Risk-based IOSA

SEIG-4 Meeting

Cair0,Egypt 23-25 October 2022

IOSA In Numbers

400 IOSA registered Operators

129 Countries represented on the Registry

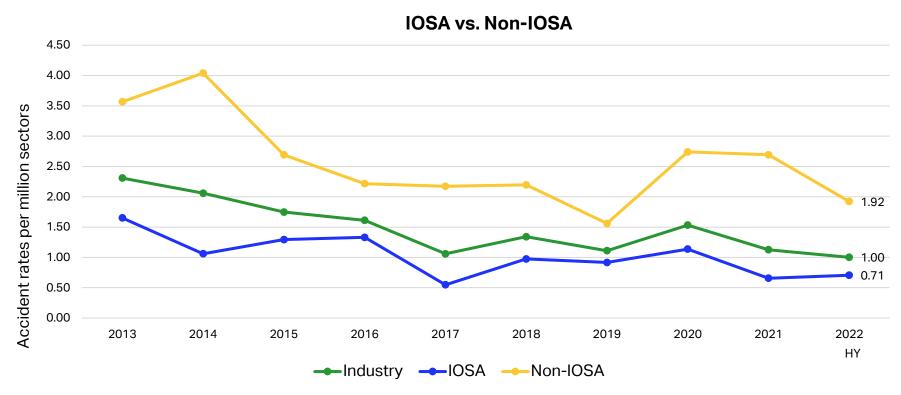**355** Audits performed in 2021

270 Accredited IOSA Auditors

4650 IOSA Reports exchanged among airlines

IATA

Safety Performance

IOSA vs. Non-IOSA

The IOSA carriers accident rate of 0.71 is below the five year (2017-2021) average of 0.85 accidents per million sectors

Source: IATA Safety Report

16 October 2022

IATA

Regulatory Safety Oversight

Numerous regulators and authorities complement their oversight with IOSA

4

Risk-based Audit Concept

Risk-based Audit Concept

IOSA Risk-based approach will contribute to reduction in consecutive accidents through improved audit philosophy
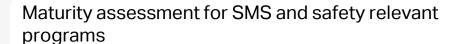
Today

Tomorrow

IATA IOSA

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

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

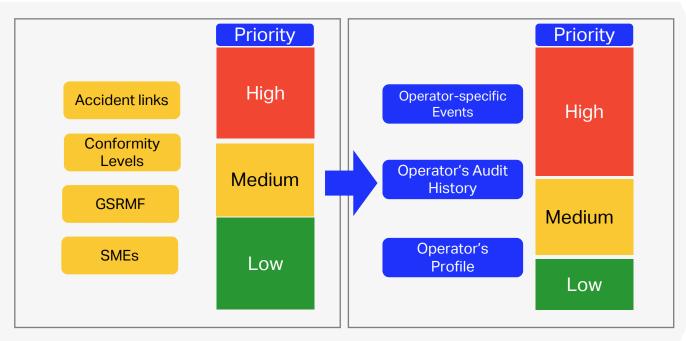**Contribute to consecutive reduction in accident rates**

IATA

Risk-based Audit Scoping

The audit scope will be reduced to critical standards and a selection of recommended practices, (ISARPs) freeing up valuable time

Industry Standards prioritization

Operator Audit Scoping

Accident links
Conformity Levels
GSRMF
SMEs

Priority
- High
- Medium
- Low

Operator-specific Events
Operator's Audit History
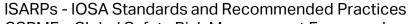Operator's Profile

Priority
- High
- Medium
- 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

ISARPs - IOSA Standards and Recommended Practices
GSRMF – Global Safety Risk Management Framework
SMEs – Subject Matter Experts

Maturity Assessment

16 October
2022

Maturity Assessment

Introduces deeper way of providing airline with an evaluation of its relevant safety systems and programs

