

REGIONAL FOCUS

# Implementation of Safety Culture in Air Navigation Service Provision in Africa

**Thursday 5 August 2021**

12:00 – 14:30 CAT



**Ms. Boni Dibate**

Director Africa Affairs

CANSO



**Mr. Shayne Campbell**

Safety Programme Manager

CANSO

# SAFETY CULTURE

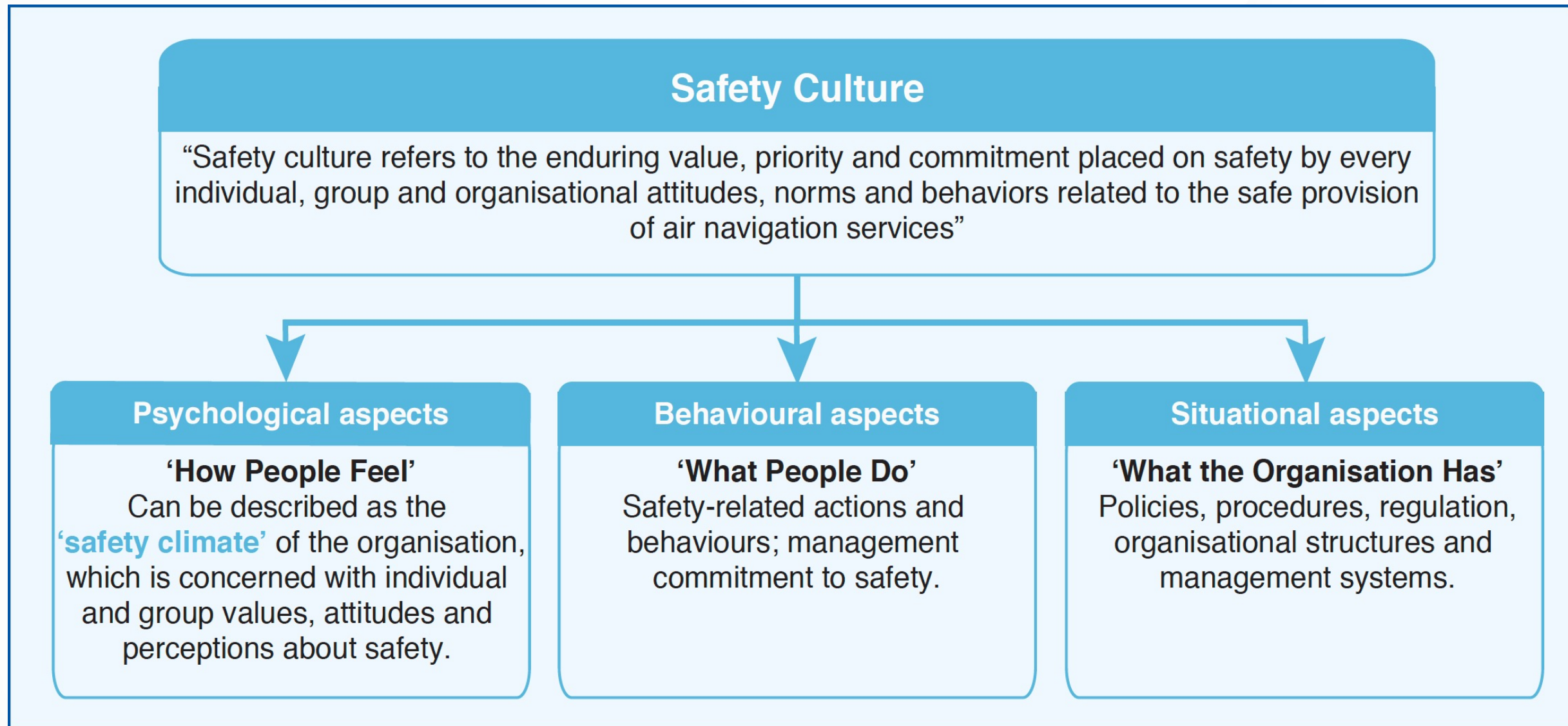
*Refers to the enduring value, priority and commitment placed on safety by every individual and every group at every level of the organisation. Safety culture reflects the individual, group and organisational attitudes, norms and behaviours related to the safe provision of air navigation services.*

# ELEMENTS OF A SAFETY CULTURE



- Learning Culture
- Informed Culture
- Just Culture
- Flexible Culture
- Reporting Culture

# SAFETY CULTURE FRAMEWORK





# THANK YOU







**Ms. Keziah Ogutu**

Regional Officer ATM/SAR

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# ICAO PROVISIONS FOR SAFETY CULTURE IN THE AFI AIR NAVIGATION SERVICES

**Keziah Ogutu**

*ICAO Regional Officer– ATM & SAR (ESAF)*

CANSO WEBINAR 5 AUGUST 2021



# PRESENTATION OUTLINE

- Definition of Safety Culture
- Introduction: ICAO Provisions to Safety Culture
- AFI RVSM Airspace
- AFI ATS Incident Reporting and Investigation
- Conclusion and Recommendation



# DEFINITION

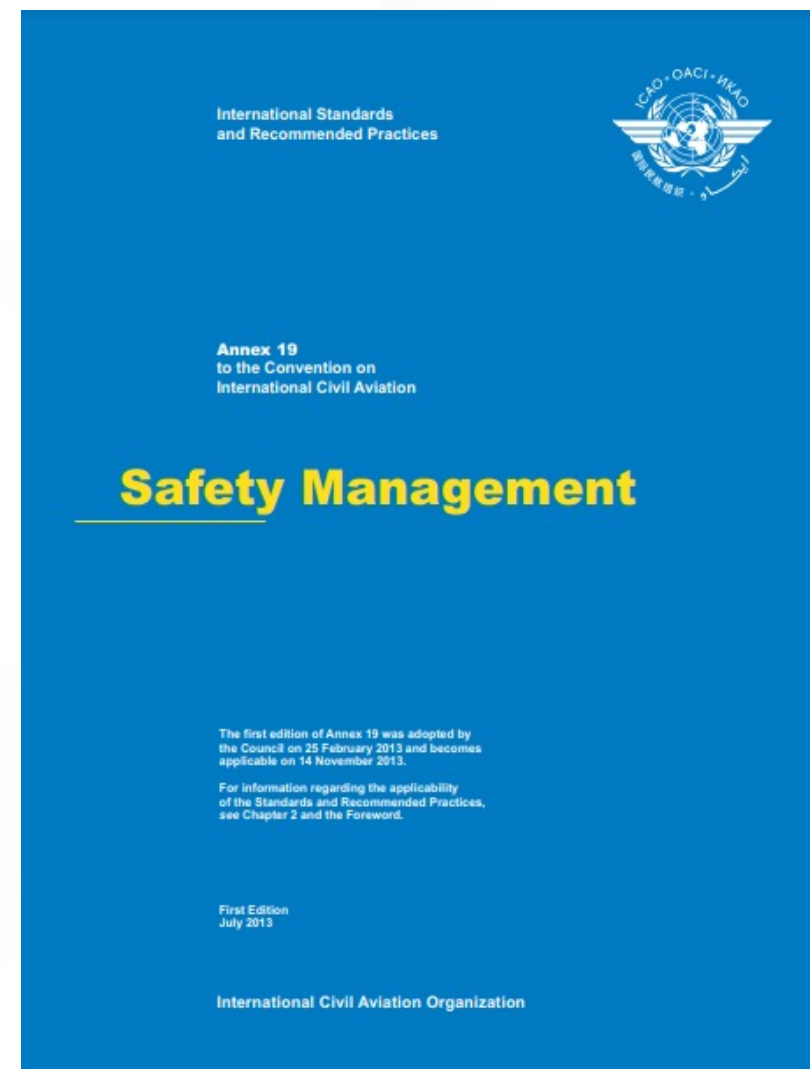
## SAFETY CULTURE

- ✓ Safety culture is the collection of the **beliefs, perceptions** and **values** that employees share in relation to risks within an organization, such as a workplace or community. ([Wikipedia](#))
- ✓ Safety culture is a **set of ways** of **doing** and **thinking** that is widely **shared** by the employees of an organisation in the context of managing the most **significant risks** associated with its activities ([Institute for Industrial Safety Culture - ICSI.](#))
- ✓ [According to OSHA](#), “Safety cultures **consist of shared beliefs, practices, and attitudes that exist at an establishment.** Culture is the atmosphere created by those **beliefs, attitudes**, etc., which **shape our behavior.**” By definition, safety culture is difficult to measure. 19 Feb 2021

