

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

*Kuala Lumpur, Malaysia
7 – 11 September*

AGENDA ITEM 3: AVIATION SAFETY

**AP-RASP 2026-2028: ADDRESSING REGIONAL RISKS AND
DRIVING SAFETY IMPROVEMENTS IN THE ASIA-PACIFIC**

Presented by APRAST Co-Chair (States)

SUMMARY

The Asia-Pacific Regional Aviation Safety Plan (AP-RASP) 2026–2028 establishes the strategic priorities for aviation safety in the APAC region for the current triennium, in alignment with the ICAO Global Aviation Safety Plan (GASP). The AP-RASP identifies APAC-specific operational and organisational risks that require targeted regional action, with action roadmaps through which these risks are to be addressed. The Conference is invited to review the safety priorities and goals in the AP-RASP, support their implementation through alignment with their national safety efforts, and commit to active contributions towards regional safety initiatives.

ASIA-PACIFIC REGIONAL AVIATION SAFETY PLAN (AP-RASP) 2026–2028: ADDRESSING REGIONAL RISKS AND DRIVING SAFETY IMPROVEMENTS IN THE ASIA-PACIFIC

1. INTRODUCTION

1.1 The AP-RASP 2026–2028 provides the overarching regional priorities and plan for aviation safety in the Asia-Pacific region for the current triennium. It is aligned with global safety priorities stipulated in the ICAO Global Aviation Safety Plan (GASP) and is intended to improve regional safety performance by establishing a clear regional risk picture, as informed by information on regional safety performance. The AP-RASP guides States/Administrations towards prioritising the most critical safety risks and strengthening their safety oversight systems and implementation of State Safety Programmes (SSPs).

1.2 The AP-RASP 2026–2028 was published by RASG-APAC in April 2026, following development by the Asia Pacific Regional Aviation Safety Team (APRAST) in consultation with the Asia Pacific Accident Investigation Group (APAC-AIG). APRAST and APAC-AIG are subsidiary technical bodies of the Regional Aviation Safety Group (RASG-APAC), the main regional body overseeing aviation safety in the APAC region.

2. DISCUSSION

2.1 The AP-RASP is a strategic planning document that is intended to support alignment between global, regional and national safety planning, and to outline the priorities and actions for the APAC region to undertake for the current triennium. The AP-RASP 2026–2028 supports civil aviation authorities and accident investigation authorities in prioritising resources in ways specific to this context, including the implementation of mitigation measures for operational (OPS) and organisational (ORG) risks unique to the APAC region, that may not be prominently reflected in global trends and frameworks.

2.2 The AP-RASP 2026–2028 is accompanied by the OPS and ORG Roadmaps, which are the work programmes detailing the various Safety Enhancement Initiatives (SEIs) developed to address each identified regional OPS and ORG risk. Implementation of these Roadmaps is driven and coordinated by APRAST, in conjunction with APAC-AIG and the ICAO APAC Office. APRAST has reorganised its work around the OPS and ORG risk areas, with designated leads and teams for specific SEIs, while the Safety Reporting Programme Working Group tracks implementation progress and supports the monitoring of risk trends across the triennium.

Regional Operational Safety Risks

2.3 In developing the AP-RASP 2026–2028, APRAST undertook a combined analysis of accidents and serious incidents within the APAC region for 2020–2024 to identify the highest occurrence categories in the APAC region and their associated contributing factors. This quantitative analysis of accident and serious incident rates was also complemented by a thematic review of published National Aviation Safety Plans (NASPs) from 14 APAC States/Administrations.

2.4 The identified Regional High-Risk Categories (R-HRCs) are aligned with ICAO's identified Global High-Risk Categories (G-HRCs), which include:

- runway incursion (RI),
- runway excursion (RE),
- mid-air collision (MAC),
- controlled flight into terrain (C-FIT), and
- loss of control in-flight (LOC-I)

2.5 The AP-RASP also reflected the other new risk categories contained in the GASP, as follows:

- abnormal runway contact (ARC),

- turbulence encounters (TURB), and
- system component failure/malfunction non-powerplant (SCF-NP).

