

**61ST CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGION**

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**AGENDA ITEM 5: AVIATION SECURITY AND
FACILITATION**

**STRENGTHENING IMPLEMENTATION OF ICAO SAFETY
AND SECURITY PROVISIONS THROUGH REGIONAL
COLLABORATION**

Presented by the Association of Asia Pacific Airlines (AAPA)

SUMMARY

This paper highlights how voluntary regional collaboration can support States in implementing existing ICAO Standards and Recommended Practices (SARPs) by facilitating the sharing of operational experience, implementation observations and regional good practices across the Asia Pacific Region. Building on the successful completion of the Asia Pacific CRM Harmonisation Manual and recognising the increased emphasis on Human Factors introduced through ICAO Annex 17 Amendment 19, the paper illustrates how collaborative regional initiatives can complement existing ICAO mechanisms by supporting practical implementation of existing ICAO provisions.

The paper also notes the Human Factors in Aviation Security (HFAS) initiative, which AAPA will continue as a voluntary collaborative regional initiative following its consideration by the ICAO Regional Aviation Security Coordination Forum (RASCF), with the outcomes to be reported to RASCF-APAC/15 in 2027. Annex A provides an illustrative framework describing how such an AAPA-led collaborative initiative may be organised.

STRENGTHENING IMPLEMENTATION OF ICAO SAFETY AND SECURITY PROVISIONS THROUGH REGIONAL COLLABORATION

1. INTRODUCTION

1.1 The Asia Pacific Region continues to experience rapid growth in aviation activity together with increasing operational complexity, evolving technologies and emerging multidisciplinary challenges affecting aviation safety and security. Although ICAO SARPs establish the internationally agreed regulatory framework, implementation of these provisions may progress at different rates owing to differing operational environments, regulatory capacity, available expertise and national priorities.

1.2 Regional collaboration has long been recognised as an effective means of promoting harmonisation, strengthening capacity and sharing expertise. The successful completion of the Asia Pacific CRM Harmonisation Manual has demonstrated the value of this collaborative approach within aviation safety and provides a model that may be applied to other multidisciplinary implementation challenges.

1.3 Such collaboration neither replaces ICAO SARPs nor diminishes the regulatory responsibilities of States. Rather, it provides a practical mechanism through which regional expertise may be harnessed to accelerate implementation, reduce duplication of effort and promote greater consistency while fully respecting State sovereignty.

2. DISCUSSION

2.1 Regional Collaborative Implementation Guidance

2.1.1 The pace of change within aviation increasingly requires practical implementation solutions that complement regulatory development. Emerging technologies, evolving operational practices and multidisciplinary challenges often require regulators and industry to interpret and implement existing ICAO provisions within diverse operational environments.

2.1.2 Collaborative implementation guidance enables regulators, airlines, manufacturers, training organisations, academia and international organisations to jointly develop practical, non-binding implementation material supporting the application of existing ICAO provisions across the region.

2.1.3 This collaborative approach provides several important regional benefits by:

- reducing duplication of effort among States;
- sharing operational experience and regulatory expertise;
- strengthening regional capacity building;
- promoting consistency while respecting national flexibility;
- accelerating implementation of existing ICAO provisions; and
- encouraging continuous improvement through shared implementation experience.

Rather than replacing existing ICAO regional mechanisms, collaborative implementation guidance complements their work by translating agreed policy and technical principles into practical implementation material suitable for voluntary adoption by States and industry

2.2 Regional CRM Harmonisation – Demonstrating the Collaborative Approach

2.2.1 The recently completed Asia Pacific CRM Harmonisation Manual demonstrates the effectiveness of collaborative implementation guidance. The CRM Harmonisation Task Force brought

together regulators, airlines, aircraft manufacturers, training organisations and academia to jointly develop practical guidance supporting implementation of ICAO Human Performance principles through harmonised Crew Resource Management (CRM) training. The completed Manual was subsequently presented to the Twenty-Fifth Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/25), where Member States and international organisations exchanged views on its implementation and regional application.

