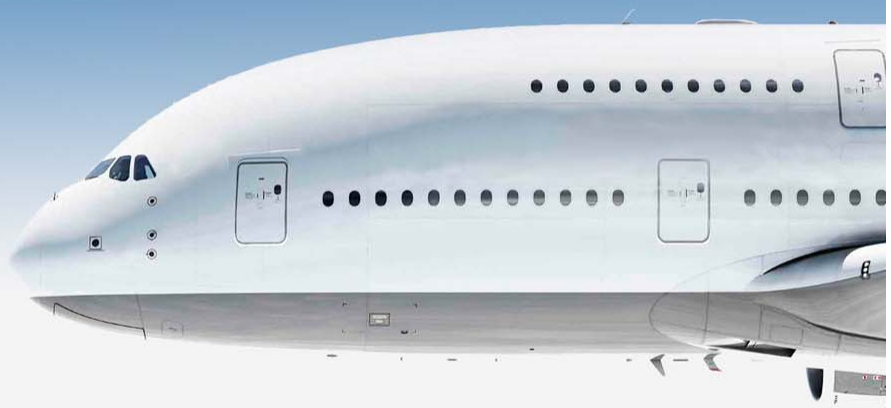
ICAO UNITING AVIATION

ANNUAL SAFETY REPORT



Mohamed Chakib

Regional Officer, Safety Implementation,
International Civil Aviation Organization (ICAO), MID Office

ASRT/3 Meeting
Nov 2018, Cairo

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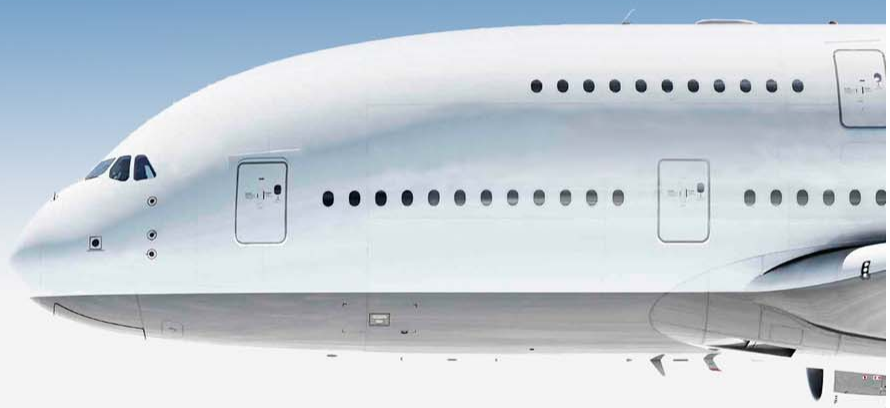
ICAO RGS-WG/5

MID Annual Safety Report

7th Edition Overview

Cairo, Egypt, 25-27 Nov 2018



Mohamed Chakib
Regional Officer, Safety Implementation,
International Civil Aviation Organization (ICAO), MID Office

RGS-WG/5 Meeting
Nov 2018, Cairo

Today's Meeting

- Objective of ASRT
- Risk Assessment Methodology
- Reactive information data
- Proactive information data
- Focus Areas and Emerging Risks
- Challenges
- Way forward

Objective of ASRT

- Gathering and Analyzing safety information
- Identification of safety focus areas & emerging risks
- Production of the annual safety report

  - 1st Edition, Nov 2012
  - 2nd Edition, Jan 2014
  - 3rd Edition, March 2015
  - 4th Edition, May 2016
  - 5th Edition, Jan 2017
  - 6th Edition, June 2018
  - 7th Edition, In progress

Data Collection & Sources

Data collection methods

- Existing safety databases of different aviation stakeholders
- Surveys
- Experts opinion
- Industry meetings

Data sources for ASR (7th edition)

ASR Structure-7th Ed

Reactive

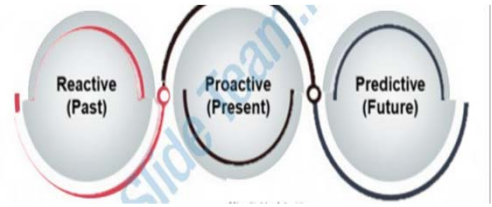
- Fatal Accidents &Accidents
- Serious incidents

Proactive

- Safety audit results and incident reports. An area for improvement!

Predictive

- SSP/SMS implementation and analysis of FDM de-identified data. An area for improvement!



