



ICAO

## **REPORT OF THE THIRTEENTH MEETING OF THE ASIA PACIFIC REGIONAL AVIATION SAFETY TEAM (APRAST/13)**

Bangkok, Thailand, 3-7 December 2018

The views expressed in this Report should be taken as those of the  
Meeting and not the Organization

Approved by the Meeting  
and published by the ICAO Asia and Pacific Office, Bangkok

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## **1. Meeting and Registration**

1.1 The Thirteenth Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/13) was held at the ICAO Asia and Pacific Office in Bangkok, Thailand from 3 to 7 December 2018.

1.2 The APRAST/13 Meeting was attended by 99 participants from 20 States/Administrations and 7 International Organizations and Industry Partners viz. Australia, Bangladesh, Bhutan, Cambodia, China, Hong Kong-China, Macao-China, India, Indonesia, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka, Thailand, United States, Airbus, Association of Asia-Pacific Airlines (AAPA), Airports Council International (ACI), Boeing, CANSO, International Air Transport Association (IATA) and International Federation of Air Line Pilots Associations (IFALPA). The list of participants is at **Appendix A**.

1.3 Mr. S M Nazmul Anam, Regional Officer Flight Safety (ROFS) of ICAO Asia and Pacific Office acted as Secretary to the Meeting supported by Mr. Mr. Kong, Cheong Tuck, Flight Safety Expert.

## **2. Opening Session**

2.1 Mr. S M Nazmul Anam, Regional Officer Flight Safety (ROFS) of ICAO Asia and Pacific Office welcomed participants, and specially mentioned on the additional tasks in hand formulating a Regional Aviation Safety Plan (RASP) for the APAC Region and implementation of the Ministerial Conference commitments (Beijing Declaration).

2.2 Mr. Xinming LYU, APRAST Co-Chair (States) and Mr. Gerardo Hueto, APRAST Co-Chair (Industry) welcomed the participants. Both of them emphasized on the fact that 2017 was a best year but 2018 is not that positive in terms of serious accidents and fatalities for APAC Region.

2.3 Capt Claude Hurley, President Air Navigation Commission, ICAO presented on the 'SARPs : from Development to Implementation'. He apprised the meeting on the role of States and Regions for SARPs making and Global Plans. The presentation is attached in **Appendix B**.

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## **REPORT ON AGENDA ITEMS**

### **1. AGENDA ITEM 1: PLENARY SESSION – ADOPTION OF AGENDA**

#### **1.1 Adoption of the Provisional Agenda – WP/1**

1.1.1 The Secretariat presented the Provisional Agenda, which was adopted by the Meeting.

### **2. AGENDA ITEM 2: ELECTION OF SRP WG VICE-CHAIR (STATE)**

#### **2.1 Election of SRP WG Vice-chair (State) – WP/2**

2.1.1 Capt. Salahuddin M. Rahmatullah, Consultant & Head of Accident Investigation Group, Civil Aviation Authority of Bangladesh was the Vice-chair (State) since August 2015 who is unable to continue further. In accordance with the SRP WG Terms-of-Reference, a nomination and election of a Vice-chair (State) from States/Administrations was required.

2.1.2 The meeting was called for the nomination of the election of SRP Vice-chair (State) where Singapore proposed for Mr. Richard Gregor, Section Manager, Operational Safety Analysis, Safety Systems, CASA/Aviation Group as the SRP Vice-chair (State), Bangladesh and Boeing Seconded the Singapore's proposition.

### **3. AGENDA ITEM 3: WORKSHOP SESSION: SSP / SMS IMPLEMENTATION**

3.1 The SSP/SMS Implementation was conducted through a series of presentations by the regulators and service providers with vibrant question and answer session by all. First four presentations were presented by CAA China (CAAC) on their experience of implementing SSP/SMS followed by Singapore. CANSO presented on the standard of excellence and SEANS-Safety. Finally FAA, USA presented on the SMS implementation by the FAA ANSP which concluded the workshop session under the Agenda Item 3.

#### **3.2 Civil Aviation State Safety Programme (SSP) in China – WP/3**

3.2.1. WP/3 was presented by CAAC. CAAC promulgated *State Safety Programme of China relating to Civil Aviation* on February 15, 2015, which means China has established SSP that is in line with both the requirement of ICAO and the actual circumstances of China aviation system. Over the past three years, CAAC has been steadily advancing the implementation of SSP, and has made progress in policy support, risk management, safety performance management, safety oversight approaches, and data-driven activities. China promulgated a comprehensive regulation on civil aviation safety management. CAAC has mandated the requirement for all civil aviation service providers to implement SMS or equivalent management mechanism, and has conducted SMS assessments, which focus on the effectiveness of SMS implementation. The promotion of safety performance management has been extended to all service providers. CAAC proposed and is exercising differentiated safety oversight approaches for airplane operators at national level. And data-driven safety management has been reinforced.

3.2.2. CAAC shared the experience and best practices of SSP implementation in China and urged States to note the status of SSP implementation. CAAC also apprised the meeting on the necessity of organizing a specific working group to promote SSP implementation. The meeting urged States to follow a non-punitive approach on implementing SMS.

### 3.3 SMS Performance Evaluation in China – WP/4

3.3.1. China presented WP/4 and informed the house that in order to evaluate and improve actual performance of SMS, CAAC initialized SMS performance evaluation activities since 2010, which is aimed to focus on evaluation of SMS implementation effectiveness in addition to regulations compliance. CAAC formulated SMS evaluation checklist based on the four components of SMS for certified operators, aerodromes and ATS providers, including 21 sub-checklists and more than 300 check items. CAAC studied the evaluation method of SMS performance, and developed SMS performance evaluation system and tools, which can calculate the evaluation score automatically. CAAC has also carried out SMS performance evaluation in more than 40 certified operators and aerodromes. As result of long term practices, the safety management and operation level of the assessed service providers have improved and the initial objective of the evaluation has been achieved. The Meeting was invited to share the methods and experience of SMS performance evaluation in China.

### 3.4 Data-driven Qualification Management for Airline Pilots – WP/5

3.4.1. WP/5 presented by CAAC. The paper mentioned on the lifecycle management system for the technical competency of airline pilots established by CAAC according to the requirements of the State Safety Program (SSP) on the data-driven supervision and risk control. Based on the data mining and interconnection of subsystems of the Flight Standards Oversight Program (FSOP) in relation to the pilot qualification management, the multi-dimensional data output is standardized according to the CBT/EBT concept, so as to realize the proactive supervision of the airline pilots based on data and risk analysis. The lifecycle management system facilitates the Chinese airline pilots to continuously monitor and correspond to their competency deficiency and provide their key reference index for the operational risk prediction of the Chinese airlines.

3.4.2. The Meeting noted the implementation of data-driven qualification management mechanism for airline pilots in China. States, suppliers of training services and manufacturers of training equipment were urged to improve the exchange of experience and data sharing of the practical application for competency based training (CBT).

### 3.5 Improvements of Safety Performance by SDR Data Screening – WP/6

3.5.1. China presented this paper. The presentation highlighted that by screening and analyzing the Service Difficulty Report (SDR) data, CAAC discovered that the incident rate in terms of aircraft models and air carriers aggregates and disperses at some time periods. To a specific failure, the incident rate varies by aircraft models. For the air carriers who operates same models the incident rate varies as well. By comprehensively analyzing SDR data, CAAC with aircraft manufacturers and airlines, identify the risk factors and control these factors from design, manufacture and maintenance perspectives to reduce incidents. The Meeting was urged to take note of the application of SDRs, since they can promote safety performance.

3.5.2. Summary of all the four CAAC working papers on SSP/SMS implementation workshop is found in **Appendix C**.

3.5.3. Singapore presented on their experiences of SSP implementation. The presentation is found in **Appendix D**.

3.5.4. CANSO presented on SMS for ANSPs highlighting the CANSO Standard of Excellence in SMS and SEANS-Safety which is found in **Appendix E**.

3.5.5. FAA, USA presented on the SMS implementation by US ANSP which is found in **Appendix F**.

#### **4. AGENDA ITEM 4: UPDATE OF RASG-APAC/8 DECISIONS / CONCLUSIONS AND WORK PROGRAMME**

##### **4.1 Progress update of the RASG-APAC/8 Decisions and Conclusions – WP/7**

4.1.1. The Secretariat presented the progress update of the RASG-APAC/8 Decisions and Conclusions. The Meeting noted the updates and supported the recommendations of the Decisions and Conclusions, as reflected at **Appendix G**.

##### **4.2 Update of RASG-APAC/8 annual & Standing Work Programme 2018/2019 – WP/18**

4.2.1. The Secretariat presented the progress of RASG-APAC 2018/2019 Work Programme which was approved at RASG-APAC/8 in September 2018. The Meeting noted the updates provided by the Secretariat and the various champions during the course of meeting and supported the recommendations and status of work programme, as reflected in **Appendix H**.

#### **5. AGENDA ITEM 5: UPDATE, DISCUSS AND REVIEW OF PROGRESS OF APRAST ACTIVITIES**

##### **5.1 Update of APRAST/12 Decisions and Conclusions – WP/9**

5.1.1. The Secretariat presented the progress of outstanding Decisions and Conclusions adopted at APRAST/12. The Meeting noted the updates provided by the Secretariat and APRAST/12 Decisions and Conclusions can be found in **Appendix I**.

##### **5.2 Status of Foreign Air Operator Surveillance Database (FAOSD) Programme and SEI Monitoring Tools – WP/10**

5.2.1. The Secretariat presented this paper. The **FAOSD** was completed by mid of 2014 and a “Manual of Procedures and Use of the FAOSD Programme” was also circulated among APAC member States and required training was given from 20-21 October 2014. Since then FAOSD has been hardly used by any State. No feedback on potential problems with the FAOSD has been provided by States.

5.2.2. States are urged to make use of the tool and assist building comprehensive data for future analysis.

##### **5.3 SEI Monitoring Tools**

5.3.1. SEI monitoring tool has experienced external interference. Recognizing the need to secure data and to protect ICAO reputation, the Champion State was requested to come with best possible security features and data protection measures along with ICAO IT certification process. As such, the SEI Monitoring Tool will take some time to be LIVE again. Secretariat will update the States once it can be restored.

##### **5.4 SEI Implementation and other Safety Tools Survey – WP/11**

5.4.1. Due to the low number of responses to this survey, the received feedback may not give APRAST a full picture of all the views from APRAST members regarding the SEIs and safety

tools implementation. As the discussion from the APRAST/13, APRAST should obtain inputs from those non-responded APRAST Members. As such, meeting adopted following Decision:

<b>Decision APRAST 13/1 : SEI Implementation and other Safety Tools Survey</b>	
<p>That, Secretariat to send out the survey again to the non-responsive States considering the following points;</p> <ul style="list-style-type: none"> <li>a) Submission date of this survey to 28 Feb 2019;</li> <li>b) Further action to be taken from Secretariat to validate the POC of APRAST members;</li> <li>c) This survey will be disseminated to both PoC and Director General of APRAST members.</li> </ul>	<p><b>Expected impact:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets</li> <li><input type="checkbox"/> Enhancement of USOAP Effective Implementation</li> <li><input type="checkbox"/> Monitoring and Administration</li> <li><input type="checkbox"/> Capacity Building and Sharing of Information</li> <li><input type="checkbox"/> Inter-Regional</li> </ul>
<p><b>Why:</b> To extend the deadline of the SEIs survey till 28 Feb 2019 and get sufficient feedback from APRAST Members in order to identify what is the need to support the implementation of all SEIs.</p>	
<p><b>When:</b> Immediately</p>	<p><b>Status:</b> In progress</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> APRAST <input type="checkbox"/> APAC-AIG <input type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF  <input checked="" type="checkbox"/> APAC States/Administrations <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: Industry Organization</p>	

## 5.5 Regional Data Collection, Analysis and Information Sharing (AP-SHARE) Demonstration Project Status Report – WP/12

5.5.1. IATA and Singapore, on behalf of FSF, presented the progress of the AP-SHARE Demonstration Project. The Meeting noted that AP-SHARE had developed and adopted a set of mitigating measures on TCAS-RA which could be considered by APRAST when developing SEIs to address mid-air collision risks. The Meeting encouraged more States/ Administrations and Industry Organizations to participate in the AP-SHARE (contact: [huetog@iata.org](mailto:huetog@iata.org)).

## 6. AGENDA ITEM 6: PRESENTATIONS – STATE / INDUSTRY / ICAO

### 6.1 Proposed Approach to Develop the Asia-Pacific Regional Aviation Safety Plan (AP-RASP) – WP/13

6.1.1. Singapore presented the proposed approach to develop the Regional Aviation Safety Plan (RASP) as required by the GASP, which included setting up an ad-hoc Working Group to undertake this task. The Meeting accepted the proposal, and adopted the following Conclusion:

<b>Conclusion APRAST 13/1 : Proposed Approach to Develop the Asia-Pacific Regional Aviation Safety Plan (AP-RASP)</b>	
<p>That, APRAST, with support from ICAO APAC Office and other regional mechanisms including the COSCAPs, establish an ad-hoc Working</p>	<p><b>Expected impact:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets</li> </ul>

Group Comprising States/Administrations and Industry Organizations, with Singapore and AAPA as Co-Leads, to develop the Asia-Pacific Regional Aviation Safety Plan (AP-RASP) for endorsement at APRAST/14, with a view to seek approval at RASG-APAC/9.	<input type="checkbox"/> Enhancement of USOAP Effective Implementation <input type="checkbox"/> Monitoring and Administration <input type="checkbox"/> Capacity Building and Sharing of Information <input type="checkbox"/> Inter-Regional
<b>Why:</b>	Development of Regional Aviation Safety Plan for Asia-Pacific region
<b>When:</b>	<b>Status:</b> In progress
<b>Who:</b>	<input checked="" type="checkbox"/> APRAST <input checked="" type="checkbox"/> APAC-AIG <input checked="" type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF <input checked="" type="checkbox"/> APAC States/Administrations <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: Industry Organizations

## 6.2 IATA Operational Safety Audit (IOSA) – WP/14

6.2.1. IATA presented this paper. The IATA Operational Safety Audit (IOSA) program is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline. The IOSA Standards and Recommended Practices (ISARPs) are based on ICAO provisions and industry best practices (e.g. Annex 1, 6, 8, 13, 17, 18 and 19). All IATA member airlines are IOSA registered and must remain registered to maintain IATA membership. As IOSA registered operators, airlines demonstrate a reliable assurance program and contribute to an increasing safety performance worldwide. The Meeting encouraged the States to endorse IOSA as a complementary measure for State Safety Oversight Activities and make stronger use of IOSA and the information it provides.

## 6.3 Safety Information Protections Enable Proactive Safety Management – WP/15

6.3.1. The United States CAST presented this paper and the Meeting noted the content of the paper.

# 7. AGENDA ITEM 7: BREAKOUT SESSION ON REGIONAL AVIATION SAFETY PLAN (RASP)

## 7.1 RASP Breakout Session:

7.1.1. The first meeting of the AP-RASP ad-hoc WG was attended by Singapore and AAPA (Co-Leads), Australia, Bangladesh, Cambodia, China, Hong Kong (China), India, Macau (China), Nepal, Thailand, US, ACI, Airbus, Boeing, IATA, IFALPA, and ICAO APAC Office. The group discussed the structure, contents and flow of the RASP, and agreed that the AP-RASP would follow draft GASP 2020-2022 Edition structure for consistency, albeit the document would be kept brief, concise and easy to understand. Also, no new operational SEIs would be added, and the work to develop the AP-RASP would focus more on integrating existing building blocks and enhancing information links/ flows between these.

7.1.2. The group also noted the preliminary RASP development timeline as follows:

- Jan 2019: Co-Leads to perform comprehensive gap analysis, and disseminate the following to ad-hoc WG members, ICAO APAC Office and other relevant stakeholders as relevant:
  - Confirmed ad-hoc WG member list
  - Ad-hoc WG TOR

- Draft AP-RASP outline
- Reference materials
- Assigned tasks and deadlines to respective Custodians to develop portions of
- By end-Jun: Complete development and review of draft
- Jul: APRAST/14 to endorse AP-RASP
- Nov: RASG-APAC/9 to approve AP-RASP

**Decision APRAST 13/2 : Confirmation of the Asia-Pacific Regional Aviation Safety Plan (AP-RASP) ad-hoc Working Group members**

That, participants of the first AP-RASP ad-hoc WG inform APRAST Secretary/ ICAO APAC Office ([APAC@icao.int](mailto:APAC@icao.int)) of the details of their designated Points-of-Contact by 31 December 2018.

**Expected impact:**

- ☒ Achievement of global and regional aviation safety priorities and targets
- ☐ Enhancement of USOAP Effective Implementation
- ☐ Monitoring and Administration
- ☐ Capacity Building and Sharing of Information
- ☐ Inter-Regional

**Why:** Development of Regional Aviation Safety Plan for Asia-Pacific region

**When:** Immediate

**Status:** In progress

**Who:** ☒ APRAST ☒ APAC-AIG ☒ SRP WG ☒ SEI WG ☐ Capacity Building TF  
☒ APAC States/Administrations ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: Industry Organization

## 7.2 Breakout Session: SRP WG

7.2.1. To identify systemic issues or areas of unmitigated risk that are not currently being addressed by the ICAO Asia Pacific Annual Safety Report.

**Conclusion APRAST 13/2: Addressing the issues or areas of unmitigated risk that are not covered in the Annual Safety Reports (ASR).**

That, SRP Vice-chairs to present a working paper at APRAST/14 discussing the development, by the SRP WG, of a Regional Risk Register. The risk register will be distinct from the APAC Annual Safety Report and be supported by the IAT. A Decision will be sought at APRAST/14 as to whether the SRP WG / IAT can proceed with this initiative.

**Expected impact:**

- ☒ Achievement of global and regional aviation safety priorities and targets
- ☐ Enhancement of USOAP Effective Implementation
- ☒ Monitoring and Administration
- ☐ Capacity Building and Sharing of Information
- ☐ Inter-Regional

**Why:** Address the areas of unmitigated risks

**When:** Immediate

**Status:** In progress

**Who:** ☒ APRAST ☒ APAC-AIG ☒ SRP WG ☒ SEI WG ☐ Capacity Building TF  
☒ APAC States/Administrations ☒ ICAO APAC RO ☐ ICAO HQ ☐ Other: Industry Organization

### 7.3 Breakout Session: SEI WG

7.3.1. SEI WG discussed the following:

- a) Review the Status of Safety Enhancement Initiatives (SEIs);
- b) Review the SEIs under the yearly work programmes;
- c) Review the SEIs under Registry of Emerging ;
- d) Review the work of SEI Core Group and SEI Review Group;
- e) Review any other open APRAST Decisions and Conclusions related to SEI WG;  
and
- f) Items from APRAST/13 Plenary Session.

7.3.2. The updated status of SEI WG can be found in **Appendix J**. As the APRAST Decision 12/6 is still open, a follow up is required as below Decision:

Decision APRAST 13/3 : SEI WG	
That, the Secretariat will circulate the comparison table to all APRAST members' consideration and if any clarification is needed from both FSF and IATA prior to APRAST/14, in order to decide if any of those recommendations may be considered to be APAC SEI(s) in APRAST/14.	<b>Expected impact:</b> <input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets <input type="checkbox"/> Enhancement of USOAP Effective Implementation <input type="checkbox"/> Monitoring and Administration <input type="checkbox"/> Capacity Building and Sharing of Information <input type="checkbox"/> Inter-Regional
<b>Why:</b>	
<b>When:</b> Immediately	<b>Status:</b> In progress
<b>Who:</b> <input checked="" type="checkbox"/> APRAST <input type="checkbox"/> APAC-AIG <input type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF <input checked="" type="checkbox"/> APAC States/Administrations <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: IATA, FSF	

## 8. AGENDA ITEM 8: BREAKOUT SESSION ON THE TASK OF YEARLY WORK PROGRAMME 2018/2019

### 8.1 Breakout Session

8.1.1. Representatives of all the groups participated in the break out session. The Work Programme mainly focuses the tasks arising from Beijing Declaration. RASG tasked the APRAST to formulate the action plan to achieve the target of the Ministerial Declaration in 2018/2019 work programme relevant to aviation safety. It was revealed that task as described in para 8.2.1, 8.2.2, 8.2.3, 8.2.5, and 8.3.1 are within the purview of the APRAST and those tasks are a continuous process and ongoing. Para 8.2.4 on the task of Aerodrome Certification is taken over by APANPIRG. Para 8.2.6 APRAST can assist States providing guidance in developing a National Aviation Safety Plan (NASP). Para 8.4.1, 8.5.1 and 8.5.2 are not within APRAST ToRs. However, Secretariat will be responsible to provide required feedback time to time on the below tasks taking feedback from the States.

**8.2 Follow up of Beijing Declaration : "Safety"**

8.2.1. Progressively enhance safety oversight capability to achieve a USOAP EI score higher or equal to the global average by 2022; – **APRAST**

8.2.2. Implement an effective State Safety Programme (SSP) by 2025; – **APRAST**

8.2.3. Endeavour not to have any Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any future SSCs within the time frame agreed with ICAO; – **APRAST**

8.2.4. Certify all aerodromes used for international operations by 2020; – **APANPIRG**

8.2.5. Use data driven methodologies to identify high risk categories of occurrences (e.g. runway safety, loss of control in flight and controlled flight into terrain), and implement collaborative solutions to reduce accident rates and fatalities in the Region; – **APRAST**

8.2.6. Include aviation safety in national planning frameworks such as National Development Plans (NDPs) supported by robust Civil Aviation Master Plans. – **NOT WITHIN THE PURVIEW OF APRAST EXCEPT MONITORING THE NASP.**

**8.3 Collaboration:**

8.3.1. Promote regional government and industry collaboration for sharing of best practices in safety management through the Regional Aviation Safety Group (RASG). – **APRAST**

**8.4 Independent Accident Investigation Body:**

8.4.1. Accident Investigation: Commit to either establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation or where appropriate develop a bilateral, sub-regional or regional partnership to support the establishment of accident investigation capabilities to serve the Region, sub-region or State” – **AIG**

**8.5 Human Resource Development:**

8.5.1. Establish access to quality training; and

8.5.2. Encourage sharing of resources bilaterally and/or multi-laterally as well as with industry partners.”

– **NOT WITHIN THE PURVIEW OF APRAST EXCEPT MONITORING ANY CAPACITY BUILDING INITIATIVE.**

**9. AGENDA ITEM 9: ANY OTHER BUSINESS**

9.1 FAA encouraged States and Industry members to attend the Info Share Meeting to be held in Dallas, Texas from 16-18 April 2019. This is an industry-government aviation safety information exchange forum. Interested candidates may contact Mr. Chad Brewer ([chad.brewer@faa.gov](mailto:chad.brewer@faa.gov)).



9.2 Mr. Nicolas Rallo, Chief, Safety and Air Navigation Oversight Audit Section (OAS), Monitoring and Oversight, Air Navigation Bureau, ICAO briefed the house on the Roll-out of State Safety Programme (SSP) Implementation Assessments under the USOAP CMA.

9.3 Mr. Len Wicks, RO/ATM presented on the outcomes of “RASMAG/23”.

9.4 No other items were discussed.

**10. AGENDA ITEM 10: REVIEW AND ADOPTION OF DECISIONS AND CONCLUSIONS, INCLUDING ITEMS FOR CONSIDERATION AND APPROVAL AT RASG-APAC**

10.1 A list of APRAST/13 Decisions and Conclusions can be found at **Appendix K** to this Report.

**11. AGENDA ITEM 11: PRESENTATION OF APRAST/13 DRAFT REPORT**

11.1 The Meeting reviewed and discussed the Draft APRAST/13 Report.

**12. AGENDA ITEM 12: DATE AND VENUE OF NEXT MEETING**

12.1 The Meeting noted that APRAST/14 Meeting would be tentatively scheduled from 27-31 May 2019 at Bangkok, Thailand.

12.2 The APRAST Co-chairs thanked the ICAO Asia and Pacific Office for hosting this Meeting, all the delegates for their active participation and contribution, and the Secretariat for its support for the Meeting.

