The future of safety-auditing:

Risk-based approach to IOSA

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IATA Operational Safety Audit Program (IOSA) Overview

↗ Global Safety audit program managed and controlled by IATA

↗ Audit standards include ICAO safety and security provisions and industry best practices from ICAO Annexes 1, 2, 6, 8, 17, 18 and 19

↗ Available to all commercial passenger & cargo airlines, regardless of IATA membership status
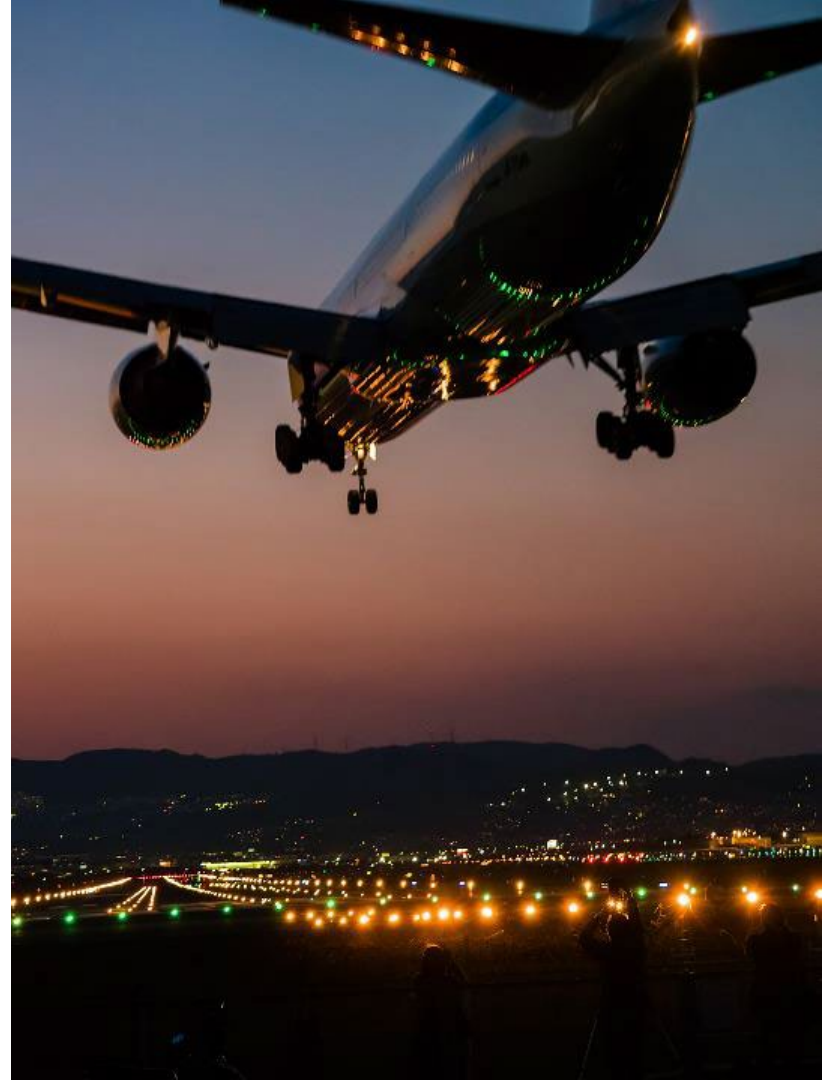
IOSA In Numbers

400
IOSA registered Operators

129
Countries represented on the Registry

355
Audits performed in 2021

270
Approved IOSA Auditors

4650
IOSA Reports exchanged in 2021

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Regulatory Safety Oversight

Numerous regulators and authorities complement their oversight with IOSA

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Benefits of Risk-based IOSA

Tailored and reduced Audit scope focusing efforts where needed the most

New safety insights to deliver safety improvements and reduction of global accident rates

Improved audit methods through maturity evaluation

Improved audit report

Improved standardization of Auditors

Long term sustainability of IOSA program through direct management of insourced products

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The Business Model

A profound business model change will lead to long-term sustainability

Customer Expectations

Challenge

Affordable and value-add audits
User friendly access to current information

Solution

Audit process tailored to airline
Improved user interfaces

Audit Org. Accreditation Model

Challenge

Financial autonomy and sustainability
Auditor standardization and performance
Ability to innovate