# INTRODUCTION

## ICAO PROVISIONS FOR SAFETY CULTURE

- ❑ The Directors General of Civil Aviation Conference on a Global Strategy for Aviation Safety (Montréal, 20 to 22 March 2006) (DGCA/06) and the High-level Safety Conference (Montréal, 29 March to 1 April 2010) (HLSC/2010) recommended for an Annex dedicated to safety management.
- ❑ The Air Navigation Commission (186-8), having determined the issues to be of sufficient scope and importance, agreed to establish the Safety Management Panel (SMP) to provide recommendations for the development of **Annex 19**.
- ❑ This Annex contains SARPs related to responsibilities and processes underlying the safety management by States.
- ❑ The Annex was first adopted by the Council on 25 February 2013 pursuant to the provisions of Article 37 of the Convention on International Civil Aviation (Chicago 1944) and designated as Annex 19 to the Convention. The SARPs were based on provisions for safety management initially adopted by the Council in Annexes 1; 6, Parts I, II and III; 8; 11; 13 and 14, Volume I, and on recommendations of the first special meeting of the SMP (Montréal, 13 to 17 February 2012)
- ❑ It supports the continued evolution of a proactive strategy to improve safety performance. The foundation of this proactive safety strategy is based on the implementation of a **State safety programme (SSP)** that systematically addresses safety risks



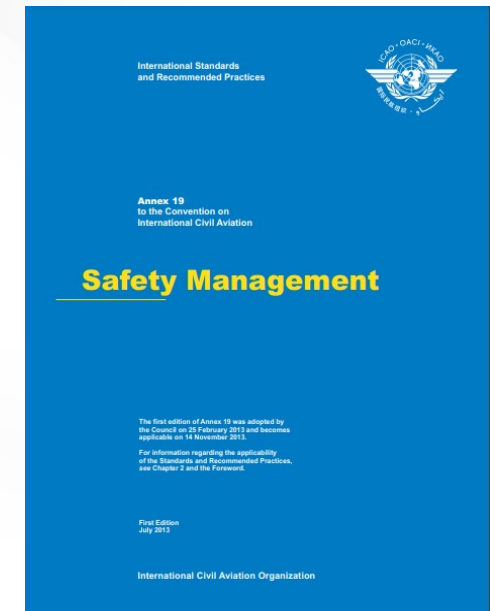


# State Safety Programme (SSP)

**An integrated set of regulations and activities aimed at improving safety.**

Annex 19, Chapter 3 . STATE SAFETY MANAGEMENT RESPONSIBILITIES

- ☐ 3.1 State safety programme (SSP)
- ☐ 3.1.1 Each State shall establish an SSP for the management of safety in the State, in order to achieve **an acceptable level of safety performance** in civil aviation.
- ☐ The SSP shall include the following components:
  - a) State safety policy and objectives;
  - b) State safety risk management;
  - c) State safety assurance; and
  - d) State safety promotion.
- ☐ 3.1.3 As part of its SSP, each State shall require that the following service providers under its authority implement an SMS:
  - a) approved training organizations in accordance with Annex 1;
  - b) operators of aeroplanes or helicopters authorized to conduct international commercial air transport, in accordance with Annex 6, Part I or Part III, Section II, respectively;



# State Safety Programme (SSP)

## Continued...

c) approved maintenance organizations providing services to operators of aeroplanes or helicopters engaged in international commercial air transport, in accordance with Annex 6, Part I or Part III, Section II, respectively;

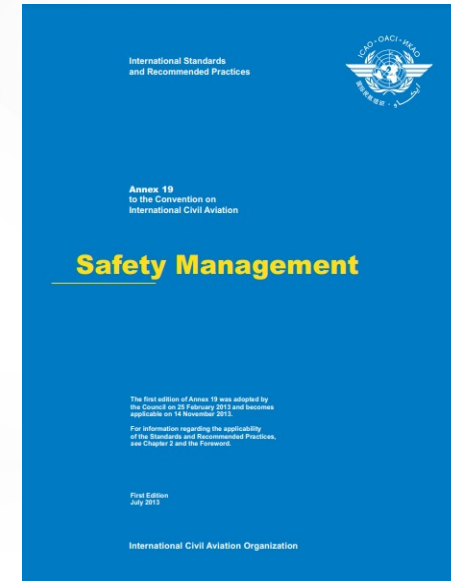
d) organizations responsible for the type design or manufacture of aircraft, in accordance with Annex 8;

e) **air traffic services (ATS) providers** in accordance with **Annex 11**;

*Note.— The provision of AIS, CNS, MET and/or SAR services, when under the authority of an ATS provider, are included in the scope of the ATS provider's SMS. When the provision of AIS, CNS, MET and/or SAR services are wholly or partially provided by an entity other than an ATS provider, the related services that come under the authority of the ATS provider, or those aspects of the services with direct operational implications, are included in the scope of the ATS provider's SMS.*

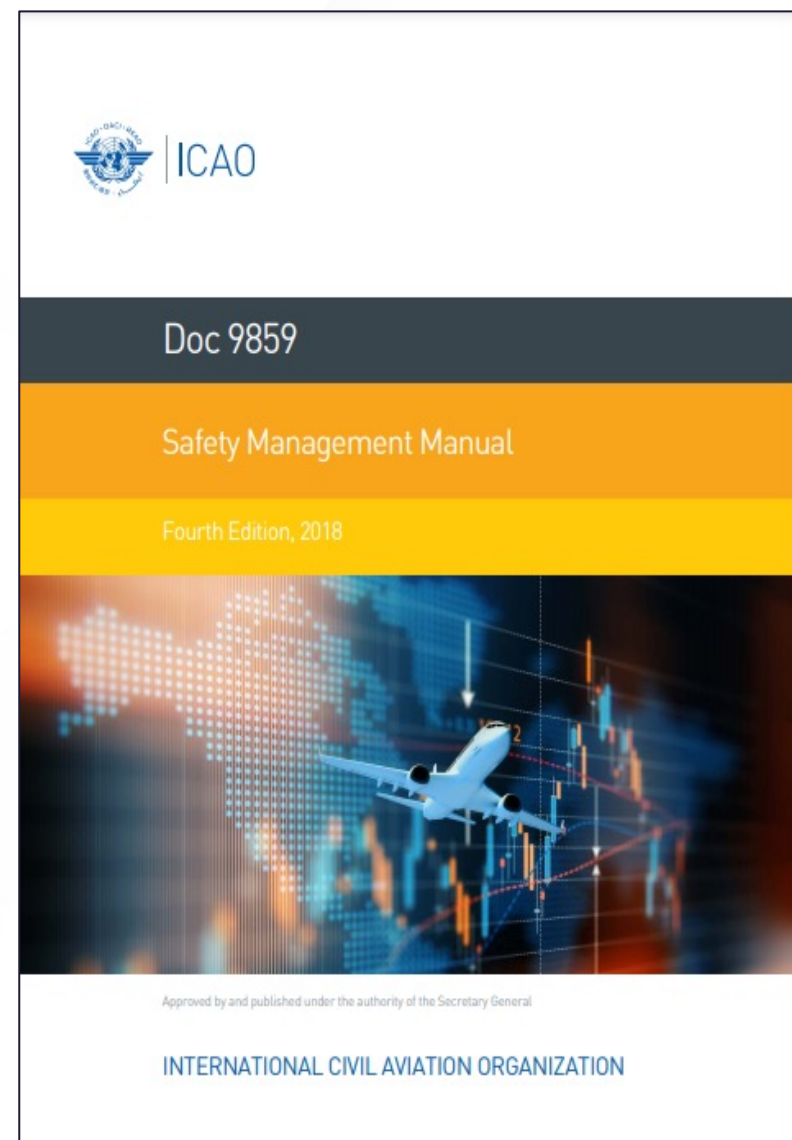
f) operators of certified aerodromes in accordance with Annex 14. 3.1.4

❑ 3.2 State safety oversight Each State shall establish and implement a safety oversight system



## ICAO PROVISIONS FOR SAFETY CULTURE: SAFETY MANAGEMENT

- **Guidance on a State Safety Programme** is contained in the Safety Management Manual (SMM) (Doc 9859). 3.1.2 The acceptable level of safety performance to be achieved shall be established by the State.
- **Chap. 3 : Safety Culture**
  - A safety culture is the **natural consequence** of **having humans** in the aviation system.
  - Safety culture has been described as ***“how people behave in relation to safety and risk when no one is watching”***.
  - It is **an expression** of how **safety is perceived, valued and prioritized** by **management and employees** in an organization, and is reflected in the extent to which individuals and groups are:
    - a) **aware of the risks and known hazards** faced by the organization and its activities;
    - b) **continuously behaving to preserve and enhance** safety;
    - c) **able to access the resources** required for safe operations;
    - d) **willing and able to adapt** when facing safety issues;
    - e) **willing to communicate** safety issues; and
    - f) **consistently assessing** the safety related behaviours throughout the organization.
  - A positive safety culture relies on a **high degree of trust** and **respect** between personnel and management.