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**APRAST/13**  
Appendix A to the Report

**THIRTEENTH MEETING OF THE ASIA PACIFIC REGIONAL AVIATION SAFETY TEAM**

*Bangkok, Thailand, 3-7 December 2018*

Total Participants = 99

20 States / Administrations (APAC + USA)  
9 International Organizations and Industry Partners

States / Administrations	No. of participants
Afghanistan	0
Australia	2
Bangladesh	4
Bhutan	1
Brunei Darussalam	0
Cambodia	3
China	5
Hong Kong, China	5
Macao, China	6
Cook Islands	0
DPR Korea	0
Fiji	0
France	0
India	2
Indonesia	10
Japan	0
Kiribati	0
Lao PDR	0
Malaysia	4
Maldives	2
	<b>44</b>

States / Administrations	No. of participants
Marshall Islands	0
Micronesia (FS)	0
Mongolia	0
Myanmar	2
Nauru	0
Nepal	1
New Zealand	0
Pakistan	2
Palau	0
Papua New Guinea	0
Philippines	1
Republic of Korea	4
Samoa	0
Singapore	6
Solomon Islands	0
Sri Lanka	1
Thailand	19
Timor-Leste	0
Tonga	0
Tuvalu	0
	<b>36</b>

States / Administrations	No. of participants
United Kingdom	0
United States (FAA)	2
Vanuatu	0
Viet Nam	0
	<b>2</b>
<i>Int'l Org / Industry Partners</i>	
1. Airbus	1
2. ACI	1
3. AAPA	2
4. Boeing	1
5. CANSO	1
6. IATA	4
7. IFALPA	1
	<b>11</b>
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**APRAST/13**  
Appendix A to the Report

**LIST OF PARTICIPANTS**

STATE / NAME		DESIGNATION / ORGANIZATION	TEL. / FAX	E-MAIL
<b>1.</b>	<b>AUSTRALIA</b>			
	1.	Mr. Richard A. GREGOR Section Manager – Operational Safety Analysis Civil Aviation Safety Authority Brisbane Airport QLD 4007	Tel.: +61-7-3144 7334	<a href="mailto:Richard.Gregor@casa.gov.au">Richard.Gregor@casa.gov.au</a> ; <a href="mailto:Lynda.oreilly@casa.gov.au">Lynda.oreilly@casa.gov.au</a> ;
	2.	Mr. Charles A. GALEA Section Manager – Safety Management Coordination and Safety Systems CASA\Aviation Group 14-16 The Circuit, Brisbane Airport	Tel.: +61-7-3144 7487	<a href="mailto:Charles.Galea@casa.gov.au">Charles.Galea@casa.gov.au</a> ;
<b>2.</b>	<b>BANGLADESH</b>			
	3.	Mr. S M Lutful KABIR Assistant Director (IR & Regulation) and APRAST Coordinator Flight Safety & Regulation Division Civil Aviation Authority of Bangladesh	Tel.: +880-2-890 1406 Fax: +880-2-890 1428	<a href="mailto:kabircaab@gmail.com">kabircaab@gmail.com</a> ;
	4.	Mr. Md. Tareq MUNEEM Aviation Safety Inspector Flight Safety & Regulation Division Civil Aviation Authority of Bangladesh	Tel.: +880-2-890 1406 Fax: +880-2-890 1428	
	5.	Ms. Quazi Fozia NAHER Administrative Officer & Aviation Safety Inspector Flight Safety & Regulation Division Civil Aviation Authority of Bangladesh	Tel.: +880-2-890 1406 Fax: +880-2-890 1428	<a href="mailto:foziacaab@gmail.com">foziacaab@gmail.com</a> ; <a href="mailto:foziaqn@yahoo.com">foziaqn@yahoo.com</a> ;
	6.	Mr. Abdul Majed MIAH Senior Flight Operations Inspector Flight Safety & Regulation Division Civil Aviation Authority of Bangladesh	Tel.: +880-2-890 1406 Fax: +880-2-890 1428	<a href="mailto:amajedmiah@gmail.com">amajedmiah@gmail.com</a> ;
<b>3.</b>	<b>BHUTAN</b>			
	7.	Mr. Bap TOBGAY Chief Flight Safety Bhutan Civil Aviation Authority	Tel.: +975-271347 Fax +975-272395	<a href="mailto:btobgay@bcaa.gov.bt">btobgay@bcaa.gov.bt</a> ;

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STATE / NAME		DESIGNATION / ORGANIZATION	TEL. / FAX	E-MAIL	
4.	CAMBODIA				
	8.	Mr. Sophondarith TAN	Director of Security/Safety Management and Quality Assurance Department State Secretariat of Civil Aviation Phnom Penh 12406	Tel.: +855-23-890 243 +855-92-700 200 Fax +855-23-890 243	<a href="mailto:tansophondarith@gmail.com">tansophondarith@gmail.com</a> ; <a href="mailto:sophondarith-tan@civilaviation.gov.kh">sophondarith-tan@civilaviation.gov.kh</a> ;
	9.	Mr. Seyla SOVATH	Deputy Director State Secretariat of Civil Aviation Phnom Penh 12406	Tel.: +855-23-890 215	<a href="mailto:sovathseyla@civilaviation.gov.kh">sovathseyla@civilaviation.gov.kh</a> ;
	10.	Ms. Soporlita VOEUNRATH	Deputy Bureau Chief State Secretariat of Civil Aviation Phnom Penh 12406	Tel.: +855-23-890 198 +855-77-445 964 Fax +855-23-890 102	<a href="mailto:Soporlita.ssca@gmail.com">Soporlita.ssca@gmail.com</a> ; <a href="mailto:soporlita-pel@civilaviation.gov.kh">soporlita-pel@civilaviation.gov.kh</a> ;
5.	CHINA				
	11.	Mr. Xinming LYU	Deputy Director General of Flight Standard Department Civil Aviation Authority of China Beijing	Tel.: +86-10-64091405	<a href="mailto:xm_lv@caac.gov.cn">xm_lv@caac.gov.cn</a> ;
	12.	Mr. Lijun WU	Director of Safety Oversight Division of Office of Aviation Safety Civil Aviation Authority of China Beijing	Tel.: +86-10-64091959	<a href="mailto:Lj_wu@caac.gov.cn">Lj_wu@caac.gov.cn</a> ;
	13.	Mr. Ming ZENG	Deputy Director General Aviation Division Flight Standard Department Civil Aviation Authority of China Beijing	Tel.: +86-10-64091454	<a href="mailto:zengming@caac.gov.cn">zengming@caac.gov.cn</a> ;
	14.	Mr. Xin HUANG	Assistant, Division of Continuous Airworthiness and Aircraft Maintenance, Repair and Overhaul Flight Standard Department Civil Aviation Authority of China Beijing	Tel.: +86-10-64091473	<a href="mailto:huangxin@caac.gov.cn">huangxin@caac.gov.cn</a> ;

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	15.	Ms. Mei RONG	Senior Engineer China Academy of Civil Aviation Science and Technology Beijing	Tel.: +86-10-13810008358	<a href="mailto:rongmei@mail.castc.org.cn">rongmei@mail.castc.org.cn</a> ;
<b>6.</b>	<b>HONG KONG, CHINA</b>				
	16.	Mr. Po-keung CHENG	Chief (Air Traffic Management Standards) Civil Aviation Department Civil Aviation Department Headquarters Hong Kong International Airport	Tel.: +852-2910 6590 Fax: +852-2910 0799	<a href="mailto:gpkcheng@cad.gov.hk">gpkcheng@cad.gov.hk</a> ;
	17.	Capt. Lawrence, K.F. WONG	Flight Operations Inspector Flight Standards Office, Flight Standards & Airworthiness Division Civil Aviation Department Civil Aviation Department Headquarters Hong Kong International Airport	Tel.: +852-2910 6126 Fax: +852-2362 4250	<a href="mailto:lkfwong@cad.gov.hk">lkfwong@cad.gov.hk</a> ;
	18.	Mr. Taka CHOW	Acting Senior Safety Manager Civil Aviation Department Civil Aviation Department Headquarters Hong Kong International Airport	Tel.: +852-2910 6442 Fax: +852-2910 0186	<a href="mailto:tctchow@cad.gov.hk">tctchow@cad.gov.hk</a> ;
	19.	Mr. Kenneth K.N. LEUNG	Safety Officer (Operations) Personnel Licensing Office, Flight Standards & Airworthiness Division Civil Aviation Department Civil Aviation Department Headquarters Hong Kong International Airport	Tel.: +852-2910 6091 Fax: +852-2329 8595	<a href="mailto:kknleung@cad.gov.hk">kknleung@cad.gov.hk</a> ;
	20.	Mr. Sze Wang MOK	Operations Officer Civil Aviation Department Civil Aviation Department Headquarters Hong Kong International Airport	Tel.: +852-2910 6631 Fax: +852-2326 3654	<a href="mailto:aswmok@cad.gov.hk">aswmok@cad.gov.hk</a> ; <a href="mailto:aswm2@outlook.com">aswm2@outlook.com</a> ;

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<b>7.</b>	<b>MACAO, CHINA</b>			
	21.	Mr. PUN Wa Kin (Stanley)	Acting Director – Flight Standards & Licensing Civil Aviation Authority of Macao Alameda Dr. Carlos D’Assumpcao 336-342 Centro, Commercial Cheng Feng	Tel.: +853-8796 4136 Fax: +853-2833 8089  <a href="mailto:stanleypun@aacm.gov.mo">stanleypun@aacm.gov.mo</a> ; <a href="mailto:aacm@aacm.gov.mo">aacm@aacm.gov.mo</a> ;
	22.	Mr. WONG Weng Kei (Ray)	Safety Officer (Flight Standards) – Flight Standards & Licensing Civil Aviation Authority of Macao 336-342 Centro, Commercial Cheng Feng	Tel.: +853-8796 4161 Fax: +853-2833 8089  <a href="mailto:raywong@aacm.gov.mo">raywong@aacm.gov.mo</a> ; <a href="mailto:aacm@aacm.gov.mo">aacm@aacm.gov.mo</a> ;
	23.	Mr. LAO Weng Kin (Tony)	Assistant Safety Officer (Air Traffic Control) – Flight Standards & Licensing Civil Aviation Authority of Macao 336-342 Centro, Commercial Cheng Feng	Tel.: +853-8796 4154 Fax: +853-2833 8089  <a href="mailto:tonylao@aacm.gov.mo">tonylao@aacm.gov.mo</a> ; <a href="mailto:aacm@aacm.gov.mo">aacm@aacm.gov.mo</a> ;
	24.	Ms. TAM Ieok Si (Iris)	Assistant Safety Officer (Airworthiness) – Flight Standards & Licensing Civil Aviation Authority Alameda Dr. Carlos D’Assumpcao 336-342 Centro, Commercial Cheng Feng	Tel.: +853-8796 4148 Fax: +853-2833 8089  <a href="mailto:iristam@aacm.gov.mo">iristam@aacm.gov.mo</a> ; <a href="mailto:aacm@aacm.gov.mo">aacm@aacm.gov.mo</a> ;
	25.	Ms. Ling ZHANG	Deputy General Manager – Aviation Safety Air Macau Company Limited	Tel.: +853-8396 6524  <a href="mailto:Gloria.zhang@airmacau.com.mo">Gloria.zhang@airmacau.com.mo</a> ;
	26.	Mr. IP Seng Chao (Justin)	Deputy Safety Manager Airport Operations Department of CAM Macau International Airport Taipa	Tel.: +853-8898 2507 Fax: +853-8898 2506  <a href="mailto:justinip@aod.macau-airport.com">justinip@aod.macau-airport.com</a> ;
<b>8.</b>	<b>INDIA</b>			
	27.	Mr. Raghavan Srinivasa DORAIRAJAN	Joint General Manager (ATM) Dte. of Aviation Safety Airports Authority of India Safdarjung Airport New Delhi 110003	Tel.: +91-11-2463 2973  <a href="mailto:draghavan@AAIAERO">draghavan@AAIAERO</a> ; <a href="mailto:dsragatc@gmail.com">dsragatc@gmail.com</a> ;

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	28.	Mr. Alagiri VENIMADHAVAN	Jt. General Manager (ATM) Aviation Safety Directorate Airports Authority of India Southern Region Chennai - 600027	Tel.: +91-44-2256 0105	<a href="mailto:venimadhavan@AALAERO">venimadhavan@AALAERO</a> ; <a href="mailto:avenimadhavan@gmail.com">avenimadhavan@gmail.com</a> ;
<b>9.</b>	<b>INDONESIA</b>				
	29.	Mr. Alfin B. FIRDAUS	Flight Operation Inspector DAAO Building Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-21-2256 6288 Fax: +62-21-2256 6399	<a href="mailto:alfin_bastian@dephub.go.id">alfin_bastian@dephub.go.id</a> ; <a href="mailto:alfinbastian64@gmail.com">alfinbastian64@gmail.com</a> ;
	30.	Ms. Ade TRISETYO	Aerodrome Inspector Directorate General Civil Aviation Jakarta Pusat	Tel.: +62-21-350 6661 Fax: +62-21-350 5571	<a href="mailto:Ade_trisetyo@dephub.go.id">Ade_trisetyo@dephub.go.id</a> ; <a href="mailto:adeth_rossi@yahoo.com">adeth_rossi@yahoo.com</a> ;
	31.	Ms. Gradithasari	International Cooperation Officer / SSP Coordinator Directorate General Civil Aviation Jakarta 10110	Tel.: +62-21-350 5550 Fax: +62-21-3505135	<a href="mailto:graditha@gmail.com">graditha@gmail.com</a> ; <a href="mailto:gradithasari@dephub.go.id">gradithasari@dephub.go.id</a> ;
	32.	Ms. Ika Septiana SARI	Air Navigation Inspector Directorate General Civil Aviation Jakarta Pusat	Tel.: +62-81-210 864534	<a href="mailto:ika@aviasi.org">ika@aviasi.org</a> ; <a href="mailto:ika.alvaroviola@gmail.com">ika.alvaroviola@gmail.com</a> ;
	33.	Mr. Suharyadi PARTODIYONO	SSP Manager DAAO Building Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-21-2256 6288 Fax: +62-21-2256 6399	<a href="mailto:haryadiadir@yahoo.com">haryadiadir@yahoo.com</a> ;
	34.	Mr. Muhammad Irfan SIRAJUDDIN	Airworthiness Inspector DAAO Building Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-21-2256 6288 +62-21-2560 8887 Fax: +62-21-2256 6399	<a href="mailto:Irfan_sirajuddin@yahoo.com">Irfan_sirajuddin@yahoo.com</a> ; <a href="mailto:Irfan_sirajuddin@dephub.go.id">Irfan_sirajuddin@dephub.go.id</a> ;

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	35.	Mr. Rizal Bayu Azi	Flight Operation Inspector DAAO Building Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-21-2256 6288 Fax: +62-21-2256 6399	<a href="mailto:rizal_bayu@dephub.go.id">rizal_bayu@dephub.go.id</a> ; <a href="mailto:rizal_bayu_azi@yahoo.com">rizal_bayu_azi@yahoo.com</a> ;
	36.	Mr. Bernard P. SITORUS	Senior Manager Incident Management Garuda Operations Center Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-811-806 087	<a href="mailto:Bp.sitorus@garuda-indonesia.com">Bp.sitorus@garuda-indonesia.com</a> ; <a href="mailto:bernardpsitorus@gmail.com">bernardpsitorus@gmail.com</a> ;
	37.	Mr. Muhammad Fuad RASYIDI	Aviation Safety Inspector DAAO Building Soekarno Hatta International Airport Tangerang - Banten	Tel.: +62-21-2256 6288 Fax: +62-21-2256 6399	<a href="mailto:Muhhammad_fuad@dephub.go.id">Muhhammad_fuad@dephub.go.id</a> ; <a href="mailto:fuad.dgca@gmail.com">fuad.dgca@gmail.com</a> ;
	38.	Mr. Norman Abdul HARIS	Chief Flight Operation Safety PT Batik Air Indonesia Lion Office Building	Tel.: +62-82213091992	<a href="mailto:ssf@batikair.com">ssf@batikair.com</a> ; <a href="mailto:normanabdulharis@yahoo.com">normanabdulharis@yahoo.com</a> ;
<b>10.</b>	<b>MALAYSIA</b>				
	39.	Mr. Harmizi Mohd HASHIM	Deputy Director Civil Aviation Authority of Malaysia 62618 Putrajaya	Tel.: +60-3-88714000	<a href="mailto:hharmizimohd@gmail.com">hharmizimohd@gmail.com</a> ;
	40.	Capt. Chow Weng CHEONG	Senior Assistant Director Flight Operation Sector Civil Aviation Authority of Malaysia 62618 Putrajaya	Tel.: +60-3-88714352 Fax: +60-3-88714334	<a href="mailto:chowwc@caam.gov.my">chowwc@caam.gov.my</a> ;
	41.	Mr. Delvinder SINGH	Risk Assessment Manager AirAsia Berhad Kuala Lumpur	Tel.: +60-3-8660 4333	<a href="mailto:delvindarsingh@airasia.com">delvindarsingh@airasia.com</a> ;
	42.	Mr. Badrul Hisham Bin ALIAS	Director of Safety, Security & Quality Malindo Air Petaling Jaya, Selangor Darun Ehsan	Tel.: +60-13-222 2672	<a href="mailto:badrulhishamalias@malindoair.com">badrulhishamalias@malindoair.com</a> ;



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<b>11.</b>	<b>MALDIVES</b>			
	43.	Mr. Ibrahim THOHA General Manager, Air Traffic Management Maldives Airports Company Ltd Velana International Airport Hulhule, 22000	Tel.: +960-333 1711 Fax: +960-330 9905	<a href="mailto:thoha@macl.aero">thoha@macl.aero</a> ; <a href="mailto:ibrahim.thoha@gmail.com">ibrahim.thoha@gmail.com</a> ;
	44.	Mr. Abdulla MUFEED Maldives Airports Company Ltd Velana International Airport Hulhule, 22000	Tel.: +960-333 7397 +960-777 4566 Fax: +960- 332 5512	<a href="mailto:Abdulla.mufeed@macl.aero">Abdulla.mufeed@macl.aero</a> ;
<b>12.</b>	<b>MYANMAR</b>			
	45.	Mr. They Oo Deputy Director (FCL) Department of Civil Aviation	Tel.: + Fax: +	
	46.	Mr. Kaung Myat Soe Assistant Director (Flight Standards Division) Department of Civil Aviation International Airport Mingaladon 11021, Yangon	Tel.: +95-1-533 019	<a href="mailto:Kmsoe79@gmail.com">Kmsoe79@gmail.com</a> ;
<b>13.</b>	<b>NEPAL</b>			
	47.	Mr. Laxman Kumar DEVKOTA Manager Civil Aviation Authority of Nepal Kathmandu	Tel.: + Fax: +	<a href="mailto:laxmank.devkota@caanepal.gov.np">laxmank.devkota@caanepal.gov.np</a> ;
<b>14.</b>	<b>PAKISTAN</b>			
	48.	Mr. Muhammad Abdul Basit SHAH Director Corporate Safety Serene Air (Pvt.) Ltd. Islamabad	Tel.: +92-302-829 6245 Fax: +92-51-835 4631	<a href="mailto:dcs@sereneair.com">dcs@sereneair.com</a> ; <a href="mailto:mabasit_shah@yahoo.com">mabasit_shah@yahoo.com</a> ;
	49.	Mr. Taimur ASGHAR Aerodrome Safety Manager Sialkot International Airport Sambrial-Sialkot	Tel.: +92-52-6633001/4 Fax: +92-52-6633023/4	<a href="mailto:asm@sial.com.pk">asm@sial.com.pk</a> ;

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<b>15.</b>	<b>PHILIPPINES</b>			
	50.	Mr. Alex B. BALDE Assistant Chief Aviation Services Safety Inspector / Acting Chief AANSOO Civil Aviation Authority of the Philippines Metro Manila 1301	Tel.: +63-2-944 2290	<a href="mailto:Balde_alex@yahoo.com">Balde_alex@yahoo.com</a> ; <a href="mailto:trixelan@gmail.com">trixelan@gmail.com</a> ;
<b>16.</b>	<b>REPUBLIC OF KOREA</b>			
	51.	Mr. Kyung-hyuk JANG Assistant Director Ministry of Land, Infrastructure and Transport Sejong Sepcial Self-governing City	Tel.: +82-44-201 4267 Fax: +82-44-201 5629	<a href="mailto:Bryan02@korea.kr">Bryan02@korea.kr</a> ; <a href="mailto:bryan02@hanmail.net">bryan02@hanmail.net</a> ;
	52.	Mr. Su Won CHOI Aviation Safety Inspector Ministry of Land, Infrastructure and Transport Sejong Sepcial Self-governing City	Tel.: +82-44-201 4267 Fax: +82-44-201 5629	<a href="mailto:Csw1217@korea.kr">Csw1217@korea.kr</a> ; <a href="mailto:csw571217@naver.com">csw571217@naver.com</a> ;
	53.	Mr. Yiyong JEONG Director Ministry of Land, Infrastructure and Transport Sejong Sepcial Self-governing City	Tel.: +82-44-201 5449 Fax: +82-44-868 2805	<a href="mailto:reyong@korea.kr">reyong@korea.kr</a> ; <a href="mailto:reyong1077@gmail.com">reyong1077@gmail.com</a> ;
	54.	Mr. Seungyeal LEE Investigator Ministry of Land, Infrastructure and Transport Sejong Sepcial Self-governing City	Tel.: +82-44-201 5436 Fax: +82-44-201 5696	<a href="mailto:sylee@korea.kr">sylee@korea.kr</a> ; <a href="mailto:gunjin44@naver.com">gunjin44@naver.com</a> ;
<b>17.</b>	<b>SINGAPORE</b>			
	55.	Mr. Kah Han TAN Senior Director (Safety Regulation Group) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65 6541 3012 Fax: +65 6542 3869	<a href="mailto:Tan_kah_han@caas.gov.sg">Tan_kah_han@caas.gov.sg</a> ;
	56.	Mr. Nick LEOW Head (Strategy & Intelligence) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65-6541 3046 Fax: +65-6542 3869	<a href="mailto:Nick_leow@caas.gov.sg">Nick_leow@caas.gov.sg</a> ;
	57.	Mr. Chee Seng MAK Deputy Head (Continuing Airworthiness - Airlines) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65-6540 3486 Fax: +65-6545 6519	<a href="mailto:Mak_chee_seng@caas.gov.sg">Mak_chee_seng@caas.gov.sg</a> ;

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	58.	Capt. Willy LEE	Deputy Head (Flight Operations – BA/GA/Heli) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65 65412493 Fax: +65 65456519	<a href="mailto:Willy_lee@caas.gov.sg">Willy_lee@caas.gov.sg</a> ;
	59.	Mr. Ruiyi ANG (PoC of RASG-APAC/APRAST)	Manager (Strategy & Intelligence) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65-65413049 Fax: +65-65423869	<a href="mailto:Ang_ruiyi@caas.gov.sg">Ang_ruiyi@caas.gov.sg</a> ;
	60.	Ms. Shiqi TEO	Manager (Unmanned Aircraft Systems) Civil Aviation Authority of Singapore Singapore 918141	Tel.: +65-65765352 Fax: +65-65456519	<a href="mailto:teo_shiqi@caas.gov.sg">teo_shiqi@caas.gov.sg</a> ;
<b>18.</b>	<b>SRI LANKA</b>				
	61.	Mr. Nishan Chandima ABEYWARDENA	Senior Manager - Air Traffic Control (Safety & Search and Rescue) Airport and Aviation Services (Sri Lanka) Limited Katunayake	Tel.: +94-725101975	<a href="mailto:nishanatc.ans@airport.lk">nishanatc.ans@airport.lk</a> ;
<b>19.</b>	<b>THAILAND</b>				
	62.	Mr. Preeda YOUNGSUKSATHAPORN	Deputy Director General / Acting Manager, Flight Operation The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8820	<a href="mailto:Preeda.y@caat.or.th">Preeda.y@caat.or.th</a> ;
	63.	Mr. Buntoeng MEGCHAI	Manager, Aviation Safety Management Dept. The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8813	<a href="mailto:Buntoeng.m@caat.or.th">Buntoeng.m@caat.or.th</a> ;
	64.	Mr. Sompol CHOMPRASIT	Head, Foreign Air Operation Division The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8842-3	<a href="mailto:Sompol.c@caat.or.th">Sompol.c@caat.or.th</a> ;

