

"Addressing Annex 19 Implementation Challenges and Promoting a Positive Safety Culture Together!"

MASTER OF CEREMONIES

MITCH FOX

Director, Asia Pacific Centre for Aviation SafetyFlight Safety Foundation









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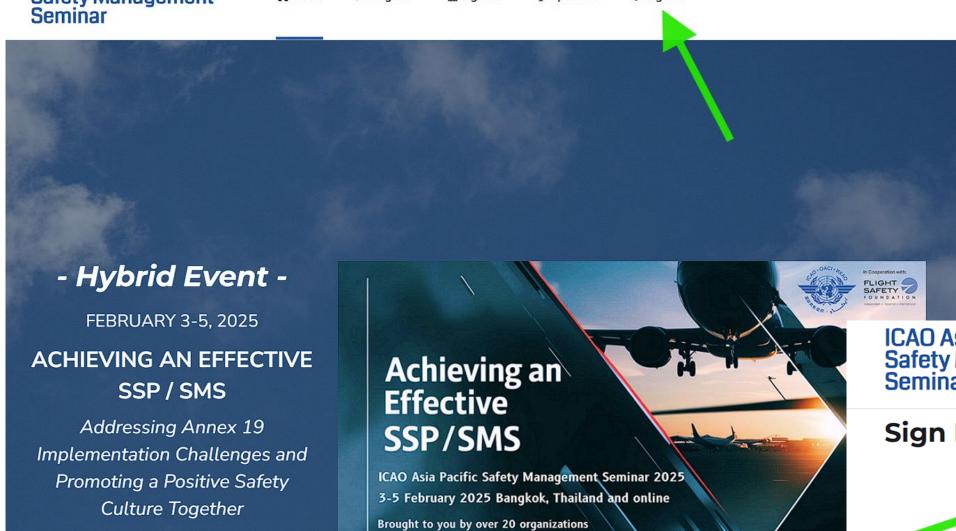




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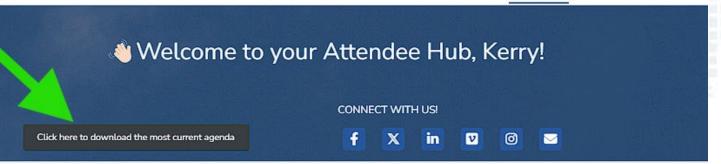


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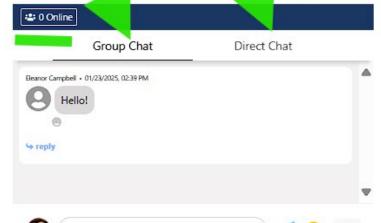


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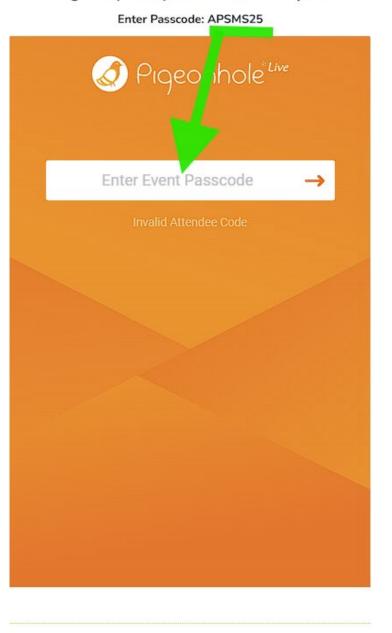
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FEATURES

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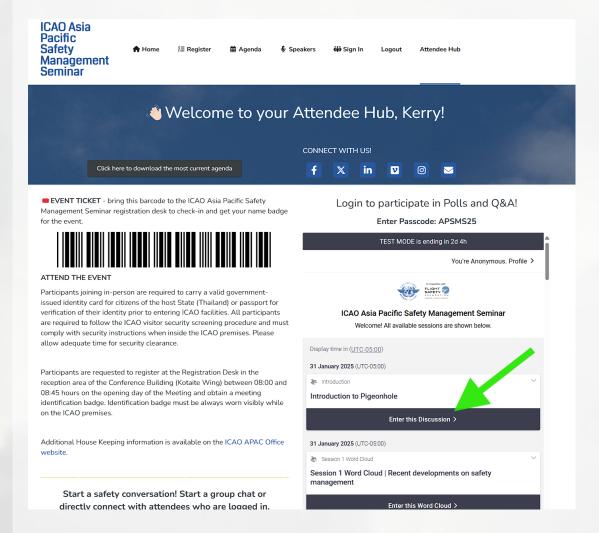
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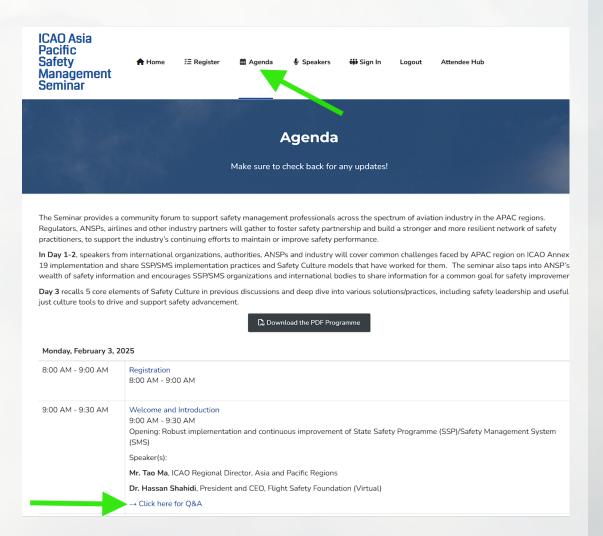


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Online in the Event Agenda



Intro to Pigeonhole



What country are you attending from?

