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SAFETY

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Air Navigation and Safety Plans, USOAP update

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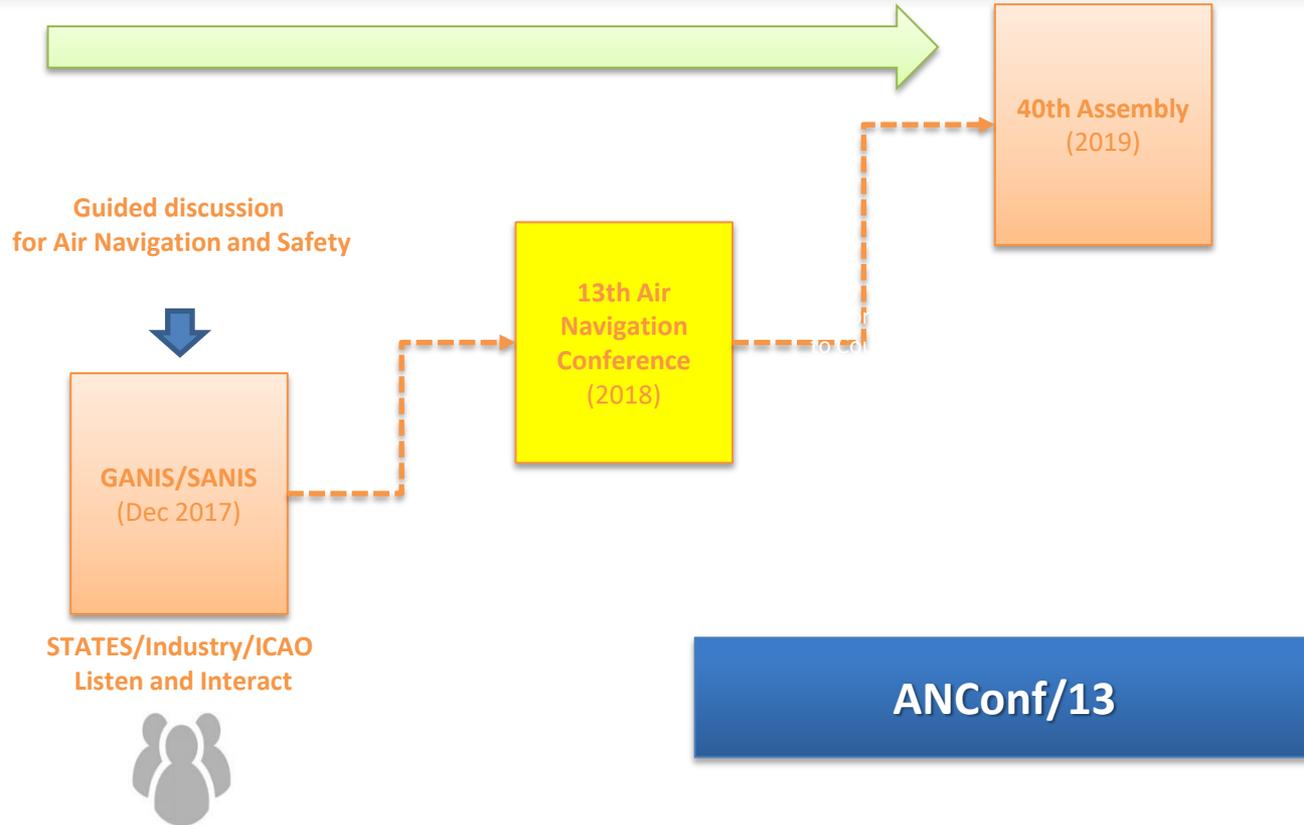
*Deputy Director, Monitoring & Oversight
Air Navigation Bureau*

Kampala, Uganda – 14 to 17 May 2019



Outline

- Thirteenth Air Navigation Conference
- Sixth Global Air Navigation Plan
- Remotely Piloted Aircraft Systems
- Drones
- The Global Trust Framework
- New Global Reporting Format
- USOAP Update





