

# AFI Aviation Week - 7<sup>th</sup> Edition

Enhancing the Aviation System in Africa

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Working together to shape the future  
growth of a safe, secure and sustainable  
air transport industry that connects and  
enriches our world

# Overview

- Data Collection
- Low maturity of Safety Culture
- Low levels of Safety collaboration
- Slow attainment of set Safety Targets

## Challenges



- Safety Leadership
- Safety Risk
- Safety Connect

## Strategy



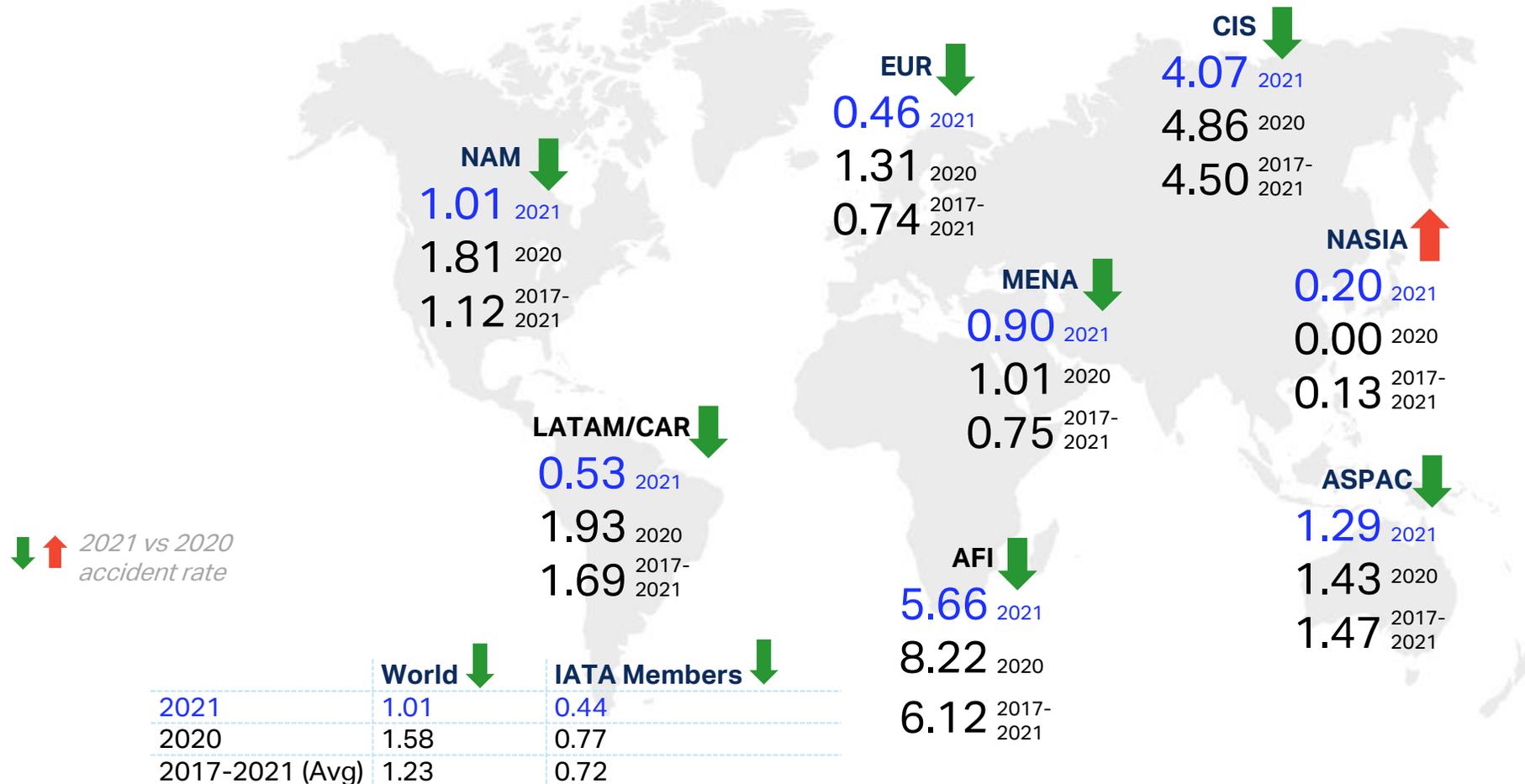
- Reduce Operational Risk
- Support Consistent Implementation of Safety Management Systems
- Identify and Address Emerging/Evolving Safety Issues