2.6 In addition, the AP-RASP identifies system component failure/malfunction powerplant (SCF-PP) as an APAC-specific “other risk” category, reflecting a regionally significant safety concern that is not yet prominently captured in global frameworks such as the GASP.

2.7 Over the 2020-2024 period, runway excursions and mid-air collision risks recorded the highest frequencies of occurrence in APAC, with system component failures (both powerplant and non-powerplant), abnormal runway contact, and turbulence identified as significant precursor risk categories warranting mitigation.

2.8 APRAST is a key platform where these and other safety issues are discussed by both States/Administrations and industry partners and translated into practical outputs such as safety guidance and implementation support that can be implemented by our region’s regulators and operators. For instance:

- a) **Lithium-ion batteries** has been a pertinent topic of discussion in the past year. APRAST had engaged regulators and industry closely to raise awareness of the issue and latest available guidance through the Regional Safety Advisory (RSA) on *Lithium Battery Fires in Passenger Cabins*. This RSA was recently revised to draw attention to ICAO’s newest Technical Instructions on power banks. In response to industry’s request for additional guidance and support at the last APRAST/25 meeting, a small taskforce will also be established to develop regional guidance to assist operators in leveraging their existing Safety Management Systems to conduct safety assessments on the management of lithium-ion batteries.
- b) **Runway safety** has been a continued concern, especially following a number of fatal runway incursions and excursions globally. APRAST has been encouraging and monitoring the implementation of recommendations contained in **the Flight Safety Foundation’s** Global Action Plan for the Prevention of Runway Incursions (GAPPRI) as part of regional efforts to strengthen runway incursion mitigations. In July, ICAO APRO hosted a GAPPRI workshop jointly organised by APRAST and the APAC Centre for Aviation Safety (AP-CAS). The workshop was customised to address APAC-specific runway safety implementation challenges, including areas where international guidance may not adequately address the region's operating environment. It also sought to deepen regional knowledge on runway safety at both the aerodrome design and operationalisation stages. Plans are also underway to roll out similar efforts to strengthen mitigations for runway excursions.

2.9 For States/Administrations facing similar safety issues, APRAST provides a practical channel through which they can access regional guidance, implementation support and shared expertise, to draw on the collective regional work rather than having to address common challenges on their own. By participating actively, States/Administrations can raise their unique challenges and operational realities, shape regional guidance, and help ensure that their regulators and operators are aware of, and can benefit fully from, available regional resources and expertise.

Regional Organisational Safety Risks

2.10 The AP-RASP 2026-2028 also identifies organisational challenges that directly affect States' ability to manage safety effectively. These challenges affect safety outcomes, as weaknesses in organisational capability constrain CAAs' capacity for risk identification and management, limiting the effectiveness of safety oversight and contributing to systemic vulnerabilities that may exacerbate operational risks.

2.11 To identify and prioritise the region's organisational challenges, APRAST analysed ICAO USOAP Continuous Monitoring Approach (CMA) data on Priority Protocol Questions (PPQs) across all eight Critical Elements (CEs) and audit areas. This was supplemented by a regional Heat Map of the lowest-scoring PPQs by audit area and CE combination benchmarked against global weaknesses identified in the GASP, a thematic analysis of organisational challenges cited in published APAC NASPs, and SSP self-assessment results and gap analyses from iSTARS.

2.12 Key organisational challenges identified included low State Safety Programme (SSP) implementation maturity, a limited number of published National Aviation Safety Plans (NASPs), inadequate safety data collection and exchange, and a lack of qualified technical personnel. Notably, the analysis identified the most significant implementation gaps in CE-4 (Qualified Technical Personnel) and CE-8 (Resolution of Safety Issues), with the Aircraft Accident and Incident Investigation (AIG) area recording low scores across the region.