Testing Pigeonhole APAC

Hello from Indonesia

Thailand jub jub ผอ.แตงโม

Papua New Guinea 新加波 Canada

Aommm Hong Kong China Australia

The Moon Malaysia India Pakistan China Morocco

Bangladesh PhilippinesSouth Korea

Laos

Bhutan Thailand Cambodia

Nepal ประเทศไทย

> United States Indonesia New Zealand

Korea 한국 ROK 대한민국Macao Hong Kong สวัสดีค่ะ Japan Singapore

Kazakhstan United Kingdom Bangkok Spain

Macao, China Yala Afkar

Betong airport









SESSION 1 | Recent Developments in Safety Management



Ms. Manoosh Valipour

Secretary of Safety Management Panel

ICAO

Speaker



Ms. Yamani Chan

Senior Operations Officer (Strategic Safety)

Hong Kong Civil
Aviation Department

Moderator



Mr. John Thomson

Senior Technical Advisor – Safety Management

UK Civil Aviation Authority International



Mr. Ruiyi Ang

Principal Manager (Safety Assurance)

Civil Aviation Authority of Singapore



Mr. Hasan Mujahid

Additional Director SSP

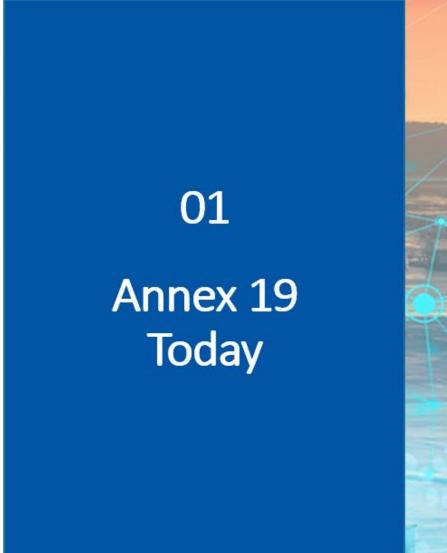
Pakistan Civil Aviation Authority

Proposed Amendments to ICAO Annex 19 – Safety Management and New Guidance Material

Manoosh VALIPOUR
Secretary, Safety Management Panel
ICAO











Annex 19 Today

Pending Amendment 2 proposals

State Letter AN 8/3-23/18 with a deadline for comments by 5 October 2023, introduced proposals for amendment 2 of Annex 19

Proposals were grouped into the following batches:

Batch 1: Enhanced provisions related to SSP

Batch 2: Enhanced provisions related to SMS

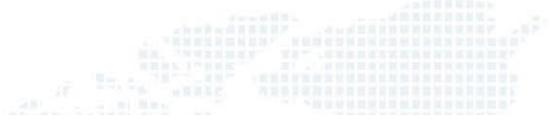
Batch 3: Provisions related to the extension of SMS applicability

Batch 4: Enhanced provisions related to safety performance management

Batch 5: Enhanced provisions related to safety intelligence

A total of 91 replies by 83 States, including 25 Council Member States, and 8 International Organizations were received.



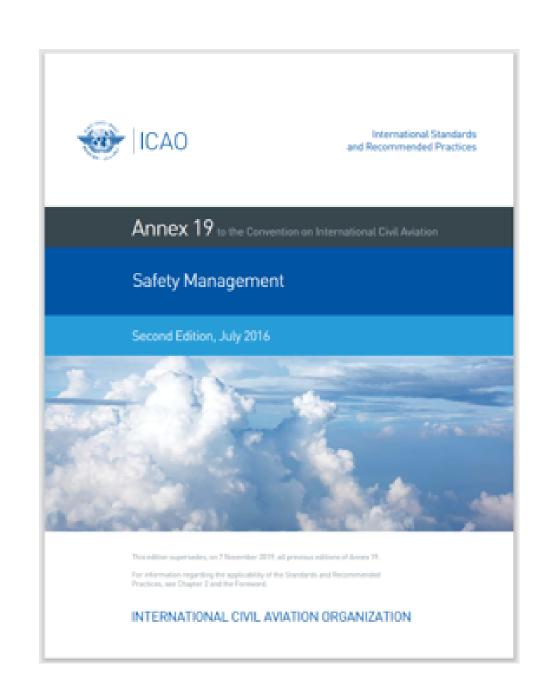


Annex 19 Amendment 2 – Safety Management

Adoption: Q2 2025

Effective: Nov 2025

Applicable: Nov 2026











Pending Amendment 2 proposals Batch 1 Enhanced provisions related to SSP

- Existing STD for establishing an SSP amended to replace the phrase "commensurate with size and complexity" with SSP components with new Notes
- New STD for States to ensure the role of CAAs is reflected in emergency response planning and crisis management
- New RP related to SMS discretionary applicability
- New RP for management of change process at State level





Pending Amendment 2 proposals Batch 2 Enhanced provisions related to SMS

- Reference to "commensurate with size and complexity" replaced with focus on tailoring SMS to each organization
- Proposed amendments to support implementation of the SMS framework with references to system description and interfaces;
- New RP for service providers to consider safety objectives established at the State level, where appropriate
- New note to highlight need to be aware of risk management efforts taking place across other domains



Pending Amendment 2 proposals Batch 3 Provisions related to the extension of SMS applicability

New STDs extending SMS applicability to:

- RPAS operators certified in accordance with Annex 6, Part IV and approved maintenance organizations providing services to them
- operators of certified Heliports in accordance with Annex 14, Vol II







Pending Amendment 2 proposals Batch 4 Enhanced provisions related to safety performance management

- New definition for safety objective, and updated definitions for safety performance, safety performance indicator and safety performance target
- ALoSP concept removed from existing STD and replaced with more foundational safety performance management provisions
- Updated RP to strengthen the link between SSP and SMS for safety performance measurement and monitoring
- Improved provisions to include the use of qualitative means for the establishment of safety performance indicators