## Goals



# All Accident Rate per Region of Operator

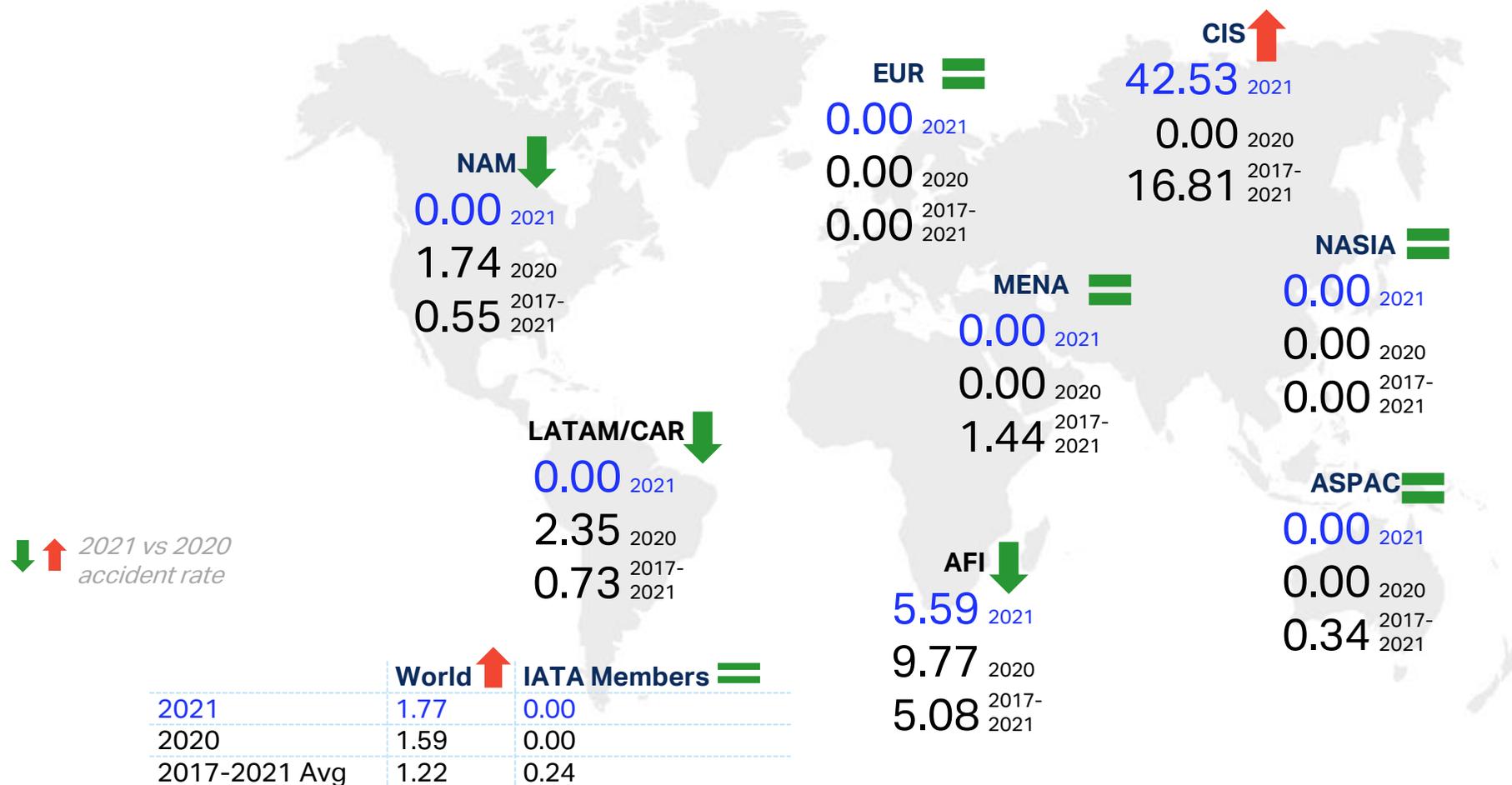
One region of operator witnessed an increase in the accident rate per million sectors