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	65.	Mr. Akaradech WUTHISUWAN	Officer, Foreign Air Operation Division Flight Operations Standards Department The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8843	<a href="mailto:Akaradech.w@caat.or.th">Akaradech.w@caat.or.th</a> ;
	66.	Ms. Patchara KONGTHANASARASITH	Officer, Aviation Safety Management Dept. The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8813	<a href="mailto:Patchara.k@caat.or.th">Patchara.k@caat.or.th</a> ;
	67.	Ms. Piyapatch CHAIPRAPAR	Aviation Safety Inspector The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8841	<a href="mailto:Piyapatch.c@caat.or.th">Piyapatch.c@caat.or.th</a> ;
	68.	Ms. Mariam SIRIKUL	Aviation Safety Inspector The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8841	<a href="mailto:Mariam.s@caat.or.th">Mariam.s@caat.or.th</a> ;
	69.	Ms. Chomchanok HUAYHONG	Aerodrome Safety Inspector The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-568 8826 Fax: +66-576 1904	<a href="mailto:Chomchanok.h@caat.or.th">Chomchanok.h@caat.or.th</a> ; <a href="mailto:fighting.taii@gmail.com">fighting.taii@gmail.com</a> ;
	70.	Mr. Bas VAN DER WEIDE	Assistant Manager to SMD The Civil Aviation Authority of Thailand Bangkok 10210	Tel.: +66-2-568 8800 Ext. 1302	<a href="mailto:Bas.w@caat.or.th">Bas.w@caat.or.th</a> ; <a href="mailto:bas.van-de-weide@easa.europa.eu">bas.van-de-weide@easa.europa.eu</a> ;
<b>Department of Airports</b>					
	71.	Mr. Chaityuth YUKTIRAT	Transportation Technical Officer Department of Airports 71 Soi Ngarmduplee, Bangkok	Tel.: +66-2-287 0320 Fax: +66-2-287 4060	<a href="mailto:Chaityuth.y@airports.go.th">Chaityuth.y@airports.go.th</a> ; <a href="mailto:chaityuth.y@gmail.com">chaityuth.y@gmail.com</a> ;
<b>Airports of Thailand Public Company Limited</b>					
	72.	Sqn. Ldr. Paytye JUNPHUANG	Deputy Vice President Aviation Services Standard Division Airports of Thailand Public Company Limited	Tel.: +66-2-535 2431 Fax: +66-2-535 2439	<a href="mailto:Paytye.j@airportthai.co.th">Paytye.j@airportthai.co.th</a> ;

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	73.	Ms. Darina KUASAKUL	Director, Aerodrome Standardization Division Aerodrome Standardization and Safety Dept. Airports of Thailand Public Company Limited Bangkok 10210	Tel.: +66-2-535 8492 Fax: +66-2-535 2530	<a href="mailto:Darina.k@airportthai.co.th">Darina.k@airportthai.co.th</a> ;
	74.	Ms. Staratee NUANGWANG	Aerodrome Safety Specialist Aerodrome Standardization and Safety Dept. Airports of Thailand Public Company Limited Bangkok 10210	Tel.: +66-2-535 3192 Fax: +66-2-535-2530	<a href="mailto:Staratee.n@airportthai.co.th">Staratee.n@airportthai.co.th</a> ;
<b><i>Aeronautical Radio of Thailand Co., Ltd. (AEROTHAI)</i></b>					
	75.	Ms. Lalita TEPWEERAPONG	Air Traffic Control Manager (Safety Management System) AEROTHAI 102 Soi Ngamduplee, Tungmahamek Sathon, Bangkok 10120	Tel.: +66-2-307 2066 Fax: +66-2-287 8645	
	76.	Ms. Oranee PHIPHITAPHANDA	Safety Management System Manager AEROTHAI 102 Soi Ngamduplee, Tungmahamek Sathon, Bangkok 10120	Tel.: +66-2-287 8294 Fax: +66-2- 287 8645	<a href="mailto:oranee.ph@aerothai.co.th">oranee.ph@aerothai.co.th</a> ;
<b><i>Thai Airways Intl</i></b>					
	77.	Capt. Naroupon CHANDRAKULSIRI	Deputy Manager, International Flight Safety and Operations Development Thai Airways International	Tel.: +66-2-545 2665	<a href="mailto:bkkokoffice@thaairways.com">bkkokoffice@thaairways.com</a> ;
<b><i>Bangkok Airways</i></b>					
	78.	Mr. Verapon TUSSANATHRONE	Safety Management Specialist Bangkok Airways Public Company Limited Chatuchak, Bangkok, 10900	Tel.: +66-2-328-3230	<a href="mailto:verapon@bangkokair.com">verapon@bangkokair.com</a> ;
	79.	Mr. Voravit VEJAJIVA	Manager - Safety Services Bangkok Airways Public Company Limited Chatuchak, Bangkok, 10900	Tel.: +66-2-328-3230	<a href="mailto:verapon@bangkokair.com">verapon@bangkokair.com</a> ;

**APRAST/13**  
Appendix A to the Report

STATE / NAME		DESIGNATION / ORGANIZATION	TEL. / FAX	E-MAIL
<i>Thai AirAsia</i>				
	80.	Ms. Anyaporn Kanchanomai	Quality Assurance Executive Thai AirAsia	
<b>20.</b>	<b>UNITED STATES</b>			
	81.	Mr. Thomas MILLER	FAA Senior Representative-New Delhi U.S. Federal Aviation Administration – IAO U.S. Embassy – New Delhi Shantipath, Chanakyapuri New Delhi, India 110021	Tel.: +91-11-2419-8403  <a href="mailto:Thomas.M.Miller@faa.gov">Thomas.M.Miller@faa.gov</a> ;
	82.	Mr. Chad BREWER	CAST Representative FAA Office of Aviation Safety, Accident Investigation & Prevention Integrated Safety Teams Branch Washington, DC 20591	Tel.: +1-202-267-9353 +1-202-455-9169  <a href="mailto:chad.brewer@faa.gov">chad.brewer@faa.gov</a> ;
<b>INTERNATIONAL ORGANIZATIONS / INDUSTRY PARTNERS</b>				
<b>1.</b>	<b>AIRBUS</b>			
	83.	Mr. Hugues LALOË	Senior Director International Safety Programs Airbus France	Tel.: +33-6-27 44 49 86  <a href="mailto:hugues.laloe@airbus.com">hugues.laloe@airbus.com</a> ;
<b>2.</b>	<b>AIRPORTS COUNCIL INTERNATIONAL (ACI)</b>			
	84.	Mr. SL WONG	Head - Technical & Industry Affairs ACI Asia-Pacific Unit 13, 2/F, Airport World Trade Ctr 1 Sky Plaza Road Hong Kong International Airport Hong Kong	Tel.: +852-2989 8001  <a href="mailto:sl@aci-asiapac.aero">sl@aci-asiapac.aero</a> ;

**APRAST/13**  
Appendix A to the Report

STATE / NAME		DESIGNATION / ORGANIZATION	TEL. / FAX	E-MAIL
<b>3. ASSOCIATION OF ASIA PACIFIC AIRLINES (AAPA )</b>				
85.	Mr. Martin ERAN-TASKER	Technical Director AAPA Kuala Lumpur, Malaysia	Tel.: +60-3-2162 1888 Fax: +60-3-2162 6888	<a href="mailto:merantasker@aapa.org.my">merantasker@aapa.org.my</a> ;
86.	Ms. Jaynie CHAN	Technical Associate AAPA Kuala Lumpur, Malaysia	Tel.: +60-3-2162 1888 Fax: +60-3-2162 6888	<a href="mailto:jychan@aapa.org.my">jychan@aapa.org.my</a> ;
<b>4. BOEING</b>				
87.	Gunter ERTEL	Safety Programme Manager Boeing	Tel.: +	<a href="mailto:Gunter.Ertel@boeing.com">Gunter.Ertel@boeing.com</a> ;
<b>5. CANSO</b>				
88.	Ms. Duangtawan PINPIMAI	Safety Management System Manager Aeronautical Radio of Thailand Ltd. Bangkok, Thailand 10120	Tel.: +66-2287 8190	<a href="mailto:duangtawan.pi@aerorhai.co.th">duangtawan.pi@aerorhai.co.th</a> ; <a href="mailto:duangtawan@gmail.com">duangtawan@gmail.com</a> ;
<b>6. INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)</b>				
89.	Mr. Gerado HUETO (APRAST Co-chair, Industry)	Assistant Director, Safety and Flight Operations–ASPAC IATA Singapore – 238164	Tel.: +65-6499 2288	<a href="mailto:huetog@iata.org">huetog@iata.org</a> ;
90.	Mr. Hakimuddin PATANWALA	Manager Safety and Flight Operations, Asia-Pacific IATA Singapore	Tel.: +65-6499 2253	<a href="mailto:patanwalah@iata.org">patanwalah@iata.org</a> ;
91.	Mr. Aric OH	IATA / Asiana Airlines 161 Tai Keng Gardens Singapore 535433	Tel.: +822 2669 5121 Fax: + 822 2669 5560	<a href="mailto:aricoh@flyasiana.com">aricoh@flyasiana.com</a> ;
92.	Mr. Ping NA THALANG	Adviser IATA / Bangkok Airways PLC Bangkok 10900, Thailand	Tel.: +66-2-265 5535	<a href="mailto:ping@bangkokair.com">ping@bangkokair.com</a> ;

**APRAST/13**  
Appendix A to the Report

STATE / NAME		DESIGNATION / ORGANIZATION	TEL. / FAX	E-MAIL
<b>7. INTERNATIONAL FEDERATION OF AIR LINE PILOTS' ASSOCIATIONS (IFALPA)</b>				
	93.	Capt. Bhudhibhuntu TEINWAN	Technical and Safety Committee IFALPA Chompol, Chatuchak Bangkok, Thailand 10900	Tel.: +66-2-5454046  <a href="mailto:bhudhibhuntu@gmail.com">bhudhibhuntu@gmail.com</a> ;
<b>ICAO</b>				
	94.	Mr. Claude HURLEY	President, ICAO Air Navigation Commission ICAO Headquarters Montreal, Quebec Canada H3C 5J9	Tel.: +1-514-283 3515  <a href="mailto:churley@icao.int">churley@icao.int</a> ;
	95.	Mr. S M Nazmul ANAM	Regional Officer, Flight Safety ICAO Asia and Pacific Office Bangkok 10900, Thailand	Tel.: +66-2-537 8189 Fax: +66-2-537 8199  <a href="mailto:sanam@icao.int">sanam@icao.int</a> ;
	96.	Mr. KONG, Cheong Tuck	Flight Safety Expert ICAO Asia and Pacific Office Bangkok 10900, Thailand	Tel.: +66-2-537 8189 Fax: +66-2-537 8199  <a href="mailto:ckong@icao.int">ckong@icao.int</a> ;
	97.	Mr. Wayne D. LOE	Chief Technical Advisor COSCAP – North Asia Beijing, China 100710	Tel.: +86 10 84015454 Fax: +86 10 84024554  <a href="mailto:wayne.loe@coscap-icao.org">wayne.loe@coscap-icao.org</a> ;
	98.	Ms. Marie Helene ZUBRYCKYJ	Chief Technical Advisor COSCAP – South Asia	  <a href="mailto:marie.zubryckyj@coscap-icao.org">marie.zubryckyj@coscap-icao.org</a> ; <a href="mailto:mariemimi@icloud.com">mariemimi@icloud.com</a> ;
	99.	Mr. Michiel VREEDENBURGH	Programme Coordinator COSCAP – South East Asia c/o ICAO Asia and Pacific Office Bangkok 10900, Thailand	Tel.: +66-2-537 8189 Ext. 135 Fax: +66-2-537 8198  <a href="mailto:mvreedenburg@icao.int">mvreedenburg@icao.int</a> ;

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Appendix B to the Report

# SARPs: from Development to Implementation

**Capt. Claude Hurley**

President, Air Navigation Commission  
International Civil Aviation Organization (ICAO)



APRAST/13, Bangkok  
Dec 3<sup>rd</sup>, 2018

# Overview

- SARP-Making @ ICAO
  - **Role of States & Regions**
- Global Plans





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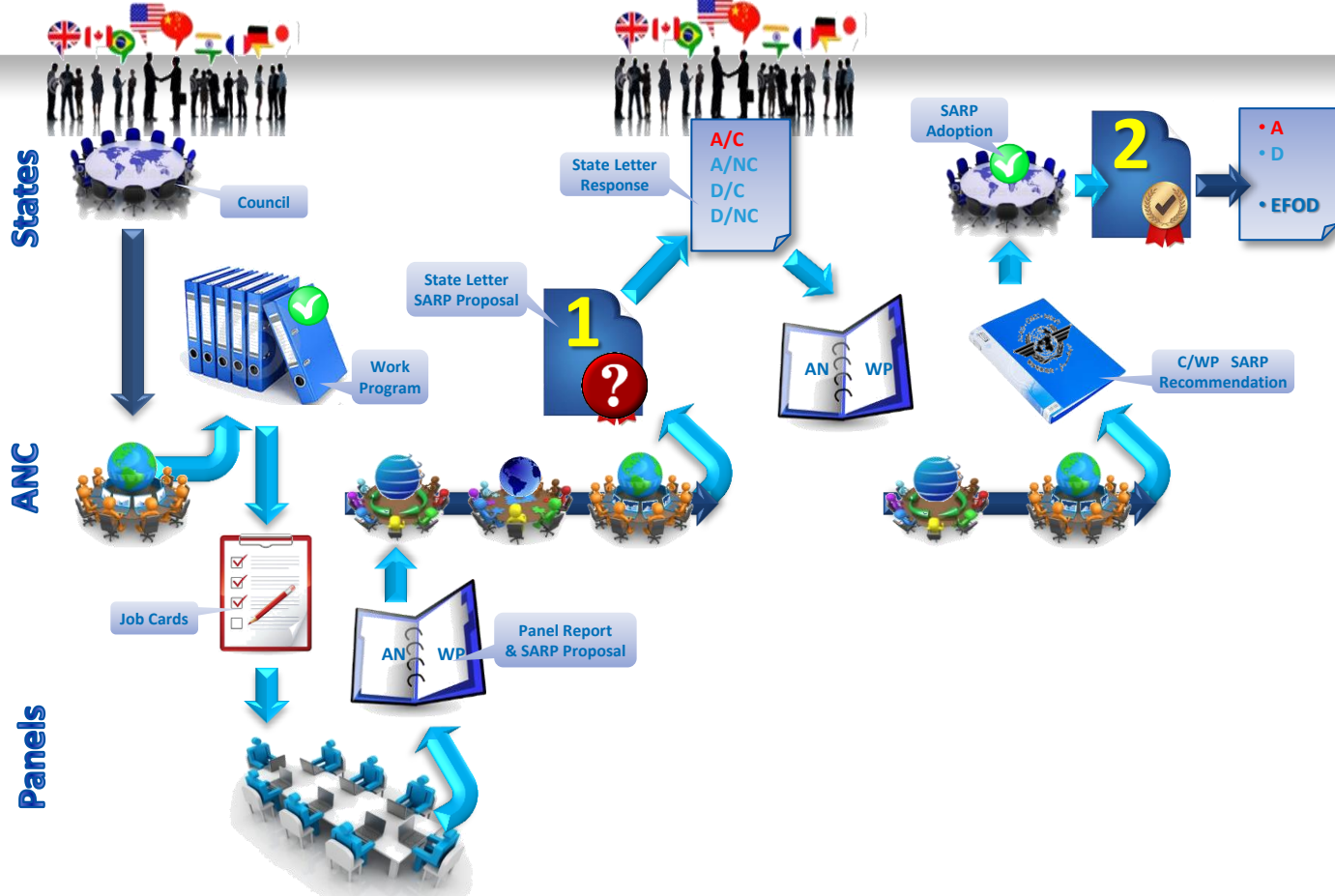
APRAST/13

Appendix B to the Report

Safety and Air Navigation

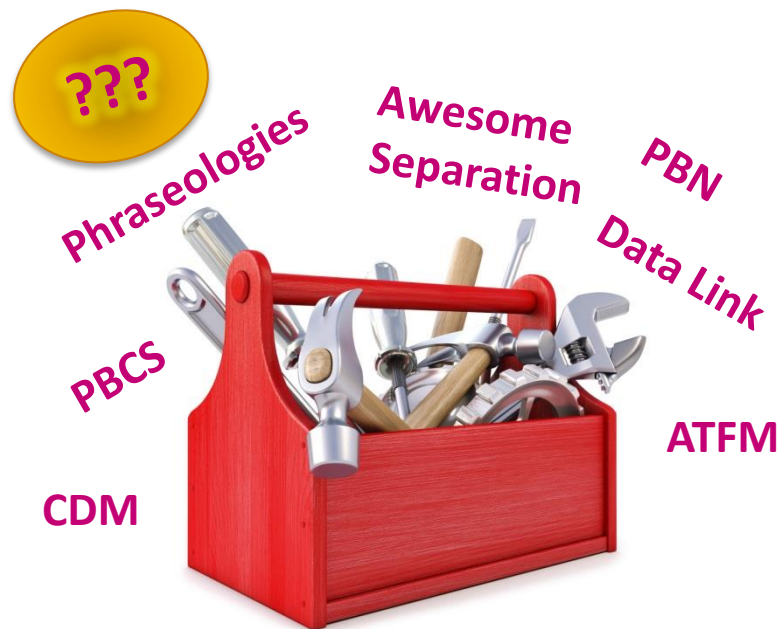
# SARP-Making @ ICAO





# Evolving Standardization

- *Innovation* starts on the flight deck, at the control position and on the tarmac
  - People using the tools are the first to know how they can be improved





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Appendix B to the Report

Safety and Air Navigation

# GLOBAL PLANS





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# 39th

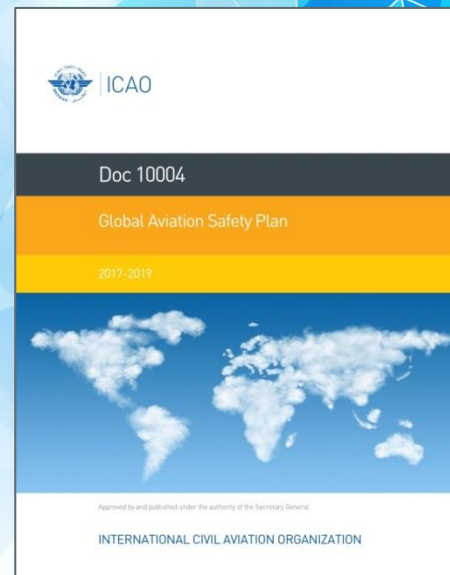
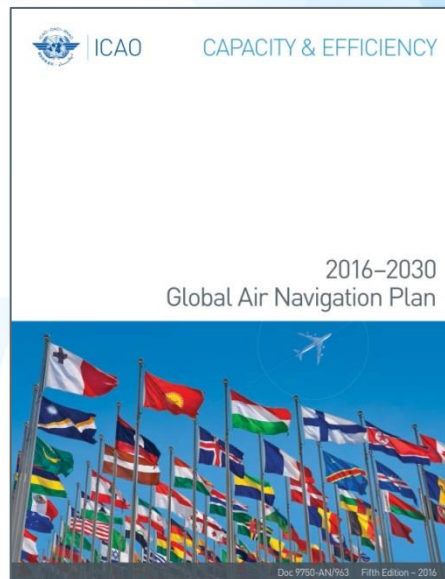
## TRIENNIAL ASSEMBLY

ICAO HQ, MONTREAL, 27 SEP-07 OCT 2016



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# Conte



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Doc 10004

Global Aviation

2017-2019



Approved by and published under

INTERNATIONAL C

APRAST/13

## Appendix B to the Report

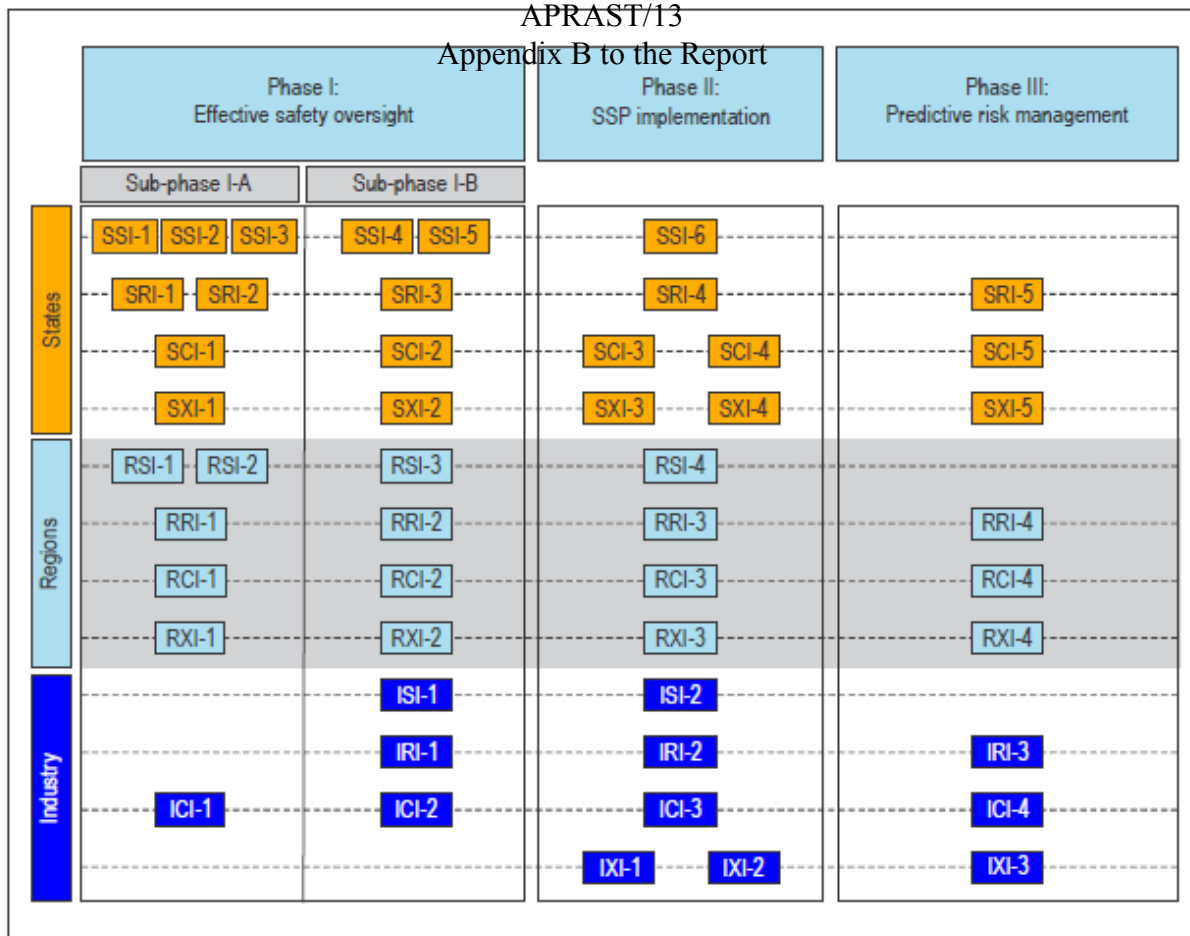
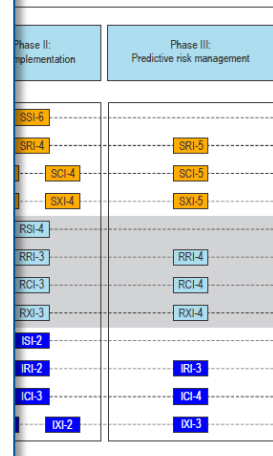


