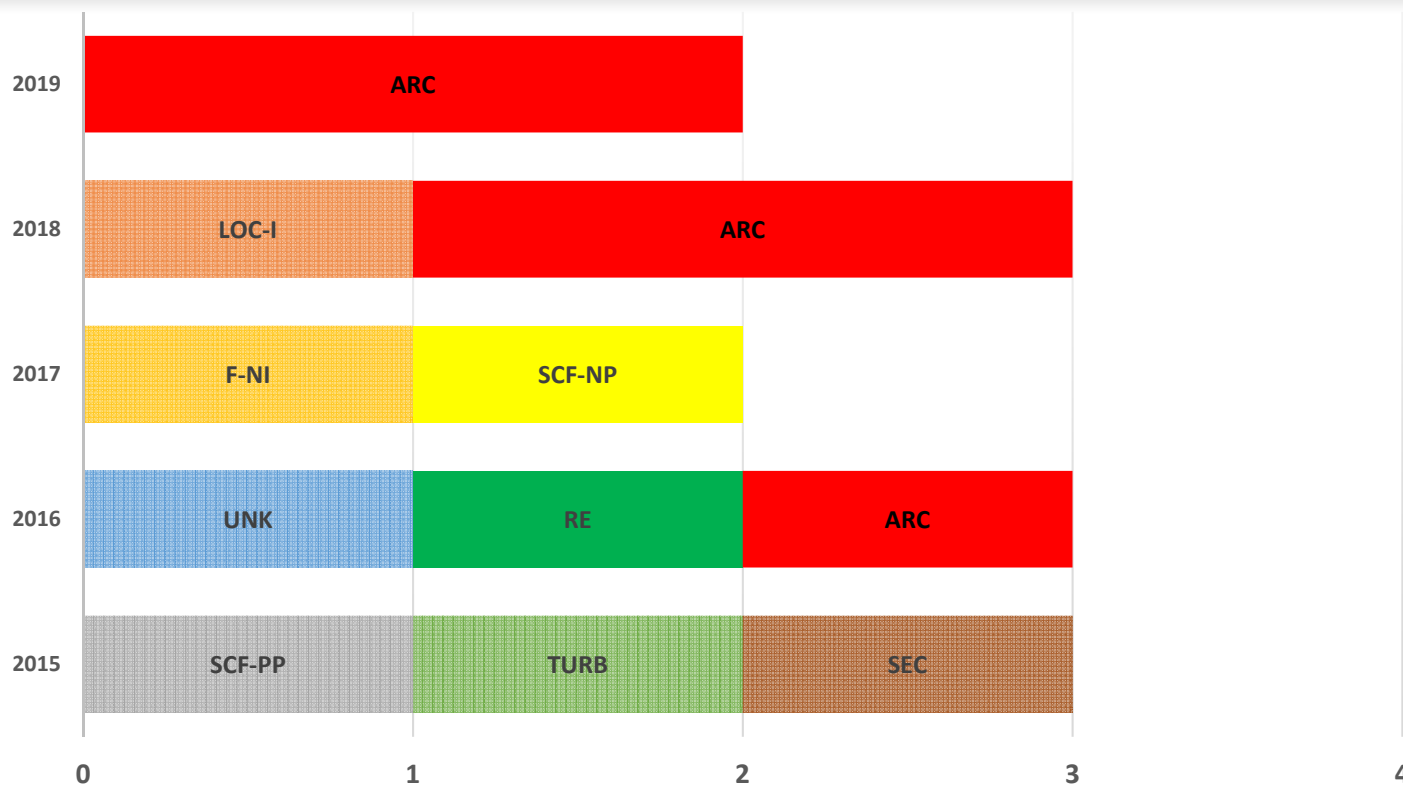
Number of Fatalities



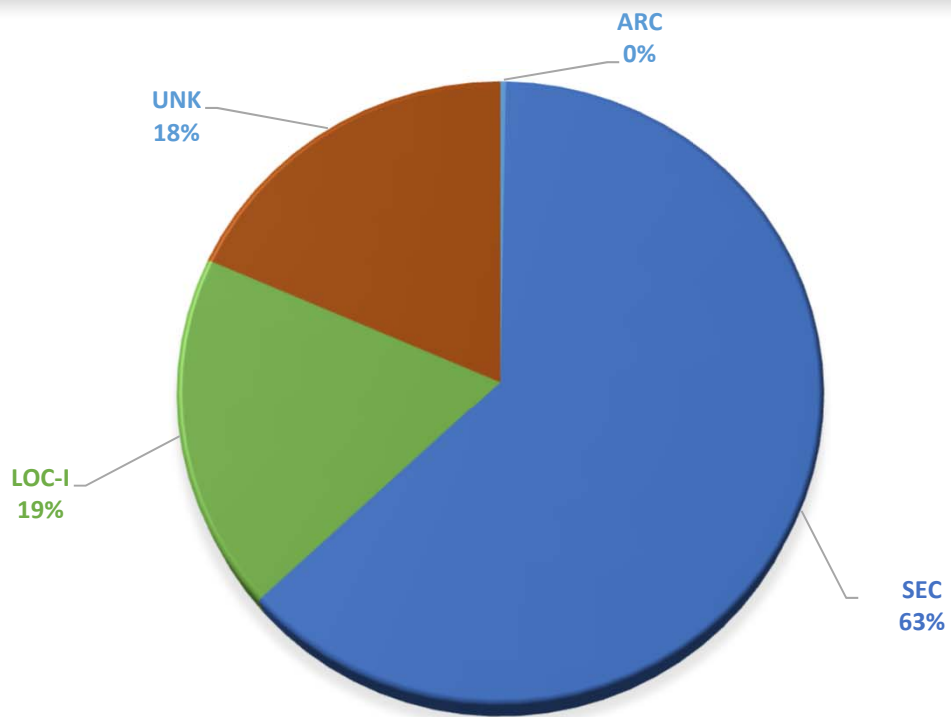
(Source ICAO Safety Reports)



ICAO UNITING AVIATION Distribution of Occurrence Category Per Year (2015-2019)