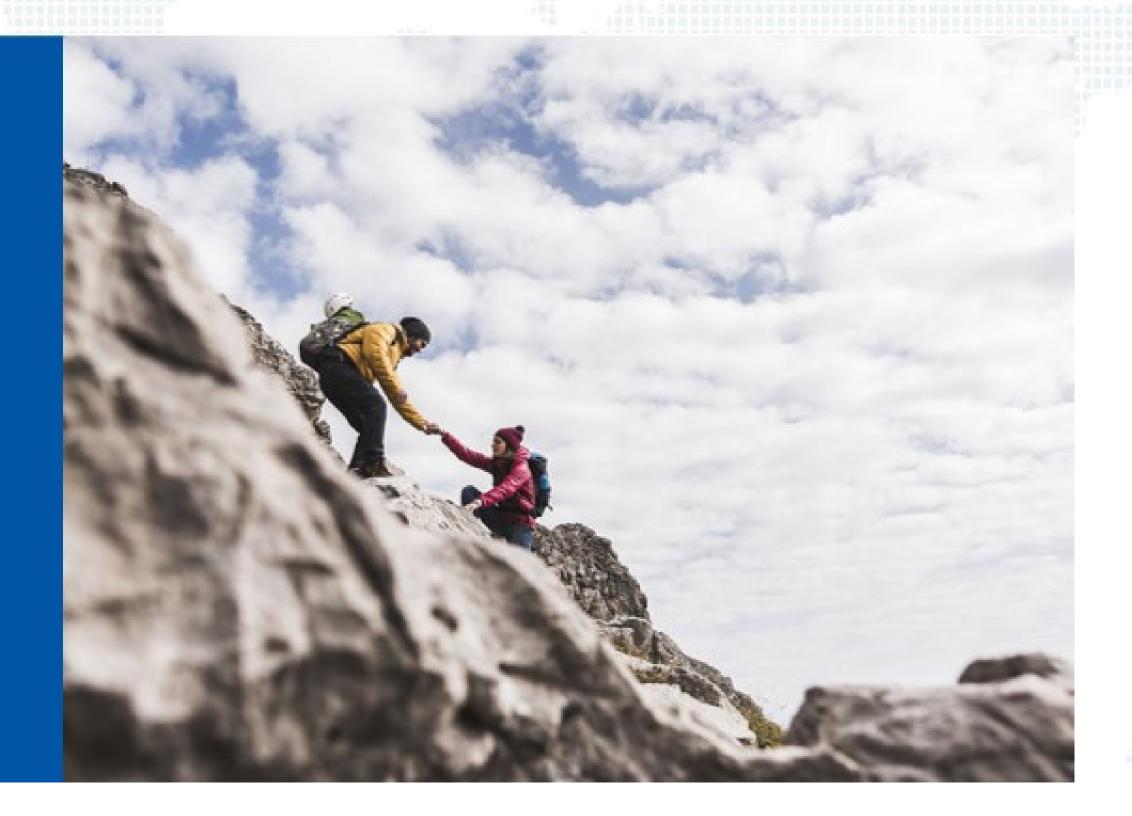


Pending Amendment 2 proposals Batch 5 Enhanced provisions related to safety intelligence

- New definition for safety intelligence
- Updated title and objective of Chapter 5 to emphasize the "development of safety intelligence" with a new RP to encourage States to develop a safety intelligence strategy
- Enhanced provisions related to the establishment of a safety data collection and processing system (SDCPS) related provisions
- A new RP to highlight the importance of safety data and safety information governance to support the development of safety intelligence by the States
- Updated provisions related to safety data and safety information analysis processes to specify objectives
- Strengthened provisions to require States to facilitate the exchange of safety information and safety intelligence and promote collaboration within the aviation community



02 Guidance Material











Safety Management Manual (Doc 9859)



NEW Safety Intelligence Manual (Doc 10159)













Safety Management Manual (Doc 9859) 5th Edition

Expected publication date: End of 2025









Improvements and Additions

- 1) Guidance on tailoring SSP and SMS to the needs of the organization
- Guidance on developing and using safety performance indicators (SPIs)
- Guidance on the link between safety performance management and safety risk management
- Guidance on application of safety intelligence in safety risk identification and management
- 5) New and dedicated chapter on safety risk management







Safety Intelligence Manual (Doc 10159) 1st Edition

Expected publication date: End of April 2025 (Advance unedited version)







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Doc 10155

Doc 10159

Safety Intelligence Manual

First Edition — 2025

O Golf C

This document is an unedited version of an ICAO publication and has not yet been approved in final form. As its content may still be supplemented, removed or otherwise modified during the editing process, ICAO shall not be responsible whatsoever for any costs or liabilities incurred ps_a-pspub_of its use.

Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION





Safety intelligence is <u>the outcome</u> of the systematic and structured <u>process</u> of collecting, analysing, interpreting and disseminating safety data and safety information with the objective of supporting data-driven decision-making.











- Existing content expanded and improved
- Brand new chapters added
- Better link to safety risk management
- Several suggestions for "good practices" and ideas for implementation
- Possibility of updates and revisions independently (from SMM)

Chapter 5.	Safety data collection and processing systems	5-1
5.1	Introduction	5-1
5.2	Safety data and safety information collection	5-2
5.3	Taxonomies	5-7
5.4	Safety data processing	5-9
5.5	Safety data and safety information management	5-10

Chapter 6.	Safety analysis	6-1
6.1	Introduction	6-1
6.2	Types of analysis	6-2
6.3	Reporting of analysis results	6-4
6.4	Safety information sharing and exchange	6-5
6.5	Data-driven decision-making	6-7

Chapter 7	Protection of safety data, safety information and related sources	7-1
7.1	Objectives and content	7-1
7.2	Fundamental principles	7-1
7.3	Scope of protection	7-3
7.4	Level of protection	7-5
7.5	Principles of protection	7-7
7.6	Principles of exception	7-11
7.7	Public disclosure	7-15
7.8	Protection of recorded data	7-17
7.9	Safety information sharing and exchange	7-17





Advantages (cont'd)

Better support for implementing SDCPS and safety intelligence provisions

- Many States still identify SDCPS implementation as one of the main challenges in implementing their State Safety Programme (SSP).
- Results of the global survey on "Challenges Faced by States in Implementing Annex 19" in 2021
- Results of global survey on "Global Aviation Safety Plan (GASP) Update" in 2024
- Feedback from ICAO regional offices



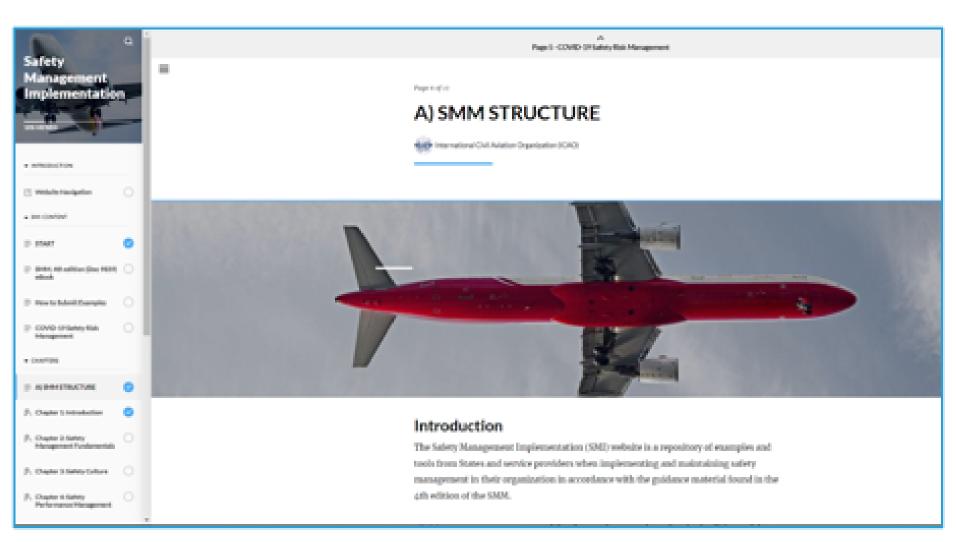




- 1) Introduction to safety intelligence (definitions; benefits; strategy; function) NEW
- Safety data and safety information (data sources; reporting mechanisms; protection; data collection; taxonomies)
- Safety data processing NEW
- Safety data collection and processing system (SDCPS) NEW
- Governance and management of safety data and safety information NEW
- 6) Data analysis
- Use of analysis
- 8) Sharing and exchange of safety information and safety intelligence NEW