Figure A-2. Global aviation safety roadmap diagram

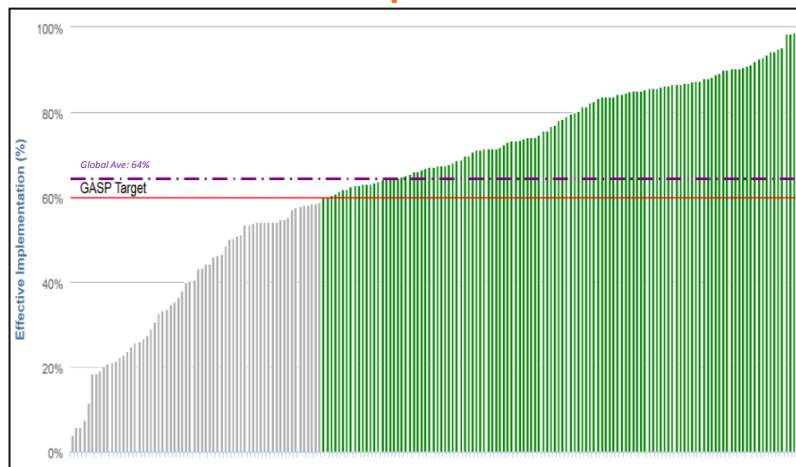


ion safety  
diagram





## Effective Implementation

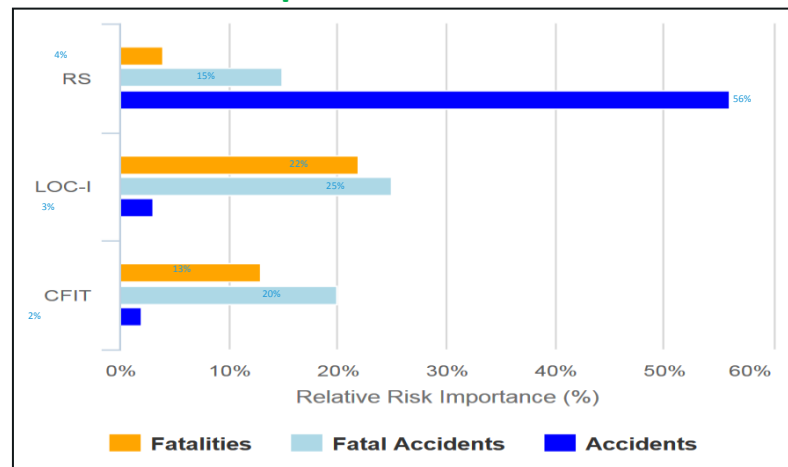


USOAP Audit Results



GANP  
ASBU  
BBBs

## Operational Risks



Scheduled Commercial flights on airplanes above 5.7t 2012-2016

TARGET 4.1	TARGET 2.1	TARGET 2.2	TARGET 3.1	TARGET 3.2	TARGET 6.1	TARGET 1.1	TARGET 5.1	TARGET 5.2	TARGET 4.2	TARGET 4.3
ICAO Recognized functions	Implement Safety Oversight	Positive Safety Margin	Sustainable SSP	Effective SSP	Appropriate Infra- structure	Reduced Accident rate	INDUSTRY assessment programmes	Harmonized KPIs in SMS	Safety risk information to RASG	RASG Risk mgmt. activities
2020	2022+	2022	2022	2025	2022	Yearly	2020	2022	2022	2022



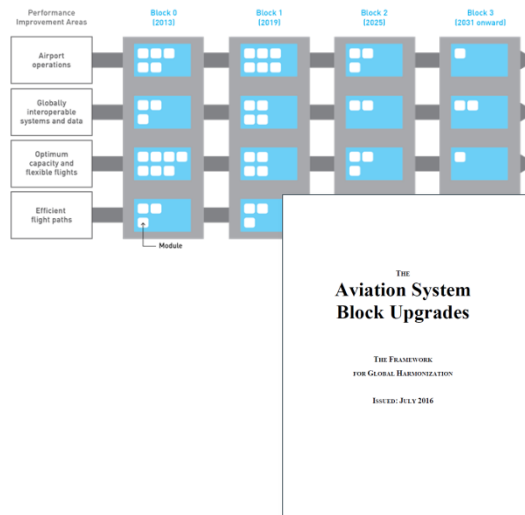
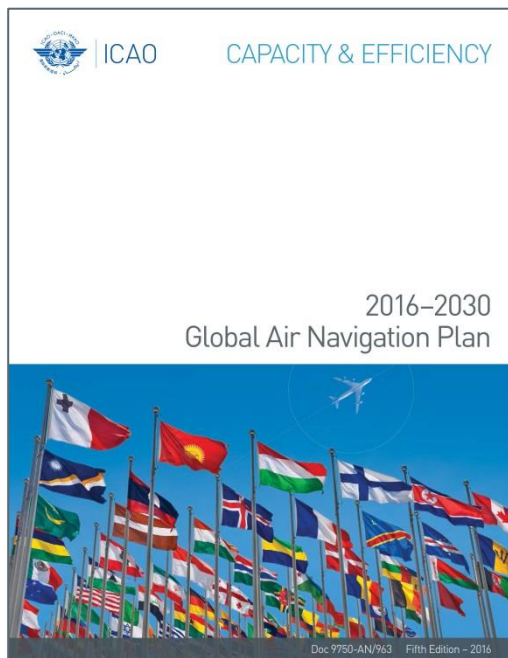
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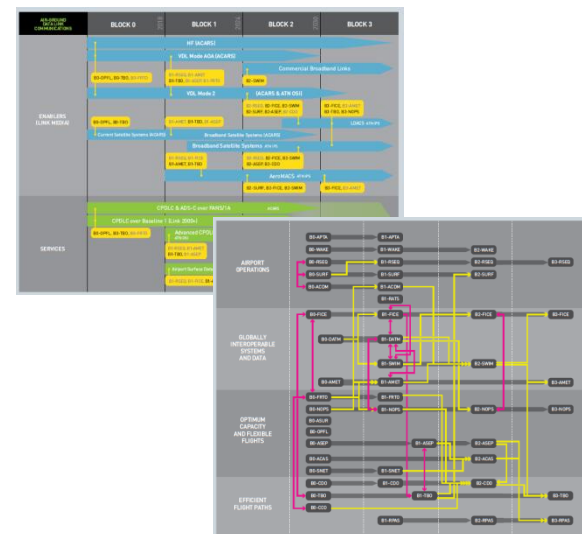
APRAST/13  
Appendix B to the Report**PROPOSAL FOR NEXT GASP****Effective Implementation****BBBs****Operational Risks**

States that need support in areas with safety margins below zero, to use a RSOO mechanism or another	All States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State's safety oversight system as follows:	All States to reach a positive safety margin, in all categories	All States to implement the foundation of a State Safety Programme (SSP)	All States to implement an Effective SSP, as appropriate to their aviation system complexity	All States to implement the air navigation and airport core infrastructure	Maintain a decreasing trend of global accident rate	Increase the number of service providers participating in the corresponding, ICAO-recognized industry	All service providers to use globally harmonized SPIs, as part of their safety management systems (SMS)	All States to contribute information on safety risks, including SSP safety performance indicators (SPIs), to their respective Regional	All States with a positive safety margin, and an Effective SSP, to actively engage in RASG
<b>TARGET 4.1</b>	<b>TARGET 2.1</b>	<b>TARGET 2.2</b>	<b>TARGET 3.1</b>	<b>TARGET 3.2</b>	<b>TARGET 6.1</b>	<b>TARGET 1.1</b>	<b>TARGET 5.1</b>	<b>TARGET 5.2</b>	<b>TARGET 4.2</b>	<b>TARGET 4.3</b>
ICAO Recognized functions	Implement Safety Oversight	Positive Safety Margin	Sustainable SSP	Effective SSP	Appropriate Infrastructure	Reduced Accident rate	INDUSTRY assessment programmes	Harmonized KPIs in SMS	Safety risk information to RASG	RASG Risk mgmt. activities
2020	2022+	2022	2022	2025	2022	Yearly	2020	2022	2022	2022

# Contents of the 2016-2030 GANP



Aviation System Block Upgrades (ASBU) Methodology



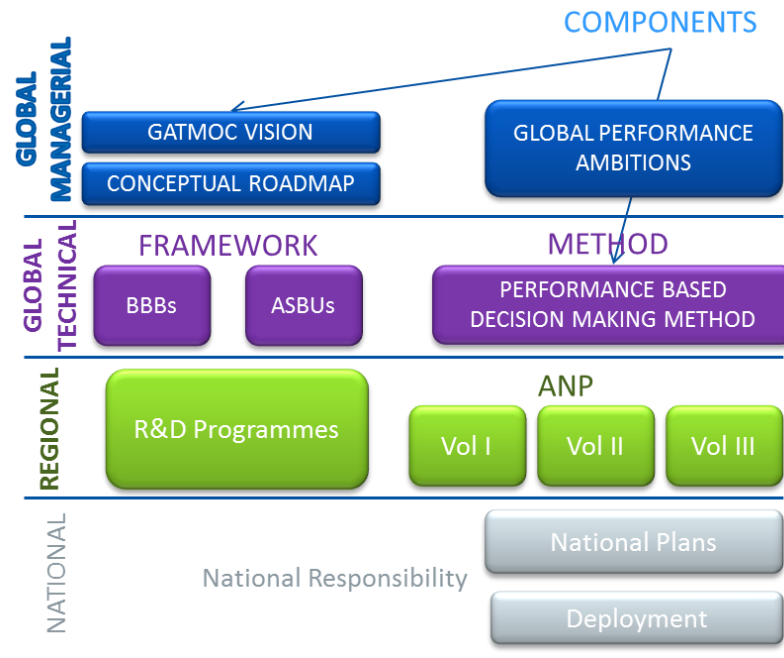
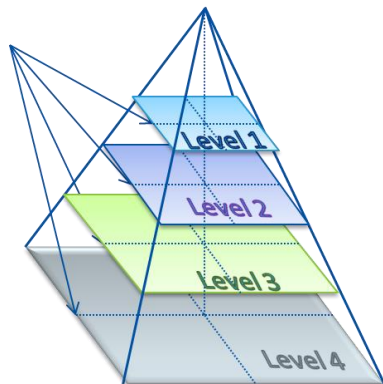
Technology Roadmaps and Module Dependencies

# Proposals for Enhancement

2019 Update of GANP:

## Creating a Multilayer Structure

LAYERS



# Going back to the roots...

- An Aviation System Block Upgrade (ASBU) contains
  - Intended **Operational Improvement** / Metric to determine success
  - Necessary **Procedures** / Air and Ground
  - Necessary **Technology** / Air and Ground
  - **Regulatory Approval Plan** / Air and Ground
  - Positive **Business Case** per Upgrade
  - Well **understood** by a Global Demonstration Trial
    - All synchronized to allow initial implementation
    - Won't matter when or where implemented





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Appendix B to the Report





# Civil Aviation State Safety Program in China

Cap. Wu Lijun  
Director, Office of Aviation Safety, CAAC  
2018.12.03



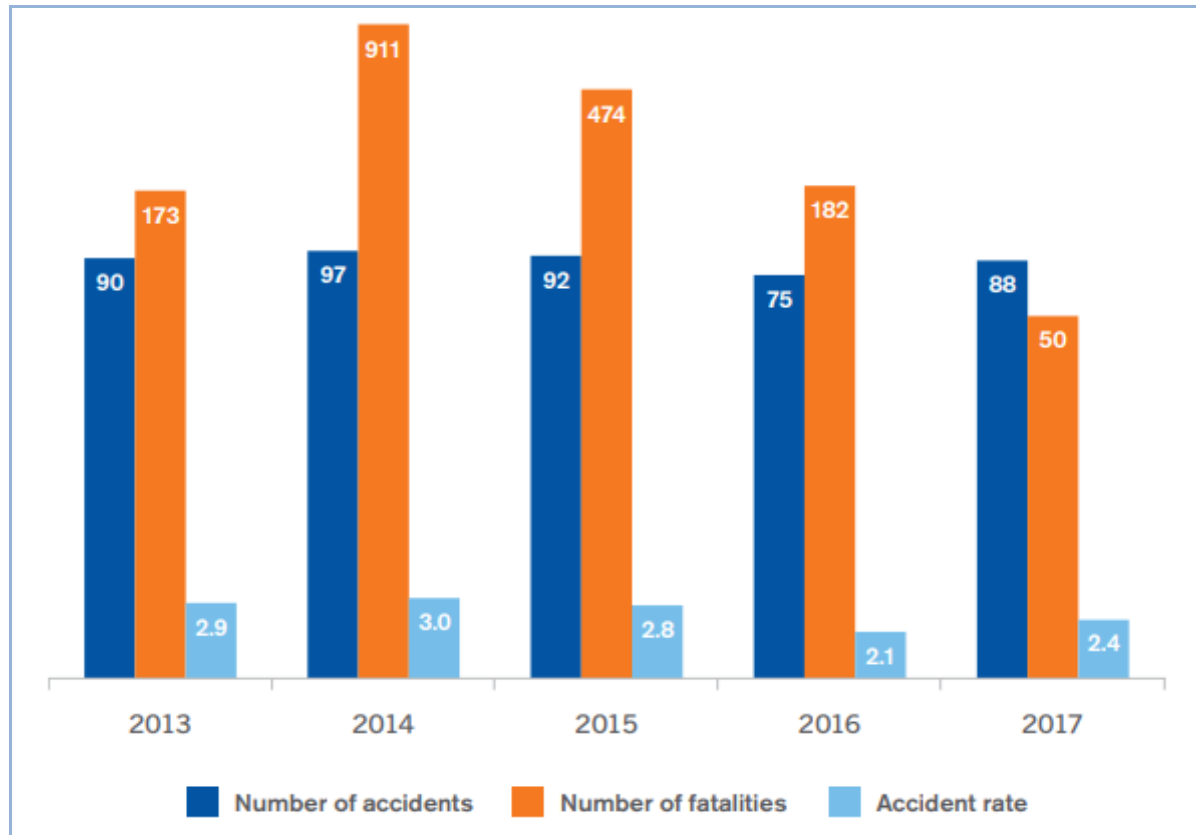
# CONTENTS

- Safety Level
- SSP of China and Implementation
- Summary



# Safety Level

## ● International



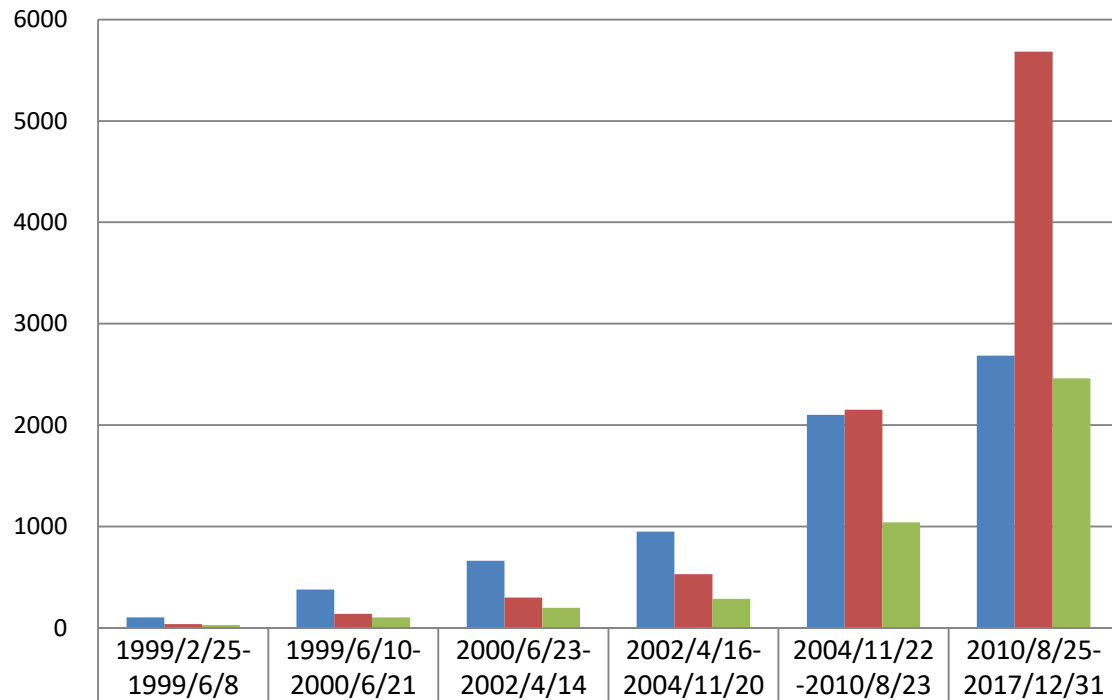
Accident Records: 2013–2017 Scheduled Commercial Flights

\*From ICAO Safety Report 2018 Edition

# Safety Level

## ●China

SAFETY DURATION



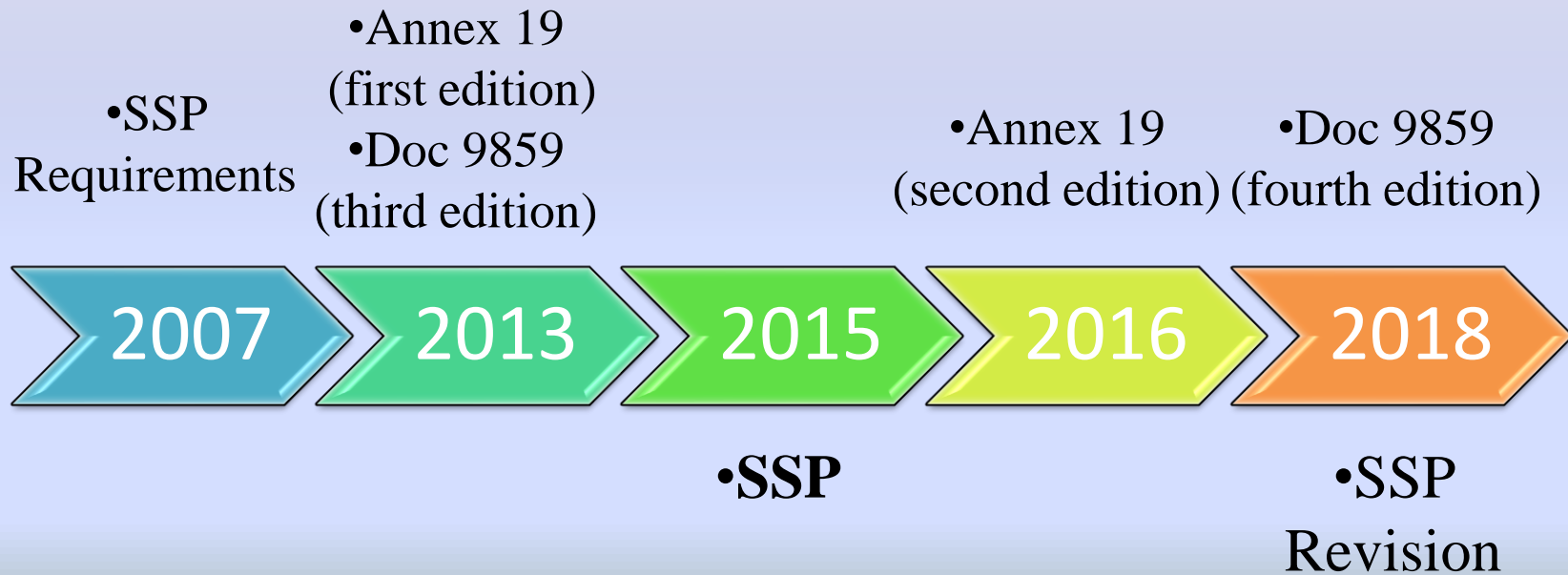
■ safety duration (days)	104	378	661	950	2101	2686
■ commercial flight hours(10000)	37	139	300	530	2150	5683
■ commercial flight departures(10000)	27	102	198	285	1040	2461