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

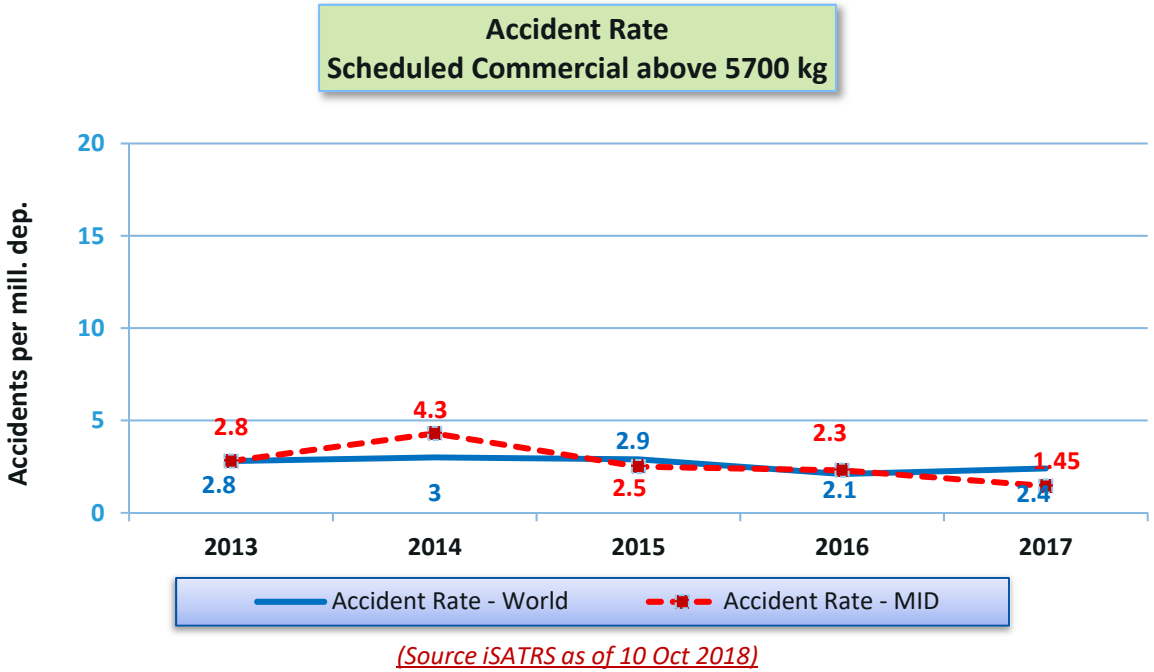
"Feared consequence" of the risk portfolio of DGAC France:

Nb	Identfication of Undesirable Event	Accident types						
		CFIT	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 surafce 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

Reactive Safety Information

State of Occurrence

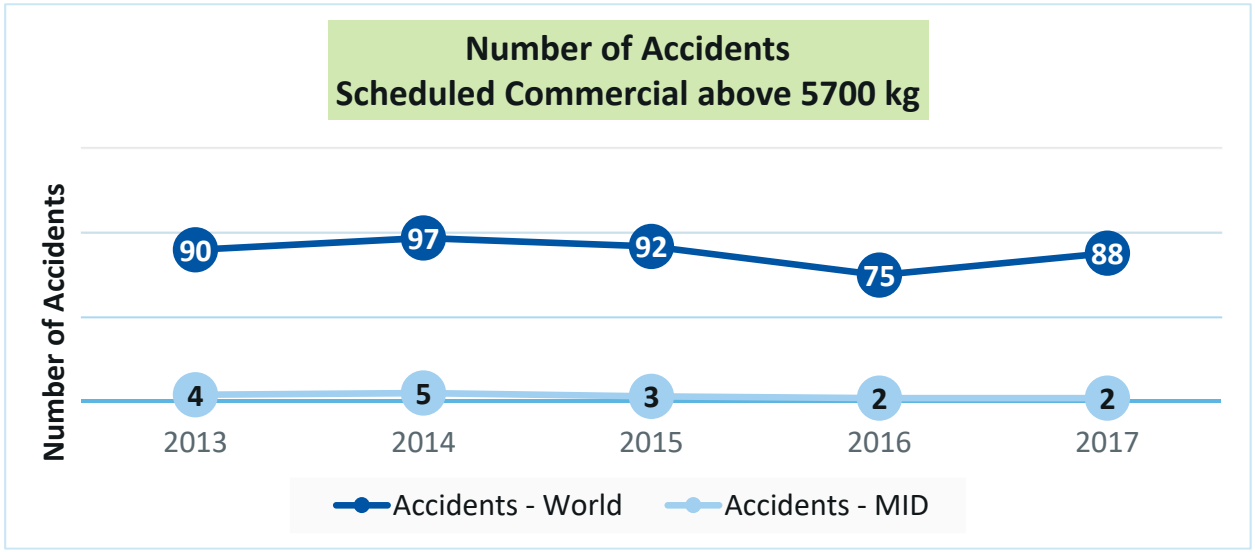
Accident Rate



(Source iSATRS as of 10 Oct 2018)