2.13 To address these, APRAST is developing timelines and initiatives to support States in assessing and strengthening SPP implementation and in developing NASPs. Surveys will be used to better understand the specific challenges faced by States/Administrations in these areas, and States/Administrations are strongly encouraged to participate, as their responses will help shape targeted mechanisms for regional assistance.

Need for Collective Regional Support

2.14 While the global G-HRCs provide a necessary baseline, the APAC-specific risk picture detailed in the AP-RASP highlights areas where proactive, collective regional action is required to prevent occurrences from escalating into higher severity outcomes. The AP-RASP 2026-2028 should therefore directly inform each State's national aviation safety planning, ensuring that mitigations and safety solutions are prioritised against the most pressing and locally relevant risks.

2.15 The operational and organisational risks identified in the AP-RASP are intended to be addressed in a complementary manner: mitigating the most pressing operational risks while strengthening the systemic safety capabilities required to manage them effectively. The effective implementation of the AP-RASP's initiatives is contingent on active regional collaboration, with APRAST serving as the central platform through which States/Administrations and industry partners develop regional safety outputs, shape implementation decisions, and share safety information, insights and best practices. States/Administrations and industry partners are encouraged to review both the OPS and ORG Roadmaps and assess the extent to which the SEIs contained may be useful in supporting their national safety planning and regulatory priorities.

2.16 Active, sustained and consistent participation by States is therefore important to ensure that APRAST's output reflects the region's operational realities and implementation needs. When States/Administrations and industry bring their needs and challenges into APRAST discussions, they have a voice in regional safety priorities and decisions. Regular participation and contribution is thus crucial not only to support sustained implementation, but to ensure that regional guidance, advisories and other safety outputs are relevant and feasible, shaped by the perspectives and operational needs of APAC States.

2.17 When the ICAO APAC Regional Office circulates a State Letter to call for contributors who are able to commit sustained participation and technical expertise to APRAST's work programme, States/Administrations are encouraged to seriously consider committing subject matter experts to APRAST's Working Groups or the designated teams for SEIs of particular interest to them, be it regulatory personnel or representatives from industry and operators.

2.18 No single State can address these challenges independently, and the achievement of the AP-RASP 2026-2028 goals will depend upon the collective effort of all APAC States/Administrations and industry partners. Active contribution to regional safety platforms, particularly APRAST, is therefore

essential to ensure that all States remain engaged with regional safety issues, and can raise their perspectives, challenges, and needs, in order to benefit from regional safety initiatives and collaboration.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the key priorities and actions detailed in the AP-RASP 2026–2028;
- b) encourage States/Administrations to align their national safety planning and resource allocation with AP-RASP priorities, recognising the importance of prioritising the implementation of mitigations for APAC-specific risks; and
- c) encourage States/Administrations and industry partners to actively contribute to APRAST and its regional safety initiatives by committing the participation of technical experts and resources to support implementation of the AP-RASP.

— END —

Asia-Pacific Regional Aviation Safety Plan 2026–2028

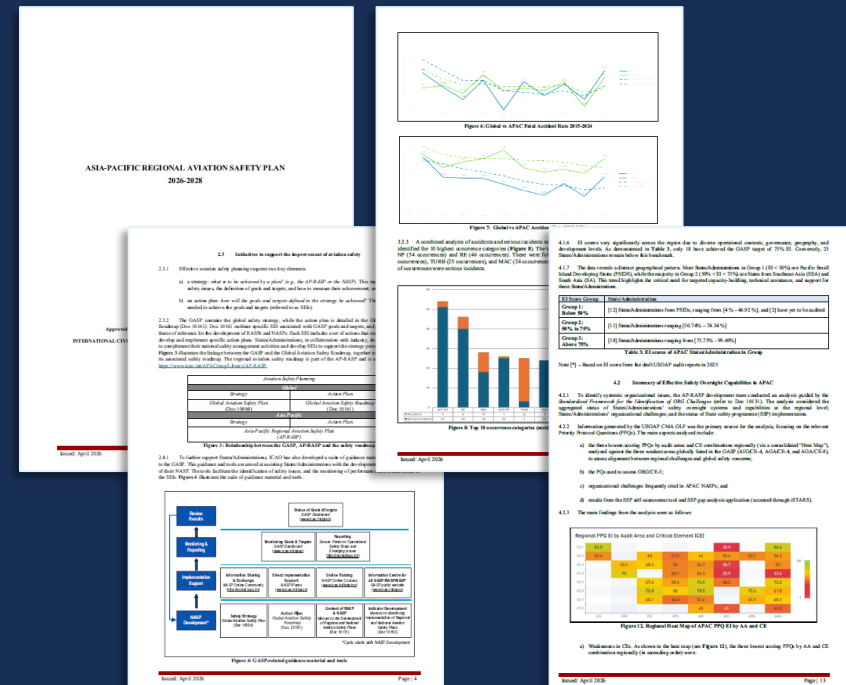
Singapore, as APRAST Co-Chair (States)