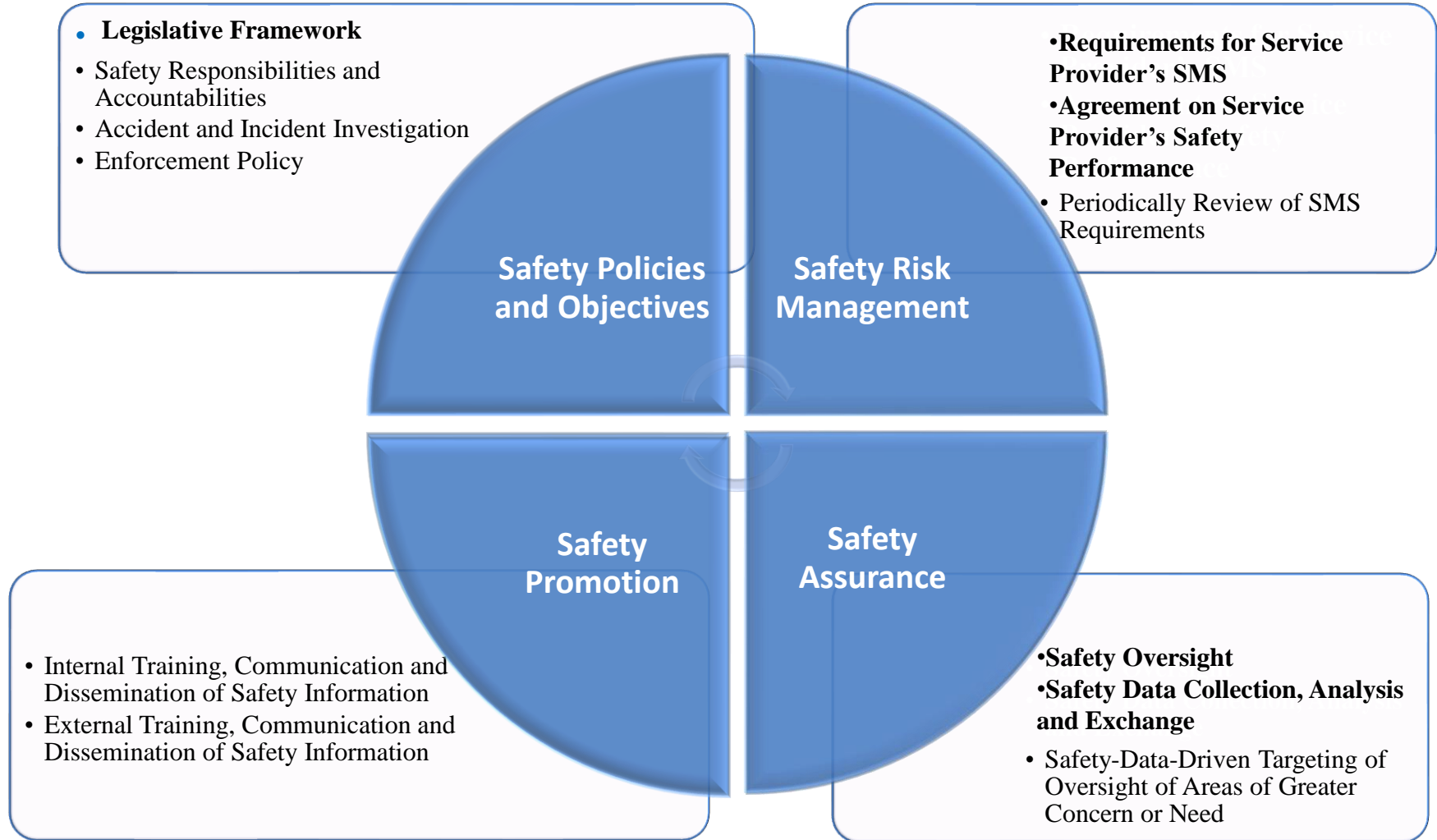
# CONTENTS

- Safety Level
- SSP of China and Implementation
- Summary

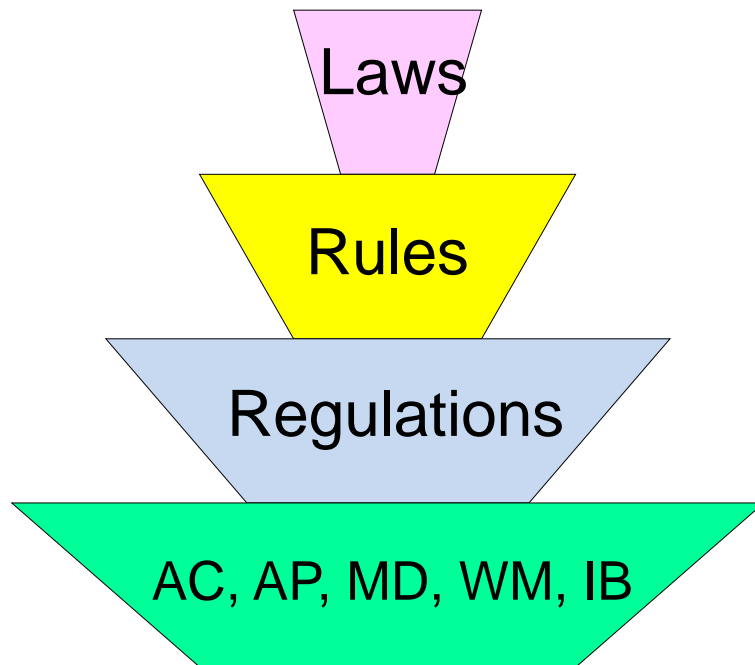
# SSP of China



# SSP of China and Implementation



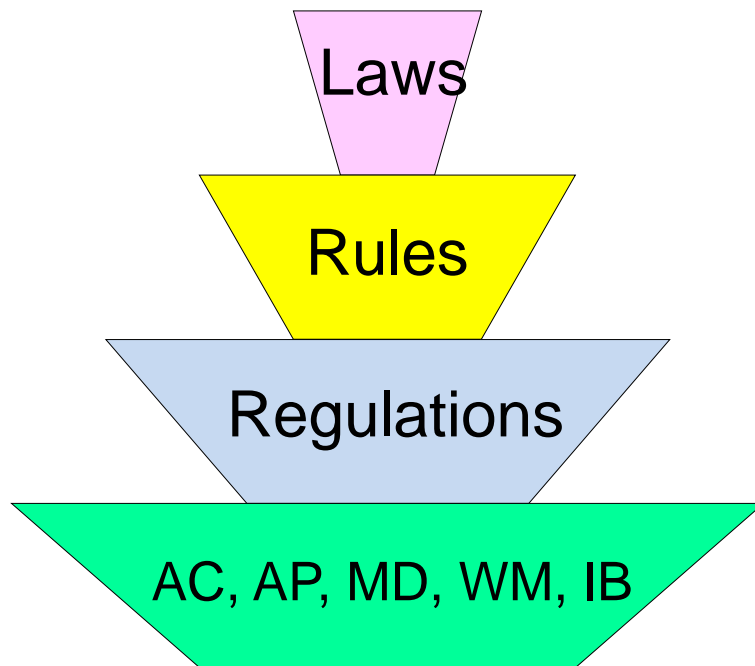
# Legislative Framework



Civil Aviation Law of the People's  
Republic of China

Law of the People's Republic of  
China on Work Safety

# Legislative Framework



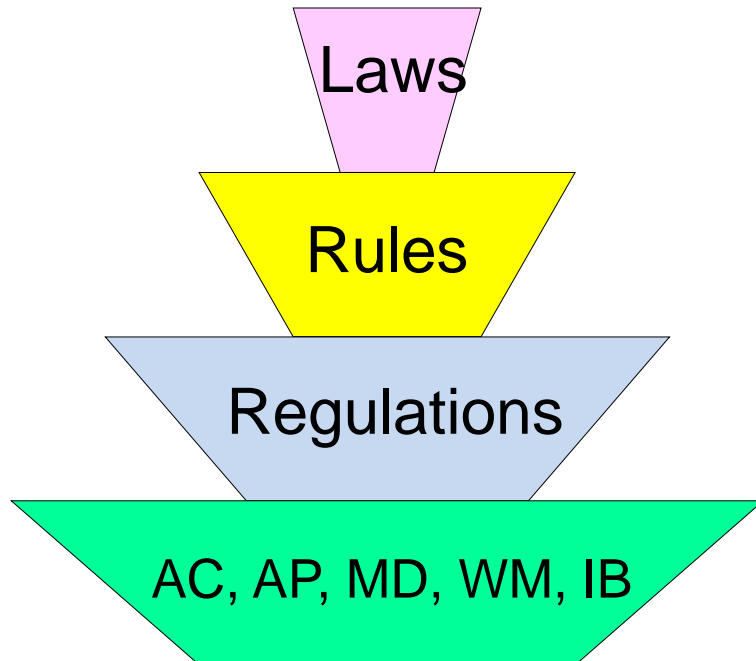
Flight Basic Rules of the People's Republic of China

Regulations of the People's Republic of China for the Administration of the Airworthiness of Civil Aircraft

Provisions of the People's Republic of China on Search and Rescue of Civil Aircraft

...

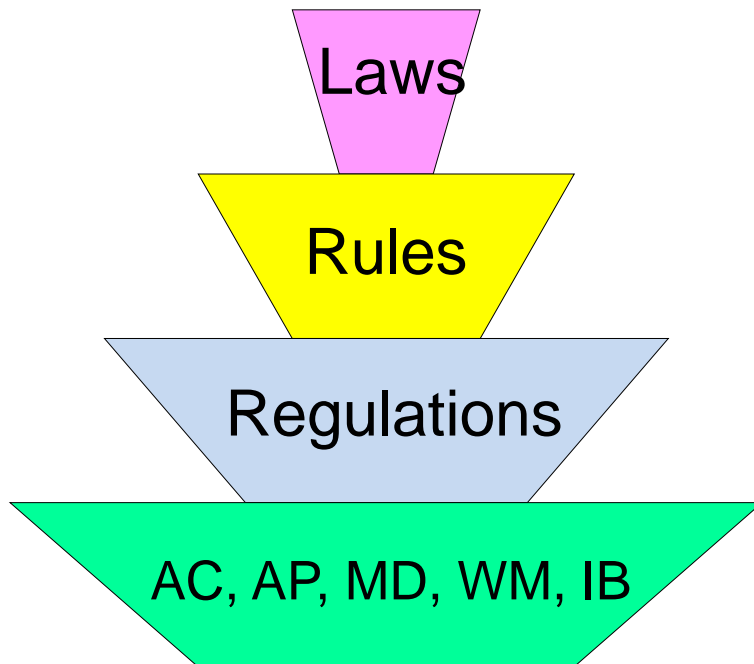
# Legislative Framework



CCAR	CONTENT
1-20	Administrative procedure rules
21-59	Aircraft
60-70	Aviation personnel
71-120 171-182	Air traffic rules and general operation rules, navigation facilities
121-139	Civil aviation enterprise certification
140-149	Certification and operation of schools and others
150-170	Airport
183-197	Administrative rules
198-200	Aviation insurance
201-250	Reserved
251-270	Aviation foundation
271-325	Aviation market management
326-355	Aviation security
356-390	Science and technology, measurement standard
391-400	Aircraft search and rescue, accident investigation



# Legislative Framework



## Rules of Civil Aviation Safety Management



交通运输部政府信息公开

返回部主站 | 首页 | 公开指南 | 管理规定 | 监督投诉

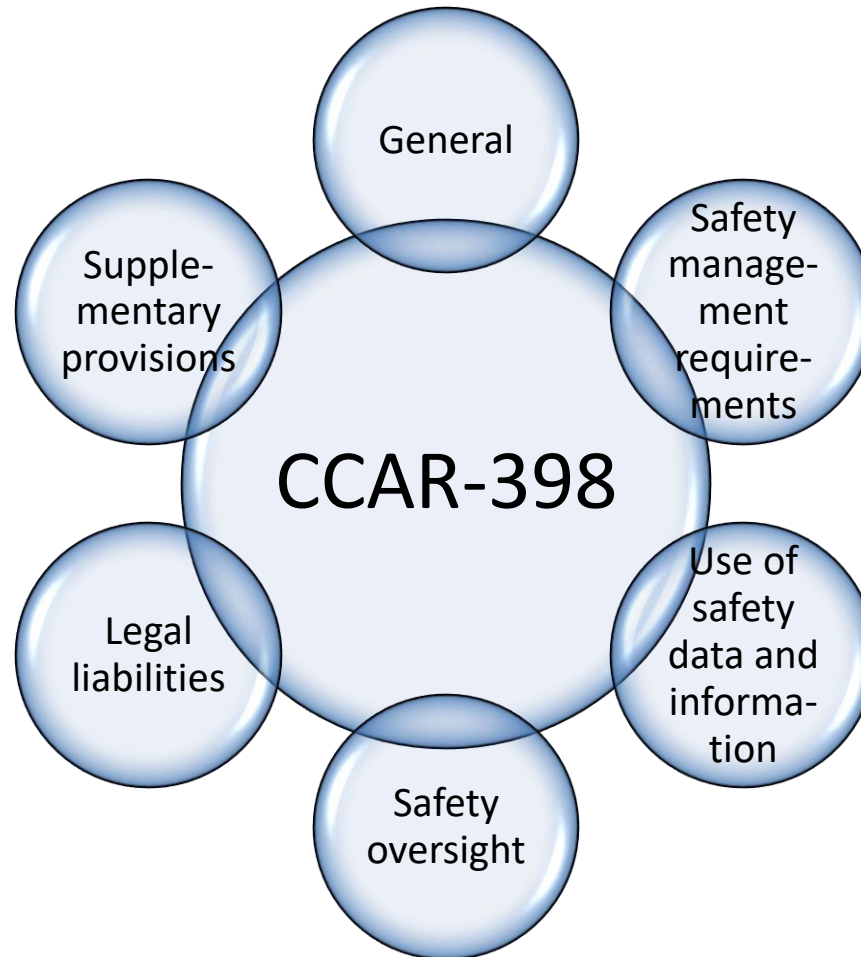
名称:	民用航空安全管理规定（中华人民共和国交通运输部令2018年第3号）		
文号:	交通运输部令2018年第3号	发布机构:	交通运输部
发文日期:	2018年03月12日	主题分类:	交通运输部部门规章
索引号:	2018-00237	关键词:	交通运输部令;民用航空;安全管理

民用航空安全管理规定（中华人民共和国交通运输部令2018年第3号）

《民用航空安全管理规定》已于2018年2月11日经第2次部务会议通过，现予公布，自2018年3月16日起施行。

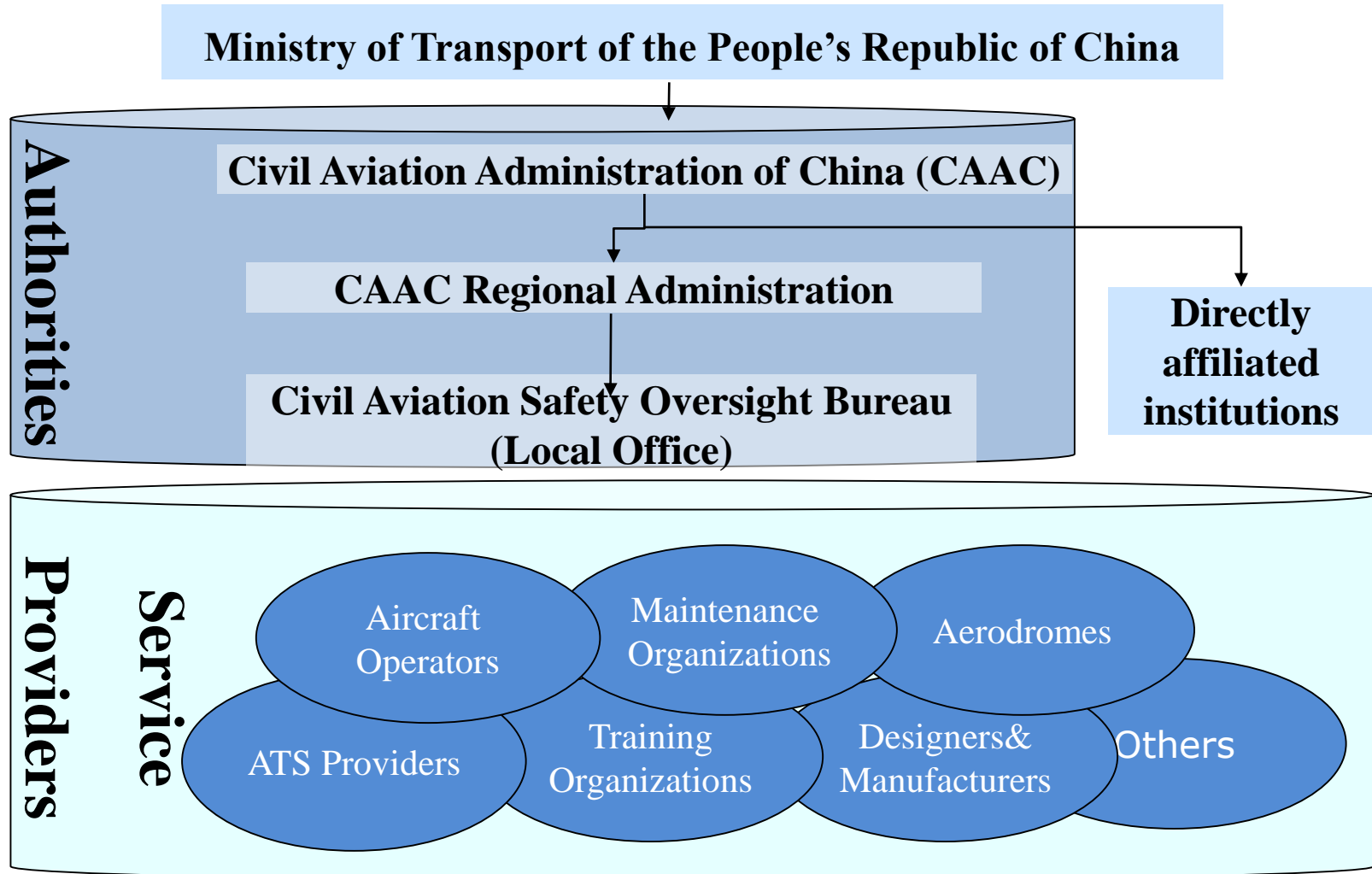
部长 李小鹏  
2018年2月13日

# Rules of Civil Aviation Safety Management





# Safety Responsibilities and Accountabilities





# Safety Responsibilities and Accountabilities

**CAAC**

**Department of General Affairs**

**Office of Aviation Safety**

**Department of Policy, Law and Regulation**

**Department of Development Planning**

**Department of Finance**

**Department of Personnel, Science & Technology and Education**

**Department of International Affairs**

**Department of Air Transport**

**Department of Flight Standard**

**Department of Aircraft Airworthiness Certification**

**Department of Airport**

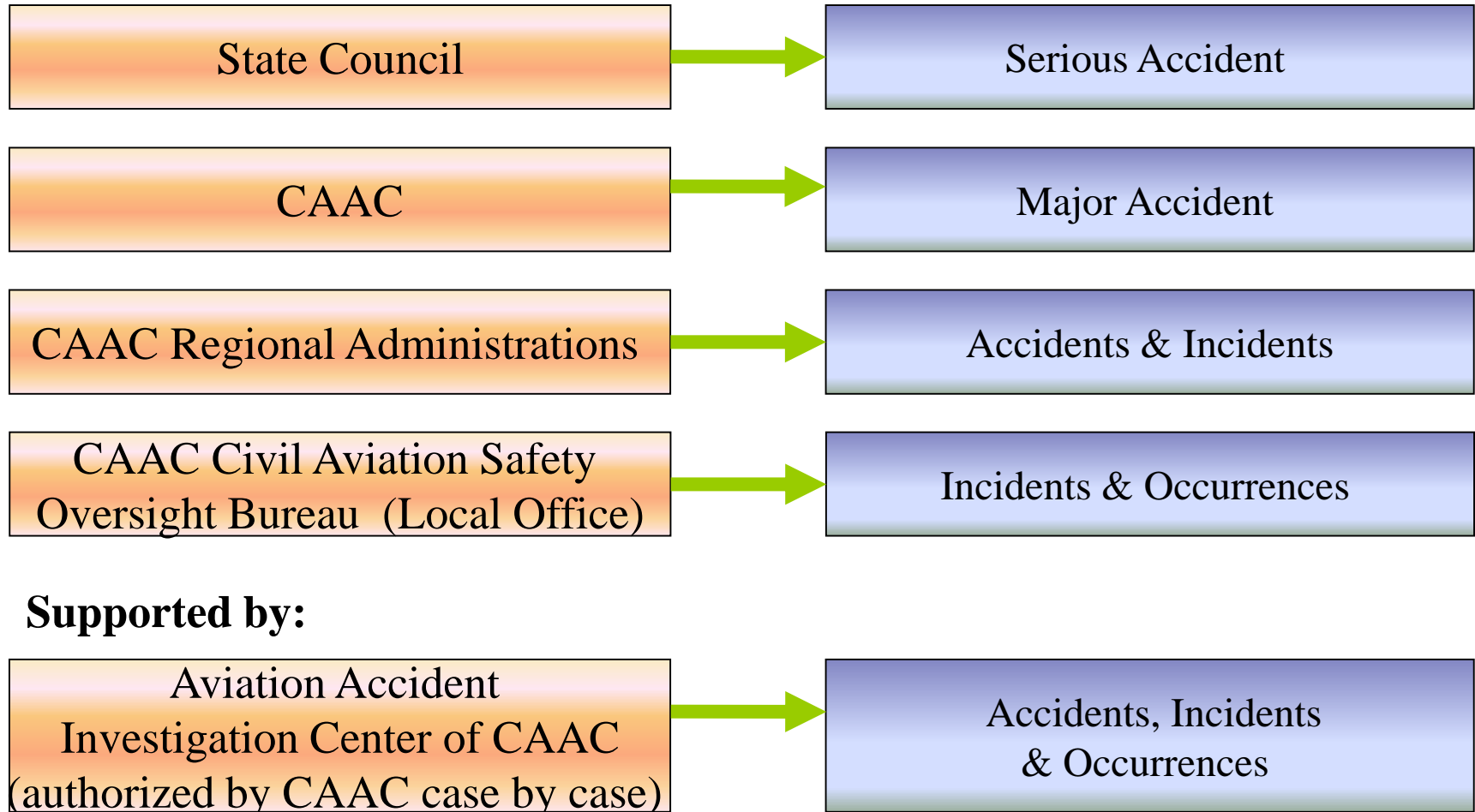
**Office of Air Traffic Regulation**

**Bureau of Aviation Security**

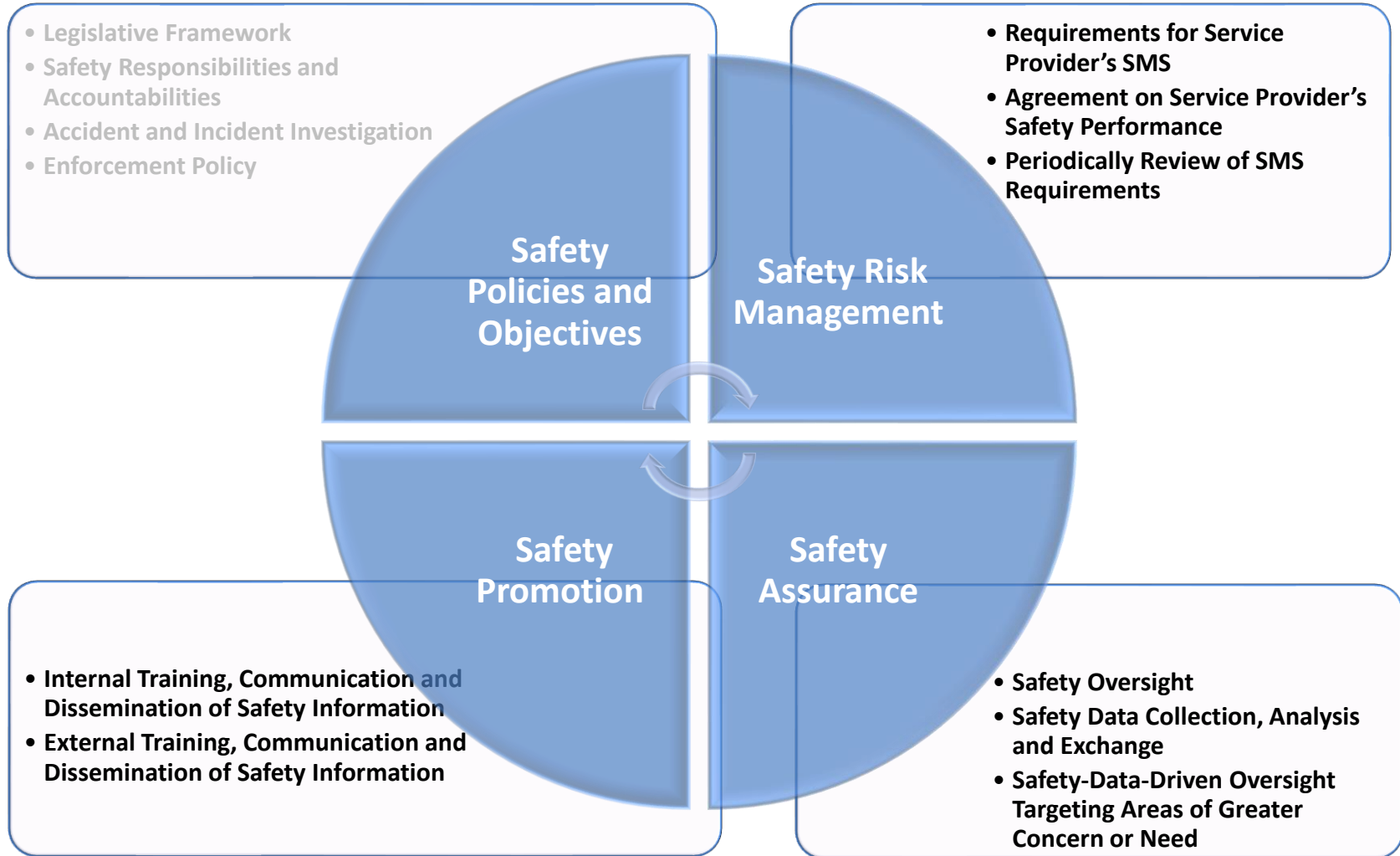
**Safety-related Departments**



# Accident and Incident Investigation



# SSP of China and Implementation





# SMS Implementation

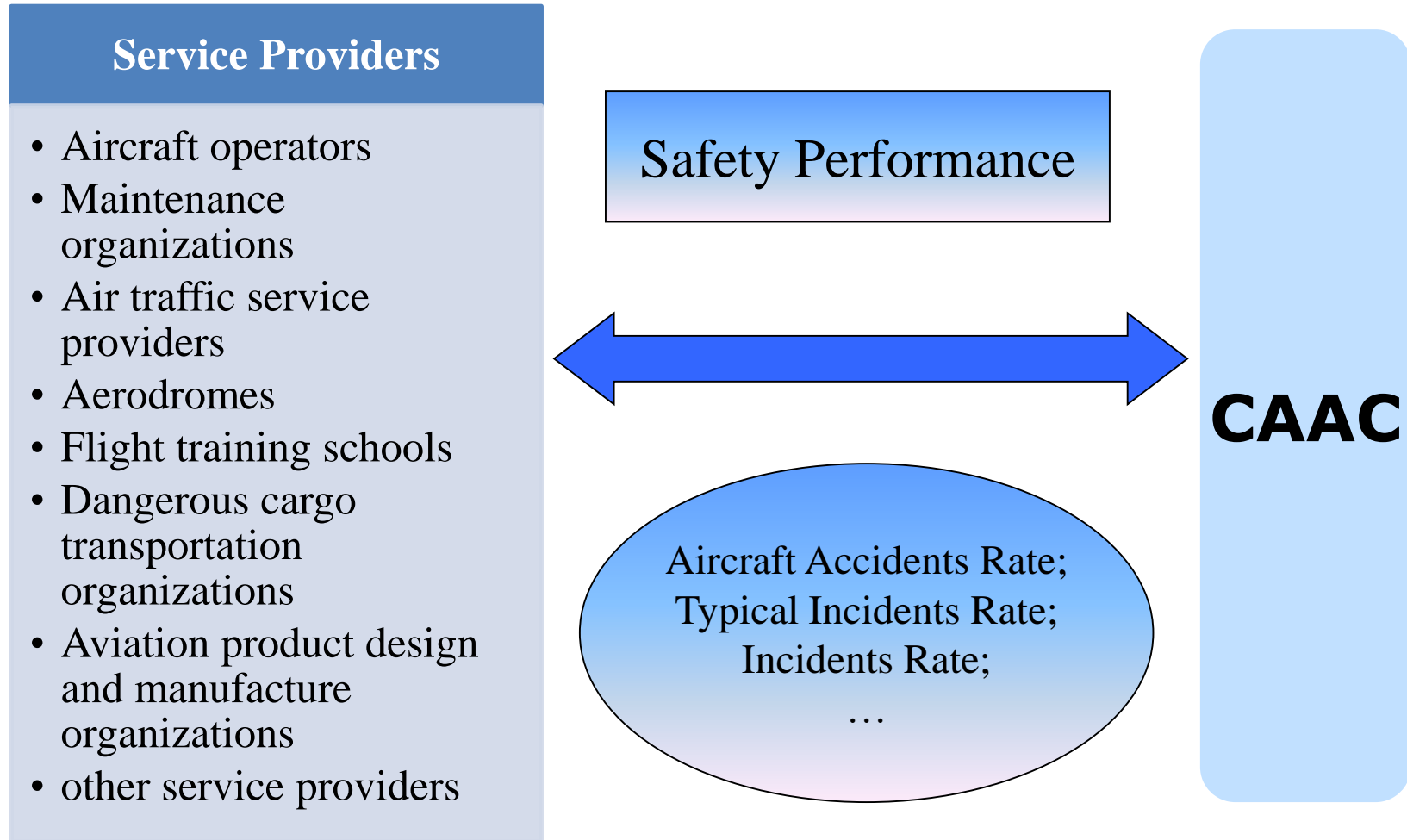
- CAAC has mandated the requirement for the following civil aviation service providers to implement SMS or *equivalent safety management mechanism*:
  - Aircraft operators (CCAR-121、 AC-121/135-FS-2008-26)
  - Maintenance organizations (AC-145-15)
  - Air traffic service providers (CCAR-83、 MD-TM-2011-001)
  - Aerodromes (CCAR-140、 AC-139/140-CA-2008-1)
  - Flight training schools (CCAR-141、 AC-141-FS-2017-07)
  - Dangerous cargo transportation organizations (MD-TR-2016-01)
  - Aviation product design and manufacture organizations (AC-398-AA-2018-01)
  - *other service providers (CCAR-398)*