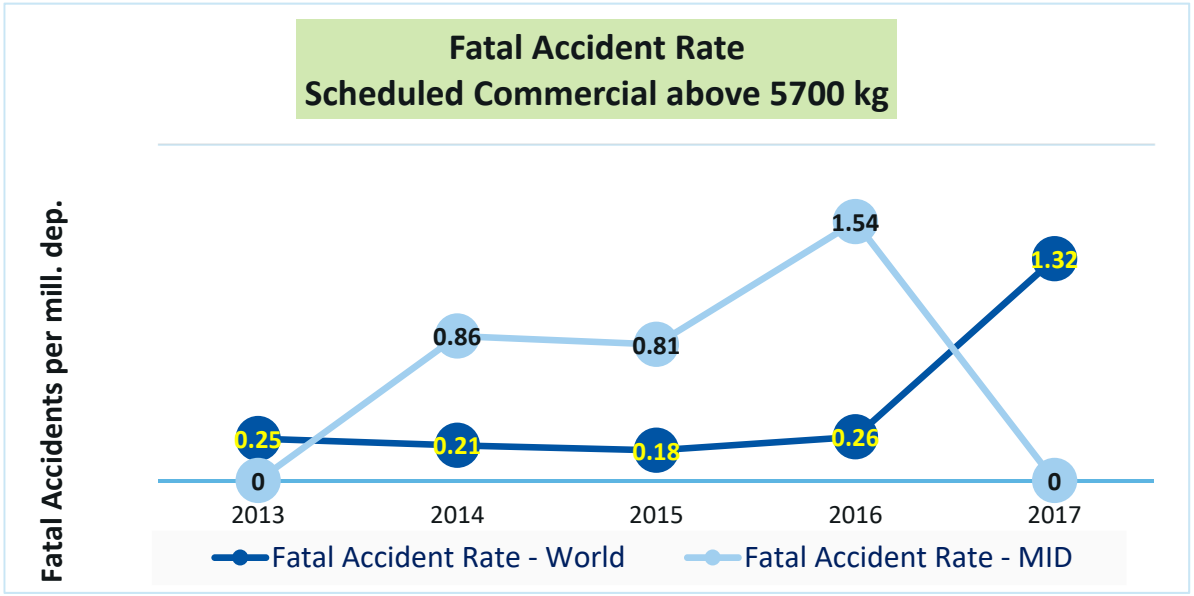
- **Reduced accident rate for 2017 compared to 2016**
- **Below global rate in 2017**
- **Matched 5 year average global rate! (avg global = 2.67)**

Number of Accident



(Source iSATRS as of 10 Oct 2018)

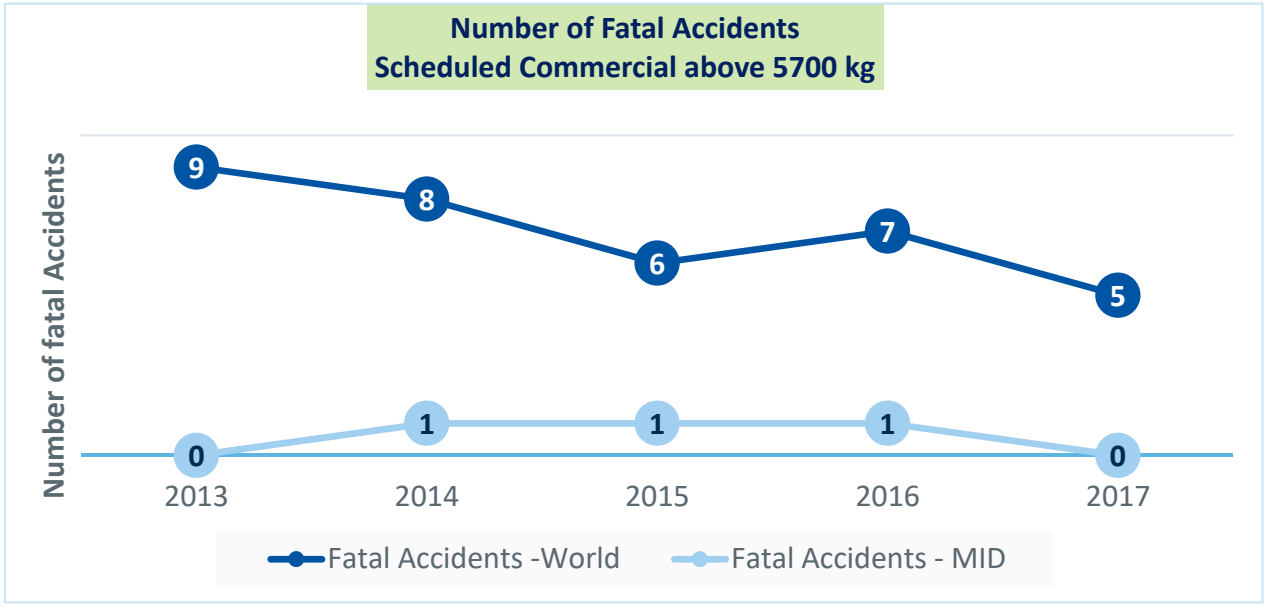
Fatal Accident Rate



(Source iSATRS as of 10 Oct 2018)