AN-Conf/13 Outcomes

- Set the foundation for the evolution of a safe air navigation system
- 52 Recommendations in: ATM, CNS, Met, IM, AD, SAR, Safety Management, USOAP CMA
- Discussions on emerging issues: Human factors, UAS, Cyber resiliency, High-level operations (above FL600), GASOS, RSOOs
- Strong support for the new editions of GANP and GASP
- All recommendations were approved by Council (C-DEC 216/5)
- *Report of the Thirteenth Air Navigation Conference (AN-Conf/13)* published (Doc 10115)



GLOBAL AIR NAVIGATION PLAN

MULTILAYER STRUCTURE OF THE GANP

Click a level to navigate

GLOBAL STRATEGIC

GLOBAL TECHNICAL

REGIONAL

NATIONAL



GLOBAL STRATEGIC ×	GLOBAL TECHNICAL ×	REGIONAL ×	NATIONAL ×
<p>Provides high-level strategic directions for decision makers to drive the evolution of the global air navigation system towards a common agreed vision.</p>	<p>Supports technical managers in planning the implementation of basic air navigation services and new operational improvements in a cost-effective manner.</p>	<p>Addresses regional and sub-regional needs aligned with the global objectives.</p>	<p>Development by States, in coordination with relevant stakeholders, of air navigation plans aligned with regional and global plans.</p>
 GANP DOCUMENT	 ASBUs AN-SPA BBBs & PF	 AFI ANP APAC ANP EUR ANP MID ANP NAM ANP NAT ANP CARSAM ANP	 NANP TEMPLATE CBA CHECKLIST

<https://www4.icao.int/ganpportal/>



Common Need Across the Ecosystem



...Establish Identity and Maintain Trust



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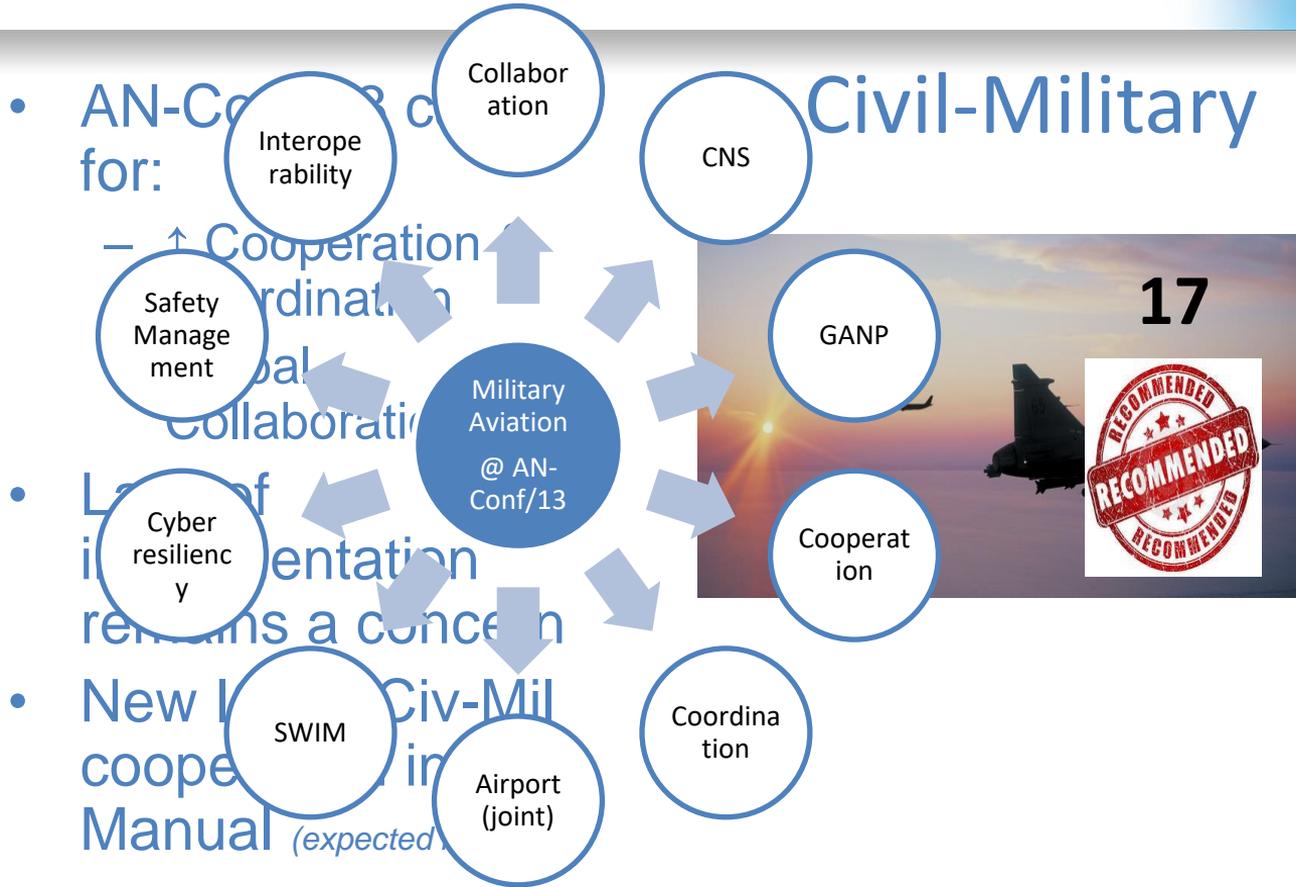
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Identity and Trust