The Safety Management Implementation website (www.icao.int/SMI)



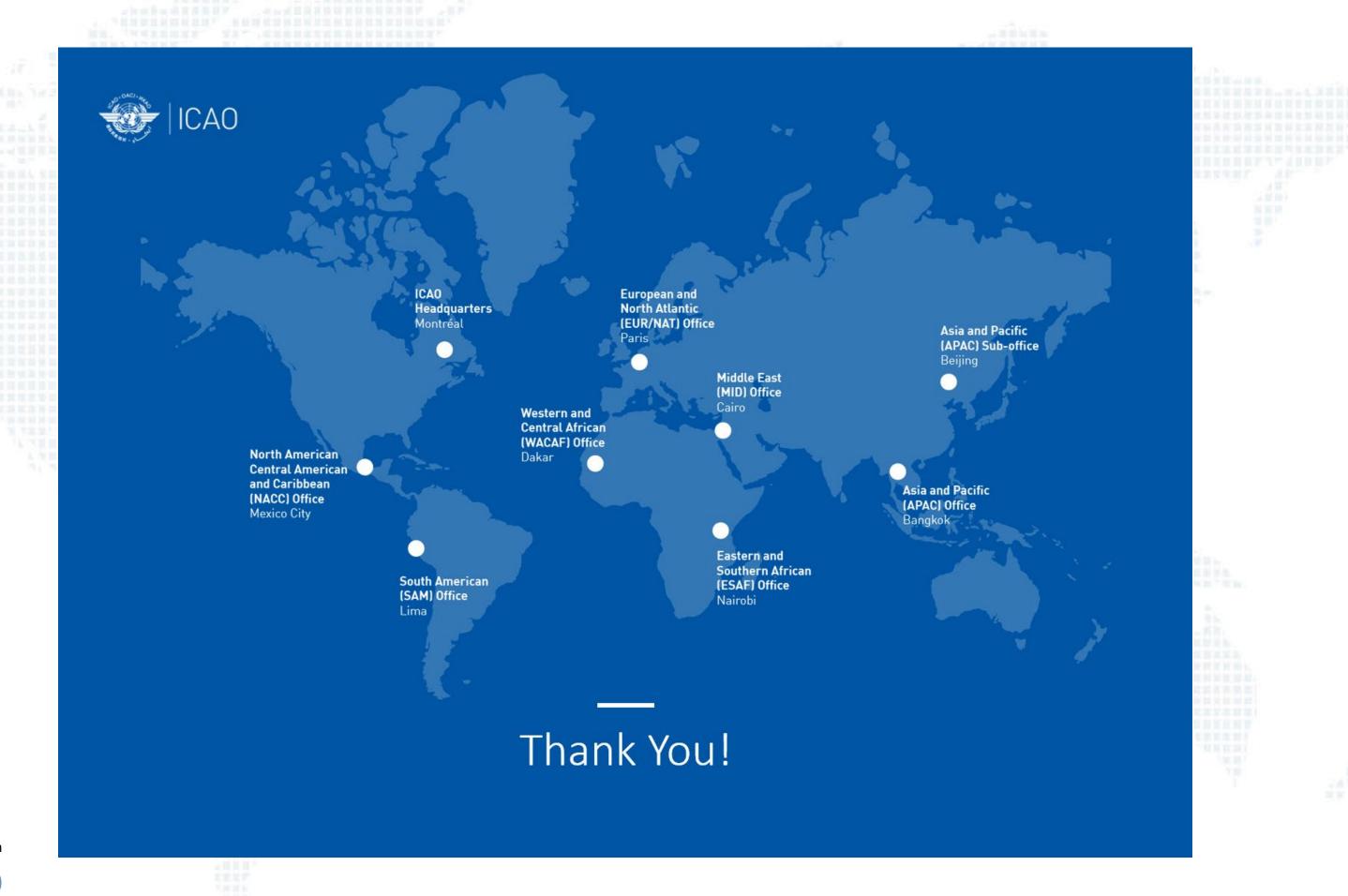
- Launched in 2018 to complement the SMM, 4th ed.
- Initially built on an online learning platform
- Will be moved to a new platform and will be aligned with new structure of guidance material
- We will continue collecting practical examples to support effective implementation













In Cooperation with



SSP and NASP Implementation

Mr. John Thomson
Senior Technical Advisor – Safety Management
UK Civil Aviation Authority International









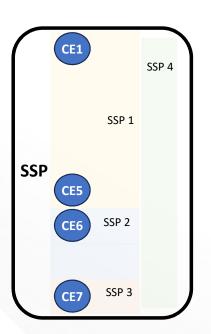
Let's Start with a question.

My State doesn't have a fully established SSP or a NASP, where should we start?



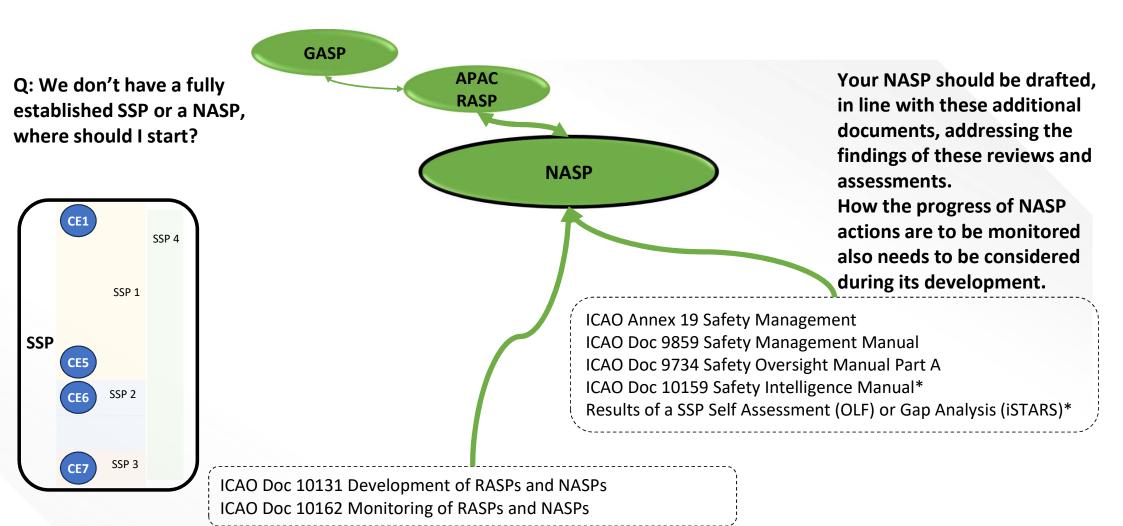
GASP

Q: We don't have a fully established SSP or a NASP, where should I start?