Source: SISG & ICAO Safety Reports



Source: SISG & ICAO Safety Reports

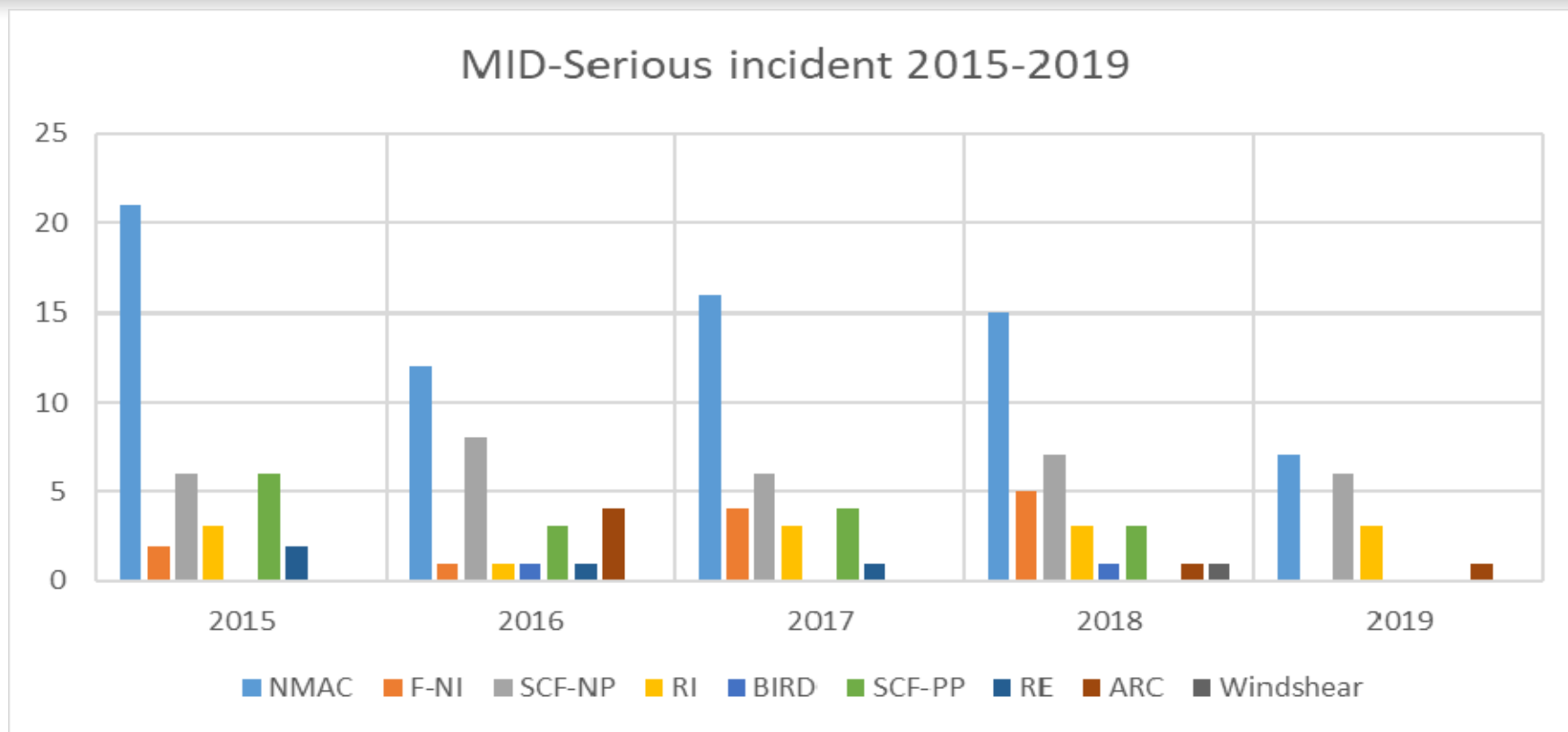


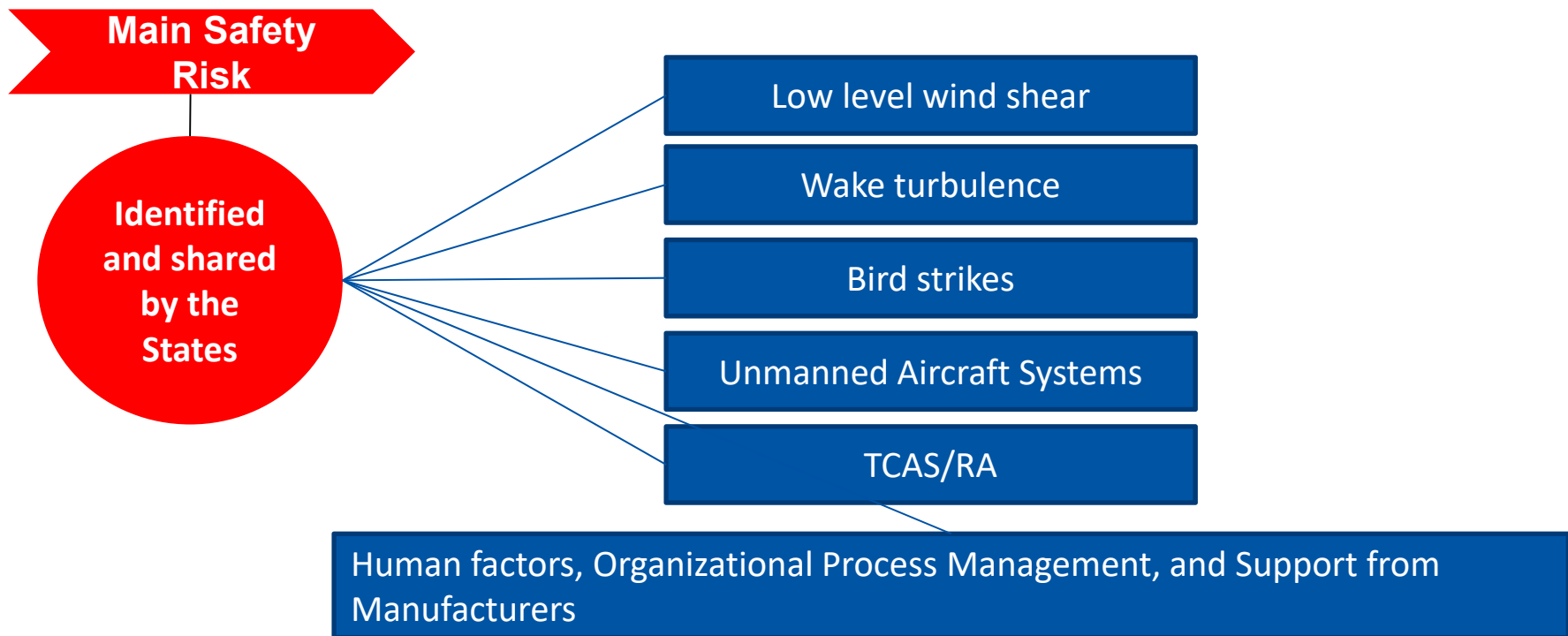
The main safety risk areas identified according to the State of occurrence's accidents data are:

- 1 Loss of Control – Inflight – (LOC-I)
- 2 Runway Excursion (RE) and Abnormal Runway Contact (ARC) during landing
- 3 Security related-(SEC)



Serious Incidents





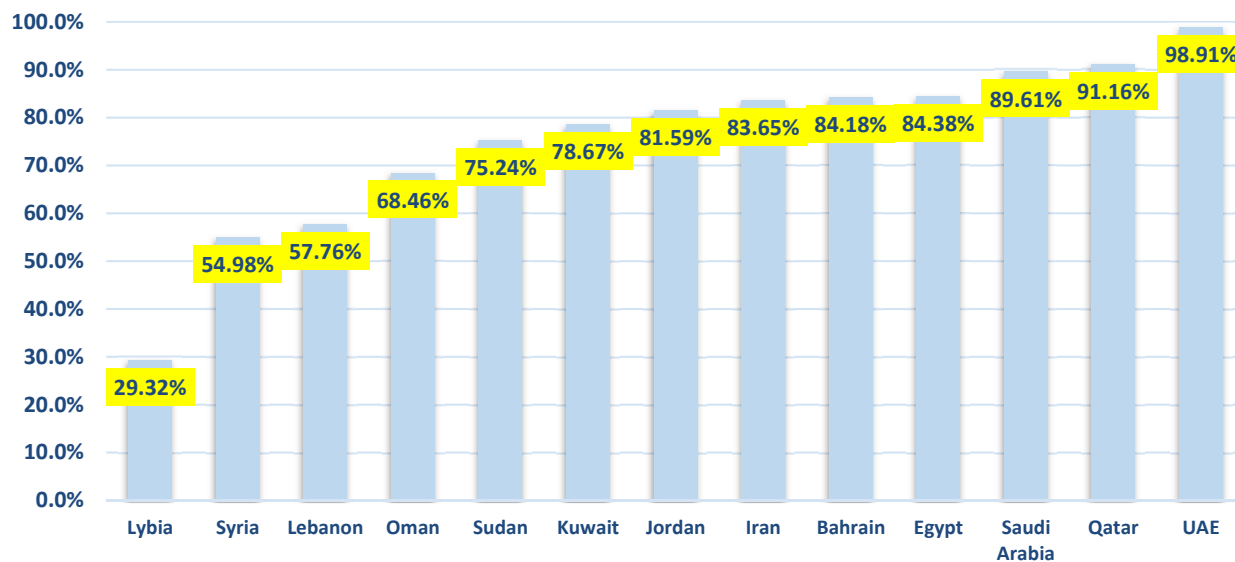


Proactive/Predictive Safety Information





Effective Implementation (EI)



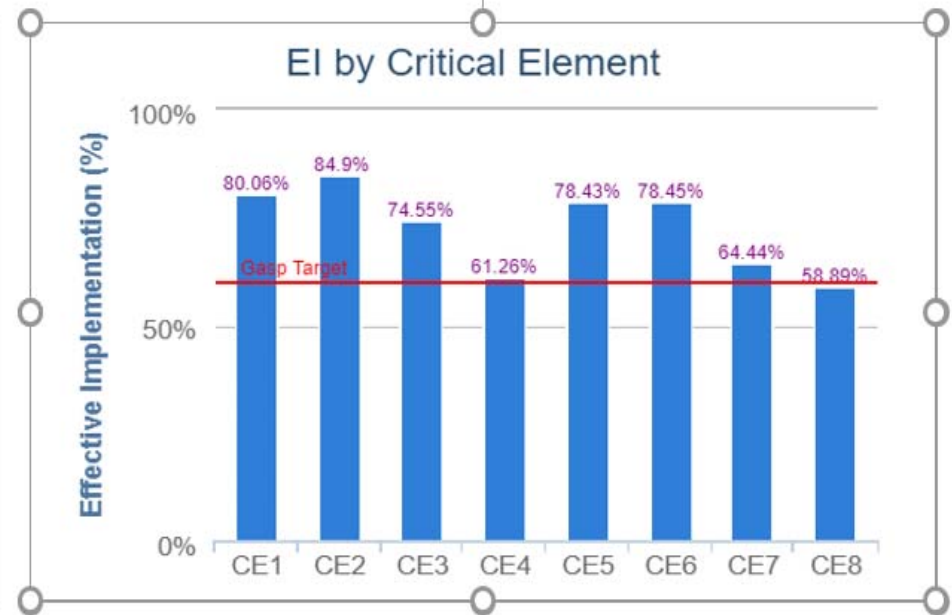
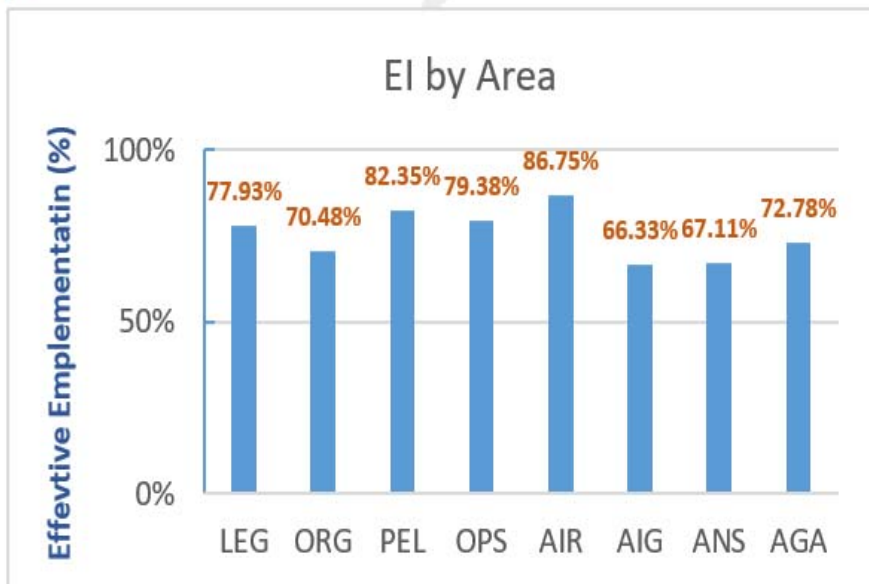
13 out of 15 States have been audited