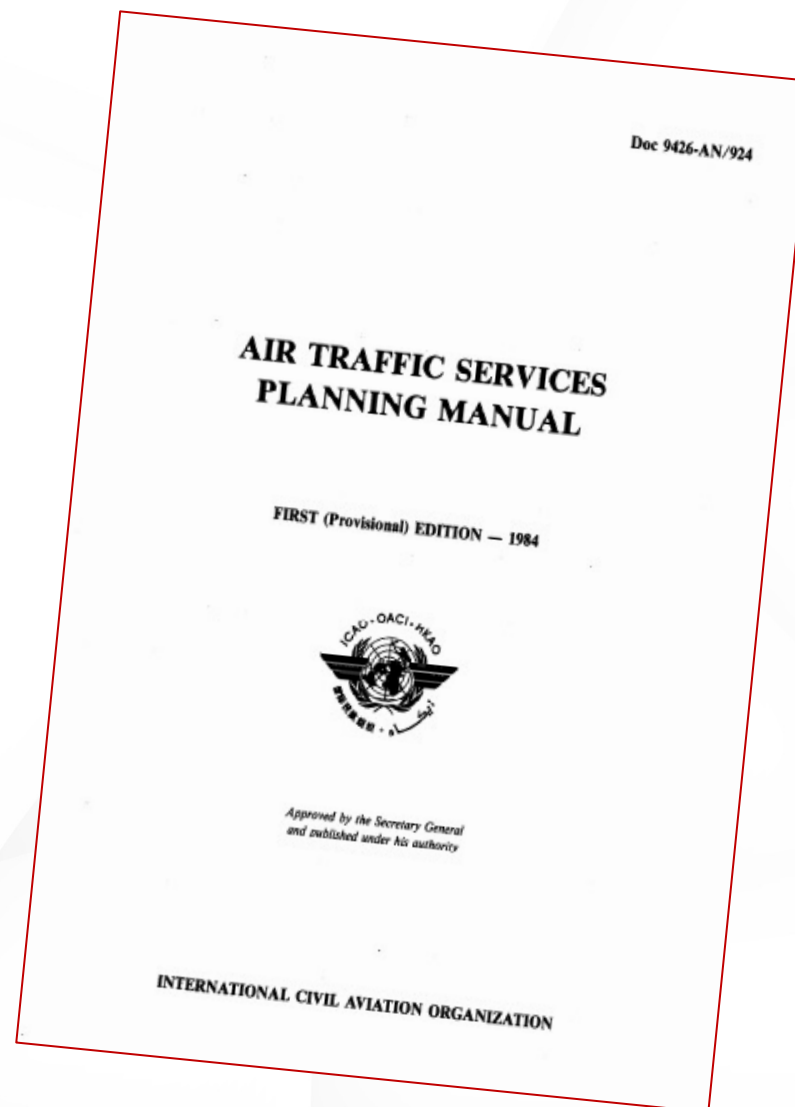
## ICAO PROVISIONS FOR SAFETY CULTURE: SAFETY MANAGEMENT

- Time and effort are needed to build a positive safety culture; can be easily damaged by **management decisions and actions, or inactions.**
- **Symptoms of poor cultural factors can include:**
  - Widespread, **routine procedural violations**;
  - **Failure to comply** with the company's own SMS (although either of these can also be due to poor procedure design);
  - Management **decisions that appear consistently** to put production or cost before safety.

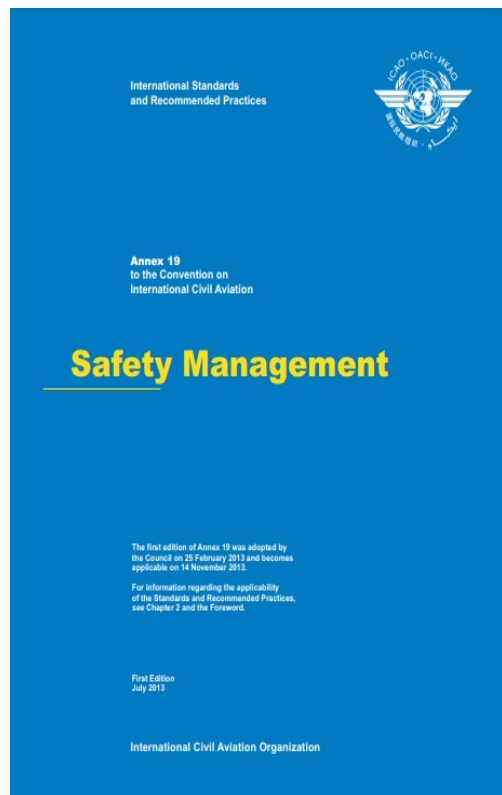


# ICAO PROVISIONS FOR SAFETY CULTURE: ATS PLANNING

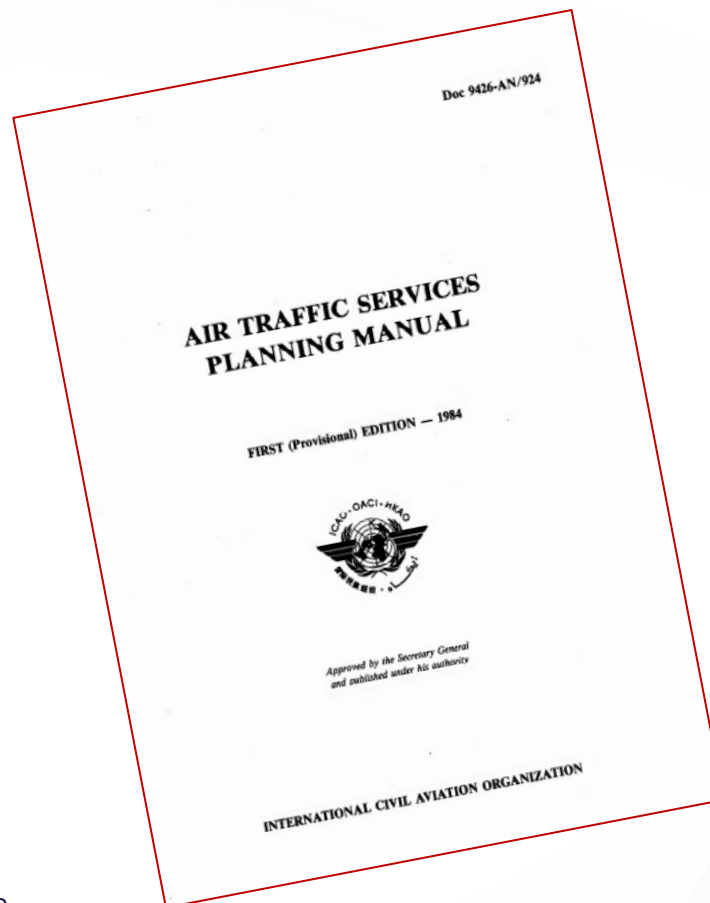
- Reporting of air traffic incidents and ATS investigating procedures should be established in order to ensure high standards of safety in the conduct and control of air traffic.
- Details the information required in an ATS Incident report
- Procedure to be followed in investigations.
- Template for reporting ATS incidents



# ICAO PROVISIONS FOR SAFETY CULTURE



Provides for the establishment of a State Safety Programme (SSP)



Provides for the establishment of a Safety Culture and a Reporting Culture within ATS



Provides for the establishment of a Safety Management System (SMS) in accordance to Annex 19

# ICAO PROVISIONS FOR SAFETY CULTURE: APIRG FRAMEWORK

## **Conclusion 20/18: Comprehensive measures to improve the AFI RVSM safety levels**

That, in order to effectively and sustainably address the AFI RVSM safety levels, AFI States prioritize the effective implementation of the following measures:

- a) Incorporate Strategic Lateral Offset Procedures (SLOP), noting the safety benefits thereof even where surveillance has been implemented;
- b) Ensure adequate safety assessments, with particular attention to crossing points, before implementing new ATS routes;
- c) **Take necessary action to improve reporting and investigation of incidents;**
- d) Prioritise the implementation of ATS Inter-facility Data Communications (AIDC) to reduce coordination failures between FIRs; and
- e) Regulators to strictly enforce SARPs and regulatory provisions relating to aircraft RVSM approvals and operations.