# SMS Implementation





# Safety Performance Management





# Safety Performance Management

## Safety Performance Management Promotion Program

### 民航局文件

民航发〔2017〕45号

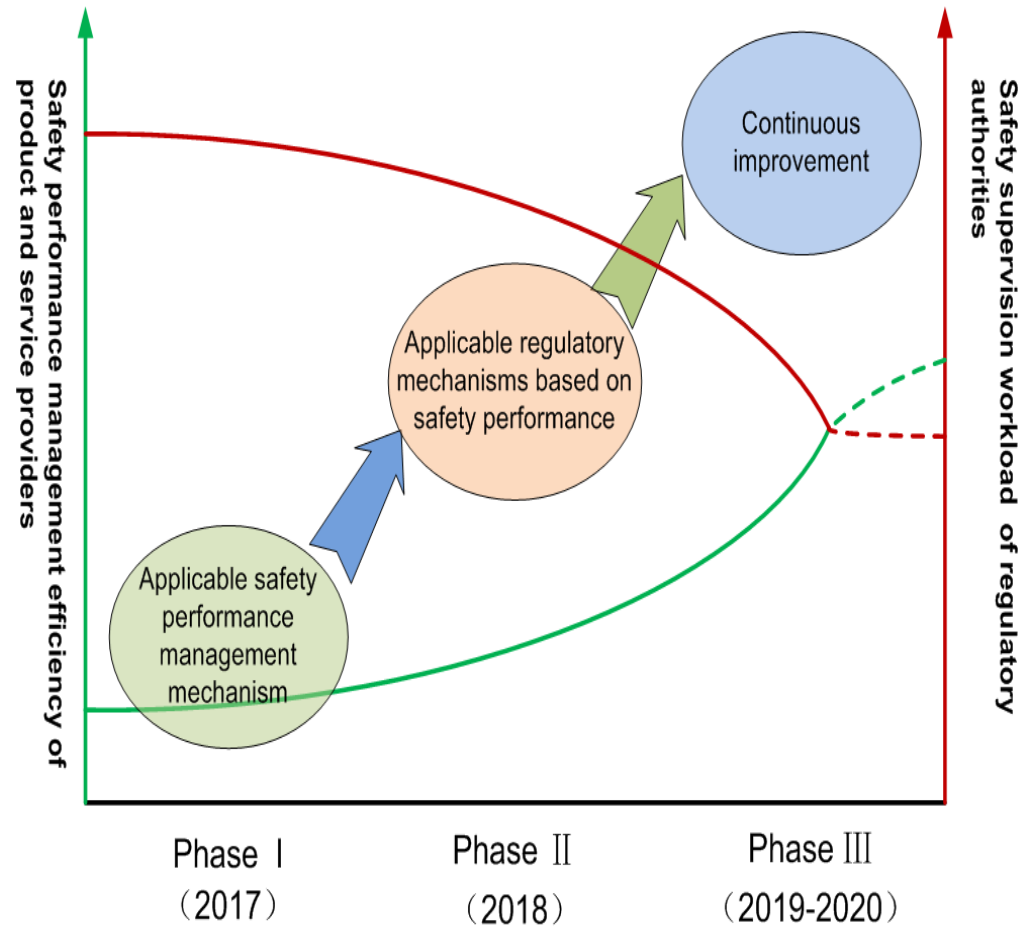
#### 关于印发安全绩效管理推进方案的通知

民航各地区管理局,各运输(通用)航空公司,各服务保障公司,各机场公司,局属各单位:

为深入贯彻落实习近平总书记“对安全隐患零容忍”的重要批示精神,严守规章标准底线、安全诚信红线,进一步保障SMS落地,有效发挥SMS效能,全面推进安全绩效管理工作,现将《安全绩效管理推进方案》印发你们,请认真贯彻落实。



2017年4月10日



# SPM Achievements

1

## *Improved safety level*

*The frequency of high consequence events were generally decreased, especially the human error events.*

2

## *Improved the level of safety management*

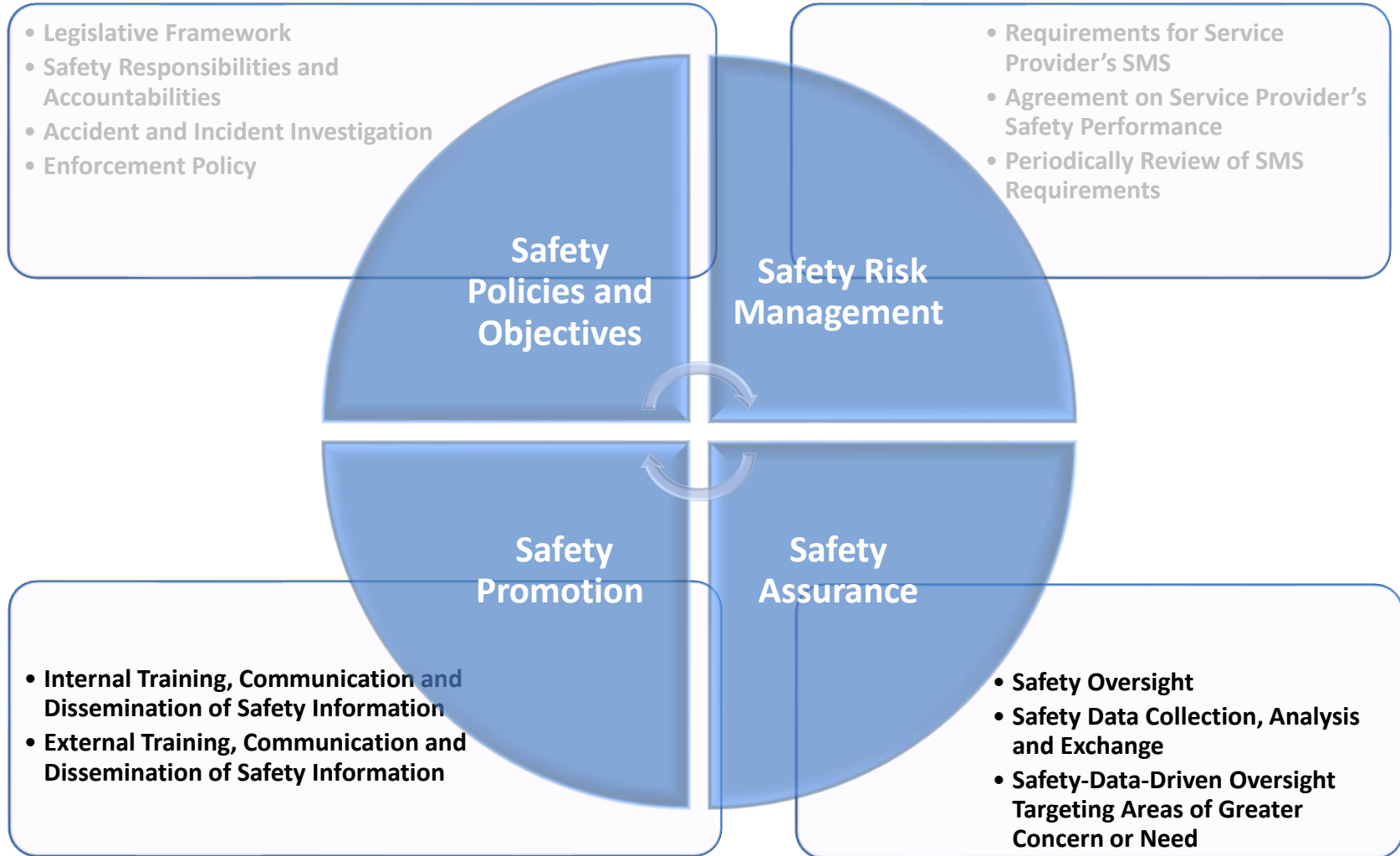
*A data-based safety management mechanism was established.  
Many low consequence indicators were monitored.*

3

## *Improved safety culture*

*Safety training was improved.  
The number and the quality of voluntary reporting were both improved.*

# SSP of China and Implementation





# Safety Oversight

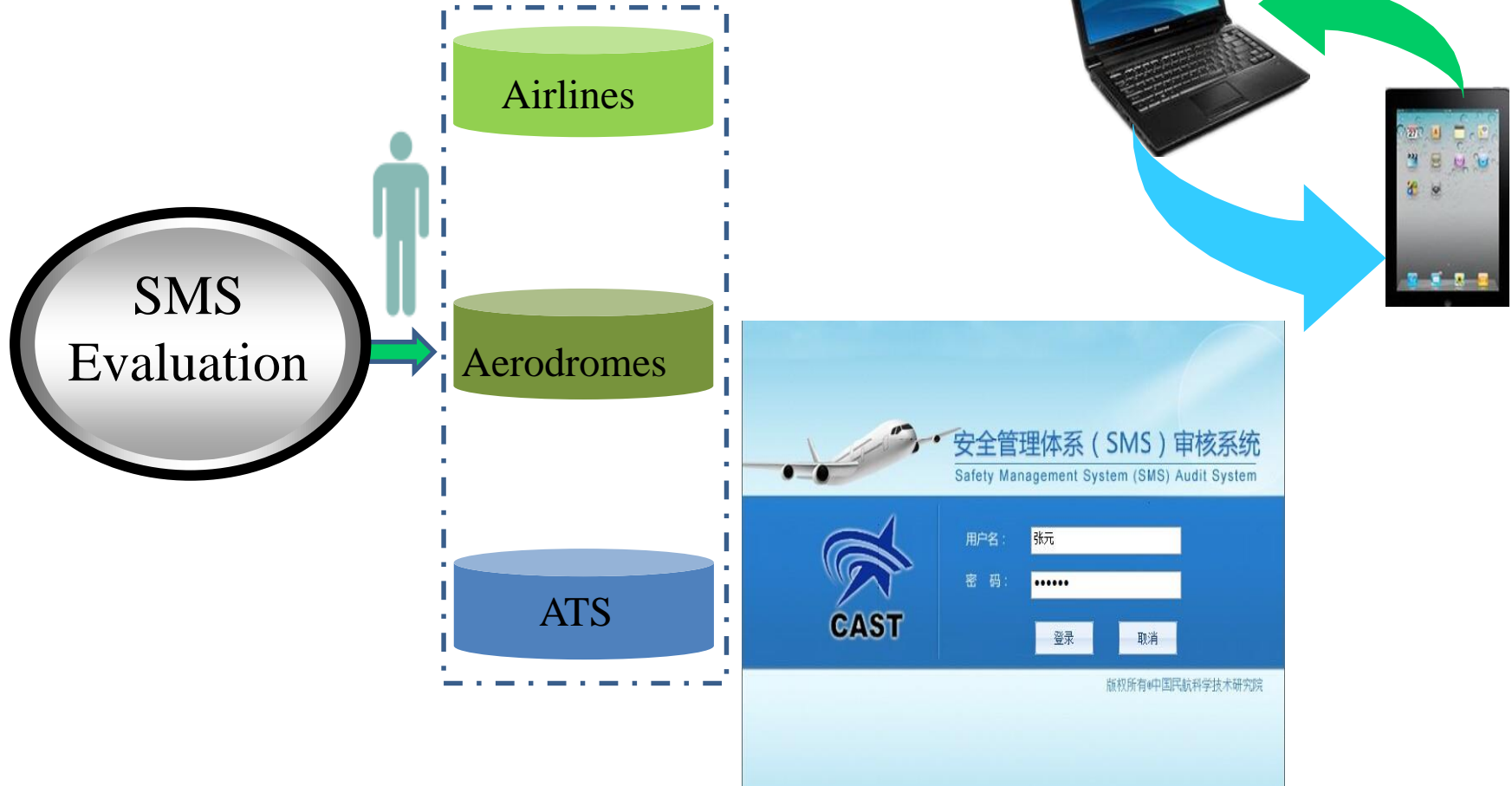
## Operation Certification Regular Supervision

- Inspections/audits/surveys
- Legislation/licensing
- (Supplementary) certification
- .....

## Safety Performance Oversight

- Safety Audit
- SMS Evaluation
- Accident/Incident investigation
- Safety Information Analysis

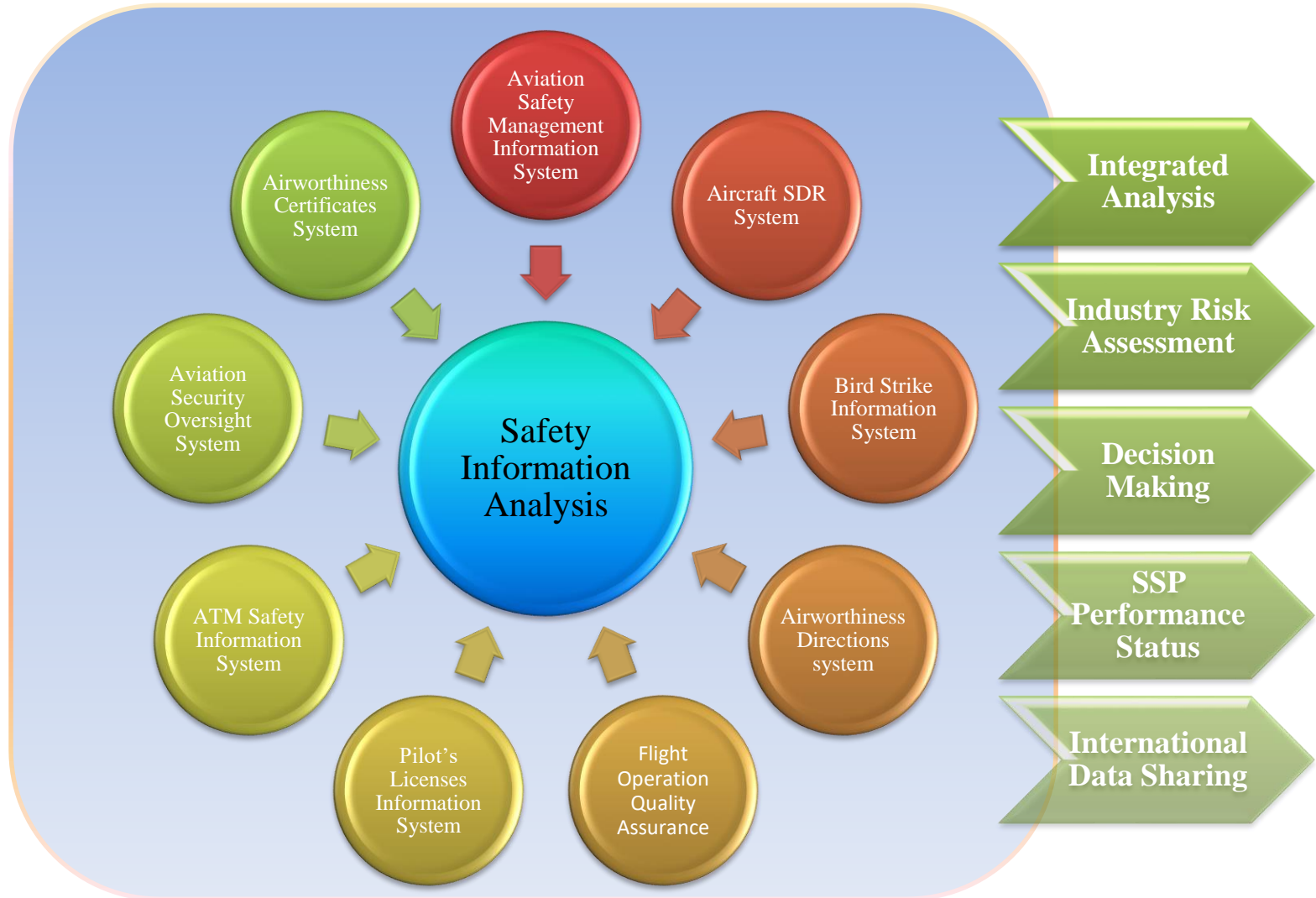
# SMS Evaluation



# Safety Data Collection Analysis and Exchange



# Safety Data Collection Analysis and Exchange

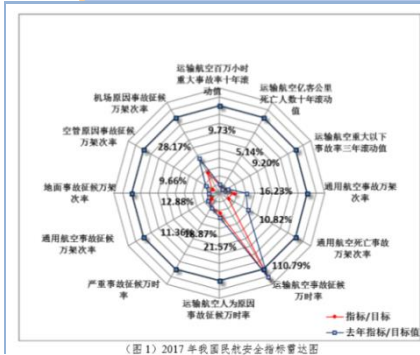
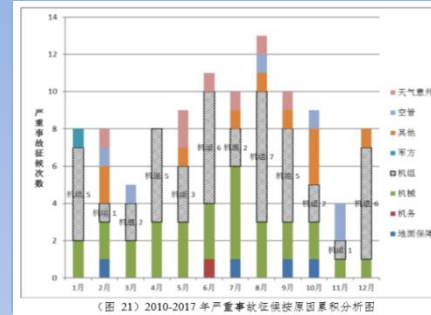




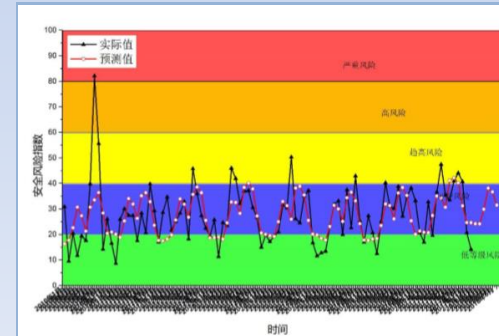
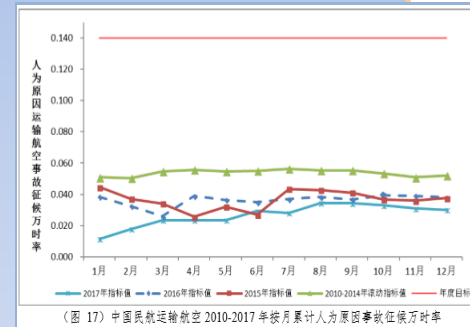
# Safety Data Collection Analysis and Exchange

(表 1) 全行业 2017 年同比安全指标目标与实际值

指标名称	目标	2017 年	2016 年	同比	指标值 占比
运输航空百万小时重大事故率十年滚动值	$\leq 0.15$	0.0146	0.0162	$\downarrow 10.09\%$	9.73%
运输航空亿客公里死亡人数十年滚动值	$\leq 0.014$	0.0007	0.0008	$\downarrow 11.74\%$	5.14%
运输航空重式以下事故率三年滚动值	$\leq 0.38$	0.0350	0.0390	$\downarrow 10.33\%$	9.20%
空防事故	不发生	0.0000	0.0000	—	—
通用航空事故万架次率	$\leq 0.20$	0.0125	0.0614	$\downarrow 47.17\%$	16.23%
通用航空死亡事故万架次率	$\leq 0.10$	0.0108	0.0369	$\downarrow 70.65\%$	10.82%
重大航空维修事故	防止事故	0.0000	0.0000	—	—
重大航空维修事故	防止事故	0.0000	0.0000	—	—
重大以下航空维修事故万架次率	$\leq 0.03$	0.0000	0.0000	—	—
运输航空事故征候万架次率	$\leq 0.50$	0.5339	0.5498	$\downarrow 10.75\%$	110.79%
运输航空人为原因事故征候万架次率	$\leq 0.14$	0.0302	0.0370	$\downarrow 20.36\%$	21.57%
严重事故征候万架次率	$\leq 0.10$	0.0189	0.0190	$\downarrow 0.45\%$	18.87%
通用航空事故征候万架次率	$\leq 1.00$	0.1136	0.1397	$\downarrow 18.88\%$	11.36%
通用航空死亡事故征候万架次率	$\leq 0.10$	0.0129	0.0125	$\downarrow 2.75\%$	12.88%
通用航空事故征候万架次率	$\leq 0.05$	0.0048	0.0090	$\downarrow 46.06\%$	9.66%
通用航空事故征候万架次率	$\leq 0.08$	0.0225	0.0376	$\downarrow 40.06\%$	28.17%
通用航空事故征候万架次率	$\leq 0.01$	0.0000	0.0000	—	0.00%