2.2.2 The Manual does not introduce additional regulatory requirements. Instead, it consolidates regional experience and international best practices into practical implementation guidance that States may review and utilise, where appropriate, to support their existing national oversight and training frameworks. APRAST further noted that the OPS Working Group would consider whether the CRM Harmonisation Manual should be recognised as a regional Safety Enhancement Initiative (SEI) output and disseminated through existing APRAST mechanisms to facilitate implementation experience sharing among States.

2.2.3 Beyond the Manual itself, the CRM Harmonisation initiative demonstrated that practical implementation guidance can be successfully developed through voluntary collaboration among regulators, industry and academia while fully respecting ICAO Standards and differing national regulatory frameworks. This collaborative methodology provides a transferable regional model for addressing future multidisciplinary implementation challenges.

2.3 Human Factors in Aviation Security – Identifying Another Regional Opportunity

2.3.1 ICAO Annex 17 continues to place increasing emphasis on Human Factors as an integral component of effective aviation security systems. While awareness of Human Factors has increased significantly within aviation safety over recent decades, practical implementation within aviation security remains continues to evolve across the Region.

2.3.2 To better understand regional implementation readiness, AAPA conducted an Asia Pacific Human Factors in Aviation Security survey involving airlines from across the Region. The survey identified several common themes:

- all participating airlines maintain dedicated aviation security organisations;
- implementation maturity varies considerably across key Human Factors elements;
- formal Human Factors expertise remains inconsistent across operators;
- fatigue, vigilance degradation, security culture and operational decision-making were consistently identified as significant operational challenges;
- airlines identified practical human factors training, implementation guidance and competency development, as the highest priorities for regional support; and
- strong support was expressed for continued voluntary collaboration between interested regulators, airlines and academia to examine implementation considerations, regional good practices and operational experience supporting the application of ICAO Human Factors provisions.

2.3.3 Collectively, these findings indicate that while awareness of Human Factors continues to increase following ICAO Annex 17 Amendment 19, implementation maturity varies considerably across operators. The survey therefore establishes an initial regional airline baseline from which implementation experience, regional good practices and collaborative learning may progressively develop.

2.3.4 Recognising these findings, AAPA presented the Human Factors in Aviation Security initiative to the Fourteenth Meeting of the ICAO Regional Aviation Security Coordination Forum (RASCF-APAC/14). The Forum welcomed the initiative, recognised the value of establishing and

evaluating an initial regional airline baseline led by AAPA, and noted that the outcomes would be presented to RASCF-APAC/15 in 2027. AAPA will continue the initiative as a voluntary collaborative regional programme involving interested regulators, airlines and academia to examine implementation considerations, regional good practices and operational experience supporting the application of existing ICAO Human Factors provisions. Any future development of ICAO guidance material would continue to be progressed through the established ICAO AVSEC Panel Working Groups and the Panel itself.

2.4 Collaborative Regional Implementation – A Transferable Model

2.4.1 Together, the CRM Harmonisation initiative presented to APRAST/25 and the Human Factors in Aviation Security initiative considered by RASCF-APAC/14 demonstrate that collaborative regional implementation can effectively support practical application of existing ICAO provisions across different aviation disciplines.

2.4.2 These two initiatives demonstrate a common implementation methodology whereby regulators, industry, academia and international organisations collaborate voluntarily to share operational experience, examine implementation considerations and develop regional good practices while respecting ICAO governance arrangements and differing national regulatory frameworks. An illustrative example of how such an AAPA-led voluntary collaborative initiative may be organised is provided in Annex A.

2.4.3 The value of this collaborative methodology extends beyond aviation safety and security and may be applied, where appropriate, to other multidisciplinary implementation challenges facing the Region.