Solution

Phase out AOs and insource production of audits
Recruit and train IOSA Auditors on freelance basis

Organization

Challenge

Production capacity
Digital Maturity

Solution

Transform and scale up IOSA organization
Develop IT infrastructure

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Risk-based IOSA

Risk-based approach will contribute to reduce accidents rates

	Today		Tomorrow	IOSA

Today

- Standard audit checklist for all operators in all audits
- Compliance-driven auditing
- Static IOSA reports and forms

Tomorrow

- Tailored audit scope focusing on pertinent safety risks ✓
- Maturity assessment for SMS and safety relevant programs ✓
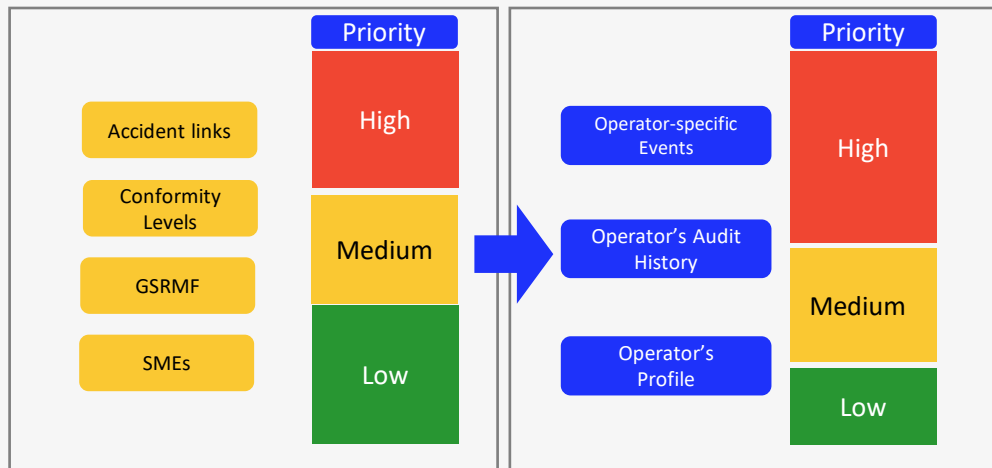- Digital reporting, risk engine ✓

Contribute to consecutive reduction in accident rates

Risk-based Audit Scoping

Audit scope will be reduced to critical standards, freeing up valuable auditing time

Industry Standards prioritization

Operator Audit Scoping

	Priority
Accident links	High
Conformity Levels	Medium
GSRMF	
SMEs	Low

	Priority
Operator-specific Events	High
Operator's Audit History	Medium
Operator's Profile	Low

✓ Tailored audit scope for each Operator

✓ Frees up time to increase depth of auditing of high priority requirements

✓ Allows for maturity assessment of critical systems and programs

Risk-based Audit Scoping - Global Safety Risk Management Framework (GSRMF)

iata.org/srmf

Risk-based Audit Scoping

Away from the one-size fits all approach

Audit Scoping	IOSA	Risk-Based IOSA
• Worldwide runway excursion rate has been increasing.	• All ISARPs are audited regardless of their universal criticality.	• ISARPs prioritized in regular intervals. In this example, ISARPs related to runway excursions are identified as high priority and audited in-depth.
• Operator has been demonstrating conformity with a non-critical ISARP for several consecutive audits.	• All ISARPs are audited regardless of their criticality for the operator.	• Audit scope tailored to Operator's operating profile and audit history. • ISARPs with low criticality may be audited at lower frequency to allow focus on high-criticality ISARPs.