Asia Pacific Regional Aviation Safety Plan (2026-2028)

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Developed by
RASG-APAC & APRAST
In conjunction with ICAO APRO



AP-RASP 2026 – 2028

Two Roadmaps accompany the AP-RASP:

OPS Roadmap

		Regional HRC 1: RS, including RI and RE Regional ORC 1: ARC Regional Goal I: Achieve a continuous reduction of operational safety risks Regional Goal IV: Strengthen collaboration at the regional and national levels to address safety issues Targets T1.1: APAC States to maintain a 5-year moving average decreasing trend of regional accident rate T1.2: APAC States to maintain a 5-year moving average decreasing trend of accidents and serious incidents for each regional high-risk category of occurrence (R-HRC) T1.3: APAC States to maintain a 5-year moving average decreasing trend of accidents and serious incidents related to the other regional risk categories of occurrences T4.3: By 2027, all APAC States to contribute to a regional mechanism within RASG-APAC to ensure the effective utilization of information on operational safety risks and emerging issues for regional aviation safety planning					
GASP SEI	Precursor Events	Regional SEI	Stakeholder(s) & OPS Action(s)	SEI Custodian	Metric (MET)	Timeline	Metric Information Mechanism
OPS 9 (RE)	Runway Excursion	SEI11* RS 1 Runway Safety Maturity Checklist	APRAST1: Develop an understanding of the SEI (such as implementation challenges) and encourage State representatives to drive domestic implementation. APRAST2: Encourage States to update the ICAO SEI	OPS WG, RI and RE Task Forces	Leading: MET1: The percentage of APAC States/Administrations with at least 75% Implementation Level A reported in the ICAO SEI monitoring tool	MET1: End Q2 2026 MET2: End Q4 2026 MET3: End Q4 2026	RASG-APAC/APRAST safety information sharing initiatives (e.g. SRP WG, Regional Safety Data and Information)

ORG Roadmap

Regional Goal 2: Strengthening the safety oversight capabilities of APAC States Target 2.1 – By 2028, all APAC States to commit to NASP or SSPs that allocate to each safety oversight authority sufficient resources including financial resources to meet national and international obligations, with at least 70 % of APAC States having sufficient financial resources Target 2.2 – By 2028, all APAC States to improve EI score for CE-4 for AIG with commitment that no State has a score of less than the baseline global average Target 2.3 – By 2028, all APAC States to improve EI score for CE-4 for AGA, with commitment that no State has a score of less than the baseline global average Target 2.4 – By 2028, at least 70 percent of APAC States to establish an independent Accident Investigation Authority (AIA)						
SEI No./ Supporting Target No.	Action	Action Custodian	Timeline	Stakeholders	Metrics	Monitoring Activity
SEI 2.1.1/ Target 2.1	Encourage States to commit to provide for adequate resources including financial resources for functioning of their Aviation Authorities	ORG WG - Custodian (SSP)	2028	APRAST, States/Administrations	- Number of activities conducted to promote allocation of resources, including States' self-assessment of progress in PQ 2.051 - E.g. Survey to identify States requiring assistance - Number of States with published documents (e.g. NASP, SSP) with commitment for sufficient resources	Progress report to APRAST Meetings