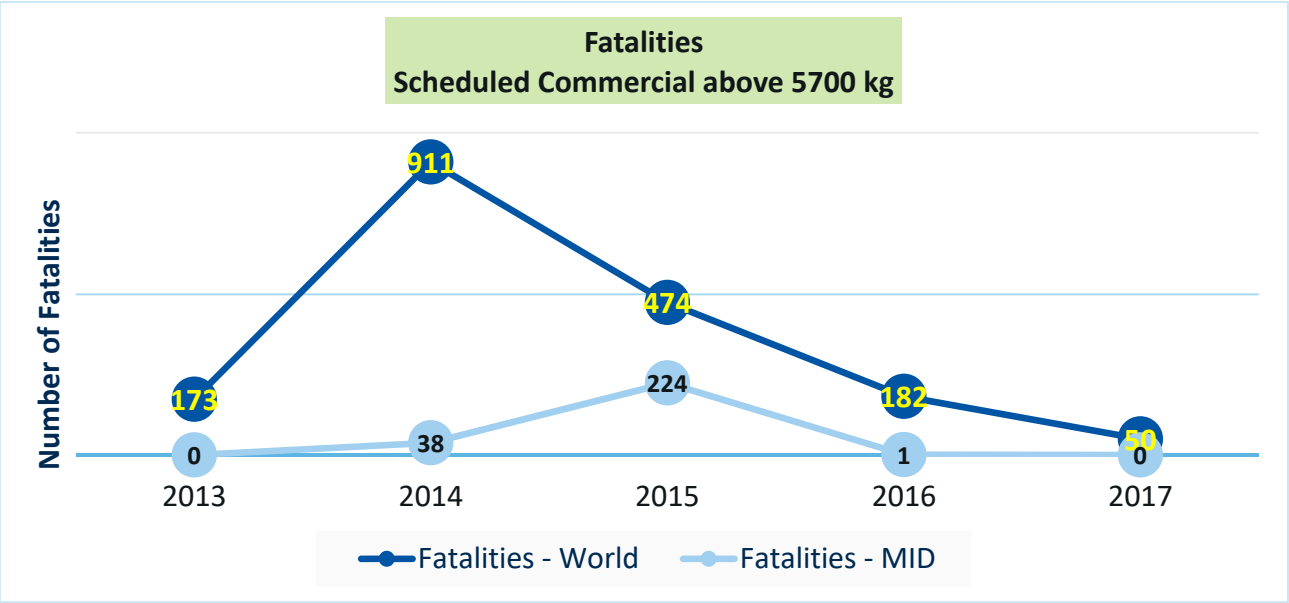
- No fatal accident rate in 2017
- Average rate (2013-2017) is 0.64
- Slightly Above average global rate!
  (avg global = 0.44)

Number of Fatal Accident



(Source iSATRS as of 10 Oct 2018)

Fatalities

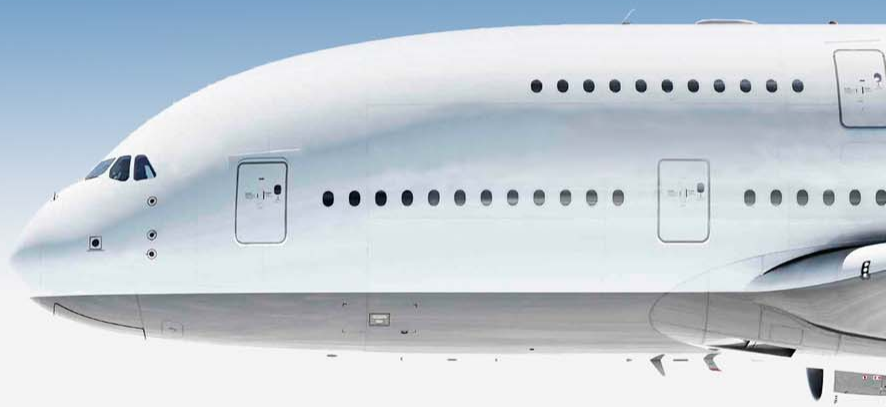


Fatalities:

- 2014 = 38
- 2015 = 224
- 2016 = 1

(Source iSATRS as of 10 Oct 2018)

Proactive Safety Information



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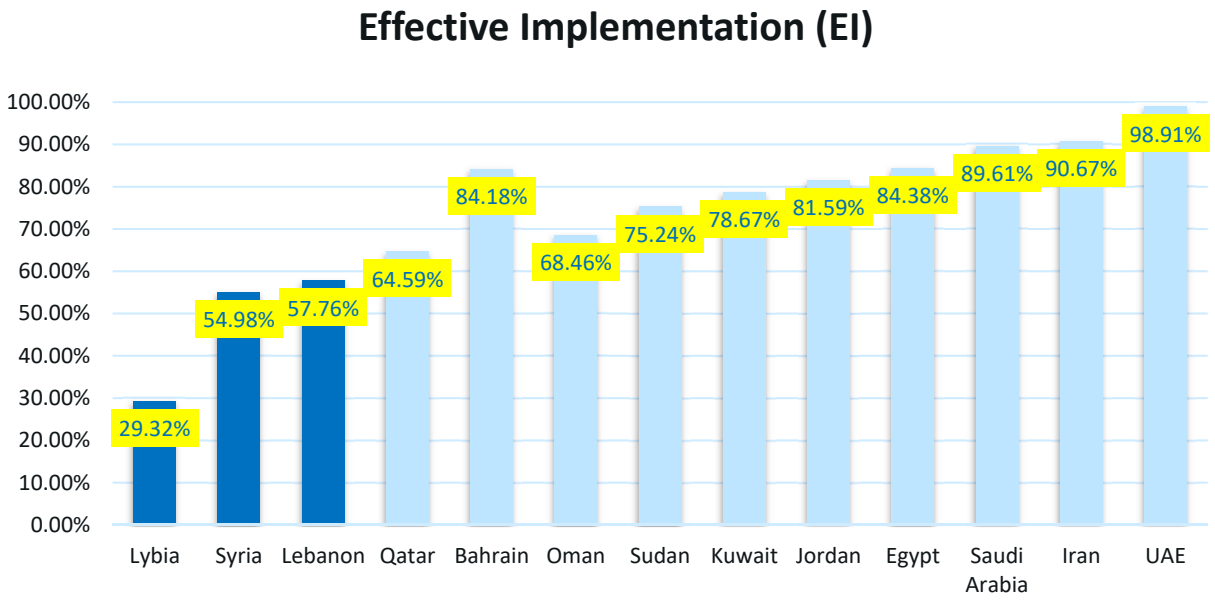
ICAO USOAP



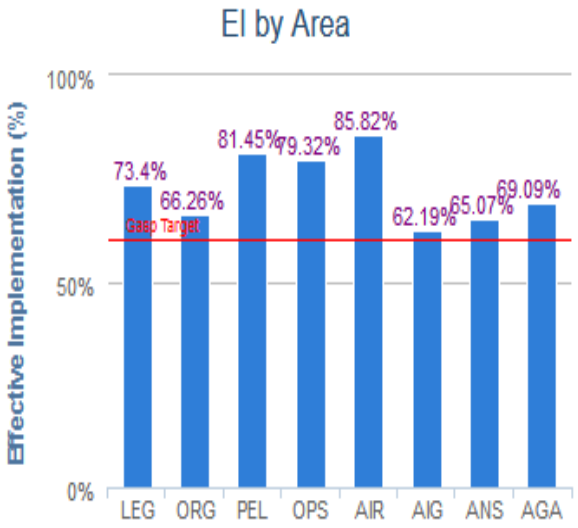
Source: ICAO USOAP CMA On Line Framework (OLF), as of 10 October 2018

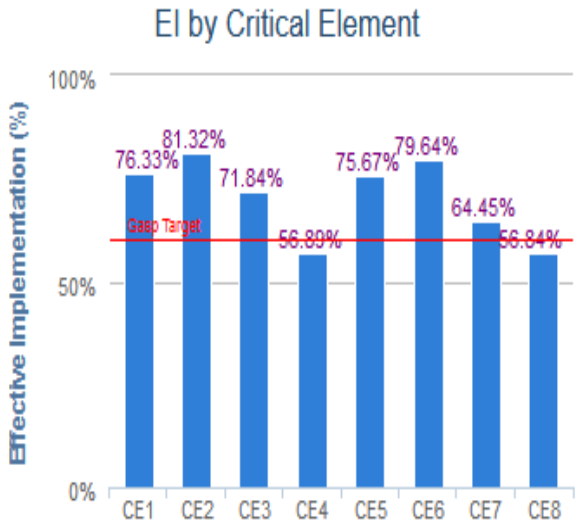
ICAO USOAP:

- **13 out of 15 States have been audited**
- **Overall MID EI = 73.24% which is above Global average (66.27%)**
- **3 states are below 60% (Libya, Syria, Lebanon)**