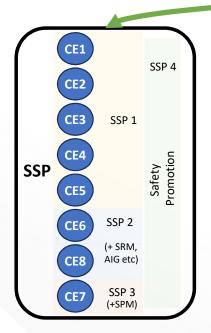
APAC RASP Start by reviewing the GASP and RASP for High Risk Categories and Organisational Challenges, this gives you a starting point. Next, review these other documents to gain an understanding of where your SSP is in its development.

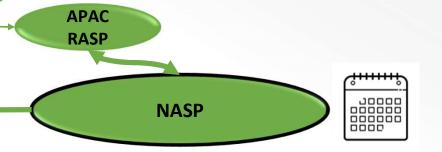
ICAO Annex 19 Safety Management
ICAO Doc 9859 Safety Management Manual
ICAO Doc 9734 Safety Oversight Manual Part A
ICAO Doc 10159 Safety Intelligence Manual*
Results of a SSP Self Assessment (OLF) or Gap Analysis (iSTARS)*



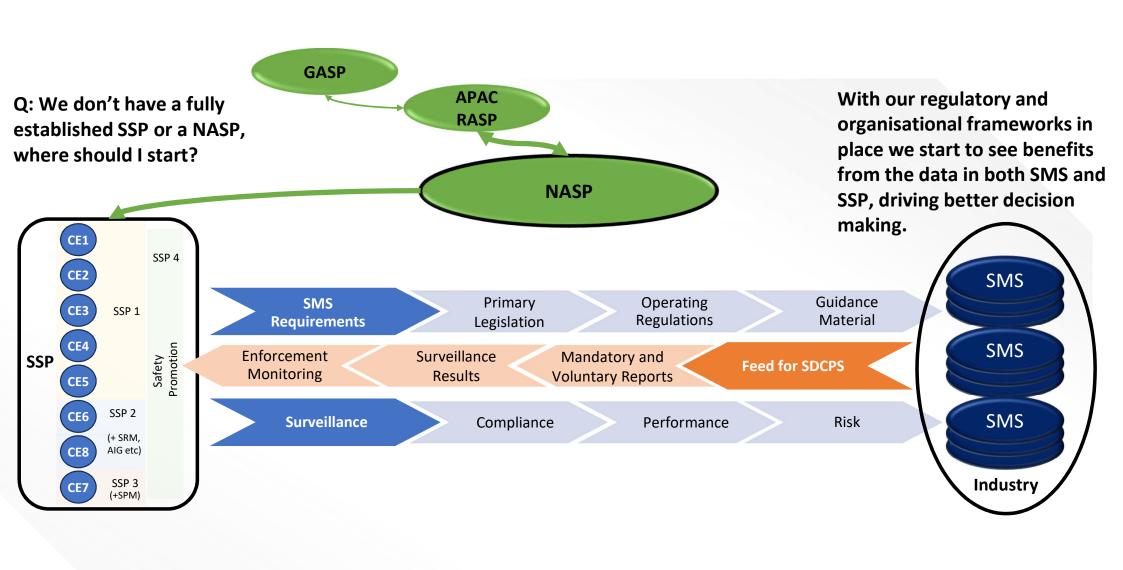
Q: We don't have a fully established SSP or a NASP, where should I start?

GASP



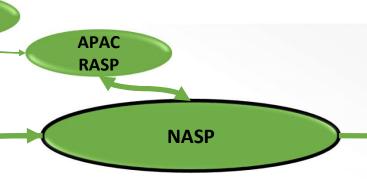


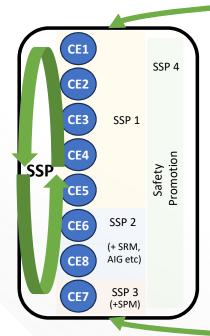
Over time your SSP is Established and Implemented.



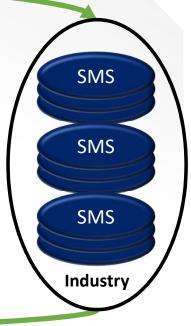
Q: We don't have a fully established SSP or a NASP, where should I start?

GASP



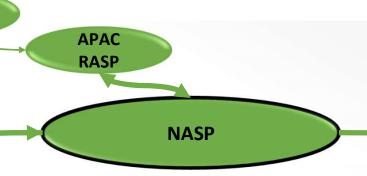


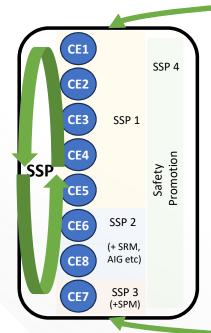
Our SSP functions such as Safety Intelligence and Safety Performance Monitoring support our Safety Risk Management, Oversight activities and SSP Maturation, including reviews of the GASP and RASP. Through these we can monitor and identify both Operational and Organisational Challenges relevant to our State, this provides us the information we need to refresh our NASP.



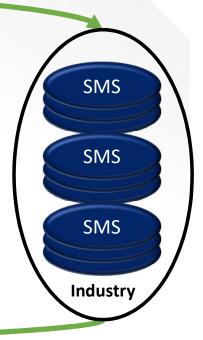
Q: We don't have a fully established SSP or a NASP, where should I start?