- The foundational principal of the global aviation network that connects us today
- A core function of ICAO since 1944
- A modern identity and trust framework now seems essential
 - Based on common standards
 - Anchored in State sovereignty
 - Facilitating global recognition of trust
 - Applied consistently across the aviation ecosystem



- AN-Conf/13 for:
 - ↑ Cooperation
 - ↑ Coordination
 - ↑ Collaboration
- Law of the Sea remains a concern
- New ICAO Civil-Mil cooperation in Manual (expected)



RPAS Status

- **Annex 2, Appendix 4**
 - Special authorization
 - Certificate of Airworthiness for RPA
 - RPAS Operator Certificate
 - Safety management
- **Annex 1; PANS-TRG**
 - Remote pilot licence (SARPs and PANS effective 2018, applicable 2022)
- **Annex 8; Annex 10 (C2 Link)**
 - Draft SARPs to be circulated to States for comment soon





Other UAS

- **Principles of Aviation Regulation Apply!**
 - Airworthiness
 - Rules of the Air
 - Educated operators and remote pilots
 - Safety management
- **Scaled to level of risk posed to others**
 - Certificate of Airworthiness vs consumer product certification
 - Separation standards vs distance from structures
 - Aviation safety-of-life spectrum vs ???
 - Licence vs operational limitations
 - Risk to third parties: 80,000 kg vs 2 kg





Other UAS

- **Toolkit developed by the UAS Advisory Group**
 - General guidance for national regulations
 - Best practices and lessons learned from many States
 - Practical examples
 - **Guidance for humanitarian activities – coming soon**
- **Expanding through DRONE ENABLE**
 - Framework for UTM
 - Registration, ID, tracking systems
 - Communications systems
 - Geo-fencing like systems
 - UTM-ATM Interface



www.ICAO.int/Safety/UA





What is the GRF?

- Common language
- Considers impact of runway surface condition on aeroplane performance
- Runway condition report based upon
 - Airport assessment of runway surface conditions enabling;
 - a description of the runway surface conditions enabling;
 - flight crew determination of performance
- Global and harmonized implementation essential