2.4.4 The role of regional collaborative implementation is therefore not to develop new regulatory requirements, but to support States through shared experience, regional cooperation and practical implementation knowledge that complements existing ICAO mechanisms.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) **recognise** collaborative regional implementation as a practical mechanism for supporting the effective implementation of ICAO Annex 17 and related guidance material;
- b) **note** the successful completion of the Asia Pacific CRM Harmonisation Manual and the proposed Human Factors in Aviation Security (HFAS) initiative as examples of regional collaboration supporting ICAO implementation objectives;
- c) **note** AAPA's intention to continue the Human Factors in Aviation Security initiative as a voluntary collaborative regional programme involving interested regulators, airlines, academia and other stakeholders;
- d) **encourage** interested organisations to participate voluntarily in the initiative and contribute to the sharing of implementation experience and regional good practices; and
- e) **note** AAPA's intention to report the outcomes of the initiative to RASCF-APAC/15 in 2027 for information and consideration.

ANNEX A

ILLUSTRATIVE FRAMEWORK FOR A HUMAN FACTORS IN AVIATION SECURITY COLLABORATIVE INITIATIVE (2026–2027)

1. PURPOSE

The purpose of this Roadmap is to establish a collaborative regional programme for the development of practical implementation guidance supporting the Human Factors in Aviation Security.

The programme seeks to assist States, airlines and other aviation security stakeholders in translating Human Factors principles into practical aviation security programmes through regional collaboration, operational experience sharing and academic support.

The initiative does not seek to develop new Standards or Recommended Practices. Rather, it aims to complement existing ICAO provisions by facilitating voluntary collaboration, implementation experience sharing and the identification of practical implementation considerations that States may consider within their respective national regulatory frameworks.

2. STRATEGIC OBJECTIVES

The collaborative programme aims to:

- a) identify regional implementation gaps relating to Human Factors in Aviation Security;
- b) facilitate collaboration between regulators, airlines, academia and industry;
- c) identify and examine practical implementation considerations and training material supporting existing ICAO Annex 17 Human Factors provisions;
- d) improve consistency of implementation across the Asia Pacific Region;
- e) encourage the sharing of operational experience, lessons learned and good practices;
- f) strengthen regional capability in Human Factors integration within aviation security programmes; and
- g) establish a sustainable collaborative model that may be applied to future multidisciplinary aviation challenges.

3. GUIDING PRINCIPLES

The programme will be guided by the following principles.

3.1 Collaboration

Every participating organisation contributes to every topic.

Although coordinators may facilitate drafting of individual topics, all deliverables will be collectively reviewed, discussed and refined by the Collaborative Forum.

3.2 Consensus

Recommendations will be developed through discussion and consensus rather than voting.

This approach reflects the successful methodology adopted during development of the Asia Pacific CRM Harmonisation Manual.

3.3 Practical Implementation

The guidance should remain practical, scalable and capable of implementation by States and operators with differing levels of operational maturity.

3.4 Non-Prescriptive

The guidance will remain principles-based and non-prescriptive. It introduces no additional regulatory obligations and is intended solely to support implementation of existing ICAO provisions.

3.5 Respect for State Sovereignty

Nothing contained within the guidance supersedes national regulations or ICAO Standards and Recommended Practices. Individual States remain responsible for determining whether and how the guidance may be utilised.

3.6 Continuous Improvement

The guidance should evolve through operational feedback, lessons learned, emerging threats and future amendments to ICAO provisions.

4. GOVERNANCE MODEL

The collaborative programme is intended to operate through a single voluntary collaborative forum involving interested regulators, airlines, academia and invited subject matter experts.

Unlike conventional projects comprising multiple independent workstreams, every participating organisation will contribute throughout the development of the guidance.