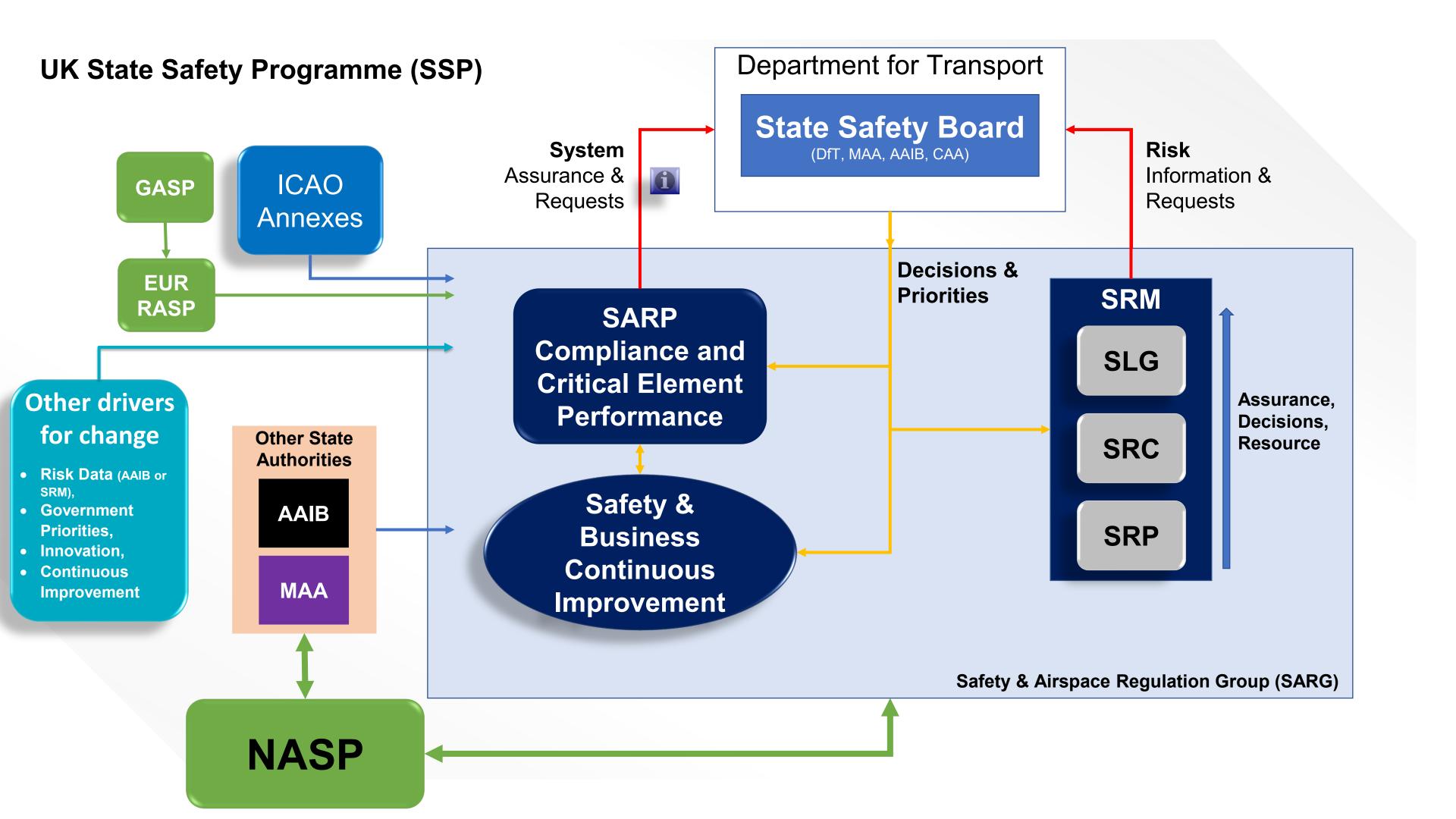
GASP

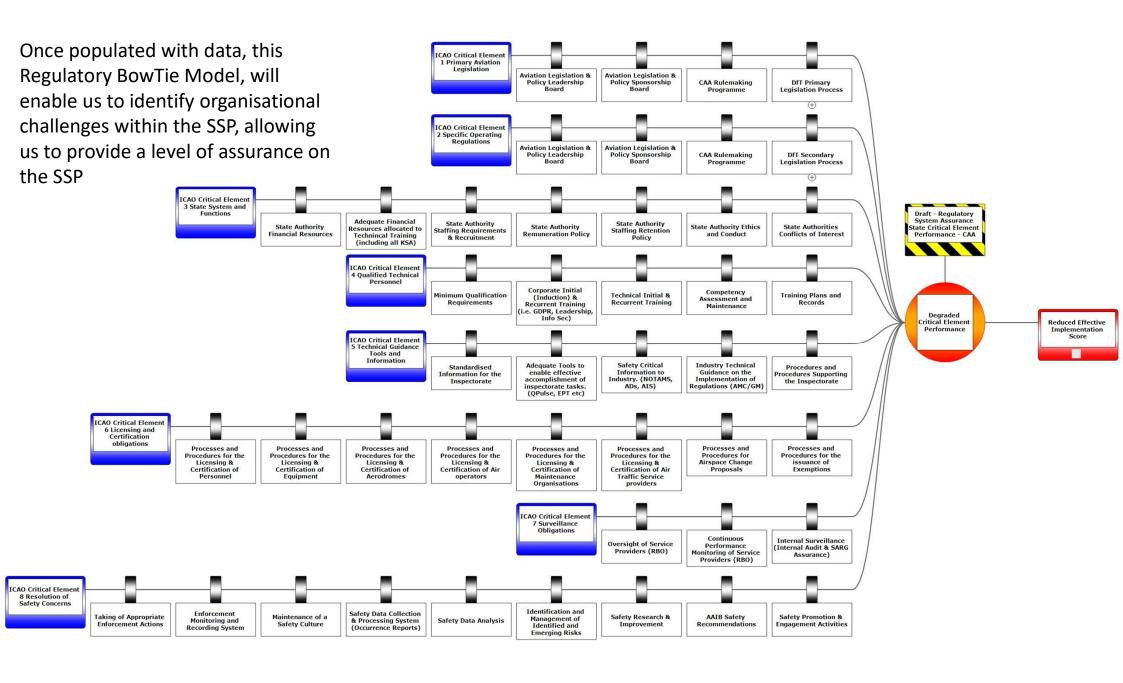




Remember, just because your SSP and NASP are now in place doesn't mean it is the end of the journey. Once implemented, the continuous monitoring and improvement of your SSP starts, through routine Self Assessments, Data Analysis, conducting GASP & RASP reviews in line with their update cycles, and by refreshing your NASP, your SSP can become self-supporting.









Thank you!

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NASP: Singapore's Experience

Ruiyi Ang
Principal Manager (Safety Assurance)
Civil Aviation Authority of Singapore





Singapore's SSP and NASP Journey



Developing Singapore's NASP

Steps 1-4

1) Self-evaluation, horizon scan

- Highlight safety priorities & risks of international concern
 - > HRCs & SEIs in GASP & RASP
 - ➤ Discussions at ICAO Conferences, RASGs/RASTs, etc.
 - > OLF tool and deficiencies
- > Evaluate safety data for trends / issues
 - > e.g. SDCPS, Risk WG



3) Publication

- Plan becomes endorsed by NASC
- > Publication & distribution of NASP
- Raise awareness of new plan at industry engagements

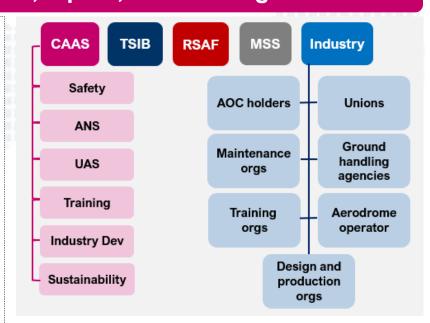




Steps 5-7

2) Consultation, inputs, and drafting

- Engage key stakeholders on safety concerns, priorities & actions to be included
 - Identify key stakeholders
- Ensure continued collaboration with stakeholders to implement actions
- Drafting the plan