Overall MID EI = 75.59% which is above Global average (68.39%)

3 states are below 60% (Libya, Syria, Lebanon)

NO SSC in MID Region

Source: ICAO USOAP CMA On Line Framework (OLF), as of May 8, 2020

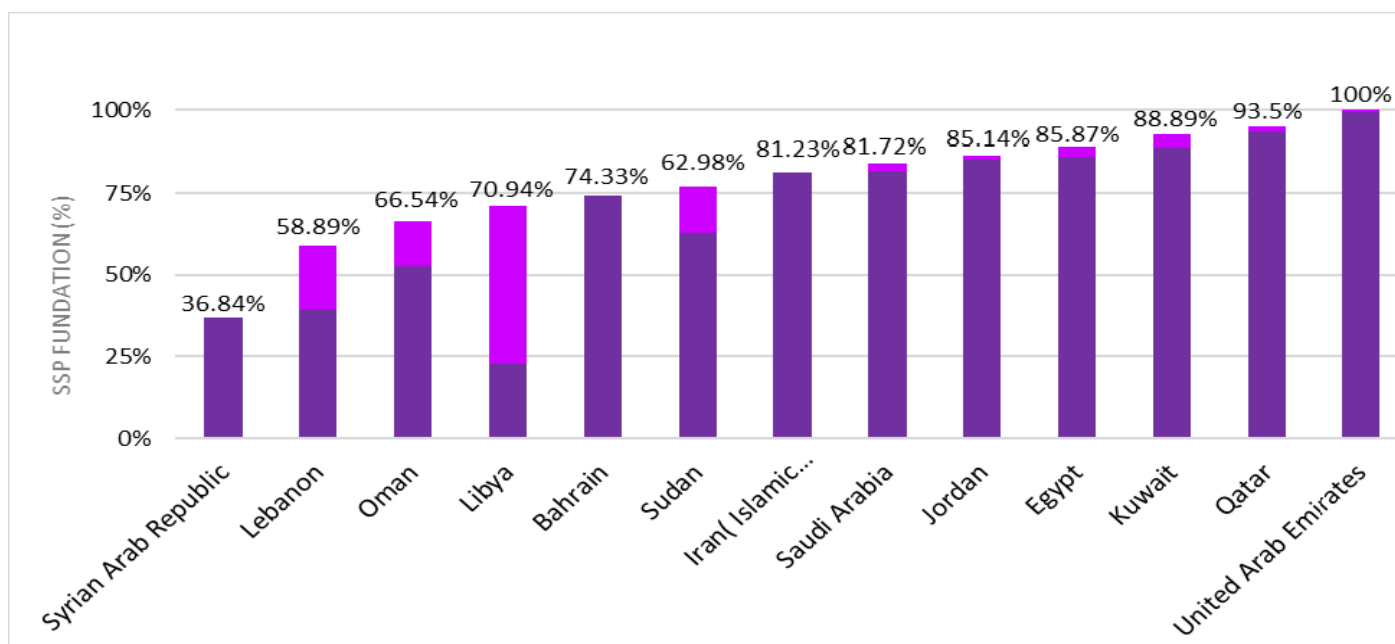


8 areas and 6 critical elements are above the target of 60%

Critical element CE8 (Resolution of Safety issues) is the lowest in terms of EI (below 60%)



MID Region State Safety Programme (SSP) Foundation

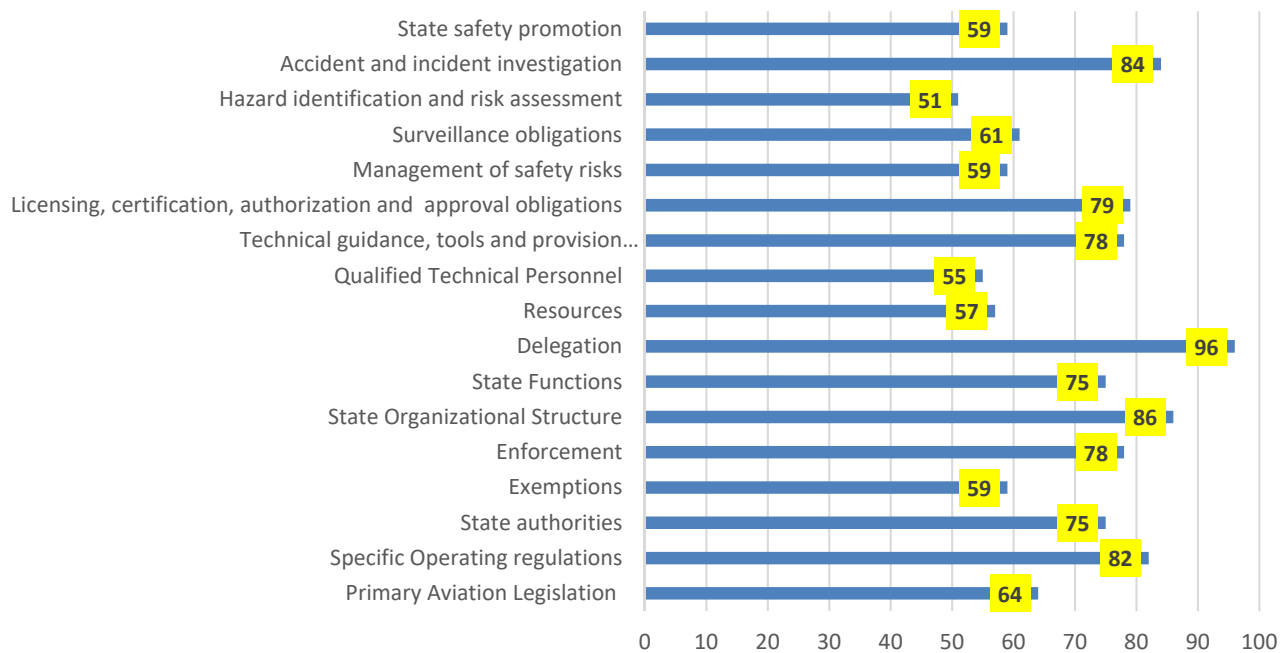


Average EI for SSP foundation PQs for States in the MID Region is **76,21%**.

Source: iSTARS as of 8 May 2020)



Average EI by Safety Management subjects for States in MID Region

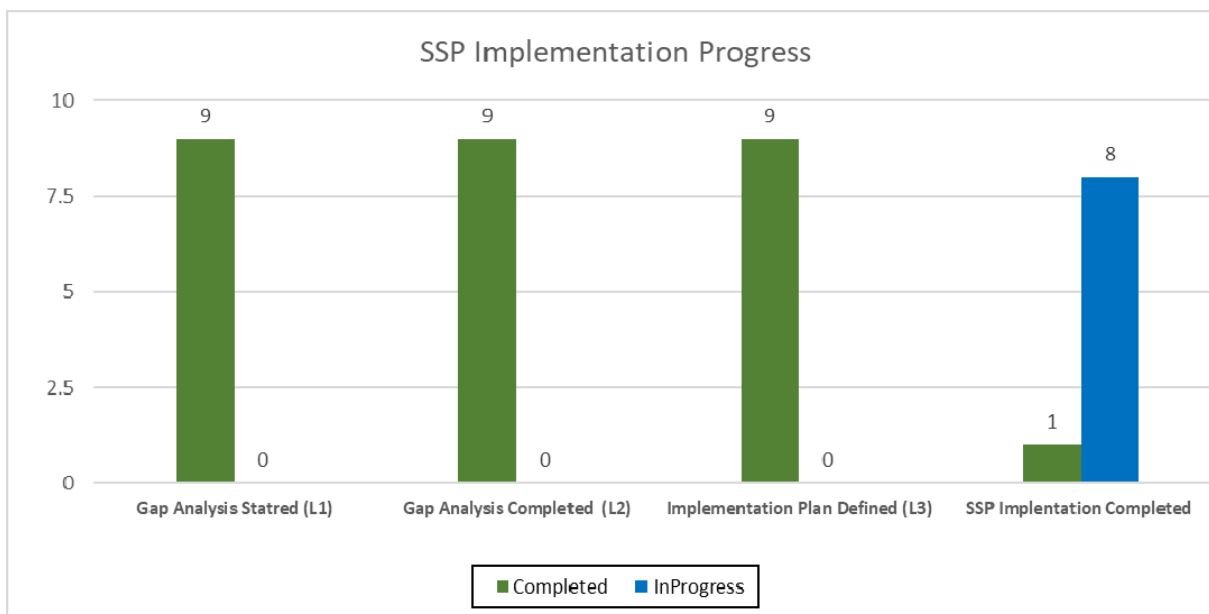


States with EI above 60% may still have PQs to address which are fundamental for their SSP