Aviation  
Safety  
Management  
Information  
System



# Safety Data Collection Analysis and Exchange

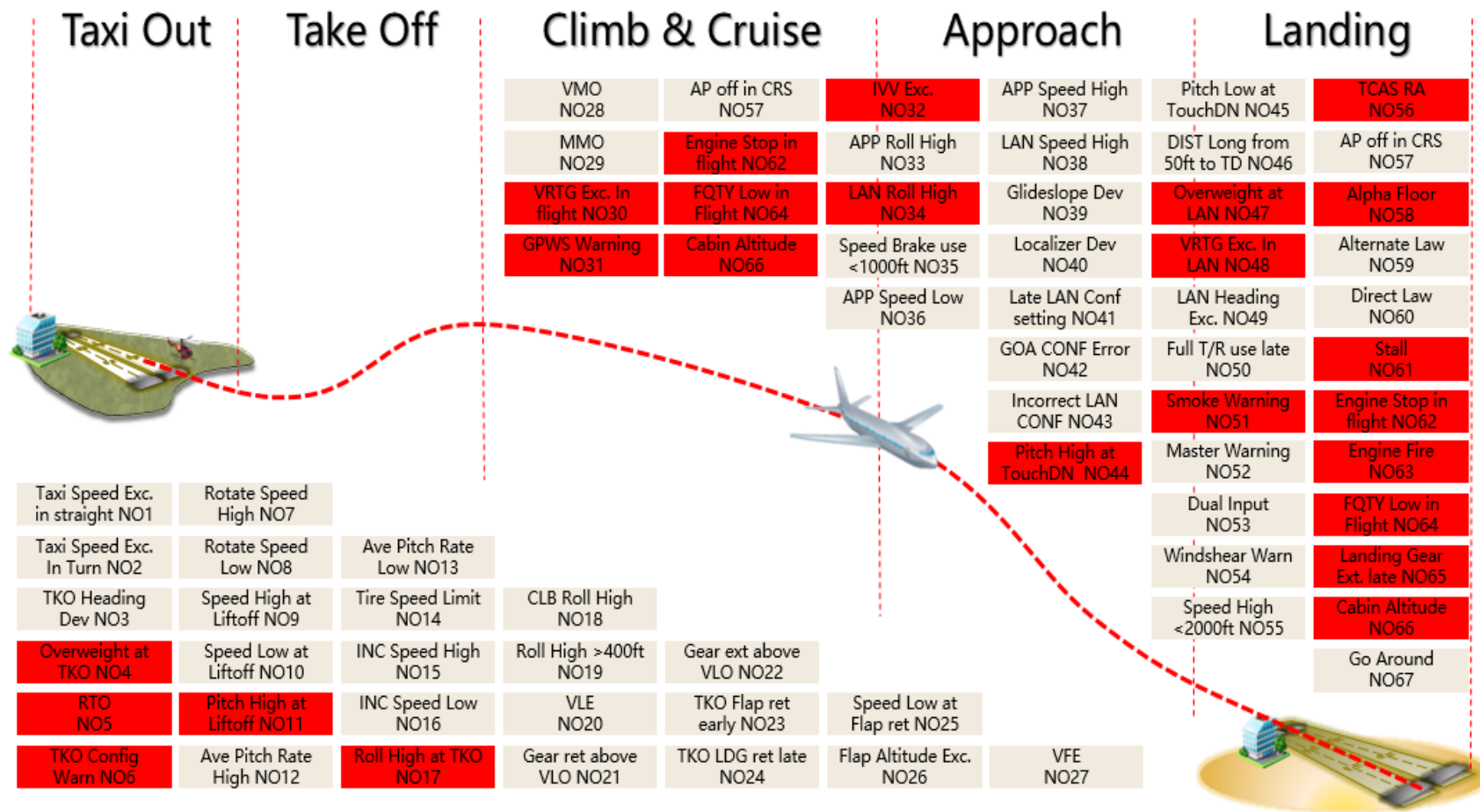
- CAAC FOQA STATION

Monitor standards and programs cover 97% aircrafts

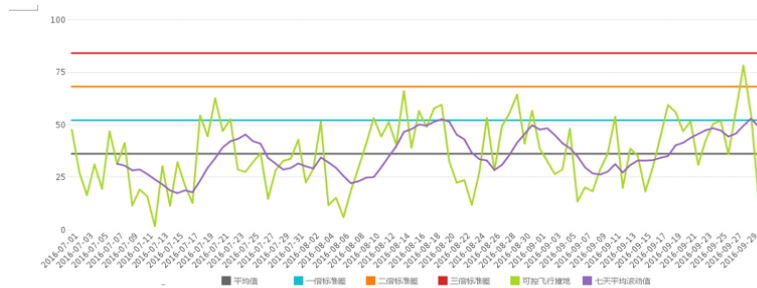


APRAST/13  
Appendix C-1 to the Report

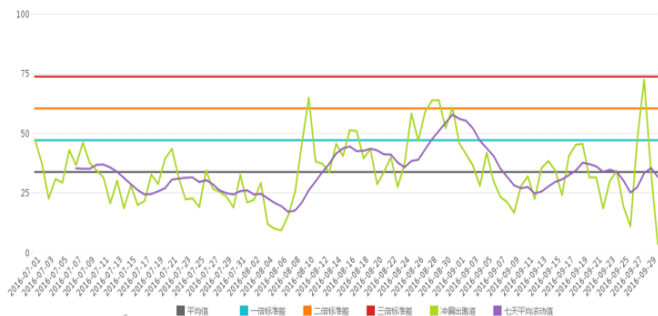
# Safety Data Collection Analysis and Exchange



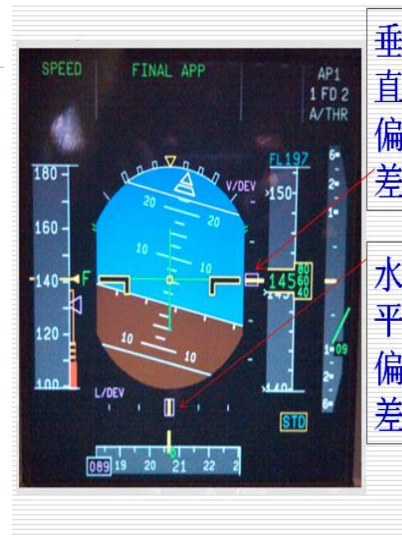
# Safety Data Collection Analysis and Exchange



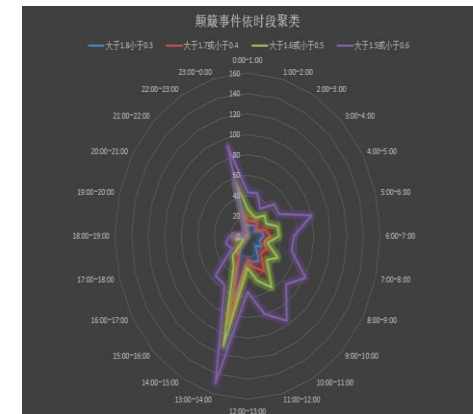
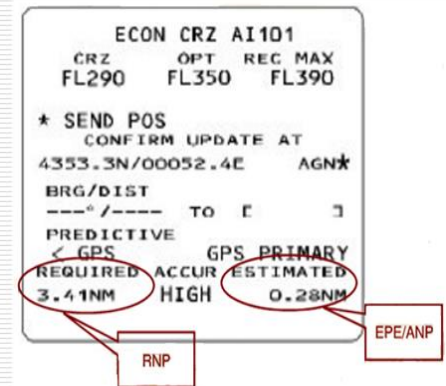
A320 CFIT Risks in 2016  
Third Quarter



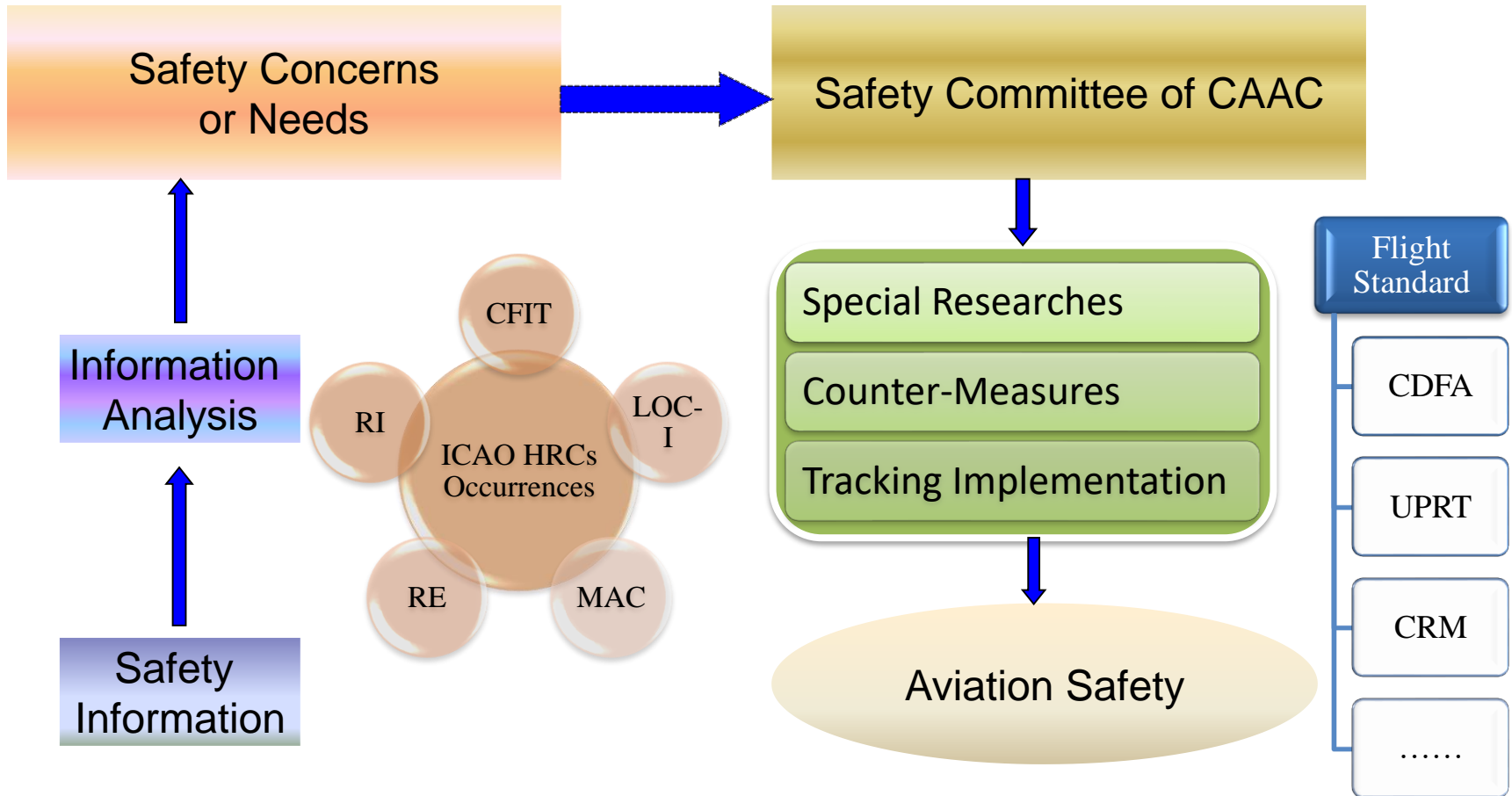
A320 Runway Excursion  
Risks in 2016 Third Quarter



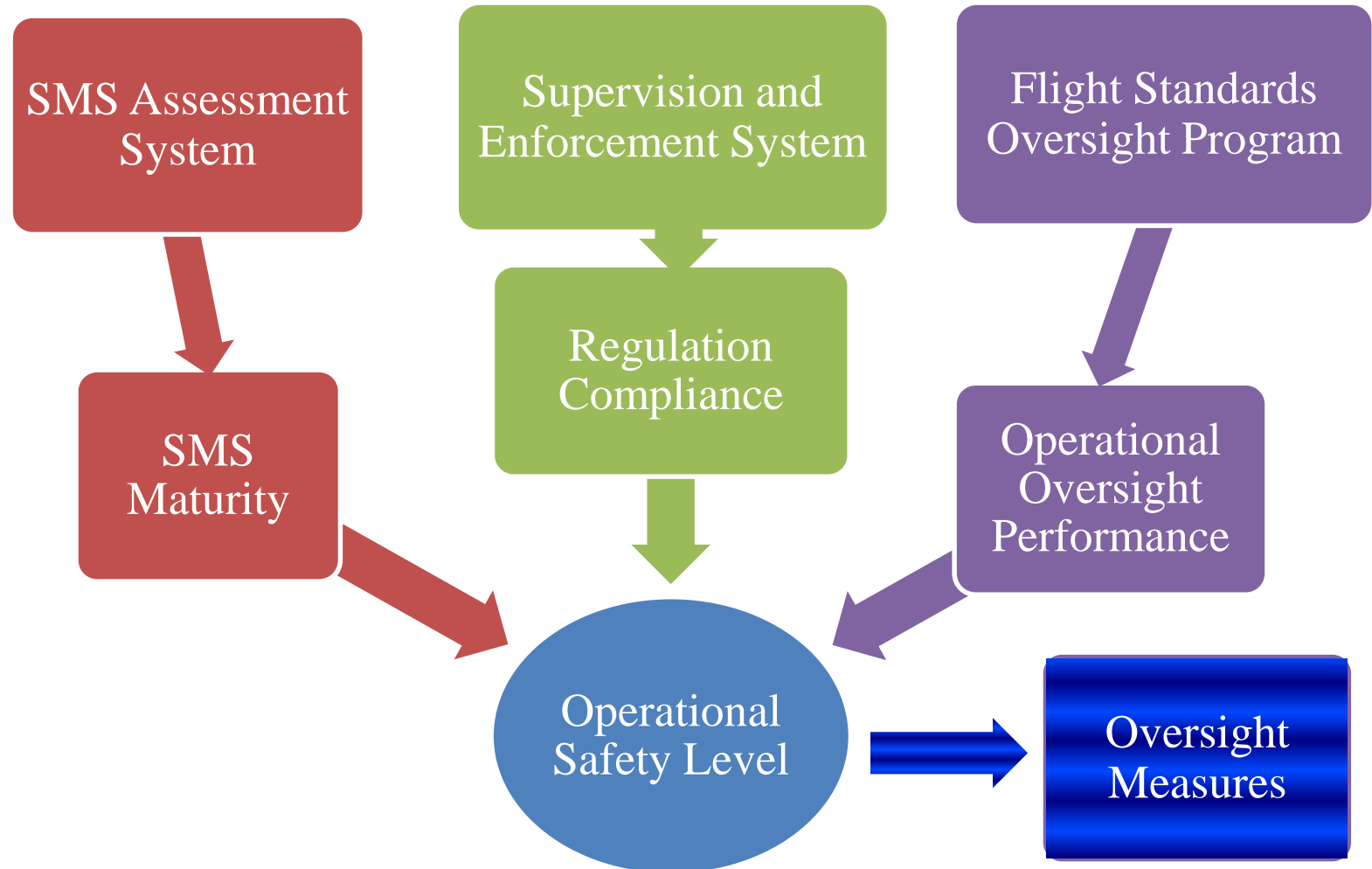
RNP EPE/ANP显示



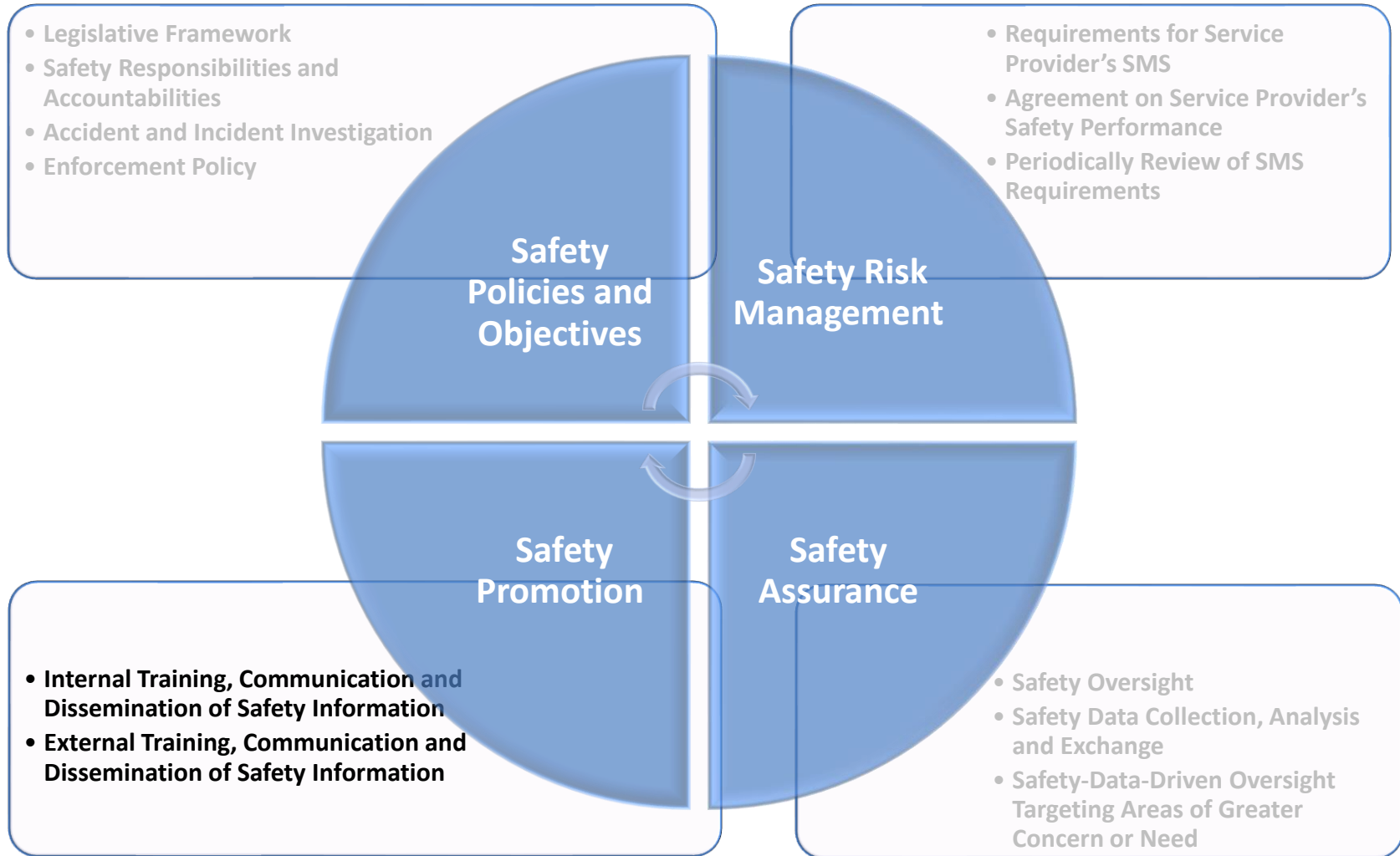
# Safety Data Driven Oversight



# Safety Data Driven Oversight



# SSP of China and Implementation





# Training

## Internal

### Developed Training Programs

- CCAR-18

### Recurrent Training

- Institutions

### Training Courses

- SSP Course
- SMS Course

### Abroad Training

- ACP
- EMDT

## External

### Training Centers

- Simulator
- Cabin Crew
- Maintenance

### Researches

- Human Factors
- Runway Safety

### Training Courses and Tools

- SMS
- Safety Management





# Communication and Dissemination

## Internal

**Safety Work Meetings**

**Weekly Briefing**

**Monthly Safety Report**

**Annual Safety Report**

**Safety Occurrences Statistic**

**Bird Strike Data Analysis Report**

**Annual Report of National Aircraft  
Service Information**

## External

**All Reports in Internal Communication  
and Dissemination**

**Developing Plans**

**Circulars, Information, Bulletins**

**Aeronautical Information Publication**

**Advisory Circulars**

**Some Aviation Publications**

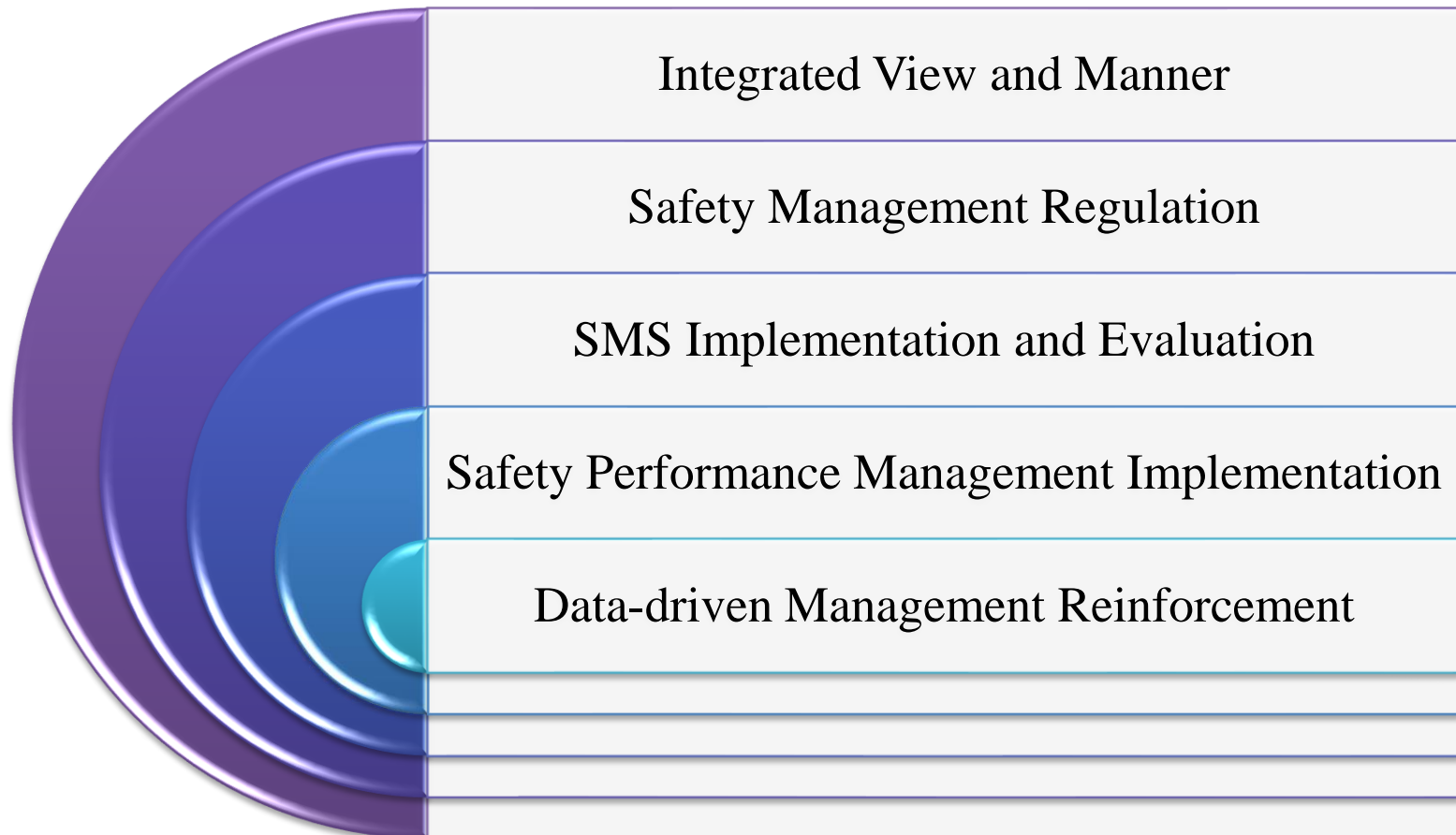
**Safety Seminar**



# CONTENTS

- Safety Level
- SSP of China and Implementation
- Summary

# Summary



# THANK YOU !



# SMS PERFORMANCE EVALUATION IN CHINA

**RONG MEI**

China Academy of Civil Aviation Science and  
Technology(CAST)