Step 8

4) Monitoring & Tracking

- Regular tracking & reporting of progress / completion to
 - > NASP WG, SWC, & NASC
- > Share on implementation of relevant actions during industry engagements





Singapore's NASP 2022-2024 Edition

- The Singapore NASP was a strategic planning document created by CAAS to address aviation safety within Singapore
 - A three-year action plan to achieve the broader foundations of the Singapore SSP

ICAO Global Aviation Safety Plan (GASP)

Asia-Pacific Regional Aviation Safety Plan (AP-RASP)

Strategic Priorities

Mitigate operational safety risks
Enhance regulatory regime
Enable enterprise and innovation
Contribute to aviation safety globally and regionally

Actions

Operational safety
Policies and rules
Safety management
Data and digitalization
Regional and global aviation safety





HRCs & SEIs in GASP & AP-RASP

Global and Regional Plans/Roadmaps



Gap Analysis

GASP 2026-2028 SEI	Indicators	Yes/No?	Justification
	1A – Work at the national level to address Significant Safety Concerns as a priority	Yes	Singapore does not have any SSCs
	1B – Address all protocol questions (PQs) of the USOAP Continuous Monitoring Approach (CMA)		Singapore has addressed all of the 2020 PQs
	Common (0, 11)	Yes	The latest 2024 PQs were released in October 2024. Singapore will continue to assess and provide our responses via the USOAP online framework.
	1C – Establish primary aviation law and regulations, to empower the competent authority to conduct regulatory oversight, this includes separation of oversight functions and service provision		Singapore established the Air Navigation Act in 1966 and subsiduary regulations are available in the ANR.
SEI-1 – Consistent implementation of ICAO SARPs at the national level	functions (CE-1 and CE-2)		With regard to the separation of oversight and service provision functions. The CAAS Act - Section 7 details oversight and service provision separately. In 2010 and 2011, The Minster issued CAAS direction on ensuring the segregation of
	ID – Increase the level of compliance with ICAO SARPs and the EI of CEs at the national level (CE-1 to CE-5)	Yes	ANSP and Regulator Singapore El score has progressively increased to 99.69% (as assessed in 2022).
	1E – Establish a process for the identification of differences with ICAO SARPs (CE-2)		Singapore maintains a database of differences files with ICAO on the SRG Intranet. CAAS SRG PP 05 details the procedure for filing difference with ICAO and CAAS SRG PP10 on the Compliance Checklist. Singapore uses ICAO E
	2A – Establish and maintain an independent regulatory oversight authority, which	Yes	of Differences (EFOD) system. With regard to the separation of oversight and service provision

NASP Actions

ACTIONS

In line with the identified strategic priorities, the NASP establishes an action plan for 2022-2024 to guide the safety developments of the Singapore aviation sector. CAAS and TSIB have been working with the industry where appropriate to implement these actions, which cover five areas:

OPERATIONAL SAFETY	B. POLICIES AND RULES	C. SAFETY MANAGEMENT	D. DATA AND DIGITALISATION	REGIONAL AND GLOBAL AVIATION SAFETY
	a			WIND SAFETY

A. OPERATIONAL SAFETY

Singapore is committed to reducing operational safety risks to as low as reasonably practicable. This section addresses operational safety risks identified earlier, through three areas-flight operations, provision of air navigation services, and serodrome operations.

Flight Operations

Action		Lead	Completion
A.1	Focus safety oversight activities on Singapore air operators to ensure that operational and safety processes are robust, resources and crew manning are adequate, and crew proficiencies are monitored, as airline operations ramp up	CAAS	2022
A.2	Increase frequency of safety oversight activities on the airworthiness of aircraft that are returned to service following prolonged parking, through close monitoring of the aircraft reliability programme	CAAS	2022
A.3	Review and implement flight crew reactivation and induction training programmes to mitigate COVID-19 related risks, to enable safe ramp up of aviation activities	Singapore Air Operators	2022
A.4	Review the selection criteria, training requirements and oversight processes for Authorised Flight Examiners (AFEs), to improve AFE capabilities and consistency of AFE assessments, ahead of the introduction of competency-based training	CAAS	2023
A.5	Review flight crew training regulations and collaborate with Singapore air operators to fully implement competency-based flight crew training to improve abilities to handle uncertain, unexpected and unprecedented in-flight situations	CAAS	2024

Singapore National Aviation Safety Plan 2022-2024

Action		Lead	Completion
A.6	Review flight crew training requirements to reinforce key manual handling abilities and automation management competencies	CAAS	2024
A.7	Review regulations and guidance to provide clarity on the responsibilities of shippers and their agents in the declaration of dangerous goods, to reduce risk of carriage of undeclared dangerous goods	CAAS	2023
A.8	Launch communications and training campaign to increase awareness of undeclared dangerous goods and potential penalties, to address relevant risks including inadvertent carriage by unapproved entities	CAAS	2023
A.9	Expand the scope of the aircraft type acceptance evaluation to strengthen the airworthiness assessment of the type design of aircraft used by Singapore air operators	CAAS	2023
A.10	Develop regulatory framework and guidance for the operation of aircraft equipped with enhanced visual systems operating under performance-based aerodrome operating minima (PBAOM)	CAAS	2024
A.11	Develop a data analysis framework and programme with Singapore air operators to deepen analysis of flight operations safety data and occurrences and uncover safety vulnerabilities	CAAS, Singapore Air Operators	2024

Organisational Support Structure



SSP Working Committee (SWC)

Chaired by Deputy Director-General, CAAS



Monthly

Bi-annual



Risk Working Group

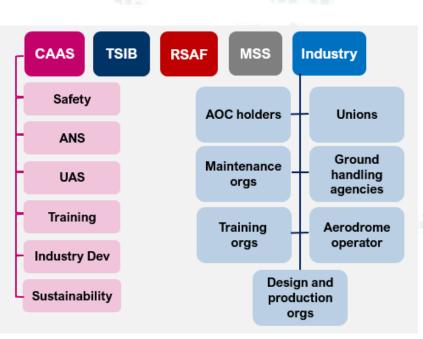
Chaired by Deputy Director (Safety Policy & Planning) (Safety Regulation Group), CAAS