Participation is envisaged from interested representatives of:

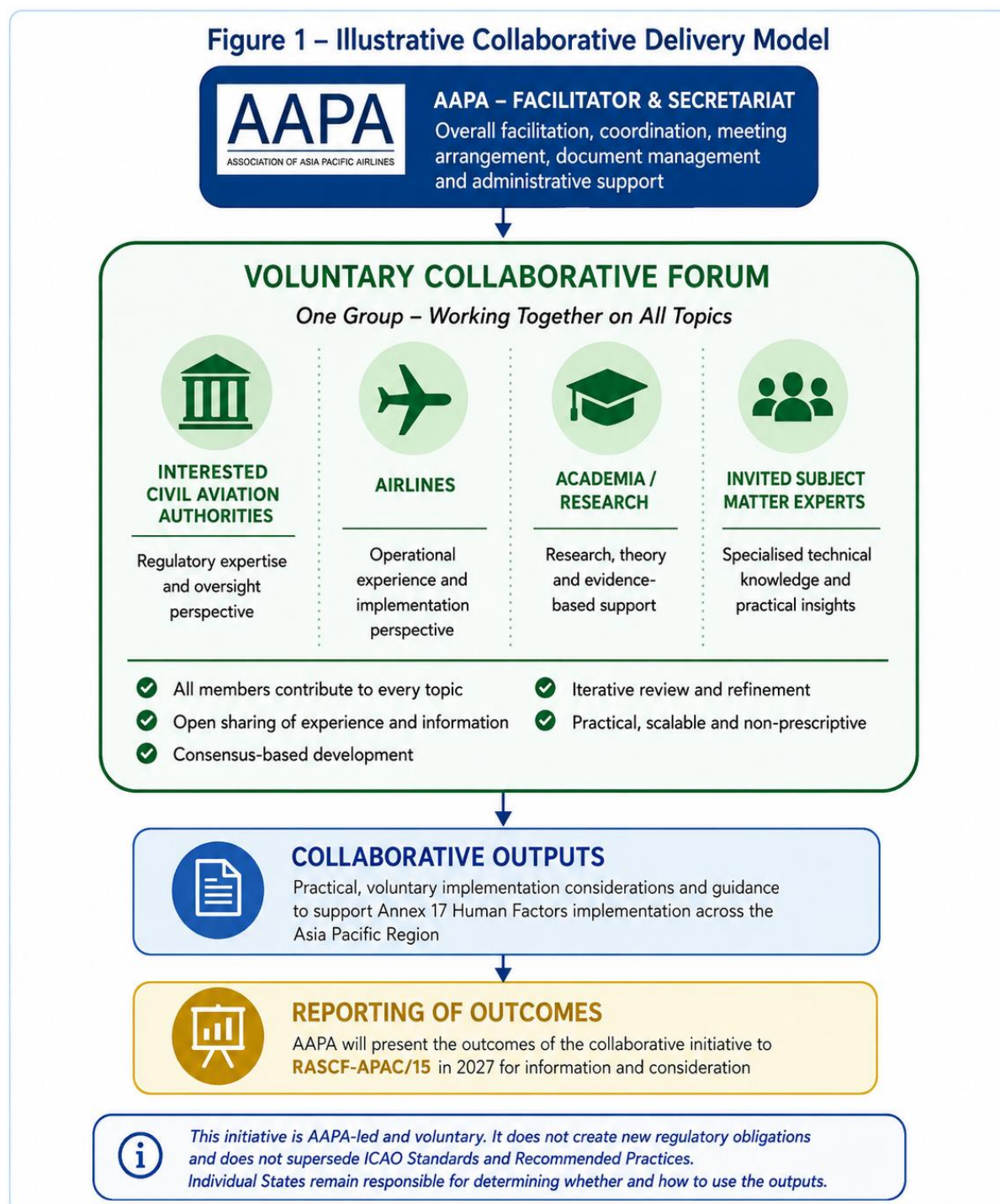
- Civil Aviation Authorities;
- Airlines;
- Academia and research institutions; and
- Other invited subject matter experts, where appropriate.

AAPA will facilitate:

- meeting coordination;
- document management;
- consolidation of comments;
- preparation of successive drafts; and
- administrative support.