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SSP Implementation Progress

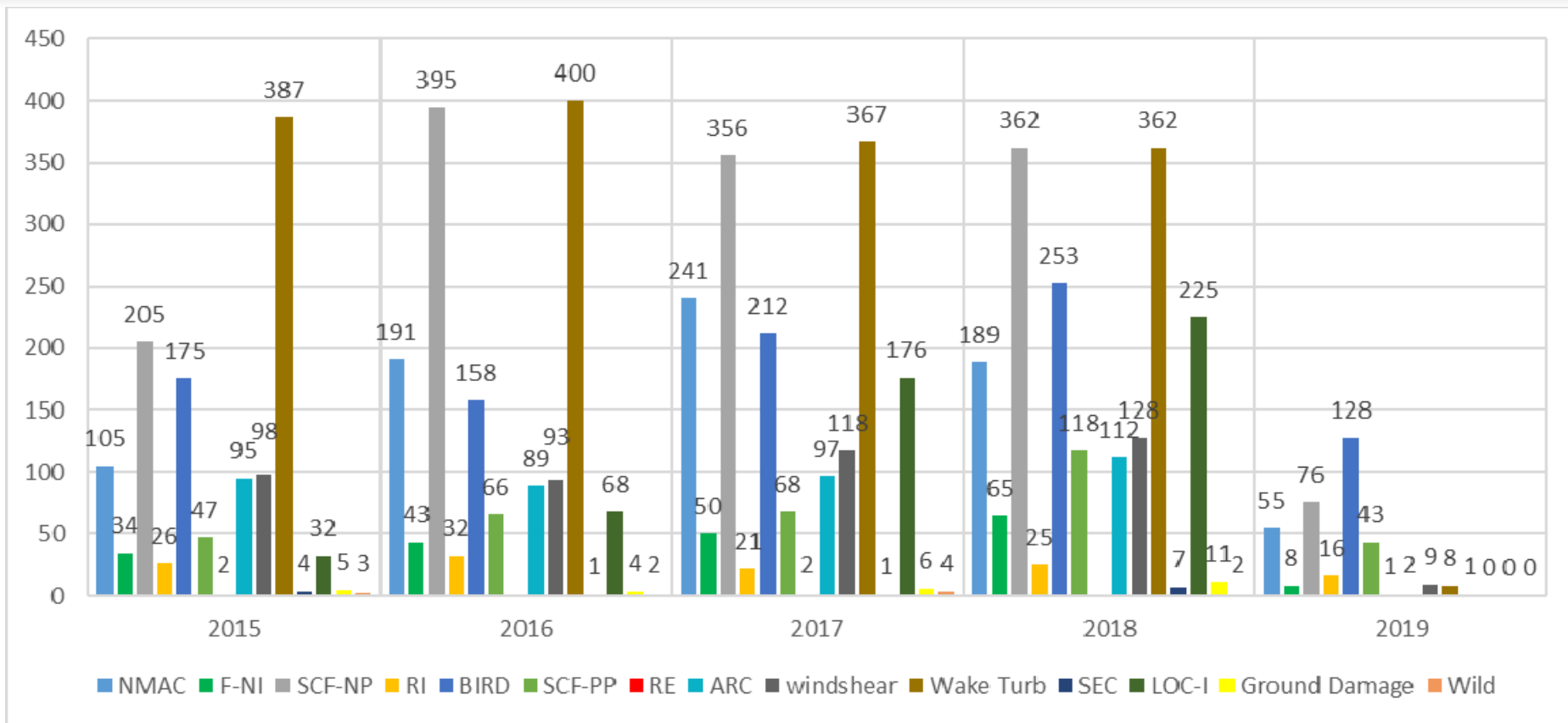


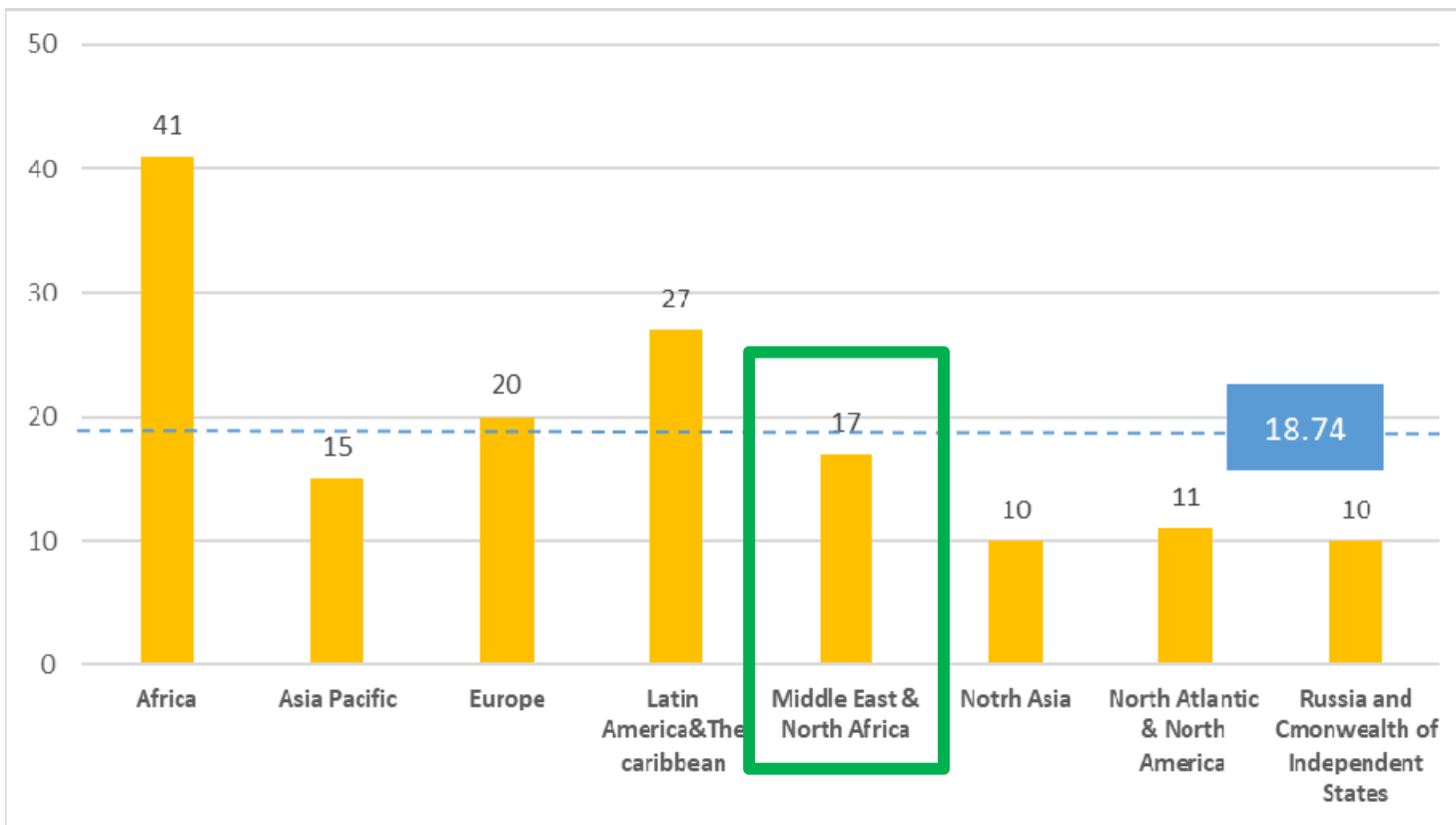
State Safety Programme (SSP) Implementation	
Level 1	States having started a gap analysis
Level 2	States having reviewed all the gap analysis questions
Level 3	States having defined an action plan for non-implemented questions
Level 4	States having closed all action and fully implemented their SSPs