## **APIRG22 & RASG-AFI5 Conclusion 1/03: Implementation of AIAG recommendations by States**

That AFI States :

a) Implement the State specific and general recommendations of the AIAG16,

b) Commit to:

**i) Further develop the safety culture (including just culture) in the region through the effective implementation of SSP and SMS;**

ii) Ensure that the investigation of events drill down deep into all causal factors, finding not only the “what” happened, but more importantly, the “why” it happened;

**iii) Submit comprehensive investigation report, including all causal factors (the “what” and the “why”), corrective and preventative action to the AIAG Secretariat; and**

iv) Make concerted efforts to implement more effective civil / military co-ordination and cooperation in the pursuit of improving both safety and efficiency in the region.

# ICAO PROVISIONS FOR SAFETY CULTURE: APIRG FRAMEWORK

## **APIRG/22 & RASG-AFI/5 Conclusion 1/04: RVSM Airspace Monitoring**

That AFI States:

- a) **Submit RVSM Data to ARMA Office on a monthly basis;**
- b) Encourage Airlines and Operators to periodically height monitor their RVSM approved aircraft; and
- c) Implement Strategic Lateral Offset Procedures and other recommended measures aimed to reduce AFI target level of safety (TLS).

## **APIRG/23 Conclusion 23/03: RVSM data returns and Large Height Deviations reporting**

That, in order to improve the level of States reporting to ARMA:

- a) States update ARMA with contact details of their national RVSM Managers and establish a mechanism to ensure that RVSM monthly data returns and incident investigation reports of large height deviations (LHDs) are provided to ARMA in a timely manner;
- b) ARMA provide to States twice a year results of the Collision Risk Assessment;
- c) ICAO and ARMA conduct on regular basis awareness workshops for State-appointed national RVSM Focal Points responsible for RVSM data returns to ARMA; and
- d) **States carry out an in-depth incident investigation to all reported large height deviations.**

**INVESTIGATE AND REPORT!!!!**



# AFI RVSM AIRSPACE

- ✓ 25 September 2008
- ✓ Managed by ANSPs
- ✓ Provides a good reflection of the safety in the region

## COLLISION RISK ASSESSMENT 14 : AFRICA INDIAN OCEAN REGION

AFI RVSM SAFETY POLICY



September 2013

CRA	$N_{az}^{total}$	TOTAL VERTICAL TLS EXCEEDED BY A FACTOR OF
CRA 14 2019	$10.9 \times 10^{-9}$	3.3
CRA 13 2018	$75.4 \times 10^{-9}$	15.0
CRA 12 2017	$58.6 \times 10^{-9}$	11.7
CRA 11 2016	$36.4 \times 10^{-9}$	7.3
CRA 10 2015	$141.2 \times 10^{-9}$	28.2
CRA 9 2014	$63.7 \times 10^{-9}$	12.7
CRA 8 2013	$31.4 \times 10^{-9}$	6.3
CRA 7 2012	$8.0 \times 10^{-9}$	1.6
CRA 6 2011	$23.2 \times 10^{-9}$	4.7
CRA 5 2010	$33.0 \times 10^{-9}$	6.6
POSC CRA (2008-2009)	$31.2 \times 10^{-9}$	6.2

# AFI RVSM AIRSPACE

## Submission of RVSM Data used in CRA 14

### *Input data*

- 1 Jan 2019 – 31 Dec 2019

AFI RVSM SAFETY POLICY



September 2013

### *Traffic flow data:*

- Received Forms 2 & 4 from **17 out of 27 FIRs/UIRs**.
- Total **54%** of the data received

### *Incident data:*

- Forms 1 & 3
- AIAG data



## CONCLUSION

- The Health of the AFI ANS safety culture still not at the optimum level: requires improvement and this can be achieved with a joint effort.
- Annex 19 requires that both States and service providers **promote a positive safety culture** with the aim of fostering effective safety management implementation through the SSP/SMS.
- Doc 9859 gives guidance on how to carry out the task:
  - Organizations, Groups, Teams etc all have different behaviours or cultures.
  - Good to note that safety culture has a **direct impact** on safety performance: if the value is perceived to be low or unimportant, end result performance will be low e.g. use of personal electronic mobile devices (mobile phones, laptop, tablets, video games etc) in the operational control rooms during work.
  - Safety culture is arguably the **single most important influence** on the management of safety.



## RECOMMENDATIONS

- AFI organizations **MUST cultivate** a positive safety culture or it is likely to continue to underperform (visibly supported by upper-and middle management) .
  - Promote the Reporting Culture
  - Ensure mechanism for promotion of a **Just Culture**
  - Continuous evaluation of the Health of the Safety Culture within the Organisation
  - Investigate and report ATS incidents in a timely manner and provide feedback as necessary
- AFI ANSPs Leadership **MUST** actively endorses safe practices; this will allow for it to become the normal way of doing things within the organizations and Region at large – **lead by Action**

**WALK the TALK NOT TALK THE WALK!!!!**





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Eastern and  
Southern African  
(ESAF) Office  
Nairobi

Asia and Pacific  
(APAC) Sub-office  
Beijing

Asia and Pacific  
(APAC) Office  
Bangkok



THANK YOU



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Managing Director/Chief  
Executive  
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Director Flight Safety and  
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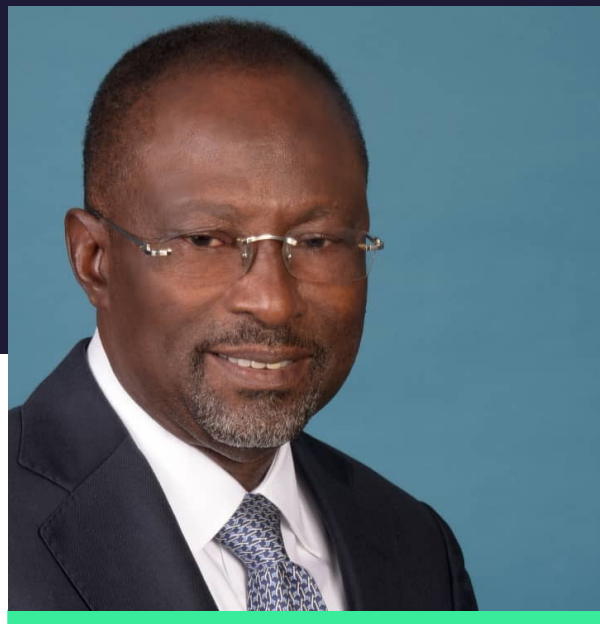
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**Capt. Fola Akinkuotu**

Managing Director/Chief Executive

NAMA

# IMPLEMENTING JUST CULTURE IN NIGERIA

**Just Culture is Defined as:**

**“An atmosphere of trust in which people are encouraged (even rewarded) for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour”.**



# IMPLEMENTING JUST CULTURE IN NIGERIA

## BENEFITS OF JUST CULTURE

- **Increased Reporting:**

A lack of reported events is not indicative of a safe operation, and likewise, an increase in reported events is not indicative of a decrease in safety. Event reporting illuminates potential safety concerns, and any increase in such reporting should be seen as a healthy safety indicator.

- **Trust Building:**

Most violations are caused by a desire to please rather than wilfulness. This observation emphasises the inherent nature of the majority of safety violations:

- (i) that they are indeed inadvertent and
- (ii) that they are intended to further the organisation's operational objectives

# IMPLEMENTING JUST CULTURE IN NIGERIA

## TYPES OF UNSAFE BEHAVIOURS

- **Human Error:**  
Inadvertent error
- **Negligent Conduct:**  
Intentional conduct
- **Reckless Conduct (gross negligence):**  
Conscious disregard of substantial and unjustifiable risk
- **Violations:**  
Knew the result and went ahead anyway



# IMPLEMENTING JUST CULTURE IN NIGERIA

## **So where do you fit in at Nigerian Airspace Management Agency?**

At NAMA we endeavour at all times to be guided by the principles of Just Culture, and our Safety Policy,

- Importance of safety consciousness in all job roles,
- Proactive approach to reporting hazards/ occurrences/incidents and
- Sense of responsibility

# IMPLEMENTING JUST CULTURE IN NIGERIA

- An effective safety management system depends crucially on the effective participation of the workforce.
- The Nigerian Airspace Management Agency recognises that Just Culture cannot be effective without willing participation of its frontline workers who are in direct contact with hazard such as the Air traffic controllers, maintenance personnel and others who can provide key information about aviation safety problems and potential solutions.
- Achieving this reporting requires an organisational climate in which they are willing to report their errors or incidents.
- Hence the necessity to introduce Just culture so as to get the buy in of the workforce.

# IMPLEMENTING JUST CULTURE IN NIGERIA

## OUR APPROACH

1. Engineering an effective reporting culture must contend with actions whose consequences has focused on blame and punishment. A “no-blame” culture is neither feasible nor desirable. A small proportion of unsafe acts are deliberately done (e.g. criminal activity, substance abuse, reckless non compliance, sabotage etc.) and they require sanctions of appropriate severity. A blanket amnesty on all unsafe acts would lack credibility in the eyes of employees and could be seen to oppose natural Justice.