Where appropriate, individual organisations may be invited to coordinate preparation of the first draft of specific topics. Such coordination shall not imply ownership. Every section of the guidance will remain subject to collective review, discussion and consensus by the Collaborative Forum.

Figure 1 – Illustrative Collaborative Delivery Model



5. COLLABORATIVE DEVELOPMENT TOPICS

The Collaborative Forum will examine implementation considerations relating to the following topics:

Topic	Typical Coordinator*
Foundations of Human Factors in Aviation Security	Academia
Human Performance in Security Operations	Airlines / Academia
Security Culture and Organisational Behaviour	Airlines
Human Factors Competencies and Training	Academia / Regulator / Airlines
Fatigue, Workload and Human Performance	Academia
Reporting, Learning and Continuous Improvement	Regulators / Airlines
Human Factors in Security Risk Assessment	Regulators / Airlines
Regulatory Implementation Considerations	Regulators

*Coordinator facilitates preparation of the initial draft only. All participating organisations contribute equally to every topic.

6. DEVELOPMENT METHODOLOGY

The collaborative forum will adopt an iterative collaborative drafting methodology.

Each meeting will collectively:

- review progress across every topic;
- discuss technical and operational issues;
- incorporate regulatory, operational and academic perspectives;
- review international developments;
- validate practical applicability; and
- seek consensus before progressing to the next draft.

The guidance will evolve as a single integrated document through successive collaborative review cycles.

7. PROPOSED IMPLEMENTATION TIMELINE

Period	Milestone
September 2026	AAPA commences the collaborative initiative following DGCA61
October 2026	Initial voluntary collaborative forum established and membership confirmed
November 2026	First collaborative meeting and confirmation of document framework
December 2026 – February 2027	Collaborative drafting, research and operational experience sharing
March 2027	Initial implementation observations and discussion paper
April 2027	Regional consultation and incorporation of comments
May 2027	Validation workshop and consensus review
June 2027	Final draft completed and submitted to RASCF for consideration
DGCA62	Progress update and implementation experience

8. EXPECTED DELIVERABLES

The collaborative programme is expected to produce:

1. Asia Pacific Human Factors in Aviation Security Regional Implementation Considerations.
2. Regional Human Factors competency framework.
3. Human Factors implementation examples.
4. De-identified regional case studies.
5. Good practice repository.
6. Regulatory implementation considerations.
7. Recommendations supporting future regional collaboration.

9. ALIGNMENT WITH ICAO ANNEX 17

The collaborative programme is intended to support implementation of the Human Factors principles contained within ICAO Annex 17, including:

- competency development;
- human performance;
- decision-making;

- vigilance;
- fatigue considerations;
- organisational culture;
- continuous improvement;
- reporting and learning; and
- integration of Human Factors into aviation security systems.

The programme will not reinterpret or seek to propose any changes to ICAO provisions. Instead, it will identify practical implementation considerations and regional good practices illustrating how existing ICAO Human Factors principles may be applied within differing operational environments across the Asia Pacific Region.

10. MEASURES OF SUCCESS

Successful completion of the programme will be demonstrated by:

- active voluntary participation by interested regulators, airlines and academia;
- consensus agreement on implementation observations, regional good practices and collaborative outputs;
- completion of an Asia Pacific Human Factors in Aviation Security implementation considerations report by AAPA for presentation to RASCF-APAC/15;
- voluntary utilisation by interested States and operators; and
- continued regional collaboration supporting future implementation initiatives.

11. LONGER-TERM VISION

The collaborative methodology established through the Human Factors in Aviation Security initiative provides a practical regional model for addressing multidisciplinary implementation challenges.

By leveraging the collective expertise of regulators, airlines, academia and industry, the Asia Pacific Region can strengthen implementation of ICAO provisions, reduce duplication of effort, promote harmonisation and accelerate the translation of international policy into practical operational outcomes.