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Maturity Assessment

A deeper evaluation of relevant safety systems and programs

Maturity Stage Cycle

Leading
Mature
Established
Basic
Low
Change
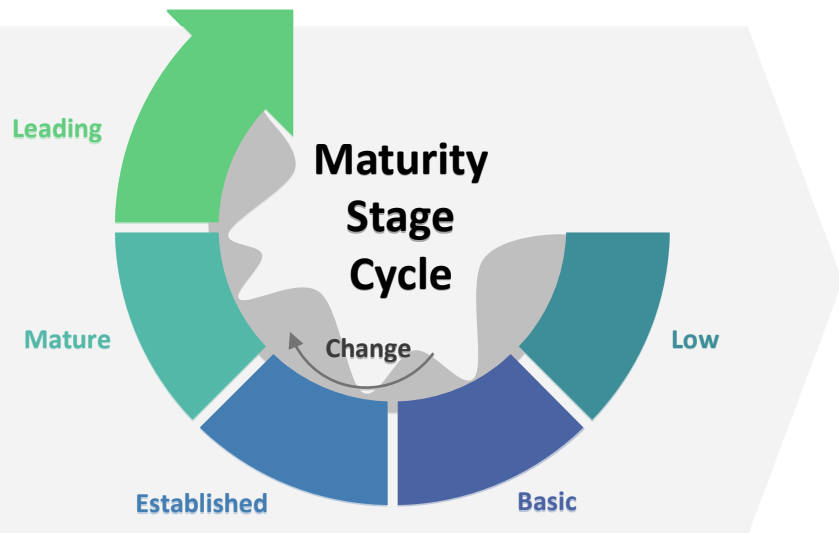
✓ Assessment beyond conformity through maturity levels

✓ Deeper assessment of SMS and operational activities

✓ Recommendations for operators

Maturity Assessment of following areas

SMS

Management & Control

Safety Assurance & Monitoring

Safety Risk Management

SMS Training & Communication

Operating Safety Maturity

Crew Training

Flight Data Analysis

Operation Control

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Maturity Assessment

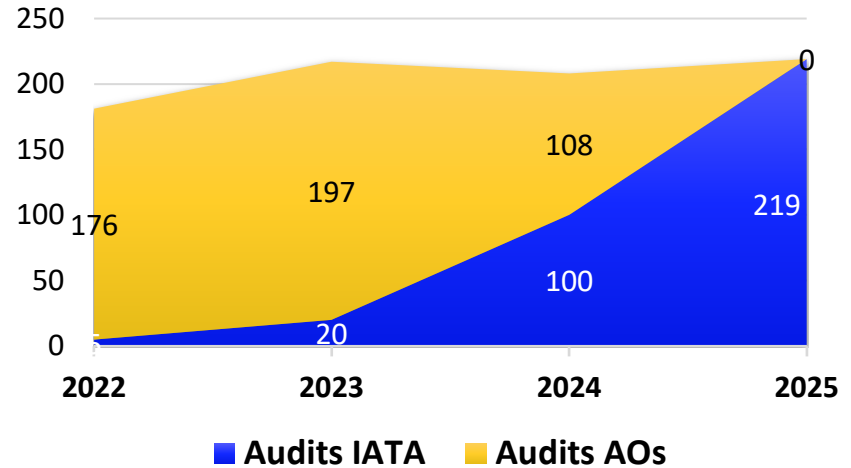| Maturity Assessment ➜	IOSA	Risk-Based IOSA
FLT 2.2.14 The Operator shall ensure flight crew members complete training and, when applicable, an evaluation in crew resource management (CRM), including Threat and Error Management, using facilitators that have been trained in human performance and human factors principles.	**Assessment Method (on each ISARP)** Conformity ☑ Nonconformity ☐	**Assessment Method (on selected ISARPs and Programs)** Basic **2.7** Mature ☐ ☐ ☑ ☐ ☐ Low　　Established　　Leading
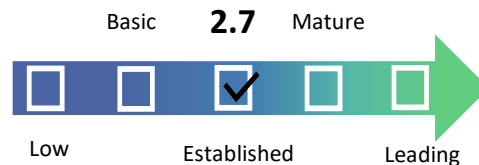
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Transition Plan

- 2022 trial audits will be performed to test audit methods and audit management process

- Audit Orgs will remain until end of 2024 to perform conventional IOSA audits

- 2025 onwards fully insourced model supporting over 200 IOSA audits per year

Projected Transition

Chart data — Projected Transition (area chart):

Year	Audits IATA	Audits AOs
2022		176
2023	20	197
2024	100	108
2025	219	0

Legend: ■ Audits IATA ■ Audits AOs

21 October 2022

Thank you