Source: iSTARS as of 8 May 20

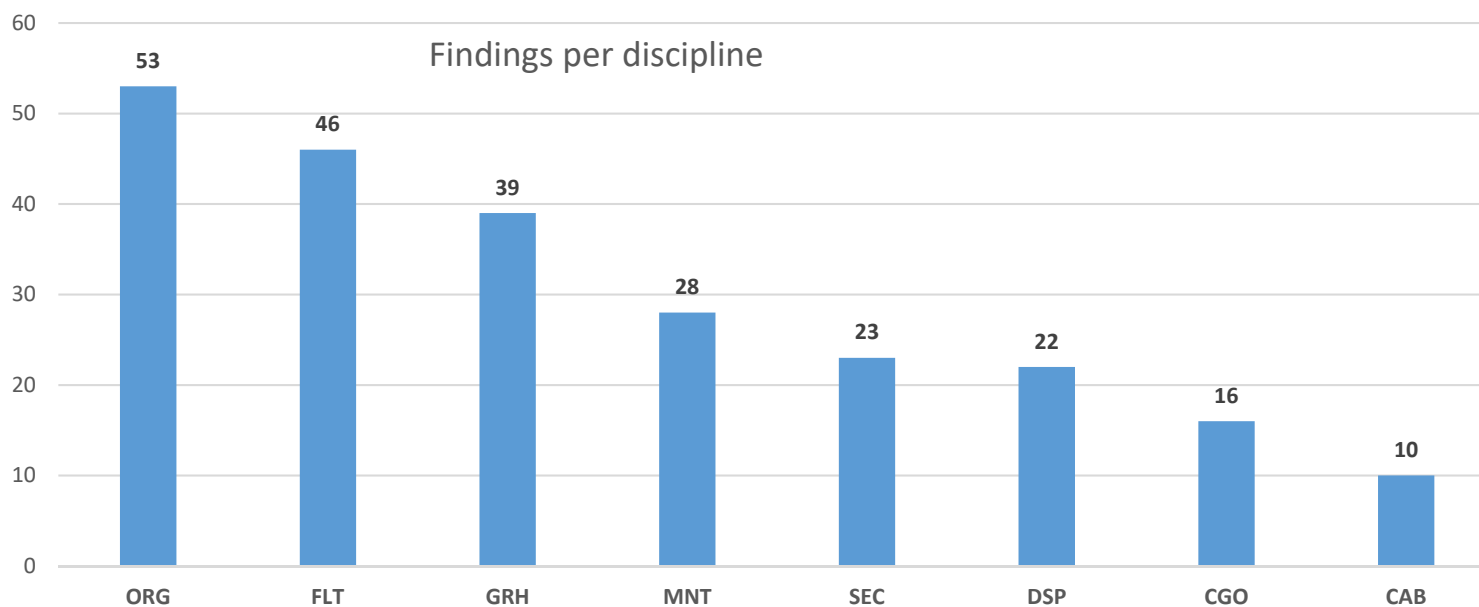


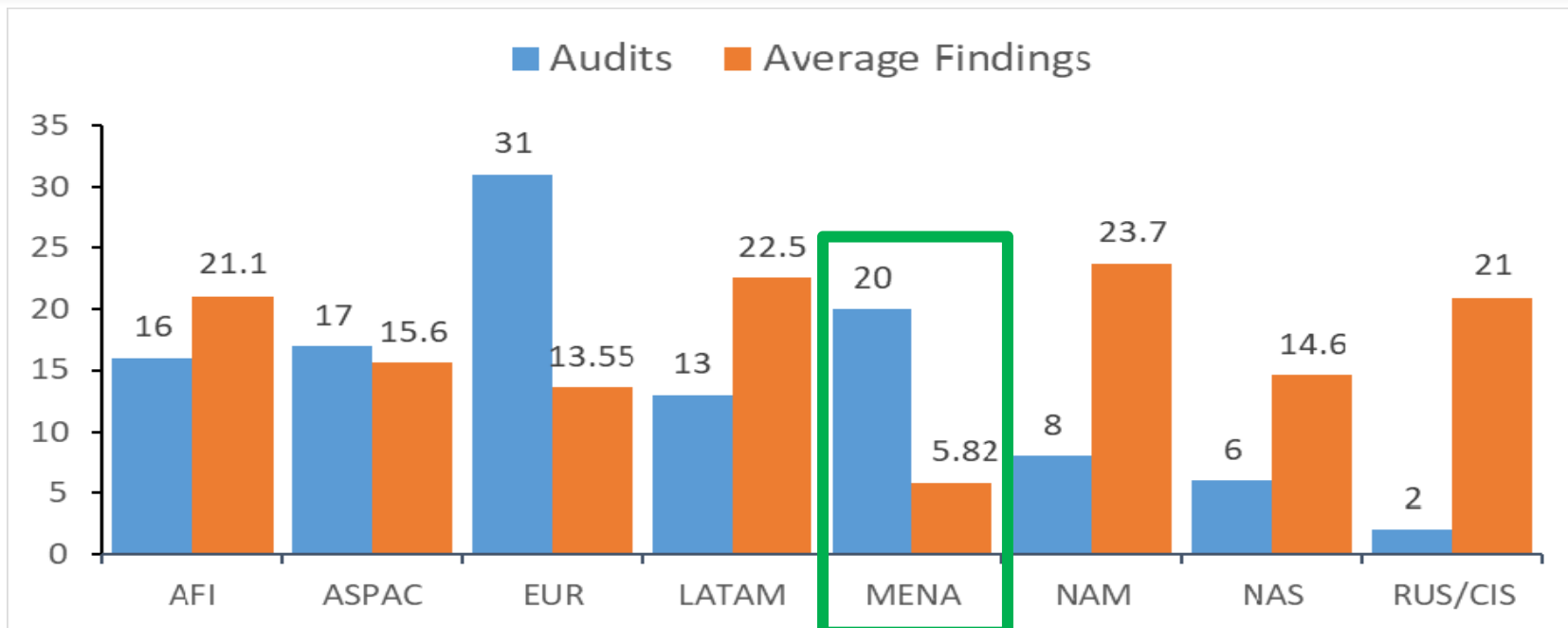
Incidents Reported by the States



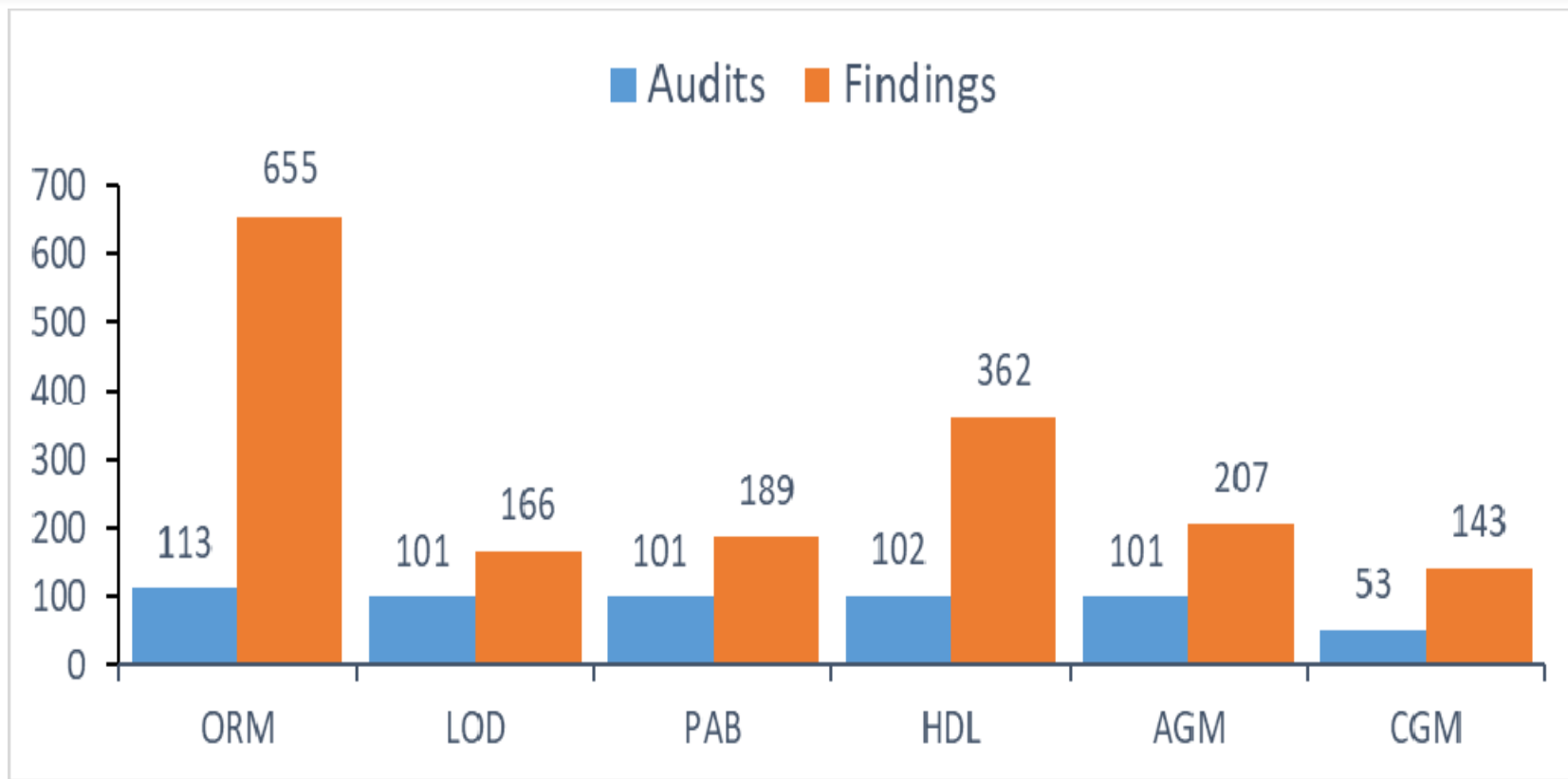


16 audits were performed in the MENA Region with an average of 17 findings per audit