Operational (OPS) Roadmap

- Runway Incursion (RI)
- Runway Excursion (RE)
- Mid-Air Collision (MAC)
- Controlled Flight Into Terrain (C-FIT)
- Loss Of Control In-flight (LOC-I)
- System/Component Failure (SCF)

Organisation (ORG) Roadmap

- State Safety Programme (SSP)
- National Aviation Safety Plan (NASP)
- Safety Oversight
- Training & Capacity Building
- Safety Culture – *by Ad-hoc Taskforce*

Regional Operational Safety Risks

Regional High-Risk Categories

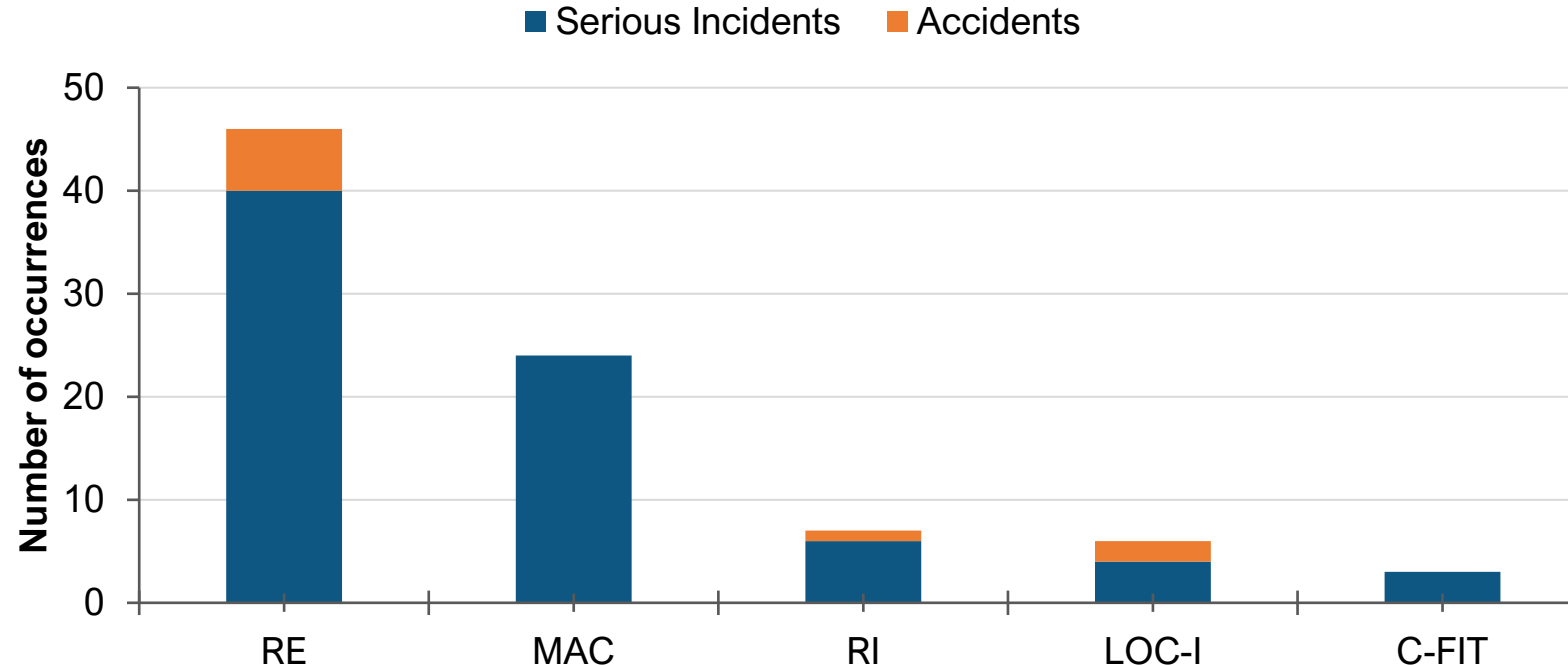
Aligned with ICAO Global High-Risk Categories