# IMPLEMENTING JUST CULTURE IN NIGERIA

2. What we have tried to create in NAMA is an atmosphere of trust where people are encouraged to provide essential safety related information, and in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.
3. We have also provided basic SMS training for over 200 staff members.
4. We have also drawn the line between acceptable and unacceptable behaviour, or human error and wilful violations or criminal conduct.

# IMPLEMENTING JUST CULTURE IN NIGERIA

## NAMA STRATEGY FOR ENHANCEMENT OF SAFETY CULTURE

- Establishment of Runway Safety Teams at all international airports
- Establishment of Safety Committees at all airports
- Appointment of Safety Officers for all international airports
- Establishment of Management of Change Procedures
- Regular conduct of Safety Reviews and Safety Assessments
- Establishment of a Safety Reporting WhatsApp Group
- Provision of Incident Reporting Logbooks and Incident Reporting Forms
- Regular conduct of Safety Workshops and Seminars.



# IMPLEMENTING JUST CULTURE IN NIGERIA

## CHALLENGES

Despite all efforts to encourage self reporting, it has not yielded the desired results, staff are unwilling to report themselves even after assurances in writing by the management.





**safety**

culture

a way of life

# IMPLEMENTING JUST CULTURE IN NIGERIA

## CONCLUSIONS

- The just culture operates by design to encourage compliance with the appropriate regulations and procedures, foster safe operating practices, and promote the development of internal evaluation programs.
- There are also legal issues that organisation needs to be deal with when it comes to litigation, therefore a legal frame work has to be provided to protect individual staff member.



# THANK YOU





**Mr. David Matovu**

Manager Safety Management System /Quality Assurance  
Uganda CAA

# IMPLEMENTATING THE SAFETY CULTURE

By Uganda Civil Aviation Authority

# SAFETY CULTURE IMPLEMENTATION

## PRESENTATION OUTLINE

- ❑ Introduction
- ❑ Factors influencing safety behavior
- ❑ Steps to building a safety culture
- ❑ Building the safety culture



# INTRODUCTION

## ***Definition:***

*The product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, DANS's management of safety.*

- ❑ A healthy safety culture is a pre-requisite for the implementation of an effective SMS.
- ❑ Safety culture is affected by what individuals know and believe about safety.
- ❑ Both management and staff need to appreciate the importance of safety, commit to and prioritize safety in all their actions/decisions..

# INTRODUCTION - 1

- ❑ Implementation of the SMS is a demonstration of an organization's safety culture. i.e. believes in, values and prioritizes safety.
- ❑ SMS implementation facilitates achievement of a certain level of a safety culture.
- ❑ The continued growth of the safety culture is influenced by the beliefs and perceptions of the individual employees of the organization.

# INTRODUCTION - 2

Categories of staff in the organization:

- ☐ Appreciate and/or believe that safety is very important.
- ☐ Do not appreciate and/or believe that safety is very important
- ☐ Consider/prioritize safety in all their actions/decisions
- ☐ Do not always consider/prioritize safety in their actions/decisions.
- ☐ Combination of any of the above.

# FACTORS INFLUENCING SAFETY BEHAVIOR

- a) Partial or lack of commitment to safety
- b) Absence of a just culture:
- c) Lack of information (Ignorance)
- d) Issues identified through safety culture survey

# STEPS TO BUILDING A SAFETY CULTURE

- 1) Identify safety culture drivers
- 2) Take appropriate action to address issues a) to d) above
- 3) Repeat safety culture survey annually
- 4) Take necessary action to address gaps identified by the annual safety culture survey.
- 5) Repeat 3) and 4) above.

# BUILDING THE SAFETY CULTURE

## DRIVERS OF THE SAFETY CULTURE

- a) Management - Shaping staff attitudes towards safety normally phrased as “This is how we do things here” e.g. leading by example, etc.
- b) The Director ANS - Fostering a positive safety culture within the Directorate.
- c) The safety Manager - Modelling and promoting an organizational safety culture that fosters good safety practices through effective leadership.
- d) Professional associations e.g., UGATSEA, UGAISOA and UGATCA provide platform for sharing important safety information.



# BUILDING THE SAFETY CULTURE - 2

## COMMITMENT TO SAFETY

- a) Safety policy endorsed by the DG describing the organization's commitment to safety.
- b) Appointment of a safety manager and 3 dedicated principal officers to coordinate implementation of the SMS.
- c) Provides an annual budget to implement and maintain the SMS.
- d) Established a Corporate Safety Review Committee chaired by the DG comprising of directors and safety managers to monitor safety and ensure necessary resources are available for the implementation of the SMS.

# BUILDING THE SAFETY CULTURE - 3

## COMMITMENT TO SAFETY

- e) Management reviews outcomes of the Corporate Safety Review Committee and any other safety reports regularly.
- f) Safety responsibilities of each level/category of staff have been identified, documented, shared with both management and staff and incorporated into their job descriptions. Staff sign a safety responsibilities acknowledgement form

# BUILDING THE SAFETY CULTURE - 4

## JUST CULTURE

- a) Staff are sensitized and regularly reminded that negligence or deliberate violations will not be tolerated, even in our non-punitive environment.
- b) Identified unacceptable behaviour is documented and regularly communicated to staff. E.g., Non-reporting of mandatory reportable occurrences, leaving ATC trainee alone in the control room to handle traffic, etc.
- c) An SMS staff recognition scheme was established to recognize and reward good and outstanding safety practices/behaviours.

# BUILDING THE SAFETY CULTURE – 5

## INFORMATION

- **To appreciate the importance of safety, prioritize and consider safety in individual actions/decisions**
  - a) Staff are provided with safety training and education as per the SMS training program and in line with the annual SMS training plan.
  - b) Safety information is regularly communicated via the safety electronic displays, directorate/department meetings, monthly SMS workshops, internal memos, emails, safety publication, etc.
  - c) Outcomes of safety risk assessments and incident investigations are reviewed by DSRC and communicated to offices/personnel who are affected and/or responsible for taking action.

# BUILDING THE SAFETY CULTURE – 6

## INFORMATION

- **To appreciate the importance of safety, prioritize and consider safety in individual actions/decisions**
- d) Incident review workshop introduced to ensure all staff learn from past incidents and in turn avoid repeating similar unsafe actions.
- e) Safety publication
- f) Staff are involved in safety activities as much as possible to help them appreciate safety including deploying them to the safety office on a rotational basis for specific periods of time.

# BUILDING THE SAFETY CULTURE IN – 7

## INFORMATION

### ➤ Collection of safety information

- a) Staff report safety occurrences or potential hazards using hazard report forms available within their respective areas of operation, operational log books, via email to SMS office, verbally to safety office personnel, etc.
- b) Safety office acknowledges safety reports received from staff and notifies them of action taken to motivate them to continue reporting.
- c) Staff recognized and rewarded for reporting.



# BUILDING THE SAFETY CULTURE - 8

## SAFETY CULTURE SURVEY

- a) A safety culture survey is conducted annually and areas that need improvement highlighted.
- b) The SMS department coordinates implementation of required actions with reference to areas that need improvement as identified by the survey.

# CONCLUSION

- ❑ Safety culture is an integral part of the SMS, however building a healthy or positive safety culture is a continuous effort and requires deliberate measures aimed at building and improving the safety culture.
- ❑ Factors affecting building and continuous improvement of the safety culture may vary with organization and time thus need for safety culture survey to identify what needs to be done.