In MENA, a total of 20 audits performed with an average of 5.82 findings raised per audit





MID Region Safety Performance - Safety Indicators





		Average 2015-2019		2019	
Safety Indicator	Safety Target	MID	Global	MID	Global
Number of accidents per million departures	Reduce/Maintain the regional average rate of accidents to be in line with the global average rate by 2016	2.02	2.6	1.5	3
Number of fatal accidents per million departures	Reduce/Maintain the regional average rate of fatal accidents to be in line with the global average rate by 2016	0.61	0.44	0	0.15
Number of Runway Excursion related accidents per million departures	Reduce/Maintain the regional average rate of Runway Excursion related accidents to be below the global average rate by 2016	0.15	0.36 (2017-2019)	0	0.43
Number of Runway Incursion accidents per million departures	Regional average rate of Runway Incursion accidents to be below the global average rate	0	0 (2017-2019)	0	0
Number of LOC-I related accidents per million departures	Reduce/Maintain the regional average rate of LOC-I related accidents to be below the global rate by 2016.	0.14	0.08	0	0.05
Number of CFIT related accidents per million departures	Reduce/Maintain the regional average rate of CFIT related accidents to be below the global rate by 2016.	0	0	0	0
Number of Mid Air Collision (accidents)	Zero Mid Air Collision accident	0	0	0	0



Safety Indicator	Safety Target	MID	Remark
A. Regional average EI	a. Increase the regional average EI to be above 70% by 2020	75.59	Target Achieved
B. Number of MID States with an overall EI over 60%.	11 MID States to have at least 60% EI by 2020	10 States	
C. Regional average EI by area	c. Regional average EI for each area to be above 70% by 2020	6 areas	
D. Regional average EI by CE	d. Regional average EI for each CE to be above 70% by 2020	5 CEs	
E. Number of Significant Safety Concerns	MID States resolve identified Significant Safety Concerns as a matter of urgency and in any case within 12 months from their identification. No significant Safety Concern by 2016.	None	Target Achieved



Goal 3: Improve Aerodrome Safety

Safety Indicator	Safety Target	MID	Remark
Number of certified International Aerodrome as a percentage of all International Aerodromes in the MID Region	A. 50% of the international aerodromes certified by 2015.	67%	
	B. 75% of the international aerodromes certified by 2017.		
Number of established Runway Safety Team (RST) at MID International Aerodromes.	50% of the International Aerodromes having established a RST by 2020	57%	Target Achieved



Safety Indicator	Safety Target	MID	Remark
Use of the IATA Operational Safety Audit (IOSA), to complement safety oversight activities.	A. Maintain at least 60% of eligible MID airlines to be certified IATA-IOSA at all times.	A. 57% (As of Sep 2017)	
	B. All MID States with an EI of at least 60% use the IATA Operational Safety Audit (IOSA) to complement their safety oversight activities by 2018	5 out of 10 States (50%)	
Use of the IATA Safety Audit for Ground Operations (ISAGO) certification, as a percentage of all Ground Handling service providers	The IATA Ground Handling Manual (IGOM) endorsed as a reference for ground handling safety standards by all MID States by 2020	5 States out of 10 signed ISAGO MOU 50%	



Safety Indicator	Safety Target	MID	Remark
Number of States that have completed the SSP Gap Analysis on iSTARS	13 MID States by 2020	9 States	
Number of States that have developed an SSP implementation plan	13 MID States by 2020	9 States	
Regional Average overall SSP Foundation (in %)	70% by 2022	76.22%	Target achieved
Number of States that have fully implemented the SSP Foundation	10 MID States by 2022	1 State	
Number of States that have implemented an effective SSP	7 MID States by 2025	TBD	



Safety Indicator	Safety Target	MID	Remark
Number of States attending the RASG-MID meetings	At least 12 States from the MID Region	14 States	
Number of States providing required data related to accidents, serious incidents and incidents to the MID-ASRTASRG	All States from the MID Region	9 States	
Number of States that received assistance/support through the RASG-MID, MENA RSOO and/or other NCLB mechanisms	All States having an EI below 60% to be member of the MENA RSOO	10 States	
	All States having an EI below 60% to have an approved NCLB Plan of Actions for Safety (agreed upon with the ICAO MID Office)		



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MID Region Safety Priorities



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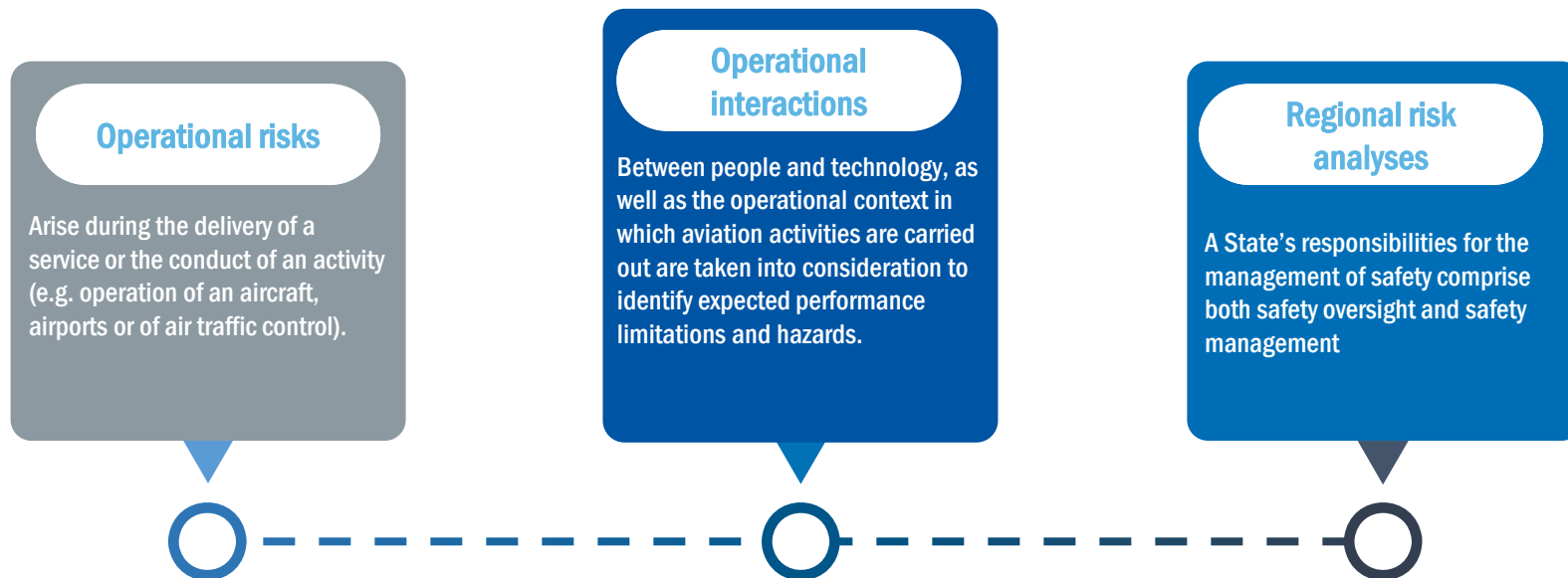


MID Region Safety Priorities





Operational Safety Risks





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Regional Operational Safety Risks