- Runway incursion (RI)
- Runway excursion (RE)
- Mid-air collision (MAC)
- Controlled flight into terrain (C-FIT)
- Loss of control in-flight (LOC-I)

Other Operational Risk Categories

Precursor risks

- Abnormal runway contact (ARC)
- Turbulence encounters (TURB)
- System/component failure – non-powerplant (SCF-NP)
- System/component failure – Powerplant (SCF-P)
– *APAC risk*



G-HRCs with highest frequency of occurrences

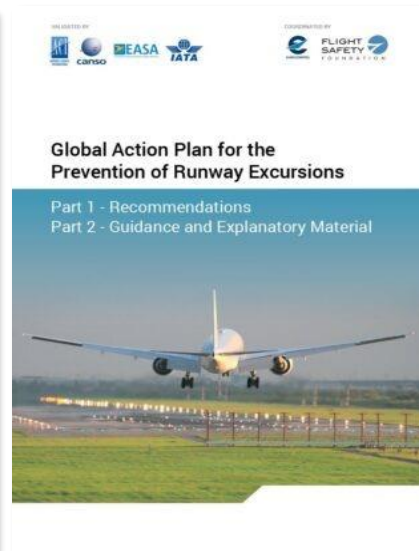
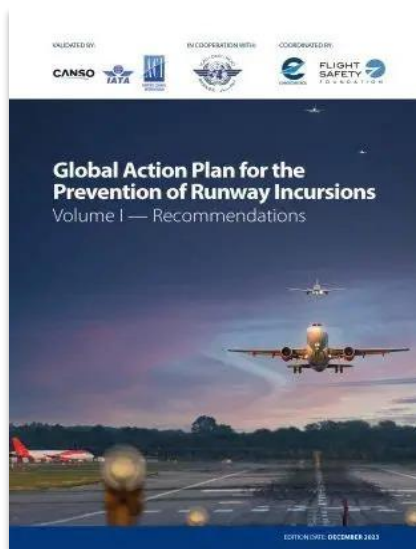
(APAC, 2020-2024):

**RE: Runway Excursion
&
MAC: Mid-Air Collision**

Strengthening Practical Regional Safety Outputs

Runway Safety

- **Global Action Plan for Prevention of Runway Incursions (GAPPRI) prioritization list & tracker**
- **APRAST-AP-CAS GAPPRI workshop (hybrid) in Jul '26**
- **Similar efforts underway for Runway Excursions**
 - States/Administrations will be invited to indicate interest for stakeholders (e.g. air operators, aerodrome, ANSP, regulator) to participate



Lithium-Ion Batteries

- **Regional Safety Advisories (RSAs) on Lithium-ion battery fires** (*updated recently in Jun '26 following new ICAO Technical Instructions*)
 - RSAs are quick-read documents to highlight safety issues & risks for immediate regional attention
 - Disseminated via ICAO State Letter and APRAST WGs. States/Administrations encouraged to disseminate to relevant industry stakeholders.
- **APRAST taskforce to be established to develop regional guidance** to assist operators in leveraging Safety Management Systems to conduct safety assessments on management of lithium-ion batteries.