Leading
Mature
Established

Maturity Stage Cycle

Change

Conformity

✓ 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

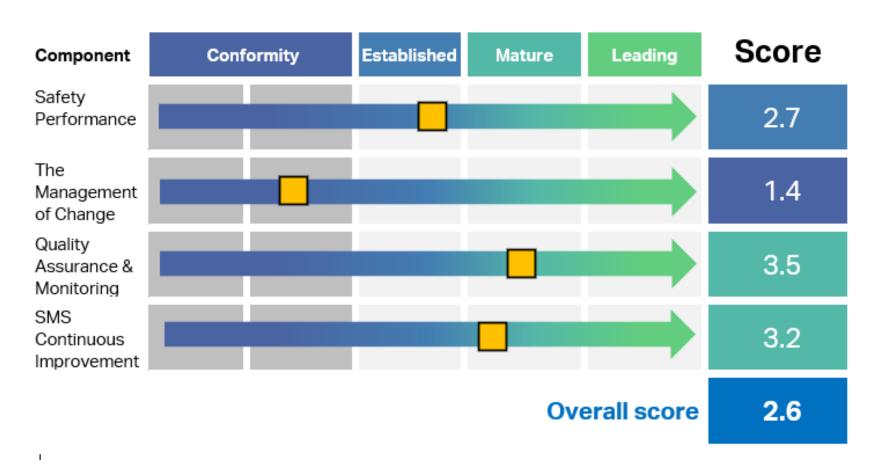**Operating Safety Maturity**

Crew Training

Flight Data Analysis

Operation Control

* For Conformity and IOSA registration this is the minimum requirement

IATA

Maturity Assessment

Example: Safety Assurance & Monitoring

Component	Conformity		Established	Mature	Leading	Score
Safety Performance			■			2.7
The Management of Change		■				1.4
Quality Assurance & Monitoring				■		3.5
SMS Continuous Improvement				■		3.2
					Overall score	**2.6**

Maturity Assessment – Example

Maturity Level

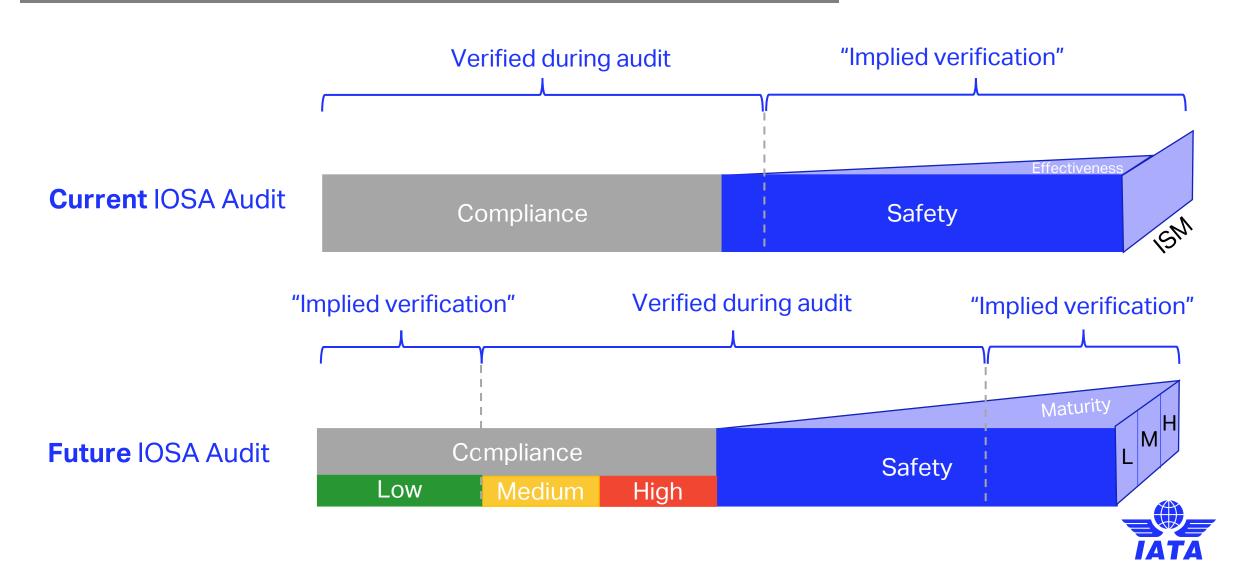| Maturity Level	Criteria	Points
Documented 0 – 1	☐ Documentation complete Documentation mostly in place and accurate ☐ Documentation partially in place Basic documentation, main components missing No documentation in place	1 0.75 0.5 0.25 0
Implemented 1.1 – 2	☐ Full implementation and suitability Mostly implemented and suitable Partially implemented and suitable ☐ Basic implementation, no suitability No implementation Suitability Considerations • Scope of the system relevant to type, size, and complexity of operations • Availability of tools and systems used • Available resources • Processes and procedures • Organizational structure of Quality Assurance	1 0.75 0.5 0.25 0