Implementation Activities

SARPS 02/16



Guidance Material Development



Training Course Development



Global Symposium 03/19



Regional Seminars

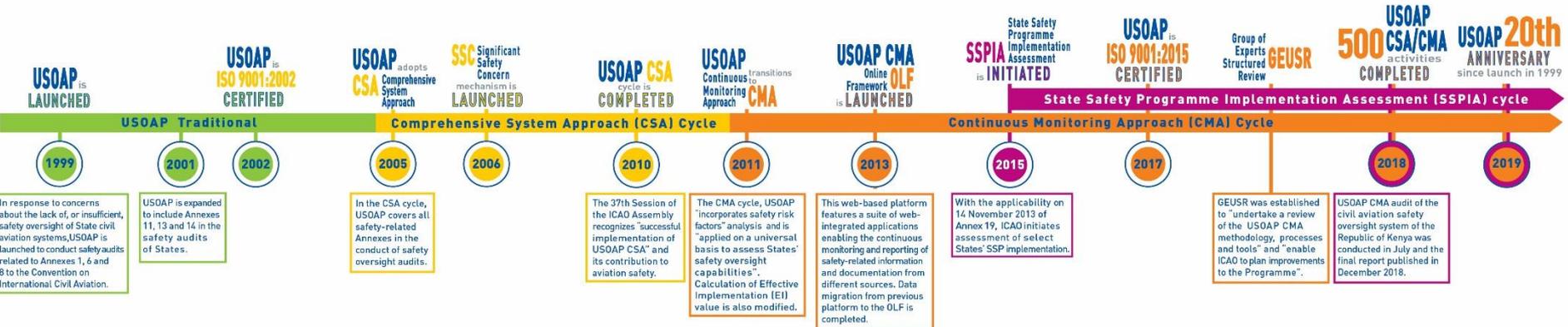


Applicability Date 11/20





USOAP evolution



By evolving, the USOAP maintains its status as the leader of global monitoring systems of States' safety oversight capabilities and/or their maturity in implementing SSPs



108

AUDITORS
and subject matter
experts in:

- PEL** Personnel licensing and training
- OPS** Aircraft operations
- AIR** Airworthiness of aircraft
- AIG** Aircraft accident and incident investigation
- ANS** Air navigation services
- AGA** Aerodromes and ground aids

from HQ, Regional Offices
and States

14

HQ Support Staff
Associates/Assistants in:

- Program**
- Administrative**
- Quality Assurance**
- Training records and logistics**
- Travel arrangements and logistics**
- Software developers**
- Technical report production (English/French/Spanish)**
- Audit documentation**
- Staff versed using ISO 9001: 2015 Certified Quality Programme**

	LEG/ORG	PEL	OPS	AIR	AIG	ANS	AGA
APAC	1	1	2	2	1	1	3
ESAF	2	2	2	1		2	2
EUR/NAT	2	2	3	3	2	3	2
MID	2			3		3	2
NACC	2	1	2	3		2	3
SAM	2	2	2		2	2	2
WACAF	2	2	2	3		2	2
ICAO HQ	3	1	2	3	2	3	3



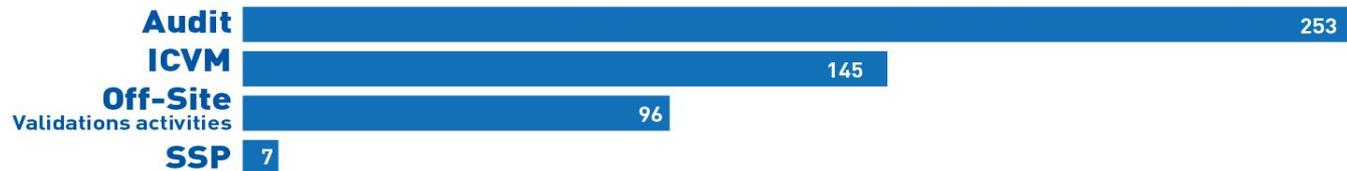
...However

African experts are:

- Underrepresented
- Only 4 non-ICAO African experts
- 1 OPS (English, French)
- 2 AIR (English)
- 1 ANS (English, French)



501 CSA+CMA completed activities since 2005



211 CMA completed activities by ICAO Region since 2015





Total ICAO USOAP activities in Africa since 2015



Audits



Off-site
Validations



ICVMs



Risks & Opportunities

Risks / Pressures

- Emerging issues in aviation (i.e. drones, SSP)
- Attrition/Loss of Org. Knowledge
- Challenging resource level
- Increased demands on MO

Opportunities/Solutions

- Evolution of the programme
- Training
- Increase use of technology
- Renewed work force



Present Challenges for a CAA-Establishment

1. Adequate legal framework
2. Lack of Regulations and/or Lack of Procedures for amending regulations
3. Procedures for issuance of approvals / authorizations
4. Granting of exemptions
5. Complex Technology



Present Challenges for a CAA-Implementation

1. Recruit / retain sufficient qualified technical staff and training
2. Implement procedures for granting licence / authorization
3. Flight / practical test supervision and control
4. Thorough / documented certification process
5. Surveillance and Capacity to Sustain Oversight
6. Aerodrome Certification