Loss of Control In-flight



Runway Excursion/ARC



Controlled Flight into Terrain



Mid Air Collision



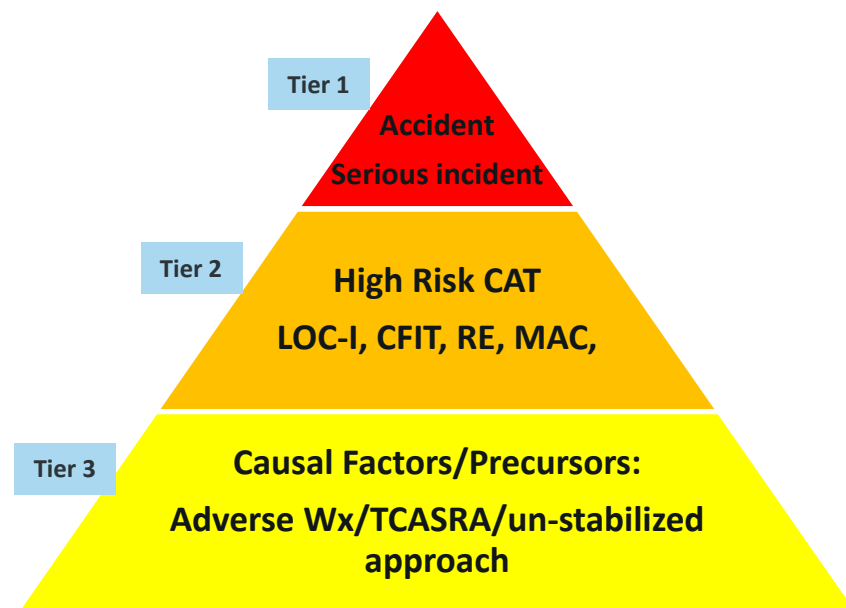
Collision on Runway





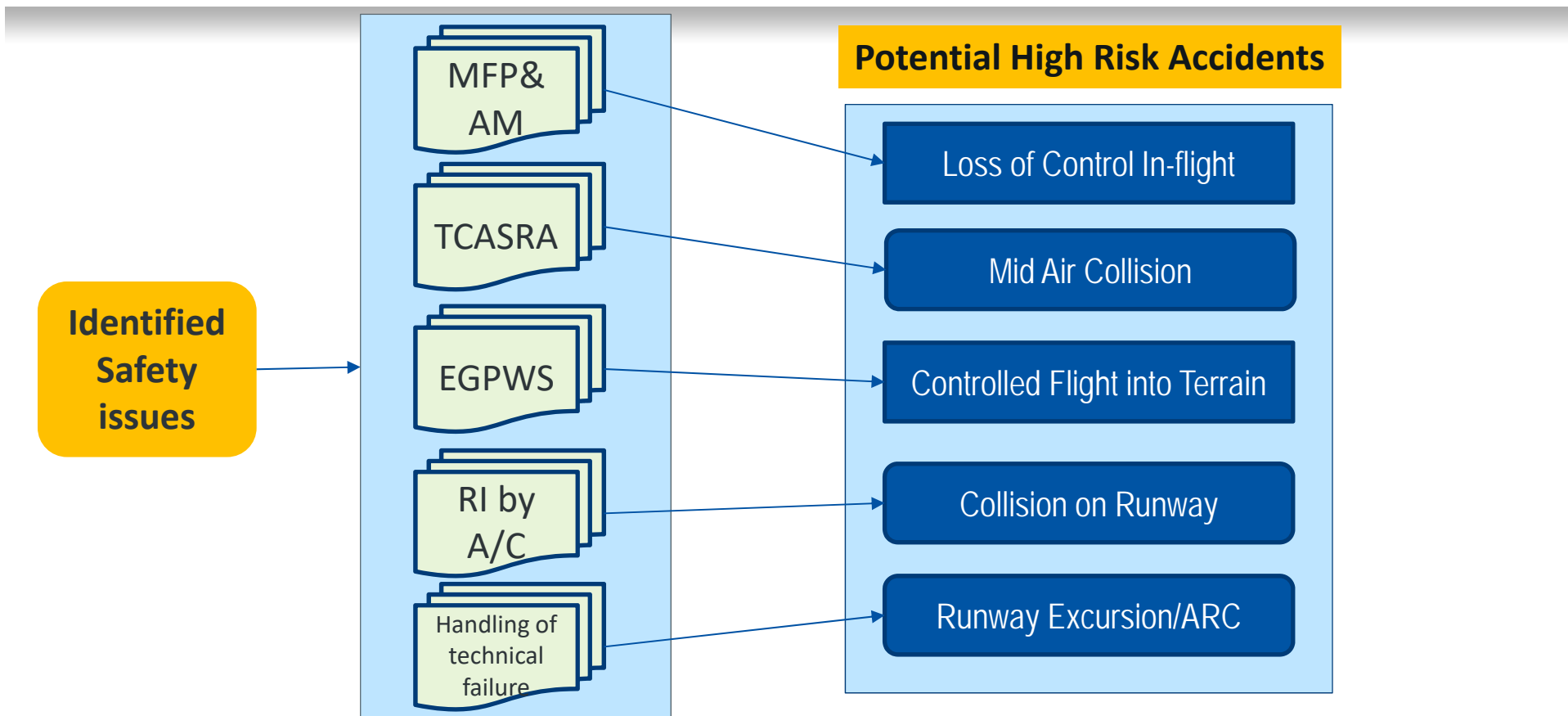
Identified Safety Issues

Safety Issues	Accident Severity	Potential Accident Outcome						
		CFIT	LOC-I	MAC	GCOL	RE/ARC	Injury Damage inflight	Injury on C
Monitoring of flight parameters and automation modes	Catastrophic	x	x			x	x	
Convective weather	Catastrophic	x	x			x		
Flight planning and preparation	Catastrophic	x	x			x		
Crew Resource Management	Catastrophic	x	x	x		x		
Handling of technical failure	Catastrophic	x	x			x		
Handling and execution of GOA	Catastrophic	x	x			x		
Loss of separation in flight/ and or airspace/TCAS RA	Catastrophic			x			x	
Experience, training and competence of Flight Crews	Catastrophic	x	x	x		x		
Deconfliction between IFR and VFR traffic	Catastrophic			x			x	
Inappropriate flight control inputs	Catastrophic		x			x		
Contained engine Failure/Power Plant Malfunctions	Catastrophic	x	x			x	x	
Birdstrike/Engine Bird ingestion	Catastrophic		x			x		
Fire/Smoke-non impact	Catastrophic		x				x	
Wake Vortex	Catastrophic		x				x	
Deviation from pitch or roll attitude	Catastrophic	x	x			x		
Security Risks with impact on Safety	Catastrophic		x					
Tail/Cross wind/Windshear	Catastrophic		x			x		
Runway Incursion	Catastrophic				x	x		
Maintenance events	Catastrophic	x	x			x	x	
Contaminated runway/Poor braking action	Major					x		
Clear Air Turbulence (CAT) and Mountain Waves	Catastrophic		x				x	





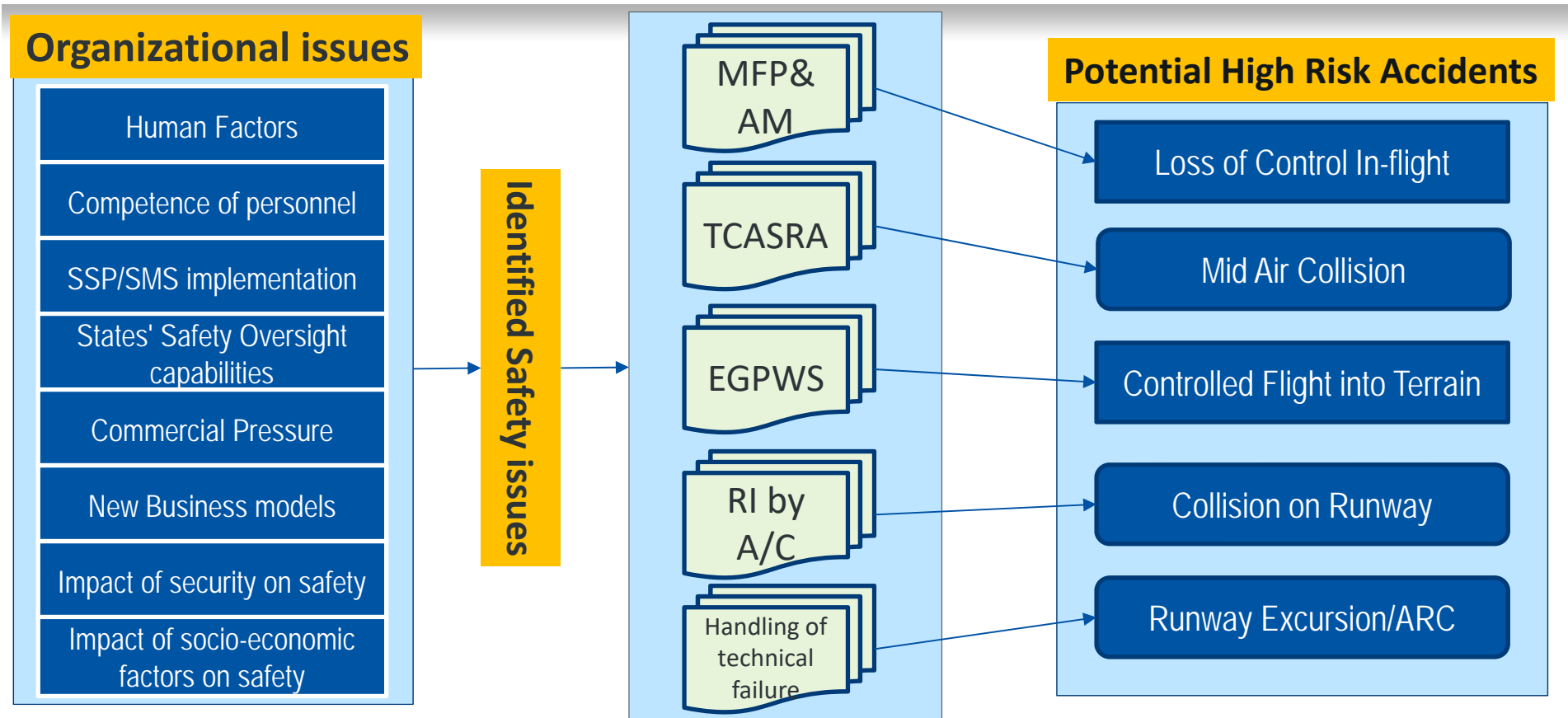
Identified Safety Issues





ORGANIZATIONAL ISSUES







1 States' Safety Oversight capabilities

Effective implementation in certification, surveillance, and resolution of Safety concerns need to be improved