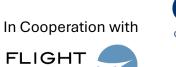
Monthly

NASP Working Group

Chaired by Head (Strategy and Planning) (Safety Regulation Group), CAAS

Monthly

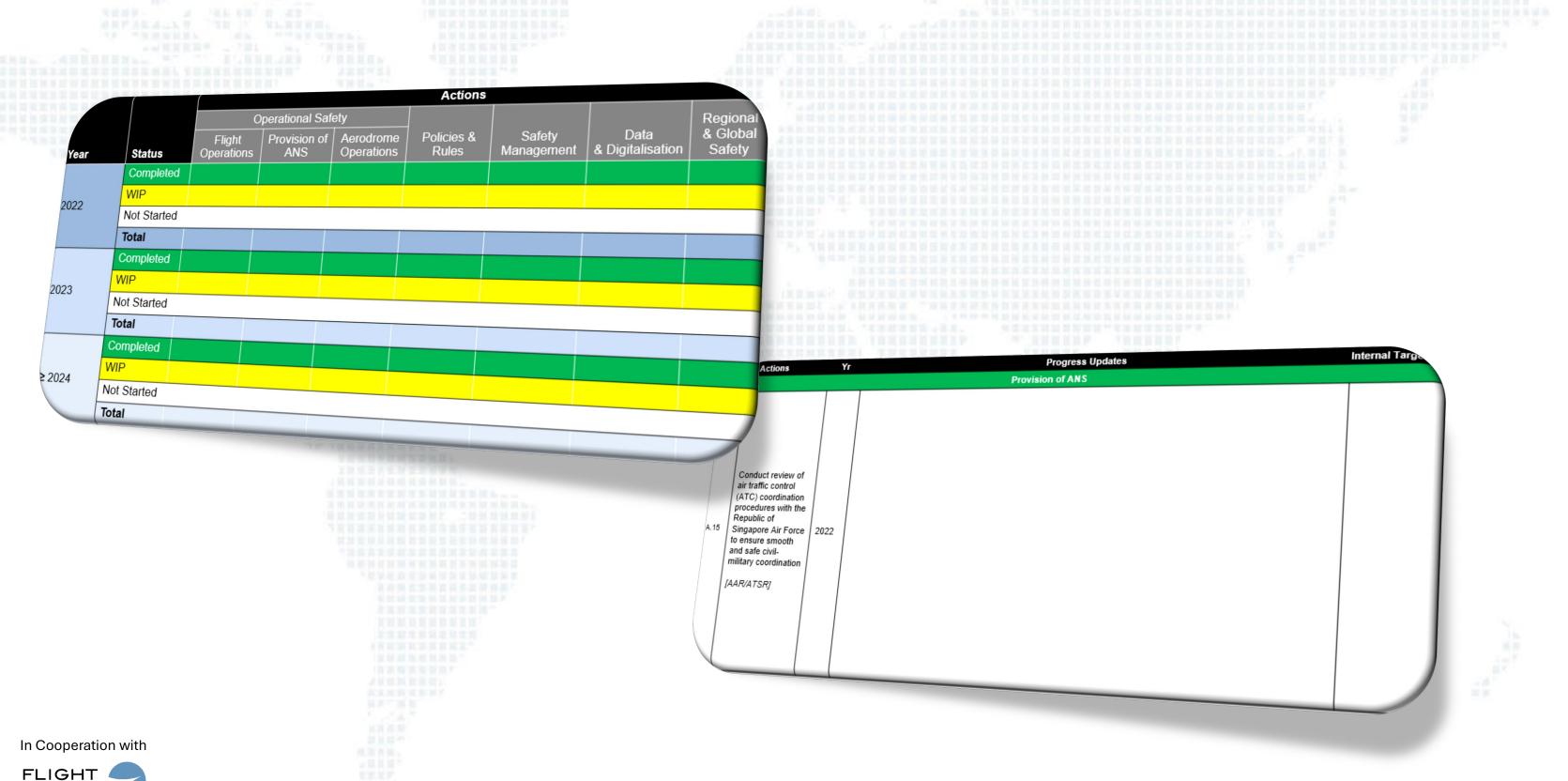








Implementation Tracking





SAFETY
F O U N D A T I O N
independent • impartial • international

PANEL









Yamani CHAN

Senior Operations Officer (Strategic Safety)

HKCAD

Hong Kong Civil Aviation Department

John Thomson

Senior Technical Advisor – Safety Management

UKCAAi

UK Civil Aviation
Authority international

Ruiyi Ang

Principal Manager (Safety Assurance)

CAAS

Civil Aviation Authority of Singapore

Hasan Mujahid

Additional Director SSP

PCAA

Pakistan Civil Aviation Authority



Session 1(ii): Implementation Progress of SSP and NASP#, and their relationship



How have you been benefited from SSP / NASP?

(Please try to describe with one or a few words)



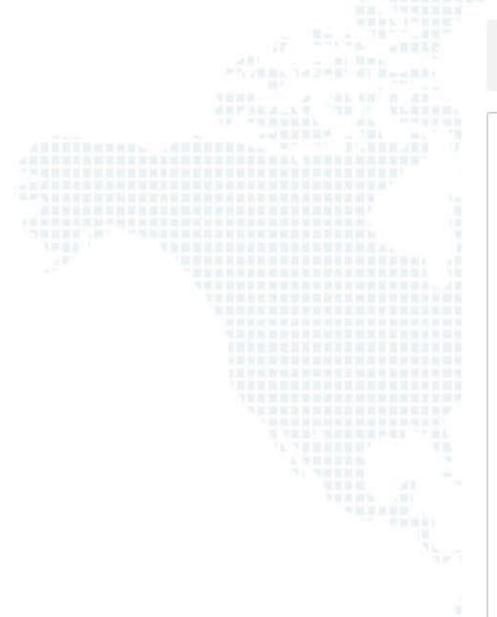








Session 1 Word Cloud | Recent developments on safety management



How have you been benefited from SSP / NASP?

Developing of state SPIs

Safety Risk Identification

Safety cannot compromise
Risk evaluation and mitigation

Monitor safety performance State Safety Policy

direction to dev SMS Importance of promoting Safety

Not at all. State commitments

Not at all. Ssp Training Develop SPI

Safety Anaylist safety promotion Thailand

Safety Policy

safety culture awareness Safety Policy

manage risk systematically

Gain knowledge Yes reporting system Korea

Safety promotion activities enhanced the SSP

Direction safety reporting

pre identified HRC Good Informative risk management Safety report

Focus approach

safety management implementation Company Safety Culture Clarity of risks Guidance Safety improvements New SPI development

risk register management

knowing concept safety system









Session 1 Poll | Recent developments on safety management

Can you help us pick a safety slogan?

Safety: your interest, our business

9.7% 19 votes

Safety is not a destination, it is a journey

86.2% 168 votes

If you're interested in safety, we are interested in you.

4.1% 8 votes



Session 1 Q & A | Recent developments on safety management