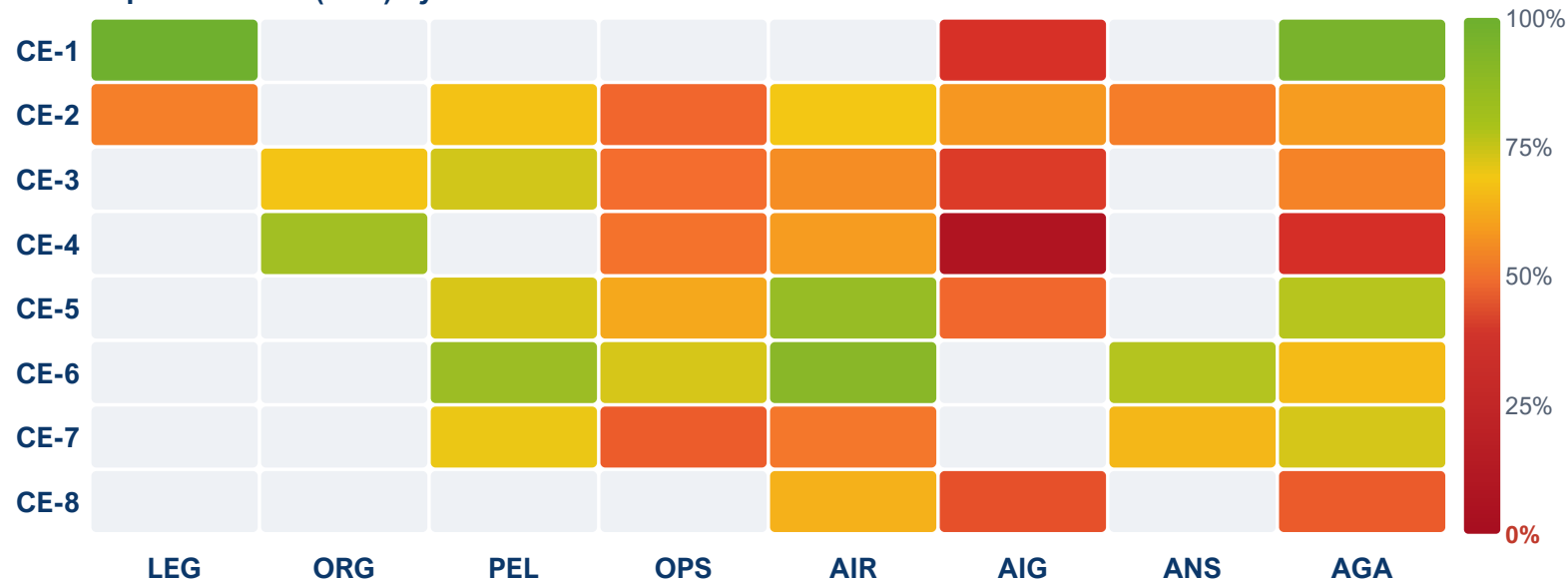
Regional Organisational Safety Risks

Organisational Challenges & Systemic Issues

Aligned with ICAO USOAP Audit Areas & Critical Elements

- Low State Safety Programme (SSP) & Safety Management System (SMS) maturity
- Lack of qualified technical personnel, esp. in AIG & AGA
- Low number of NASPs published
- Gaps in safety data/information for risk identification [*Safety Data Collection and Processing System (SDCPS)*]

Effective Implementation (EI %) by Audit Area & Critical Element



Most significant
implementation gaps:

CE-4: Qualified Technical
Personnel

CE-8: Resolution of Safety
Issues

AIG: Accident and Incident
Investigation

Need for Collective Regional Support

OPS Roadmap Actions

Action Area	Lead(s)
Runway Excursion (RE)	Thailand
Runway Incursion (RI)	Singapore
Mid-Air Collision (MAC)	US
Loss Of Control In-Flight (LOC-I)	Boeing
Controlled Flight Into Terrain (CFIT)	Singapore Airlines
System/Component Failure (SCF)	TBD

ORG Roadmap Actions

Action Area	Lead(s)
State Safety Programme (SSP)	a) <u>Assessment</u>: Republic of Korea & Japan b) <u>Establishment</u>: Japan & Singapore c) <u>SDCPS</u>: Thailand
National Aviation Safety Plan (NASP)	India & Australia
Safety Oversight	Pakistan & India
Safety Culture [Ad-hoc Task Force]	Republic of Korea (incl. KAL), Japan (incl. JAL) & Boeing

Action by the Conference

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