IATA

Maturity Assessment – Example

Maturity Level	Criteria	Points
Established **2.1 – 3**	• **Operator compiles and analyses data, which is shared with the rest of the organisation** • **The interface between internal audits and the safety risk management processes is clearly described.** • **Relevant standards to be monitored by QA are clearly identified** • **Audits are performed using current (up-to-date) standards.**	
Mature **3.1 – 4**	• Scheduling of audits is risk-based with clear criteria. • Opportunities for improvements in Operations and maintenance systems are identified and implemented; • Audits of high-risk areas are performed at least annually. • Audits are complemented by inspections as needed. • The QA program is managed through an effective IT tool / database. • Audits are performed with full independence from the audited department.	
Leading **4.1 – 5**	• Operator analyses industry trends to improve compliance methods and safety risk mitigation • Operator shares information with other industry players to enhance industry trend analysis on similar issues • Audits are performed based on a process-based approach. • Repetitive findings are identified and escalated.	

Maturity Levels

IATA

Shift in Audit Focus

With Risk-based approach, the audit will move from a compliance towards a safety audit

New Audit Methodologies

16 October
2022

New Audit Methodologies

New Audit Methods make use of wider set of auditing tools

Auditing Documentation

Desktop assessment

Virtual engagement

Onsite validation

Auditing Implementation

Virtual engagement

H In-depth auditing for high priority

MO More Mandatory Observations

Maturity Assessment (MA)

H In-depth maturity assessment

MA Process-based auditing

IATA

Operator Questionnaire

1

2 IOSA Reporting Form

SAR.F23 Operator Questionnaire
(Covid Related)

+

IOSA Self Evaluation Form (SEF)
(18 Pages - Word Document)

Reporting Responsibility (IPM 7.7.1)

Continuous safety information exchange between Operators and their partners/authorities

The content is determined by safety experts of Operators
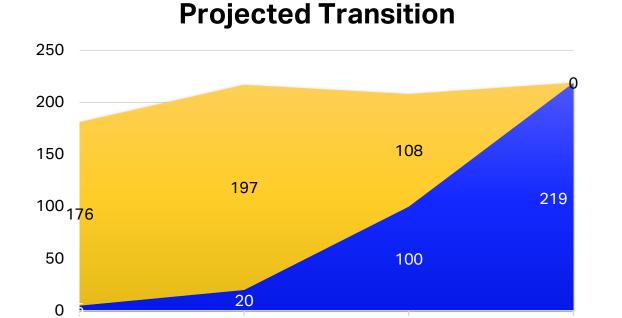
General Information

	Regular IOSA Audit	Risk Based IOSA Audit
• Audit duration	Unchanged (30 auditor days)	
• Audit fixed fees (amount)	Unchanged	
• Audit variable fees	• Negotiated with the AO	• Fully paid by the Operator
• Who will conduct the audit	• Auditor from Audit Organizations	• Auditors engaged directly by IATA

IATA

Transition Plan

Transition Plan supports timely scaling up and mitigation of risks

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

- AOs 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 "Projected Transition" (area chart), y-axis 0 to 250, x-axis 2022, 2023, 2024, 2025.

Data labels: 2022 — 176 (Audits AOs); 2023 — 197 (Audits AOs), 20 (Audits IATA); 2024 — 108 (Audits AOs), 100 (Audits IATA); 2025 — 0 (Audits AOs), 219 (Audits IATA).
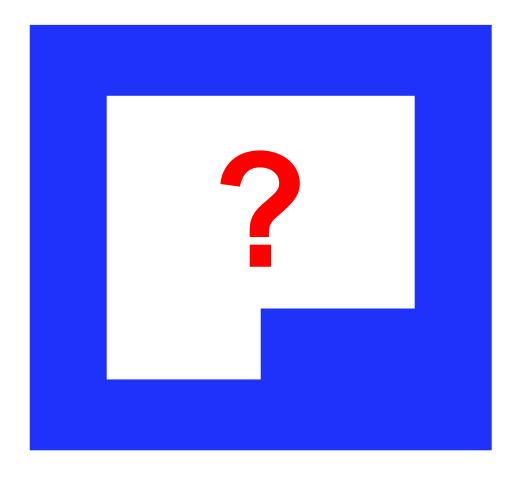
Legend: ■ Audits IATA ■ Audits AOs

IATA

Benefits of Risk-based IOSA

Tailored and reduced Audit scope focusing efforts where needed the most

Improved audit methods through maturity evaluation

Improved management and standardization of Auditors

Safety insights captured to deliver safety improvements and reduction of global accident rates

New insights through improved audit report

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

IATA

Questions?

Thank you!