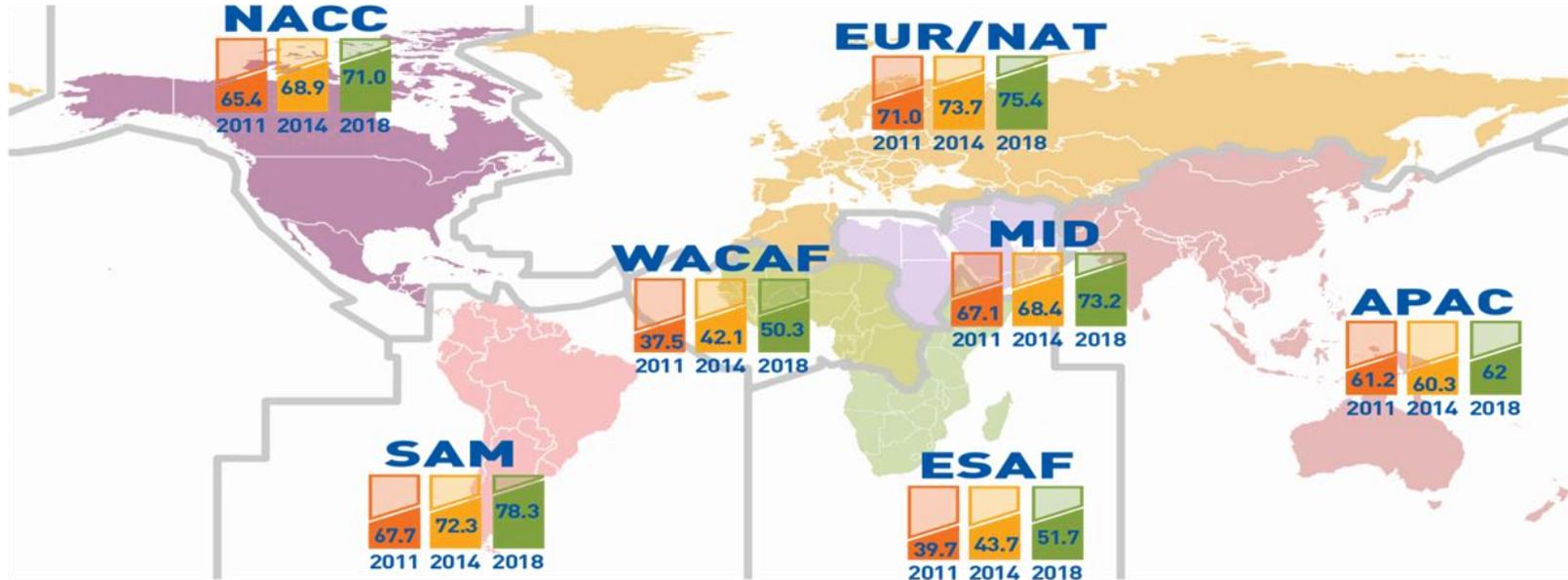
Evolution of a Regulatory System





USOAP – OUTCOME EVOLUTION

Effective Implementation in ICAO Regions.
EI% evolution in 2011, 2014 and 2018.