NO SSC in MID Region

ICAO USOAP

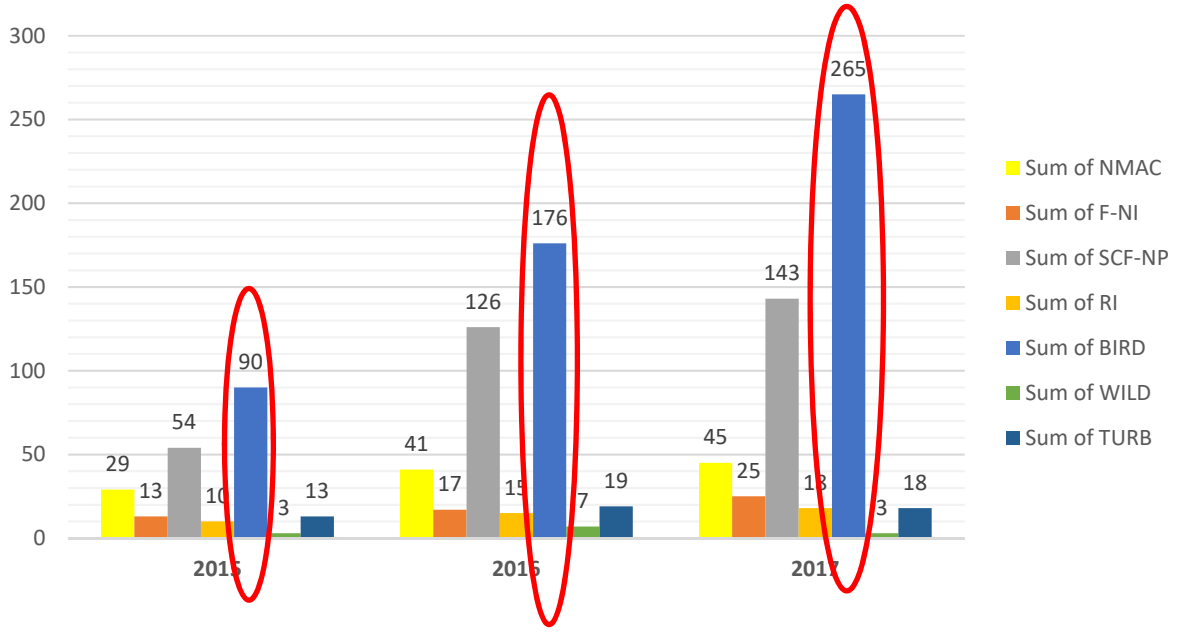




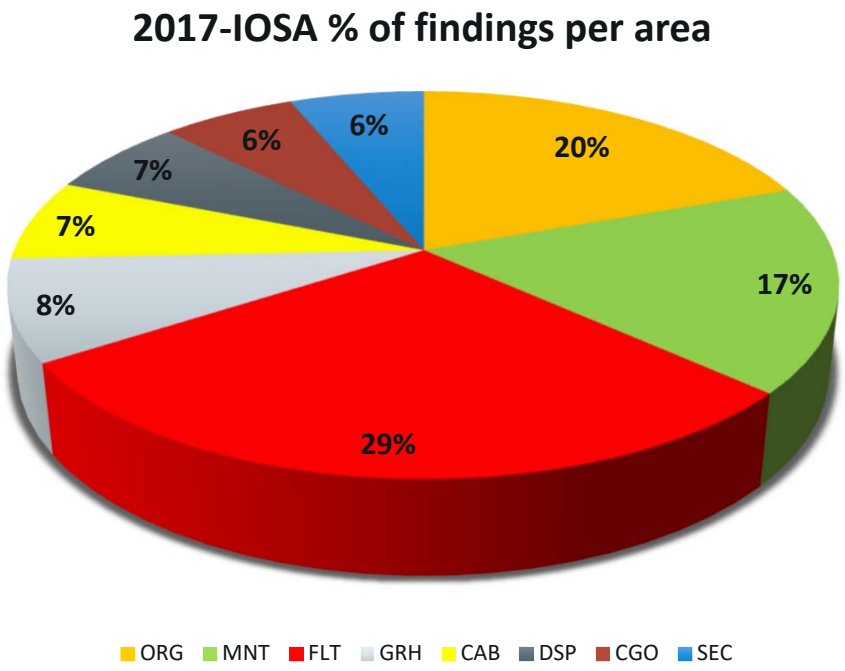
- 8 areas and 6 critical elements are above the target of 60%
- Critical elements CE4 (Qualified technical personnel), and CE8 (Resolution of Safety issues) are the lowest in terms of EI (below 60%)

Source: ICAO iSTARS, as of 10 October 2018

Incidents Reported by the States



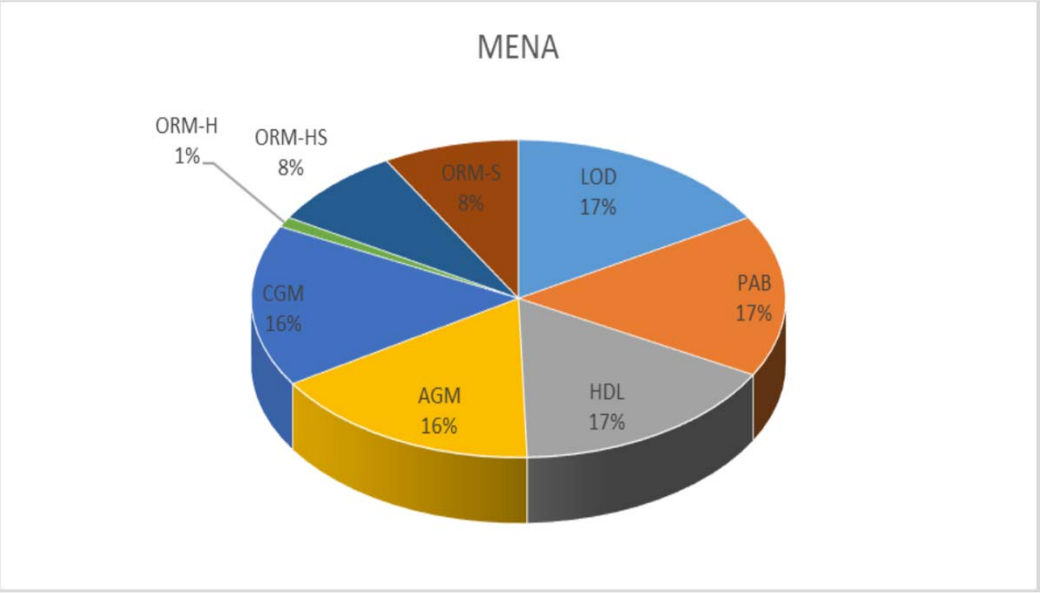
IATA IOSA



Findings were mainly in the areas:

- Flight Operations (FLT) (29.1%),
- Organization Management (ORG)(19.49%),
- Maintenance (MNT) (17.23%) , and
- Ground Handling Operations (GRH) (8.47%).

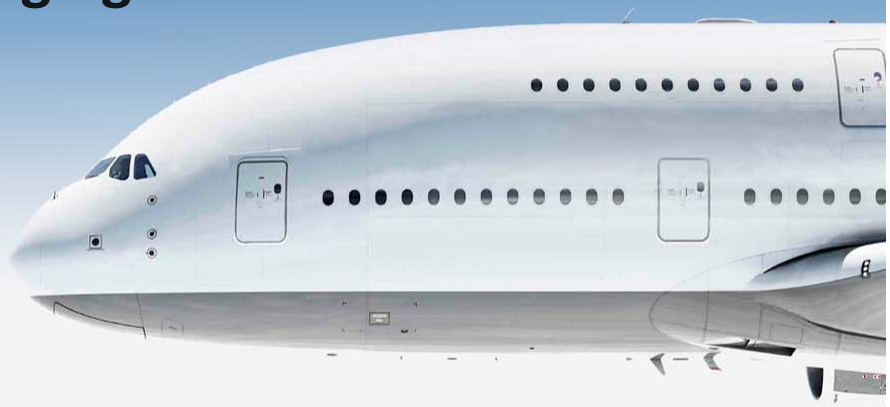
IATA ISAGO



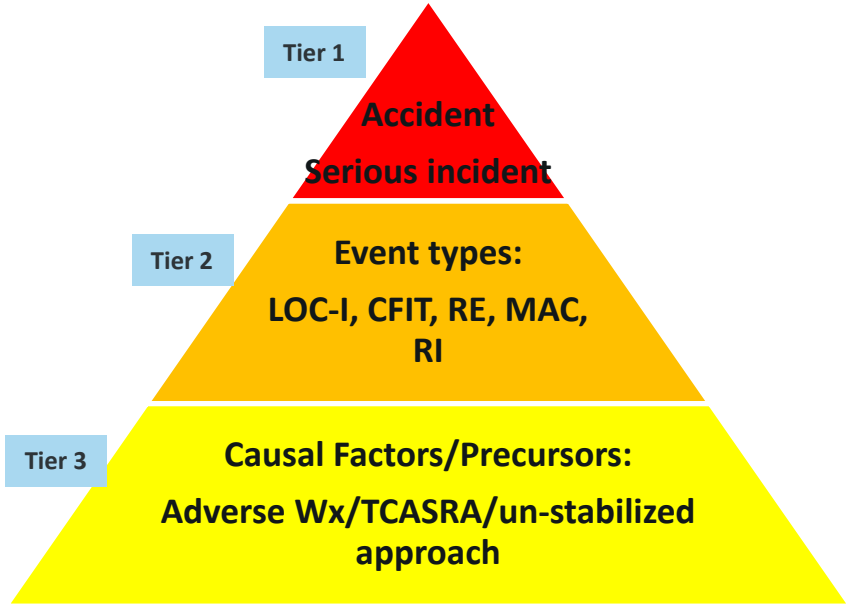
A total of 34 audits took place in 2017 have been included in the analysis covering the IATA MENA Region.

- **40 findings were recorded**
- **Majority of findings were in the areas of:**
  - ✓**Passengers & Baggage handlings (PAB)**
  - ✓**Aircraft Handling & Control (HDL)**
  - ✓**Load Control (LOD)**

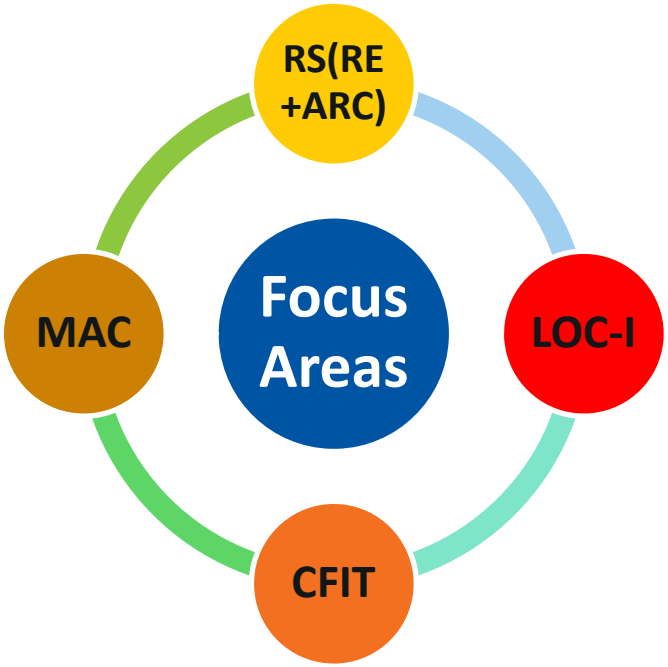
Identification of Focus areas & Emerging Risks