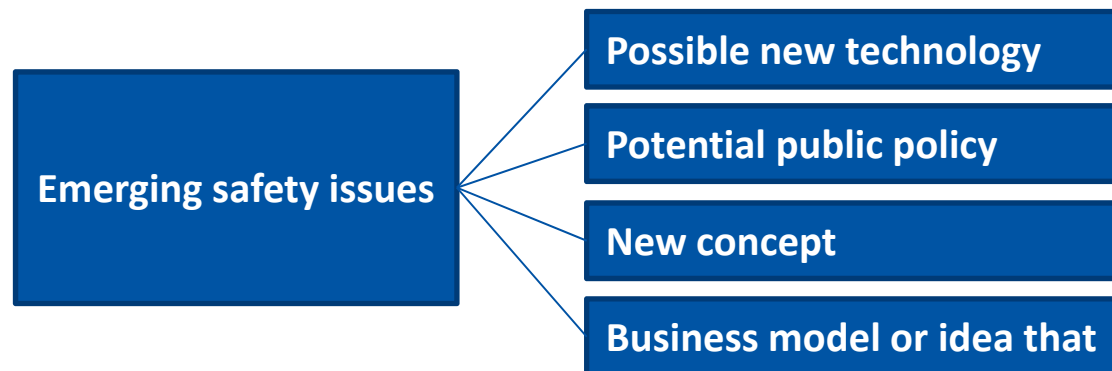
1 Safety Management

Implementation of SSP is one of the main challenges faced by the State in the MID Region





Risks that might impact Safety in the future



While perhaps an outlier today, could mature and develop into a critical mainstream issue in the future or become a major trend in its own right.



GNSS Outages/ Vulnerability

The reports were mainly located in the FIR Middle East- Europe.
The most frequent GPS outage problems reported by the air operators

- Failure of one or both GPS boxes
- Disagreement between GPS positions and the NAV FMSs
- Unable to fly RNP and request for radar vectoring
- Loss of TAWS/HTAWS
- Larger than normal GPS position errors prior to the loss of GPS
- Loss of ADS-B Out over a wide area.
- Missing/ degraded ADS- B In targets
- GPS/SBAS Nav/ GPS Measurements
- Loss of GPS position to SATCOM
- No GPS position for ELT
- Reduced ability to determine flight phase



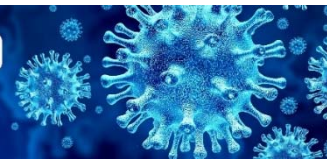


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Emerging Safety risks

ICAO MID
COVID19



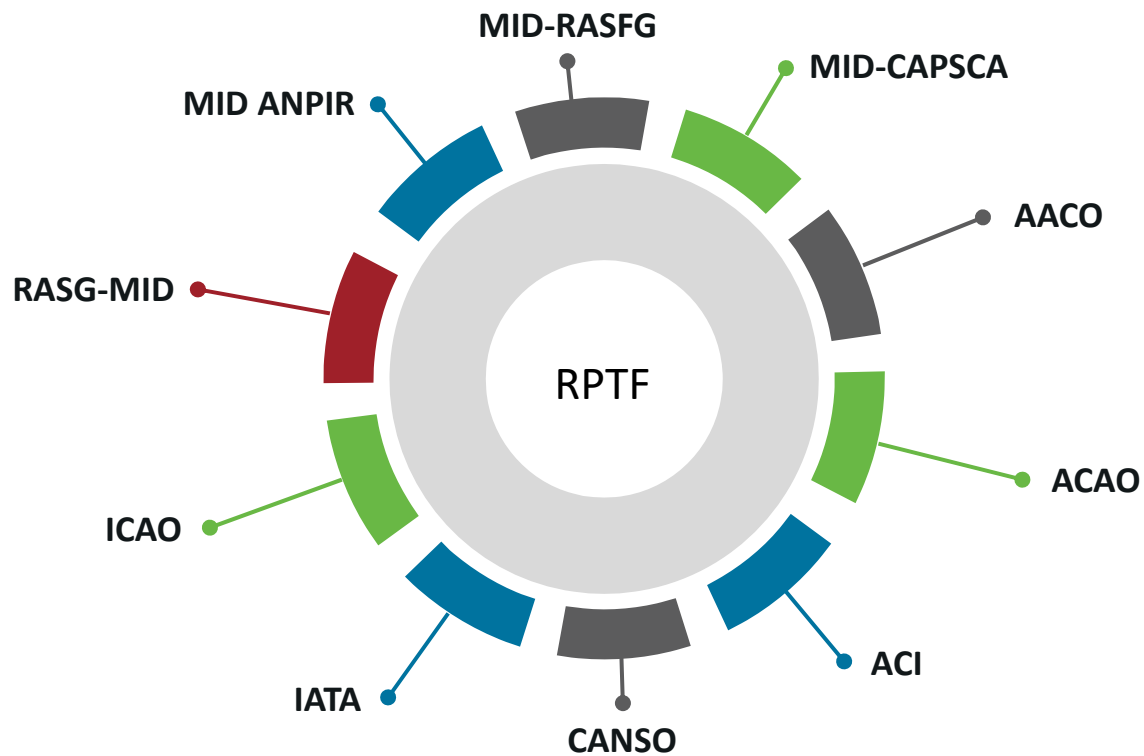
COVID-19 PANDEMIC OUTBREAK

MID Region Recovery Plan Task Force (RPTF)

Main Objectives of RPTF:

Monitor global restart and recovery developments and ensure the harmonization, and where necessary regional customization, of the implementation of these global developments at the Regional level.







ESTABLISHMENT OF 4 TECHNICAL WORK STREAMS

Stream 1

Public Health Requirements

Stream 2

Operational Safety Measures

Stream 3

Airport & Passengers Facilitation

Stream 4

Air Navigation Services/Air Traffic Management



Sharing of Safety Data & information



States are encouraged to provide necessary safety information to the ICAO MID Office, by March 2021

The Draft of the 10th edition of the MID ASR will be presented to the ASRG/3 meeting for review (July 2021).



Challenges

01 Challenge: Low level of safety information, analysis and safety recommendations shared by States (confidentiality concerns); and

02 Challenge: Low participation in the meeting from the States and the organizations



Action by the Meeting

1. Review and update as deemed necessary, the Draft version of the 9th MID-ASR at Appendix C, in order to be presented to the RASG-MID/8 meeting for endorsement;

2. Encourage States and all Stakeholders to provide necessary safety data and information to the MID-ASRG for the development of the next Edition of the Annual Safety Report; and

3. Endorse the following Draft Conclusion:

DRAFT CONCLUSION 2/1: SHARING OF SAFETY DATA ANALYSIS

States are encouraged to provide ICAO MID Office by March 2021 with the number of accidents, serious incidents and incidents, safety data analysis, and their associated safety recommendations related to each occurrence category in Appendix A for the past 5 years (2016 – 2020) and using the template in Appendix B

**3****Future work Programme**

The meeting may wish to note that the ASRG/3 is planned to be held in Cairo, Egypt, 6-8 July 2021.

Action by the Meeting

The meeting is invited to agree on the dates and venue of the ASRG/3 meeting.



MONTREAL
(HEADQUARTERS)

MEXICO CITY
(NORTH AMERICA AND CARIBBEAN)

LIMA
(SOUTH AMERICA)

PARIS
(EUROPEAN AND NORTH ATLANTIC)

DAKAR
(WESTERN AFRICA)

NAIROBI
(EASTERN AFRICA)

CAIRO
(MIDDLE EAST)

BANGKOK
(ASIA-PACIFIC)

BEIJING
(ASIA-PACIFIC SUB-OFFICE)

THANK YOU!