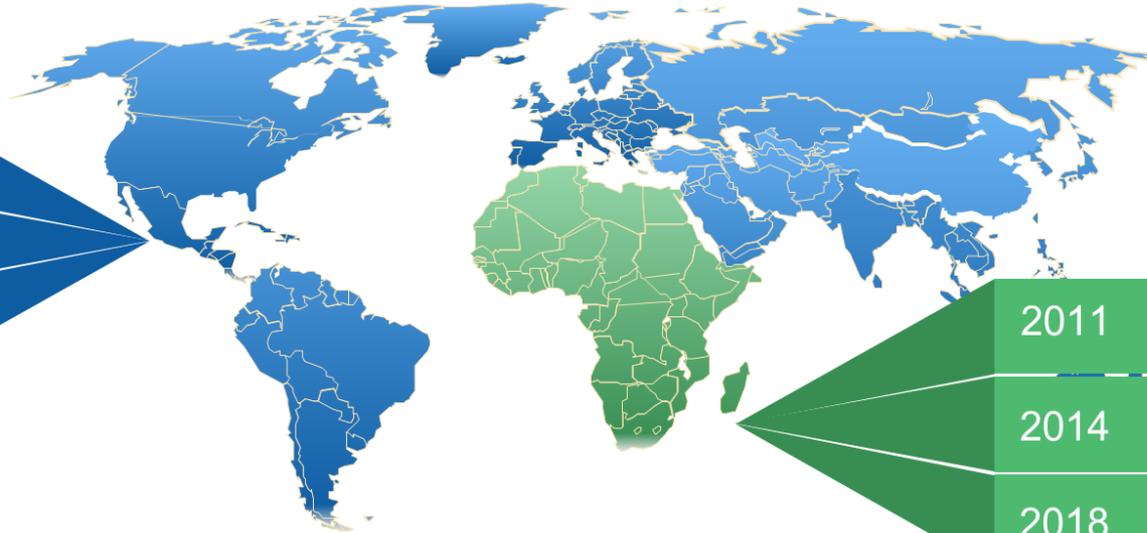




USOAP – OUTCOME EVOLUTION

World

60.8	2011
63.9	2015
67.7	2011



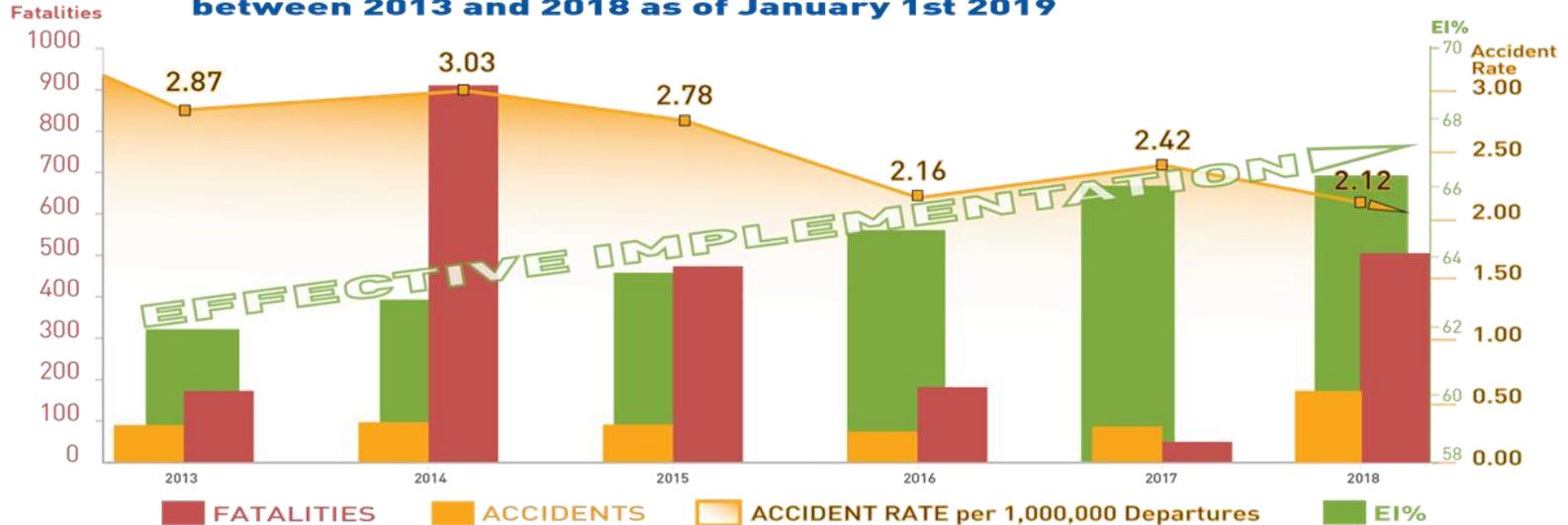
Africa

2011	42.6
2014	46.2
2018	54.8



Results

FATALITIES, ACCIDENTS, ACCIDENT RATE per 1,000,000 departures and EFFECTIVE IMPLEMENTATION between 2013 and 2018 as of January 1st 2019





USOAP Organization and Mandate Review





Successes and Opportunities for Africa

- AFI Plan
- Space Base ADS-B
- Drones
- Multi-Country Organization - RSOO



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Lima

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Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU