

AVI AFRIQUE 2017 |
Africa Aviation Innovation Summit



Welcome to
AVI AFRIQUE 2017



ICAO NO COUNTRY LEFT BEHIND CAMPAIGN

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Introduction

The ICAO “No country left behind” campaign seeks to assist states to implement ICAO’s SARP by providing guidance and technical assistance where possible. The main goal is to help states be in a position to attract global air transport and benefit economically from such.

Effective implementation of safety` Role of the global aviation community

- ❖ It is part of the global aviation community's responsibility to support States that have difficulties or are unable to establish sustainable safety oversight systems in compliance with international standards.

Effective implementation of safety cont'd

- ❖ Cooperation in aviation safety can positively contribute to greater international harmonization of ICAO SARP to the benefit of passengers and the aeronautical industry.
- ❖ Cooperation areas must include training, technical assistance and skills development through various cooperation programs.

Effective implementation of safety cont'd

- ❖ The African Union must strengthen its cooperation with ICAO to assist member States in meeting ICAO standards, as the EU already has several Aviation cooperation programs.
- ❖ The EU is actively engaged in a number of technical assistance and cooperation initiatives aimed at promoting aviation safety globally and regionally, particularly in areas with high accident rates.

Effective implementation of safety cont'd

The role of States/ANSP's in this initiative:

- ❖ ANSPs should have proper strategic plans for implementation of safety programmes, planning is key, most African States suffer inefficiencies in regulation and policy making within their States.
- ❖ States should prioritise safety programmes in their budget allocation ,budget constraints are a major obstacle in developing countries .

Effective implementation of safety cont'd

- ❖ ANSPs should invest in Personal training and development to ensure their personnel are aware of the organisation's safety objectives .
- ❖ ANSP's should have an active SMS in accordance with ICAO Annex 19 , SMS Manual Doc 9859 and their SSP.

Effective implementation of safety cont'd

- ❖ Senior management must be responsible for establishing an SMS and for allocating resources to support and maintain an effective SMS
- ❖ Management must be responsible for implementing, maintaining and adhering to SMS processes within the ANSP's and CAA's .
- ❖ Employees must be responsible for identifying hazards and reporting them without fear of victimization.

Effective implementation of Safety cont'd

- ❖ There must be a top-down commitment from management and a personal commitment from all employees to achieve safety performance goals;
- ❖ ANSPs must have an established practice of open communication throughout the organization that is comprehensive and transparent, and where necessary, non-punitive.

Effective implementation of Safety cont'd

- ❖ ICAO's intervention will be made easier if States have proper Structures dealing with Aviation Safety.
- ❖ State CAA's and ANSPs must be structured to reflect the core business of aviation
- ❖ Roles and responsibilities must be clear between CAA's and ANSP's especially in States where the Regulator is also the operator.

Effective implementation of Safety cont'd

- ❖ ANSP's should ensure their Human Capital departments understand the need to train and develop Personnel to be up to minimum required ICAO standards.
- ❖ An organizational and safety culture that continuously strives to improve.

Effective implementation of Safety cont'd

Training organisation's role in safety:

- ❖ Certified Training organisation's must collaborate and offer standardised programmes within the region.
- ❖ Differences in training standards has caused many problems especially in ATM e.g. ATCs are trained under different traffic densities in the different organisations but in One Continent.

Effective Implementation of Safety cont'd

The role of African States

- ❖ African States main objective must be to reform ATM in Africa in order to cope with sustained air traffic growth and operations under the safest, most cost and flight-efficient and environmentally friendly conditions.

Effective Implementation of Safety cont'd

- ❖ De-fragmenting the airspace,
- ❖ Reducing delays,
- ❖ Increasing safety standards and flight efficiency to reduce the aviation environmental footprint, and reducing costs related to service provision

Security

The persistent threat of terrorism is driving the need for security forces around the world to monitor the movement of wanted individuals and potential terrorists.

Global travel awareness will continue to grow as one of the preeminent tools in the fight against terror as we confront an increasingly agile adversary.

Aviation security has been challenged mostly after the September 9/11 terrorist operation.

Security cont'd

ISIS' global reach is particularly concerning, especially when we think of the threat to aviation from insider threats and the technical organisation of groups like ISIS.

Security cont'd

- ❖ It is commonly believed that one of the ISIS affiliated group leveraged an insider to smuggle a bomb onto Russian Metro jet Flight 9268 and take down the plane within the Egyptian airspace.
- ❖ This attack demonstrates how one individual with legitimate access to high-risk areas at airports can be inspired and moved to action, such calls for a new approach towards AVSEC.

Security cont'd

Reinforcing State and aviation security

- ❖ State security programmes should prioritise aviation security in their National security planning processes
- ❖ States/CAA's/ANSP's should prioritise Aviation Security in their budgeting processes and resource allocation
- ❖ Airport Security and facilitation committees should ensure security and safety awareness is emphasized at all levels of Airport staff, stakeholders and customers

Security Cont'd

- ❖ CAA's and ANSPs must focus on common-sense approaches to buttress funding and embrace smart security, staffing and screening standards
- ❖ States must develop and implement a system-wide method for assessing the vulnerability of pre-security checkpoint areas in airports

Security Cont'd

Improvement areas:

- ❖ Funding
- ❖ Local empowerment and communication;
- ❖ Airport PreCheck improvements and expansion;
- ❖ Technology and innovation
- ❖ Organisational structures
- ❖ Internal solutions; and Airport risk mitigation

Infrastructure Development

Benefits

- ❖ Air transport has proven to be a catalyst for sustainable development.
- ❖ It impacts tourism and trade.
- ❖ It serves as the main mode of transportation to deliver humanitarian relief and response to crises and public health emergencies.
- ❖ It generates socio-economic benefits which help eradicate poverty by creating jobs and enhancing air connectivity.

Infrastructure Development cont'd

- ❖ States MUST develop quality and resilient aviation infrastructure compliant with the international requirements adopted by International Civil Aviation Organization (ICAO).
- ❖ Aerodromes are considered an integral and essential component of the aviation infrastructure in a State.
- ❖ Airports are drivers for economic development and trade.

Infrastructure Development cont'd

- ❖ A Poorly designed and overseen aerodrome or an aerodrome which does not meet international requirements adopted by ICAO has been proven to be a safety risk,
- ❖ States must ensure proper skills are employed during design and construction of Airports.

Infrastructure Development

- ❖ Poorly designed Airports can be a barrier for the economic development of a State.
- ❖ A single aviation accident can have a substantial knock on effect for their economies and many accidents have been attributed to poorly designed airports and poorly maintained equipment.

Infrastructure Development cont'd

- ❖ Development require international support and partnerships to ensure that essential aviation infrastructure including aerodromes, navigation aids and fire safety equipment are upgraded to modern international standards and operated effectively to guarantee safety and economic stability.
- ❖ More generally, air transport is essential for the economic and social welfare of State in special situations

Infrastructure Development cont'd

ICAO must assist States to liberalize air transport and to close the infrastructure gap that exist among States.

The “No Country is Left Behind campaign” will assist States in achieving their optimal air transport potential that will ultimately contribute towards the realization for Sustainable Development.

Technology Innovation

The impact of technological innovation capability on States /ANSPs performance is enormous , therefore states must invest in innovation to keep up with the increasing Air traffic demand.

Technology innovation cont'd

Challenges faced by States in acquiring latest technology systems

- ❖ Budget constraints
- ❖ Lack of top management understanding of the need to implement such systems
- ❖ Lack of strategic plans and funding models for such projects
- ❖ Poor follow up and performance measurement tools

Technology Innovation cont'd

Aviation Systems Block upgrades ASBU'S

- ❖ The ASBU project has proven to be a challenge to most African States in as far as the implementation of the various modules is concerned.
- ❖ The ASBU project was a good move by ICAO to ensure that there is no much gap in technology used by different States.
- ❖ The introduction of affordable and handy ATM solutions like ADSB, IMLAT etc. has been a drag for most African States

Technology innovation cont'd

AFI Regional Performance Objectives

- ❖ RVSM Implementation (PFF ATM/01)
- ❖ PBN Implementation (en-route, terminal and approach) (PFFs ATM/02, ATM/03 and ATM/04)
- ❖ Enhancement of CNS Infrastructure (PFF CNS/01)
- ❖ Search and Rescue (PFF SAR/01)
- ❖ Transition from AIS to AIM (PFFs AIM/01 and AIM/02)
- ❖ Improvement of the provision of Meteorological Services (PFFs MET/01, MET/02)
- ❖ Improvement of Aerodrome Operations (PFF AGA/01)

Technological Innovation cont'd

ASBU BO- Surveillance targets

Elements	Targets and implementation
1. Surveillance system for ground surface movement (PSR, SSR, ADS-B or Multilateration)	December 2017 Service provider
2. Surveillance system on board (SSR transponder, ADS-B capacity)	December 2017 Service provider
3. Surveillance system for vehicle	December 2017 Service provider
4. Visual aids for navigation	December 2015 Service provider
5. Wildlife strike hazard reduction	December 2015 Aerodrome operator / Wildlife Committee
6. Display and processing information	December 2017 Service Provider

Technology Innovation Cont'd

Improving innovation within States:

- ❖ States must set aside financial resources for Innovation and accommodate innovators within their organizational structures
- ❖ Top management must play an essential role in generating innovations by providing the appropriate environment, making decisions that enhance the creation and execution of knowledge successfully
- ❖ Top management must support plays a key role in influencing the adoption of innovational activities in organizations

Technology Innovation cont'd

- ❖ The technological development that has been achieved in Aviation requires continual generation of novel ideas and encouraging innovation in renewable manners, especially in less fortunate countries, which are striving to catch up with technological development through innovation.

Technology Innovation cont'd

- ❖ States must create the necessary infrastructure to support innovational activities such as creating the appropriate educational environment for employees, providing financial support for training programs, and promoting teamwork
- ❖ Poor organizational structure hinders innovative ideas, while rich organizational structure is considered to be the catalyst for the adoption of innovative behavior

Technology innovation cont'd

- ❖ In summary it is therefore the support of top management within ANSPs ,CAAs that plays an important role in improving the process of innovation

Environmental Sustainability

Annex 16 to the Chicago Convention addresses environmental concerns posed by aviation such as aircraft noise ,greenhouse gas(GHG)emissions land utilization, waste and congestion.

ICAO is reliant on its member states for the implementation of its environmental standards on Annex 16.

Environmental Sustainability cont'd

Primary environmental issues associated with the operation of airports are

- ❖ (GHG)emissions,
- ❖ noise pollution,
- ❖ land utilization,
- ❖ waste, and
- ❖ congestion

Environmental Sustainability

- ❖ States are to find a balanced approach for maximizing the capacity of airports and the possibilities and potentials for future growth in one hand, and minimizing the accompanying negative impacts on the other hand

Environmental Sustainability cont'd

Addressing environmental impact caused by airports.

- ❖ Adopting new procedures and technology that are in line with environmental policies.
- ❖ Air Traffic Management can increase efficiency in the use of fuel and use of airport, which ultimately reduces GHG emissions and can mitigate noise emissions.

Environmental Sustainability cont'd

ATM's role in environmental sustainability

- ❖ The most important fuel saving opportunities come from ATM systems that permit more direct routings e.g. SSR ,PBN routes
- ❖ Use of more efficient conditions such as optimum altitudes and speed.

Environmental Sustainability cont'd

- ❖ Shortening routes can indeed significantly reduce CO2 emissions.
- ❖ ATM and other operational procedures, reportedly, can reduce aviation fuel burn between 8% and 18%.

Environmental Sustainability cont'd

- ❖ Growth of airports should be encouraged for the economic and social benefits they provide.
- ❖ such growth should be a green growth in which increase in capacity is not achieved at the cost of negative impacts on the environment

Environmental Sustainability cont'd

- ❖ There must be an active involvement of the local communities in all stages of development, and implementation of plans necessary for the effective management of airports.

Environmental Sustainability cont'd

- The aviation industry in Africa must improve on:
- ❖ Coordination between transport, environment, and health policy makers
 - ❖ development of policies accordingly in all the stages, from manufacturing of aircrafts and building infrastructures (regulations for standardization), to running and operation of airports.

Aviation is the branch of engineering that is least
forgiving of mistakes-*Freeman Dyson*

END -THANK YOU