# THANK YOU





## **Mr. Simon Kutibiwa**

Director Flight Safety and Standards

Eswatini CAA

# ESWATINI TEAM



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Mhlanga**

Senior Legal Compliance  
Officer



**Mr. Nhlanhla  
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Air Navigation Services  
Manager



**Mr. Simo  
Shongwe**

Aerodromes and Air  
Navigation Services  
Inspector



**Mr. Bongani  
Lukhele**

Airports Director

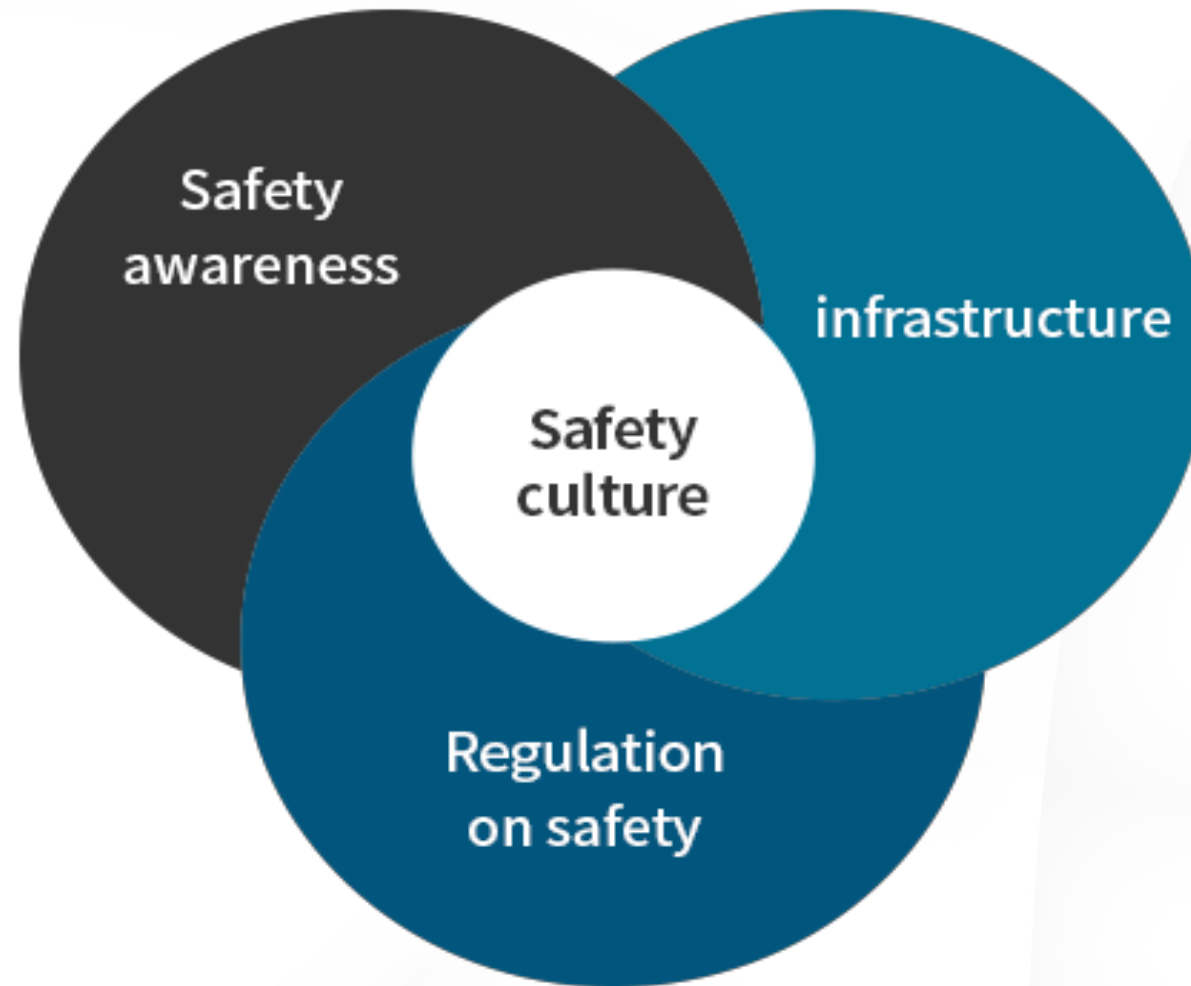


**Mr. Simphiwe  
Maseko**

Chief Air Traffic Engineer

# PRESENTATION TOPICS

## THE VENN DIAGRAM





# REGULATIONS ON SAFETY

1. Provisions of Civil Aviation Bill No 22 of 2019
2. Regulatory Provisions on Safety
3. Technical Guidance on Safety
4. Certification Process
5. Workshop on Certification Process
6. Organizational Aspects of the ANSP
7. ANSP Processes and Procedures

# SAFETY AWARENESS

1. SSP entrenched in the Act an enabler of Safety Promotion
2. Instructional capacity within the Safety Regulatory for efficient and timeous education of Management and all levels of both Regulator and ANSP a critical enabler of a safety culture

# SAFETY AWARENESS

3. SSP mandates the SMS in applicable Regulations
4. Stakeholder consultancy and inclusion of input has engendered ownership by Stakeholders an enable for building a safety culture

# INFRASTRUCTURE

1. Pursuit to comply with ASBU Targets
2. Current Status
3. Projected status

# SAFETY CULTURE

“Safety culture refers to the enduring value, priority and commitment placed on safety by every individual and every group at every level of the organisation. Safety culture reflects the individual, group and organisational attitudes, norms and behaviours related to the safe provision of air navigation services.”

# CONDUSIVE SAFETY ENVIRONMENT

**Eswatini at Corporate as part of strategy  
is to achieve Abuja Safety Targets**

# SAFETY PERFORMANCE

1. ANSP synopsis
2. Internal Oversight
3. Statistics
4. Operational Activities



# ESWATINI TEAM



**MS. Xolile  
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Senior Legal Compliance  
Officer



**Mr. Nhlanhla  
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Air Navigation Services  
Manager



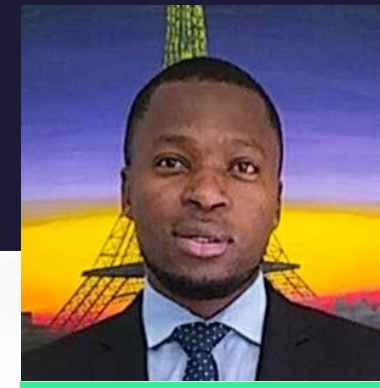
**Mr. Simo  
Shongwe**

Aerodromes and Air  
Navigation Services  
Inspector



**Mr. Bongani  
Lukhele**

Airports Director



**Mr. Simphiwe  
Maseko**

Chief Air Traffic Engineer



# THANK YOU





## **Mr. Frank Kofi Apegyei**

Manager Training & Research / Regional Africa Director

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# EFFECTIVE SMS IMPLEMENTATION & OBSERVATIONS

# OUTLINE

- ❖ Introduction /Definition
- ❖ Genesis (Why SMS)
- ❖ Implementation of SMS
  - - ICAO SARPs
  - - Scope
  - - Planning - Key elements
  - - GAP Analysis
- ❖ Appointment of Safety personnel
- ❖ Observation – ATSEP environment
- ❖ Safety Culture
- ❖ Conclusion

# INTRODUCTION

## Some Definitions

- ❖ **Safety Management system (SMS):** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures
- ❖ **Safety** is **the state** in which the **risk of harm to persons or property damage** is reduced to, and maintained at or below, an **acceptable level** through a continuing process of **hazard identification and risk management**
- ❖ **Hazard** - Condition or activity with the potential of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function
- ❖ **Safety Risk** - The predicted probability and severity of the consequences or outcomes of a hazard.

# SAFETY ISSUES.... THE GENESIS

Safety issues are a **by-product of activities** related to **product/services delivery** of any organisation.

**Operational interactions** among different system components. More specifically, the interaction of people with technology are potential contributors to hazardous conditions.

**Human errors and violations** are contributing factors in most aviation occurrences.



# ICAO SAFETY MANAGEMENT SARPs

The safety management SARPs are aimed at two groups:

1. States and
2. **Service providers** which includes Air Navigation Service Providers

## **References:**

Annex 1: Personnel Licensing

Annex 6: Operation of Aircraft

Annex 8: Airworthiness of Aircraft

Annex 11: Air Traffic Services

Annex 13: Aircraft Accident and Incident Investigation

Annex 14 : Aerodromes

Annex 19: Safety Management System (SMS)

Doc 9859: Safety Management Manual (SMM)

## States to:

- ❖ Establish a **State safety programme (SSP)**, in order to achieve an acceptable level of safety (ALoS) in civil aviation
- ❖ Establish the **acceptable level of safety (ALoS)** to be achieved (by an SSP)

## Service Providers to:

- ❖ Establish and implement a **Safety Management System (SMS)**.
- ❖ Establish that a service provider's SMS shall ensure action to **maintain safety performance and shall continuously monitor** and regularly assess such safety performance.
- ❖ Ensure that accepted SMS shall clearly **define the lines of safety accountability** throughout the organization, including direct accountability for safety on the part of Senior Management.

# IMPLEMENTATION

## SCOPE

- ❖ An SMS is a system to assure safe operation of aircraft through effective management of safety risk.
- ❖ It seeks to proactively contain or mitigate risks before they result in aviation accidents or incidents.
- ❖ Therefore, it should be implemented in such a way as to continuously improve safety by identifying hazards, collecting and analyzing data and continuously assessing safety risks.
- ❖ The scope may also indirectly include other organizational activities that support operational or product development such as finance, human resources and legal.