Undesirable/Safety Event		Potential Accident Outcome						
Safety Event	Accident Severity	CFIT	LOC-I	MAC	GCOL	RE/ARC	Injury or Damage inflight	Inj Da Gr
Technical Problems with Landing Gear Collapse/not Extended during landing	Major					x		x
Contained engine Failure/Power Plant Malfunctions	Catastrophic	x	x				x	
Fire/Smoke-non impact	Catastrophic		x				x	x
Un-stable or non-compliant Approach	Catastrophic	x	x			x		x
Deviation from pitch or roll attitude	Catastrophic	x	x			x		
Security Risks with impact on safety	Catastrophic		x					
Tail/Cross wind/Winds hear	Major		x			x		x
Loss of separation in flight/ and or airspace/TCAS RA infringement	Catastrophic		x	x			x	
Runway Incursion	Catastrophic				x	x		x
Maintenance events and technical failures	Catastrophic	x	x			x	x	x
Contaminated runway/Poor braking action	Major					x		x
Birdstrike/Engine Bird ingestion	Catastrophic		x			x	x	x
Wake Turbulence	Catastrophic			x			x	
High energy go-around			x				x	

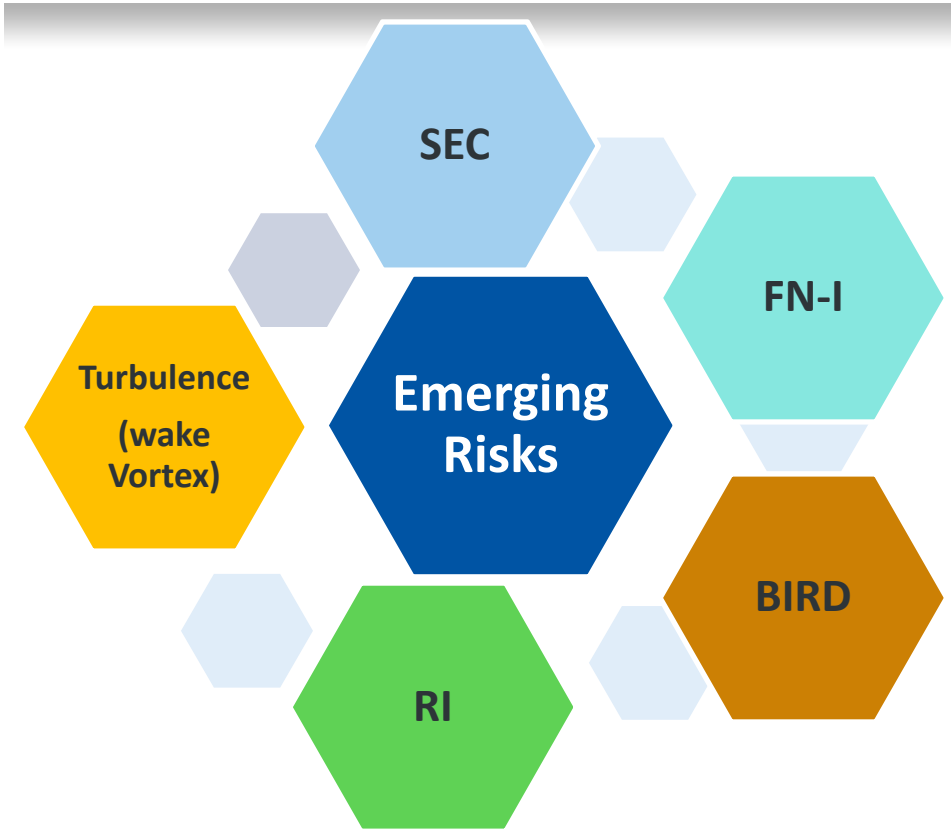


Focus Areas



❑ Focus Areas:

1. Runway Safety (RS); (RE and ARC during landing);
2. Loss of Control-In Flight (LOC-I);
3. Controlled Flight Into Terrain (CFIT); and
4. Mid-Air Collision (MAC



- **Emerging risks:**

1. **Security Risks with impact on safety- SEC;**
2. **Fire/smoke- (non-impact)- (FN-I);**
3. **Runway incursion (RI);**
4. **Birdstrike-(BIRD); and**
5. **Wake Vortex.**

Challenges

- Accidents with the category “Unknown”
- Low level of incidents reporting by States (confidentiality concerns)
- Unavailability of predictive safety information
- Differences between organizations with respect to:
  - Taxonomy and classifications/categories
  - Reporting criteria (State of occurrence/operator/registry, MTOW..etc)
  - Regional distribution (MENA, MID…etc)

way forward…

- Develop a process for future work methodology
- Establishment of ASRT Core Team to support the Rapporteur & Secretariat in performing the root cause Analysis/contributory factors
- States to use the previous developed template which will contain the focus areas and emerging risks to submit their occurrences as well as to share analysis data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THANK YOU!