Source: IATA GADM

# Turboprop Hull Loss Accident Rate per Region of Operators

Turboprop hull loss accident rate has seen an increase in one region



Source: IATA GADM

# Emerging Risks – 5G

Country	No. of operators	Total spectrum (MHz)	Frequency bands awarded (MHz)	Demand forecasts (2018 to 2025)	4G introduction & 5G forecast	5G status	Comments
Benin	3	383.2	800, 900, 1800, 2100, 2600	2G ↓ 3G - 4G ↑↑	4G 2015 5G > 2025		
Cameroon	4	414.2	700, 800, 900, 1800, 2100, 2600	2G ↓↓ 3G - 4G ↑↑		The regulatory framework is being revised and modernized through a 5-year plan to prepare for 5G.	
Congo, Democratic Republic	8	352	450, 700, 800, 900, 1800, 2100, 2600, 3500	2G ↓↓ 3G ↑ 4G ↑	4G 2017 5G 2024		3G commenced In 2011. Aiming To extend LTE coverage. Annual growth in mobile
Côte d'Ivoire	5	580	800, 900, 1800, 2100, 2300, 2600, 3500	2G ↓↓ 3G 6 4G ↑↑		4G networks are still being deployed. Workshops were held in 2019 to discuss the opportunities and specificities of 5G. This resulted in a roadmap which was validated in July 2021 and work is due to commence in Q3 2021.	
Ethiopia	2	330	800, 900, 1800, 2100, 2600	2G- 3G ↑ 4G ↑↑	4G 2015 5G 2022	Safaricom Ethiopia plans to first deploy 4G network and thereafter introduce 5G. Ethio telecom is undergoing network infrastructure and system enhancements to pilot 5G networks in the coming year.	
Kenya	4	290	700, 800, 900, 1800, 2100	2G ↓↓ 3G ↑ 4G ↑↑	4G 2014 5G 2021	5G commercial network deployed by Safaricom and trials ongoing in 4 cities since March 2021. Trials will be expanded to 9 cities by the end of the year <sup>22</sup>	2nd country in Africa to deploy 5G
Nigeria	8	610	700, 800, 900, 1800, 2100, 2300, 2600, 3500	2G ↓↓ 3G - 4G ↑↑	4G 2013 5G 2023	4G LTE network has been upgraded in 2019 to improve capacity and connectivity <sup>23</sup> . MoU signed with Israel in November 2020 to exchange opportunities and ideas on technologies, including 5G networks	Trials in the 3.5 GHz and 26 GHz bands
Rwanda	3	455.8	700, 800, 900, 1800, 2100, 2600	2G ↓↓ 3G - 4G ↑↑	4G 2014 5G > 2025	4G LTE network has been upgraded in 2019 to improve capacity and connectivity <sup>24</sup> . MoU signed with Israel in November 2020 to exchange opportunities and ideas on technologies, including 5G networks	
Senegal	4	377.1	800, 900, 1800, 2100, 2300, 3500	2G ↓↓ 3G ↑ 4G ↑↑	4G 2016 5G > 2025	First 5G trials staged in November 2020 by Orange. Company officials have stated 5G trials could take place in the next two years, subject to regulatory approval <sup>25</sup>	
South Africa	6	528.25	850, 900, 1800, 2100, 2300, 2600, 3500	2G ↓↓ 3G ↓↓ 4G -	4G 2012 5G 2020	First commercial 5G networks in Africa deployed in 2020. Operators are using temporary allocated spectrum.	Spectrum Auction Of 700MHz, 800MHz, 2600MHz and 3500MHz bands delayed due to legal challenge <sup>26</sup> .