# IMPLEMENTATION

## PLANNING - FRAMEWORK



The diagram illustrates the ICAO SMS Framework. It features a blue header with the ICAO logo on the left, the title 'ICAO SMS FRAMEWORK' in the center, and a small airplane icon on the right. Below the header, the framework is organized into four numbered components, each with a list of sub-elements. The background of the content area is light blue with a subtle grid pattern.

**ICAO SMS FRAMEWORK**

- 1 Safety policy and objectives**
  - 1.1 – Management commitment and responsibility
  - 1.2 – Safety accountabilities of managers
  - 1.3 – Appointment of key safety personnel
  - 1.4 – SMS implementation plan
  - 1.5 – Coordination of the emergency response plan
  - 1.6 – Documentation
- 2 Safety risk management**
  - 2.1 – Hazard identification processes
  - 2.2 – Risk assessment and mitigation processes
  - 2.3 – Internal safety investigations
- 3 Safety assurance**
  - 3.1 – Safety performance monitoring and measurement
  - 3.2 – The management of change
  - 3.3 – Continuous improvement of the safety system
- 4 Safety promotion**
  - 4.1 – Training and education
  - 4.2 – Safety communication

- 27

- ❖ The framework includes 4 components and 14 elements representing the minimum requirements for SMS implementation.

# PLANNING

## STAKEHOLDER IDENTIFICATION

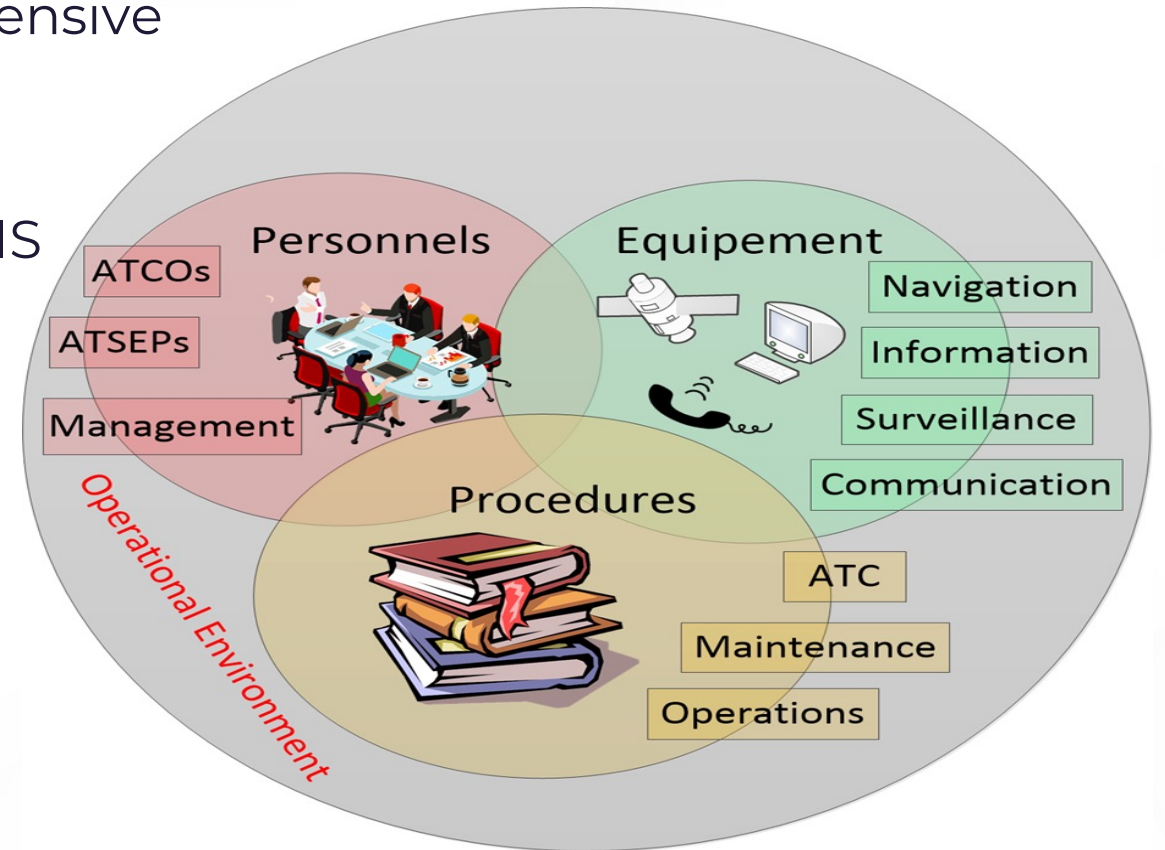
- It is important to identify aviation system stakeholders to ensure that stakeholders relevant to risk decision are taken into consideration and contribute with their knowledge before the decision is taken.
- They may include:
  - ❖ Aviation professionals
  - ❖ Aircraft owners and operators
  - ❖ Manufactures
  - ❖ Aviation regulatory authorities
  - ❖ Industry trade associations
  - ❖ Regional air traffic service providers
  - ❖ Professional associations and federations
  - ❖ International aviation organizations & Investigative agencies
  - ❖ The flying public

# PLANNING

## KEY ELEMENTS

**3 components** to consider for a comprehensive approach of SMS implementation:

- ❖ Personnel - Refers to ATCOSA, ATSEPs AIS officers, Management
- ❖ Procedures - Refers to the operational environment – ATC operations and maintenance
- ❖ Equipment - Refers to Navigation, Surveillance, Information, and Communication



# GAP ANALYSIS

- ❖ An analysis of safety arrangements existing within the organization.
- ❖ The organizational structures necessary for an SMS may be found throughout an organization.
- ❖ Various activities of an SMS are probably already in place and are working.
- ❖ SMS development should build upon existing organizational structures.
- ❖ Conduct the gap analysis against the components and elements of the SMS.
- ❖ Once completed and documented, the gap analysis forms the basis of the implementation plan.



# APPOINTMENT OF SAFETY PERSONNEL

- Once the plan is structured, it is important to think of the following:
- Who will:
  - ❖ Facilitate hazard identification, risk analysis and management? Monitor corrective actions to ensure their accomplishment?
  - ❖ Provide periodic reports on safety performance?
  - ❖ Maintain safety documentation?
  - ❖ Plan and organize staff safety training?
  - ❖ Provide independent advice on safety matters?
- The safety manager –
- Manages the SMS implementation plan on behalf of the accountable executive
- And other Safety personnel to assist the safety manager.

# OBSERVATIONS

## ATSEP ENVIRONMENT

In short, once we go through all the planning establishing the policies and objectives, together with appointment of safety personnel, the implementation could be done in phases.

**Safety** of the services provided by any ANSP depends on the

- ❖ **Availability**
- ❖ **Integrity**
- ❖ **Reliability**

of CNS/ATM systems – which are **ensured only by ATSEP**

### **Deployment of CNS/ ATM systems**

ATSEP plan, select and procure the correct systems/technology as required for the ATS depending upon the airspace design, geographical terrain conditions, traffic density, rate of growth of traffic, etc

- ❖ Select appropriate Site, Install, Test and Commission CNS/ATM systems
- ❖ Continuous collection of Safety Data in terms of safety occurrences and hazards
- ❖ Development and implementation of risk mitigation strategies

# REPORTING RPODECDURE

## SAFETY CULTURE

An attitude

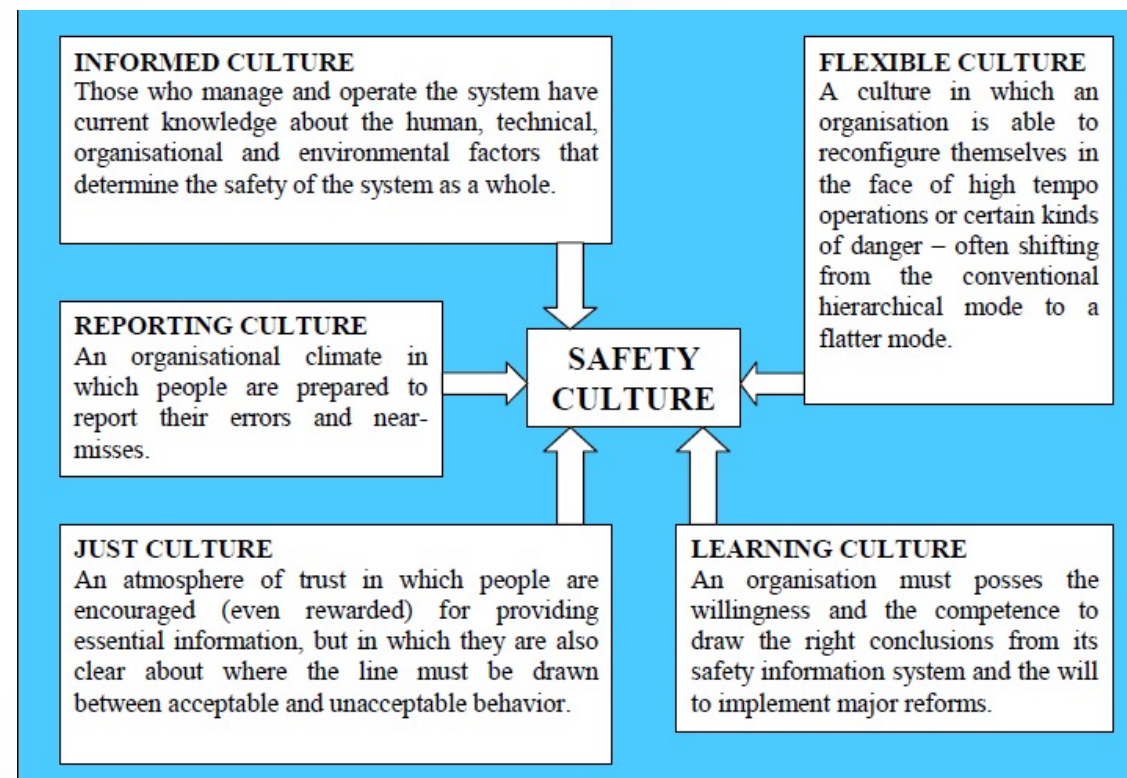


Figure 1 – Safety Culture Components Definition (from Prof. J. Reason)

# CONCLUSION

① A method...



② An attitude...

This could have  
happen to me as  
well...

Let's understand  
rather than criticize

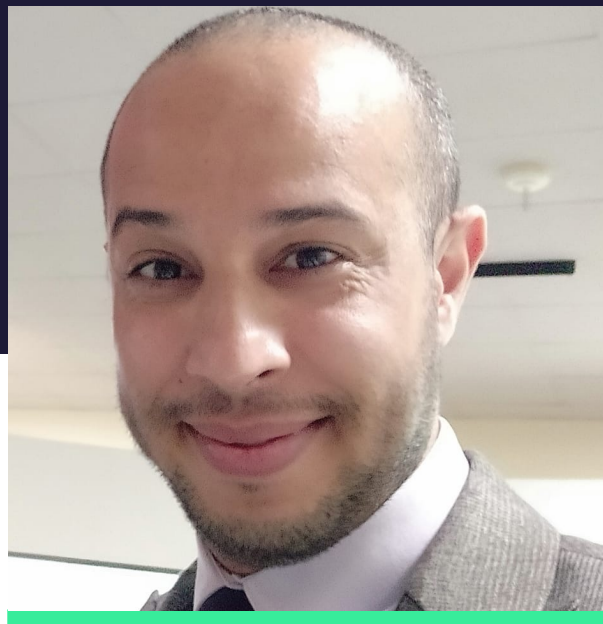






# THANK YOU





**Mr. Fateh Bekhti**

Executive Vice-President Africa & Middle East

IFATCA



## **Implementation of Safety Culture in Air Navigation Service Provision**

Presented by Fateh Bekhti , Executive Vice President Africa and Middle East



# Outline

IFATCA – Just Culture efforts

Safety Culture in Africa :

Case Study 1 – Wakanda State

Case Study 2 – Etopia state

Case Study 3 – Zumba State

# IFATCA – Just Culture efforts

**Think Safety, Nairobi 3-5 February 2016;**

**Think Safety, Accra 3-5 April 2017;**

**Think Safety, Algeria 26-28 November 2017;**

Think Safety, India 16-18 August 2018;

**Think Safety, Nigeria 8-9 November 2018;**

Think Safety, Bulgaria 11-13 December 2018;

Think Safety, Spain 27 February - 1 March 2019;

Think Safety, PLC/TOC Hong Kong 12-13 March 2019;

**Think Safety, Tunisia 10-12 April 2019**

Think Safety, Bahamas 16-19 July 2019;

Think Safety, Bulgaria 12-14 November 2019;

**Think Safety, South Africa 18-21 November 2019;**

# Safety Culture in Africa

## Case Study 1 :

State of WAKANDA Located in Eastern Africa – Just Culture

Airspace Classification G

Radar Coverage : Available

Involved flights :

WF 339 ( Transponder Equipped ) and WF 629

NIL flight plan for Both aircrafts

CAVOK

Controller in charge : Rosemary Bagendo

Senior Air Traffic Controller : TWR , APP , APP RAD ,OJTI , ELP  
Instructor

Airspace Classification G

Radar Coverage : Available

Involved flights :

WF 339 – Helicopter ( Transponder Equipped ) and WF 629 –  
B206

NIL flight plan for Both aircrafts

CAVOK

# Class G Airspace

No entry requirements

Two way - Radio communication with ATC is not a requirement .

No separation is provided for VFR flights

Special VFR , Not Available

Traffic advisories , if workload allows it .

# Tasks required by the controller

Responsible for the provision of controlled flights ARR/DEP  
And required to provide separation between them .

All other aircraft can be handled if traffic workload allow but no obligation for the ATCO to do it .

# Synopsis

On October 2012 a Helicopter WF 339 and a B206 WF 629 were reported being on airprox by one of the pilots **after landing** .

Both Helicopters were flying opposite tracks . The pilot of WF 339 didn't report the opposite traffic B206 for the ATCO in charge despite providing this information in his airprox report :

*# **I saw traffic in a Distance** .. After crossing each other flight route , the controller advised about the opposite traffic ... **I thought we passed so close to one another.** #*

The ATCOs in Charge provided information for him but according to his report it was late .

The flight WF 339 appears to be a VVIP flight however the ATCO in charge have not received any information about it .



# **Action by the ANSP/CAA WAKANDA**

Conduct an investigation .

Air traffic Controller validation – withdrawn immediately after the report were made by pilot .

Air traffic Controller Suspended from work on November 2012

Termination was made on November 2013 – One year after being suspended .

# **Action by the controller**

Refused to admit that it was an airprox

Started a legal procedures against WAKANDA CAA

# Results

Rosemary Bagendo was found not guilty in 2018 .The Court requested her re-instatement to her initial Job .

CAA refused up to now to re-instate our colleague despite our several calls .

Ms. Rosemary Bagendo was a victim of seriously poor management by both ANSP and CAA . She lusted her Job and left behind without any kind of support .

# Case Study 2

State of ETOPIA located in Eastern Africa – Just Culture

Location : SEBABA Airport  
Push back operations

Aircraft involved :  
A320 Vs B738 ETOPIAN Airlines .

Controller in charge : Ahmed Blaha – Senior Air traffic  
Controller with more than 20 years experience .

# Synopsis

Ahmed Blaha TWR controller , has no ATC License because it is not provided by the CAA .

Ahmed Blaha were not supposed to work night shift ( medical issue ) and he was sort of obliged to work that night shift due to staffing issues .

An aircraft A330 were cleared to push back on the condition that the B738 inbound traffic join the adjacent stand accordingly.

The pilot of A330 didn't comply and it ended up hitting the other aircraft which resulted on a damage on both aircrafts wings .

## **Action by the ANSP / CAA**

Both Pilot and Controller were suspended from work .

The pilot resumed work after one month .

The Air traffic controller Mr.Ahmed Blaha is up to now performing administrative tasks . He has never been returned to ATC Work .

# Case Study 3

State of Zumba located in Southern Africa – Just Culture

Location : MAKASSA ACC

Aircraft involved : B767 Vs B737 on cruise .

Non communication of Estimate for Adjacent Units . Resulted on an Airprox

Controllers involved : Mr.Tempo Kassa ( OJT ) , Mr. Samson Akapore ( ATCO Trainee )

Additional ATCO : Ms.Keziah Makenza – ATC Chief



# Synopsis

Non communication of Estimate to adjacent unit resulted on an airprox .

**It was found After Checking CCTV Cameras installed inside Control rooms ( for security reasons ) that the OJTI were busy doing other tasks than providing OJTI for the trainee controller .**

## **Action by the ANPS / CAA**

Suspend the OJTO controller immediately .He returned to work after one month .

Conduct the investigation .

Later on . Charge the ATC Chief and terminate her

**Case not closed since Controllers is taking it to Court .....to be continued .**

# Conclusion

While we have succeed as a region to implement SMS even partially and conducted many training sessions .

It is time to question ourselves .

Have we achieved the objectives of a robust SMS system as described in Annexe 19 and DOC 9859 .

Have we really as a region implemented a safety culture instead of bureaucratic procedures that still harming our system and stopping it from any development ?

# INTERNATIONAL FEDERATION OF AIR TRAFFIC CONTROLLERS' ASSOCIATIONS

One sky - One voice



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# QUESTIONS AND ANSWERS



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CANSO





# THANK YOU