- 2 States have deployed
- Deployment MOUs Signed by 2 States
- Trails staged by 1 State
- Proposed:
  - States to consider Exclusion Zone and Buffer Zone at /around Aerodromes
  - Consider 5 G Antenna tilt
  - Limit power of transmitters
  - Establish 5 G TF for AFI Region (ICAO)
  - Stage awareness campaign on risk of 5 G interference



# IATA Audit Programs – IOSA/ISSA/ISAGO

## Overview

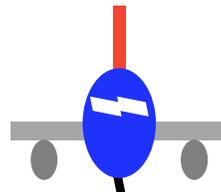
- Global Safety audit program
- Audit standards include ICAO safety and security provisions and industry SARPs from ICAO Annexes 1, 2, 6, 8, 17, 18 and 19
- Available to all commercial passenger & cargo airlines, regardless of IATA membership status

## AFI Adoption

- Compliment SAATM propagating Safe and Efficient Operations
- Compliment State Civil Aviation Authority Regulatory oversight through signed and activated MOUs – 4 of 46
- Abuja Safety Target @ 43%
- Evaluation & approval of foreign operators

## Focus

- Standardization Support (IOSA, ISSA, ISAGO) through MOUs.
- Sharing initiatives which improve industry compliance with applicable regulations (CE 6 to CE 8).
- Propagate the use of Safety Performance Enablers and collaborate towards the full implementation of ICAO SSP framework



# Industry Safety and Operational Studies

## Data Inputs

### Global Aviation Data Management (GADM)

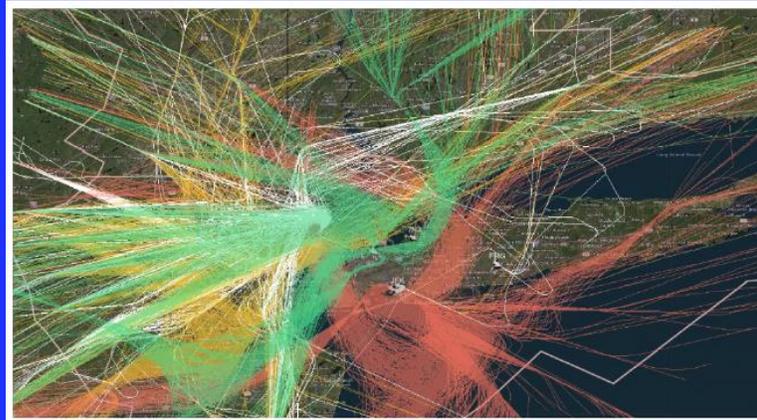
- Flight Data (FDX)
- Accident Data (ADX)
- Incident Data (IDX)

Any other operational data (SWIM, ADS-B, etc.)

FDX contains data of **~11.5 M flights**. This database is unique to IATA.

## Data Analytics and Expertise

IATA solutions will leverage operational data to deliver safety & operational studies to the industry



### Key competitive advantages of IATA:

- Unique data-set
- Strong analytics capabilities (to be developed through the project)
- Strong aviation expertise

## Outputs

IATA solutions will be offered through tailored Consulting services (customized reports).

AVATAR solutions will help airlines and all industry stakeholders to improve safety & operational efficiency



# In Conclusion

IATA continues to support the Global Aviation Safety Plan (**GASP**) objectives and associated timelines to ensure effective safety oversight through:

- Standardization Support (IOSA, ISAGO).
- Sharing initiatives which improve industry compliance with applicable regulations (CE 6 to CE 8).
- Encourage compliance through partnership.
- Propagates the use of Safety Performance Enablers
- Facilitating improved runway safety; reducing the number of LOC-I, CFIT
- Supporting the full implementation of ICAO SSP framework