# Contents

1

• **Background and Objective**

2

• **Principle**

3

• **Checklists**

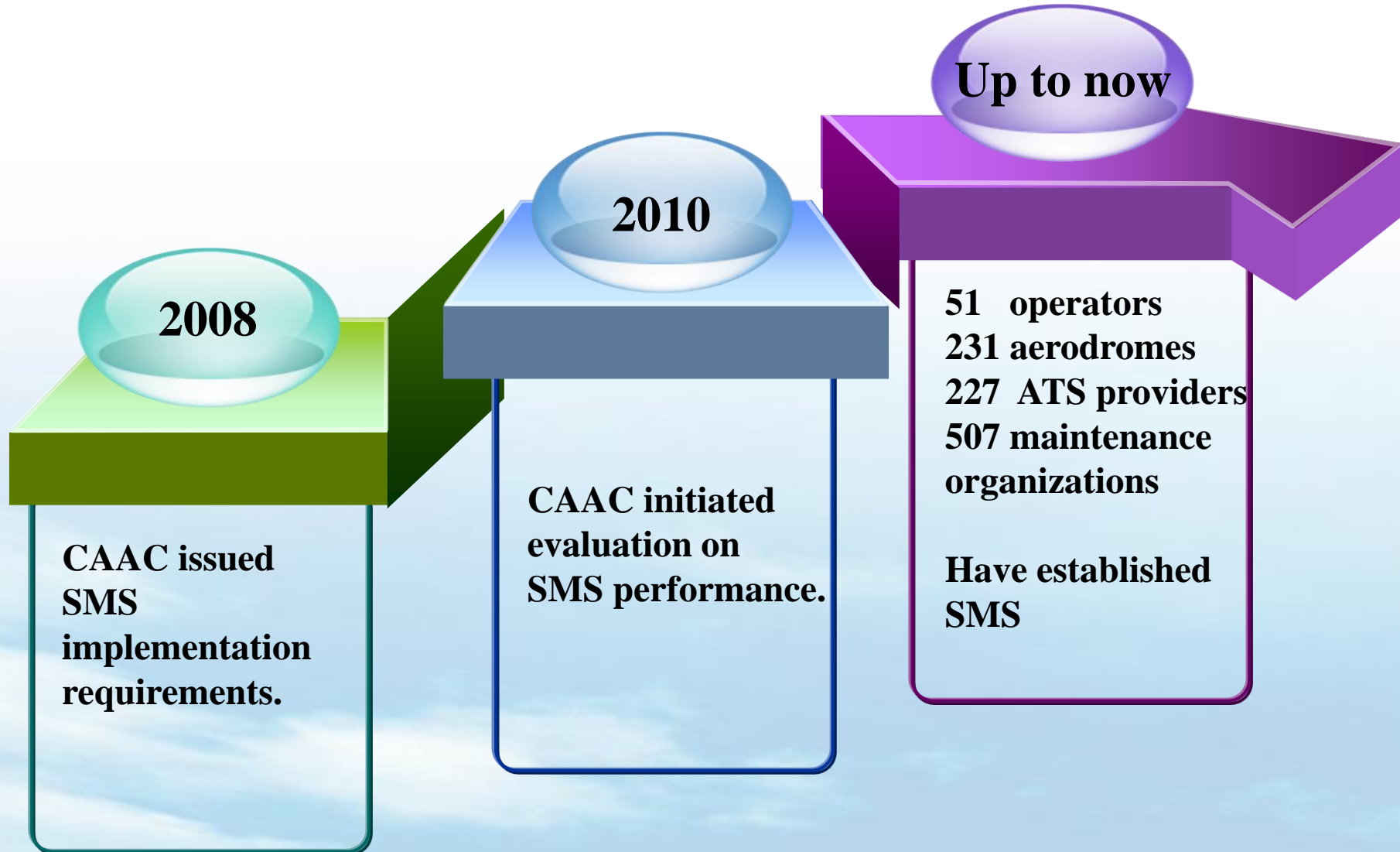
4

• **Process and Approach**

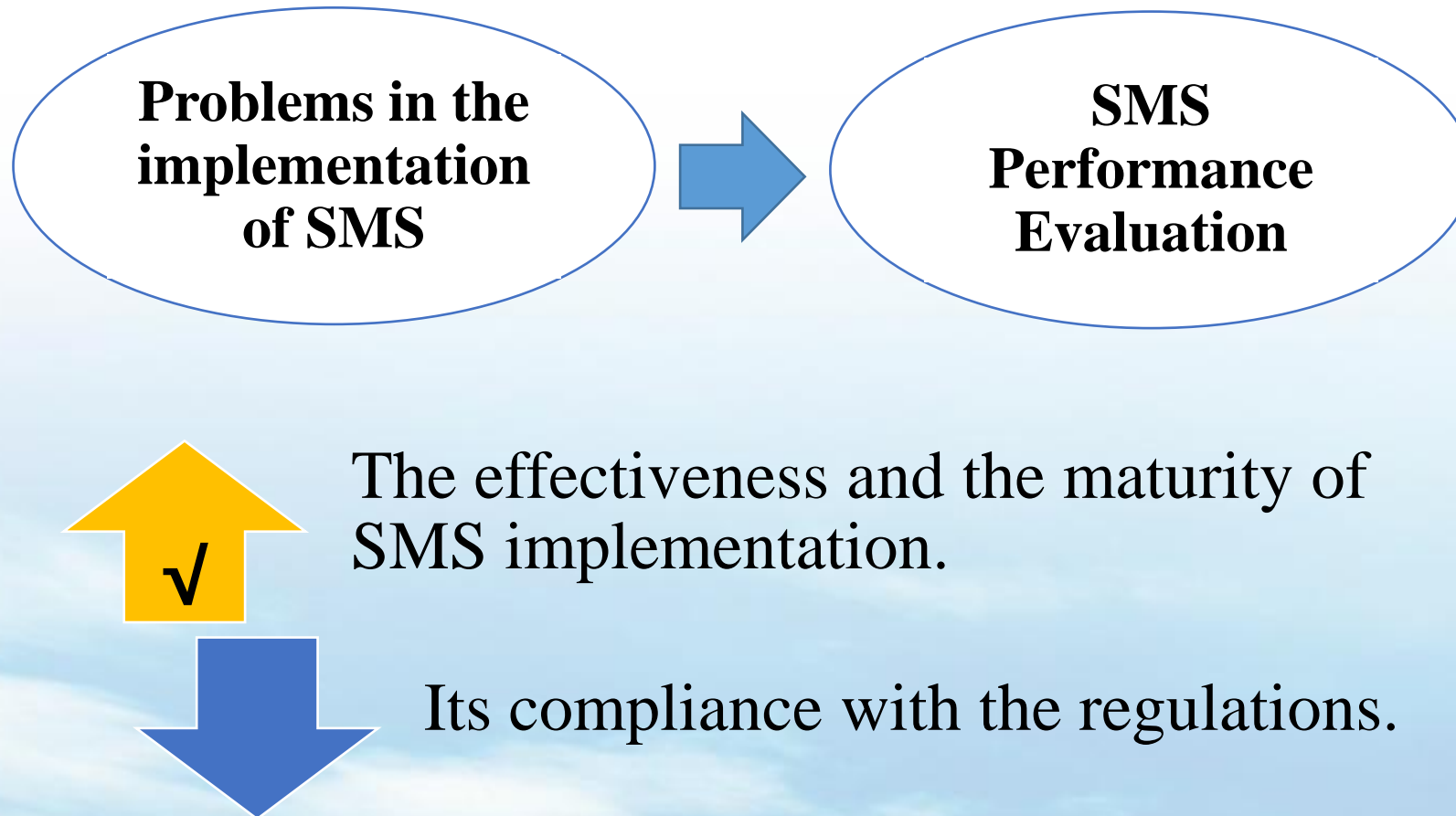
5

• **Conclusion and Effectiveness**

# Background and Objective

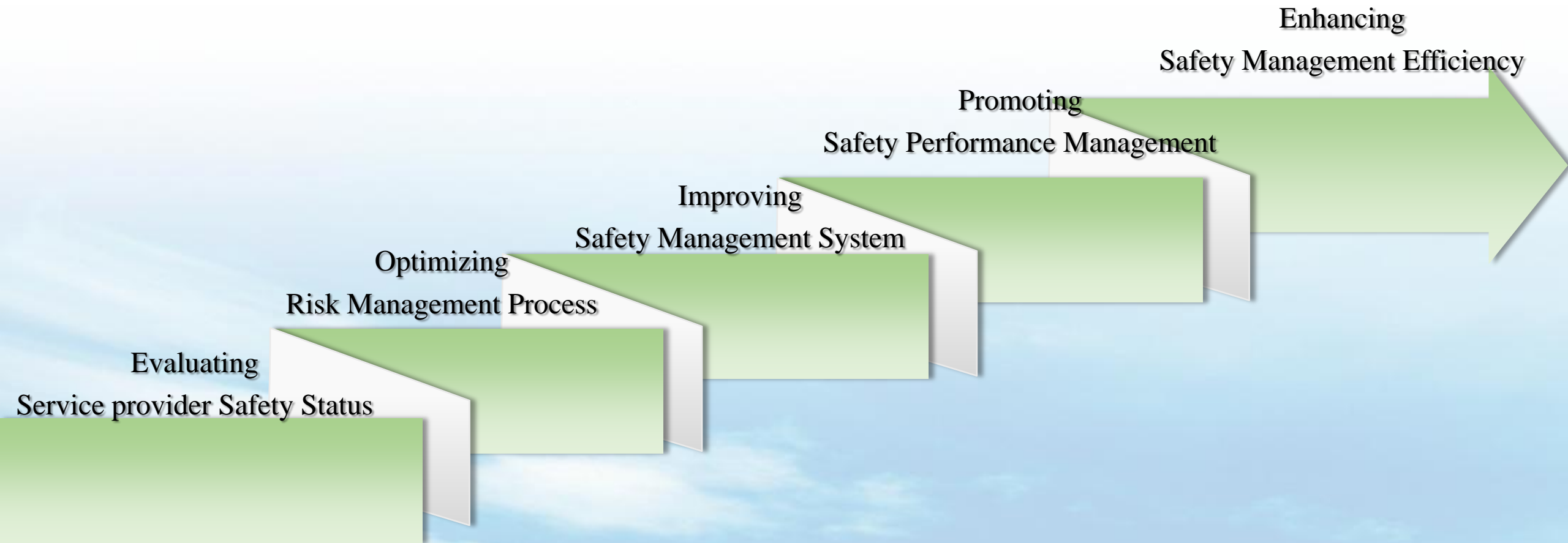


# Background and Objective





# Background and Objective

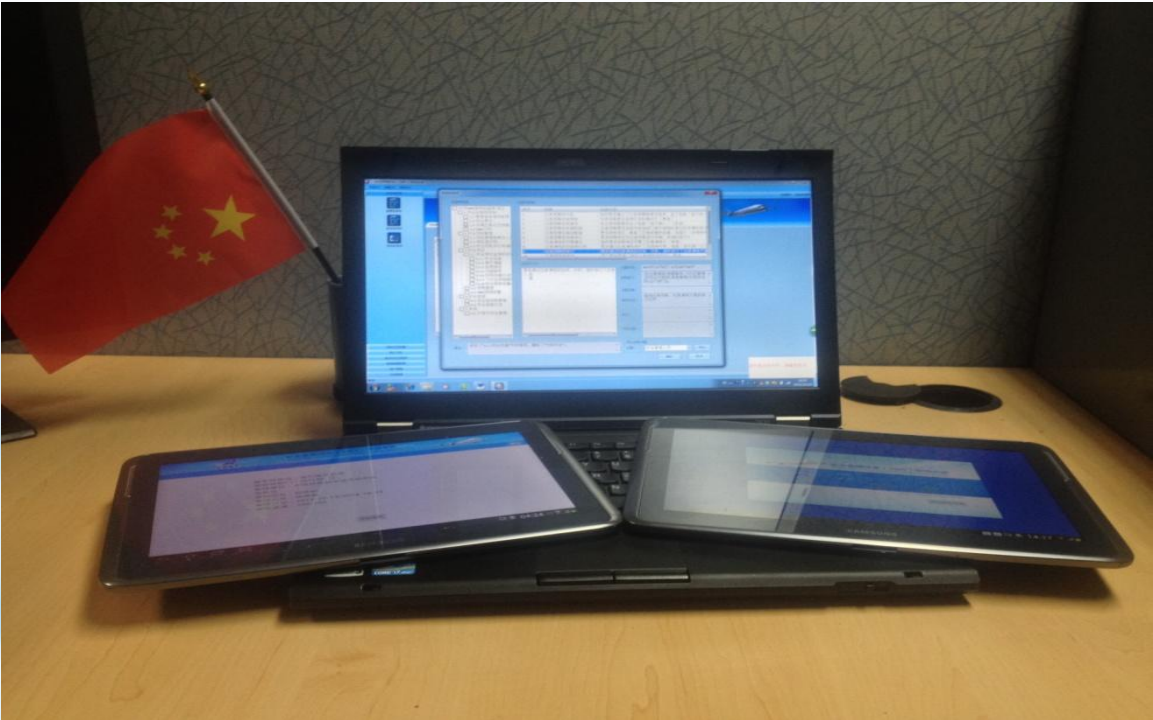


# Background and Objective



# Background and Objective

- Tools



# Contents

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- **Checklists**

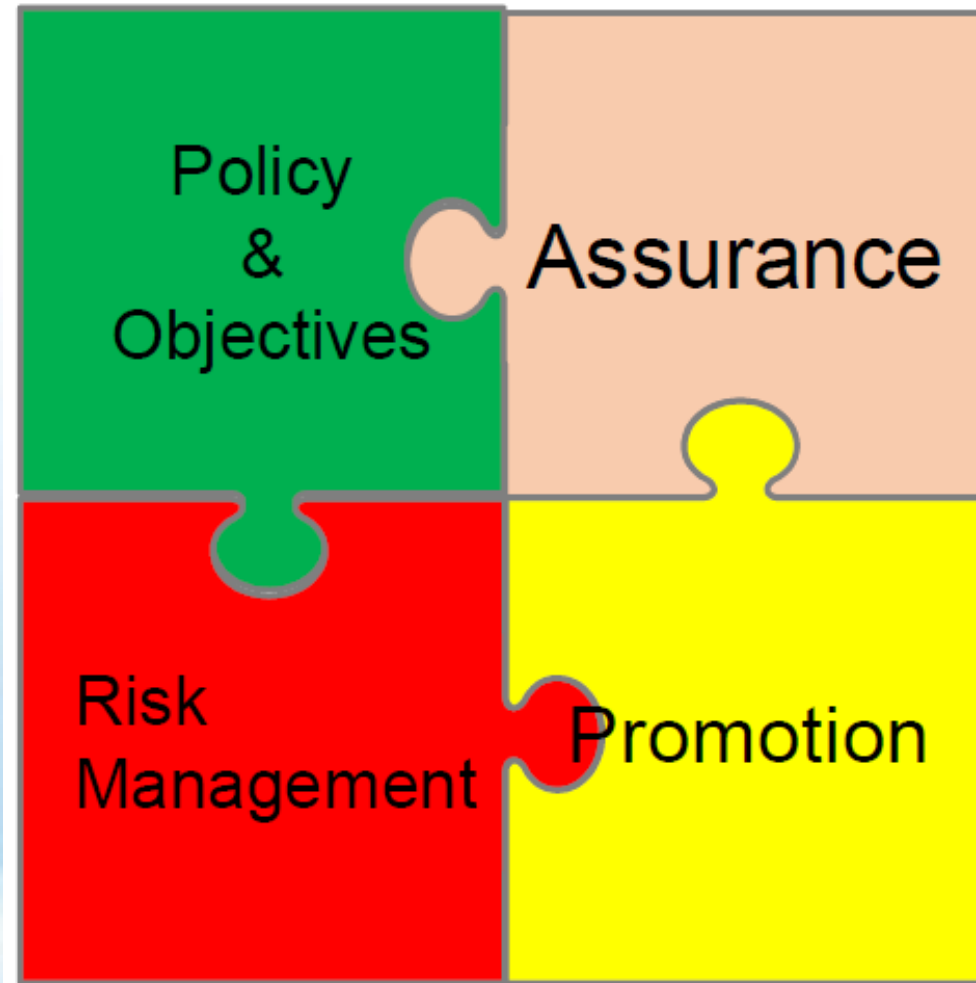
4

- **Process and Approach**

5

- **Conclusion and Effectiveness**

- SMS FRAMEWORK



- System engineering :
  - System: A system is an integrated set of constituent pieces that are combined in an operational or support environment to accomplish a defined objective. These pieces include people, hardware, software, firmware, information, procedures, facilities, services and other support facets.

——FAA Systems Engineering Manual



# Principle

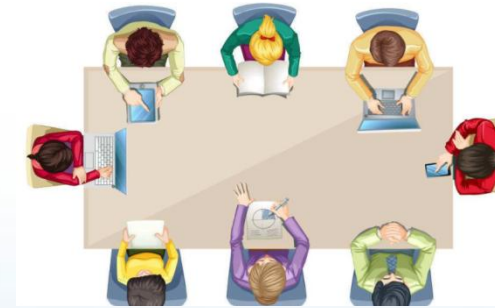
APRAST/13  
Appendix C-2 to the Report



**System and Procedure-How**



**Responsibility- Who**



**Personnel- Quantity &  
Qualification& Ability**



**Tools- Hardware&  
Software**



**Implementation- Degree**



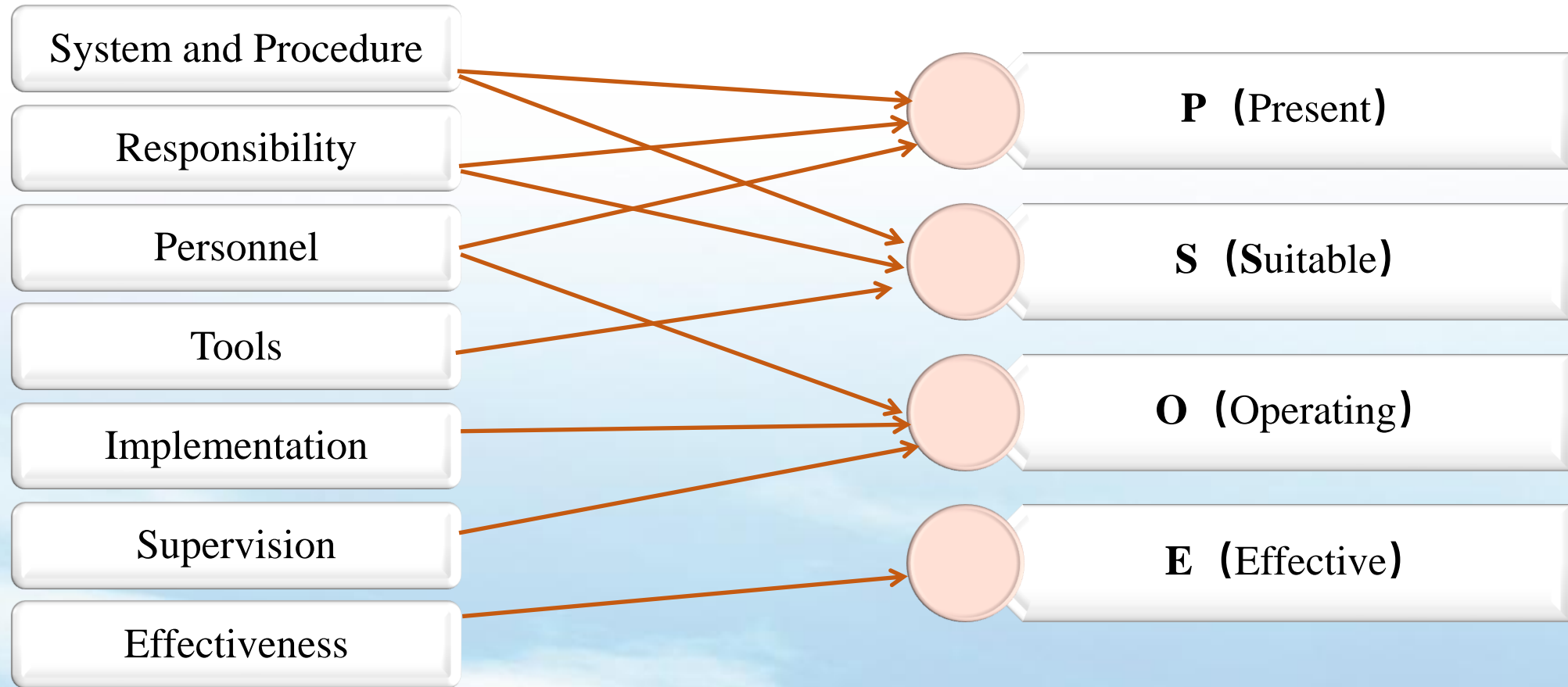
**Supervision-Degree**



**Effectiveness-Outcome**

- SMS Assessment Tool——SMICG
  - Evaluating present, suitable, operating and effective of SMS work.
    - Present: There is evidence that the ‘indicator’ is clearly visible and is documented within the organization's SMS Documentation.
    - Suitable: The indicator is suitable based on the size, nature, complexity of the organization and the inherent risk in the activity, including consideration of the industry sector.
    - Operating: There is evidence that the indicator is in use and an output is being produced.
    - Effective: There is evidence that the indicator is effective and achieving the desired outcome.
  - The check items contain the assessments of present, suitable, operating and effective.





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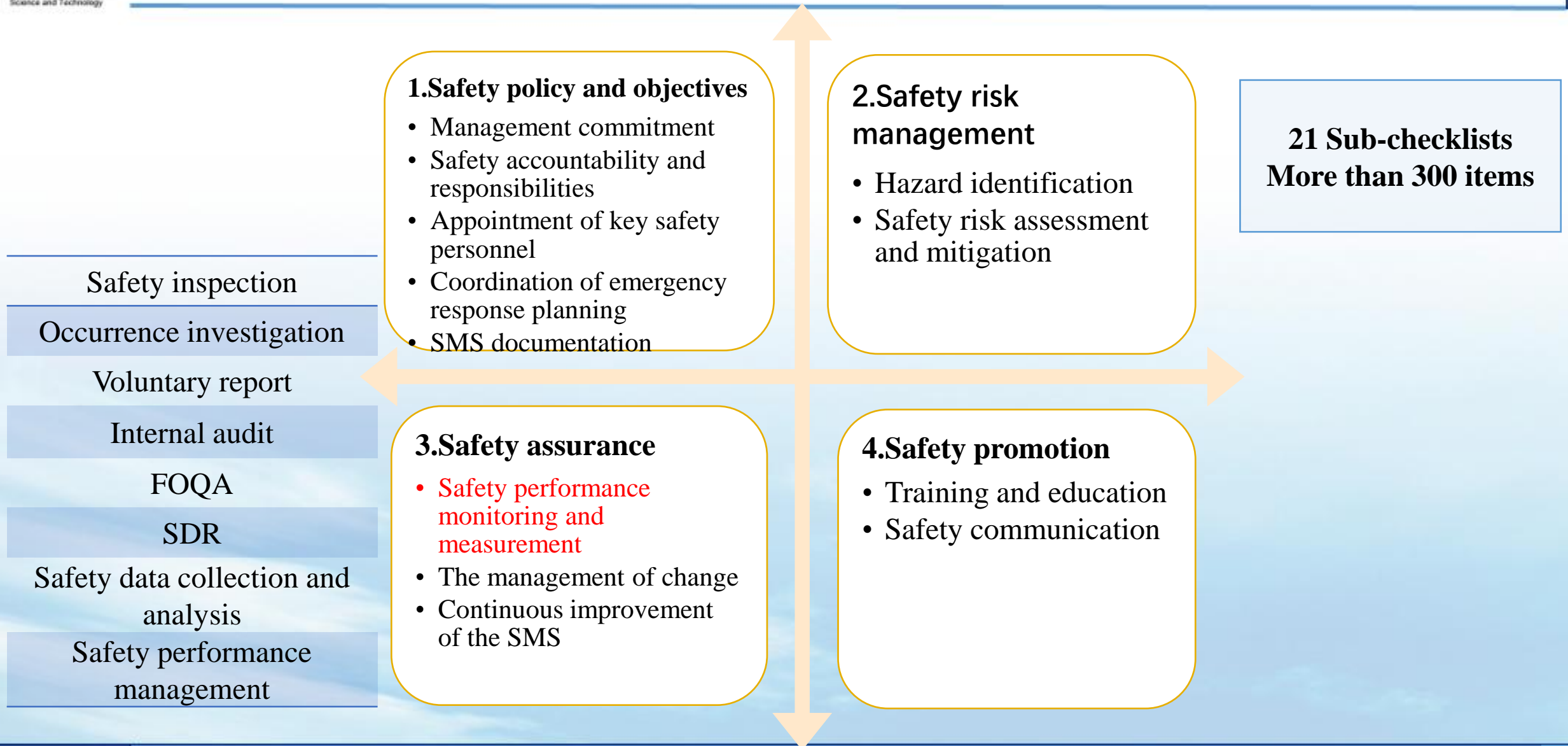
- **Checklists**

4

- **Process and Approach**

5

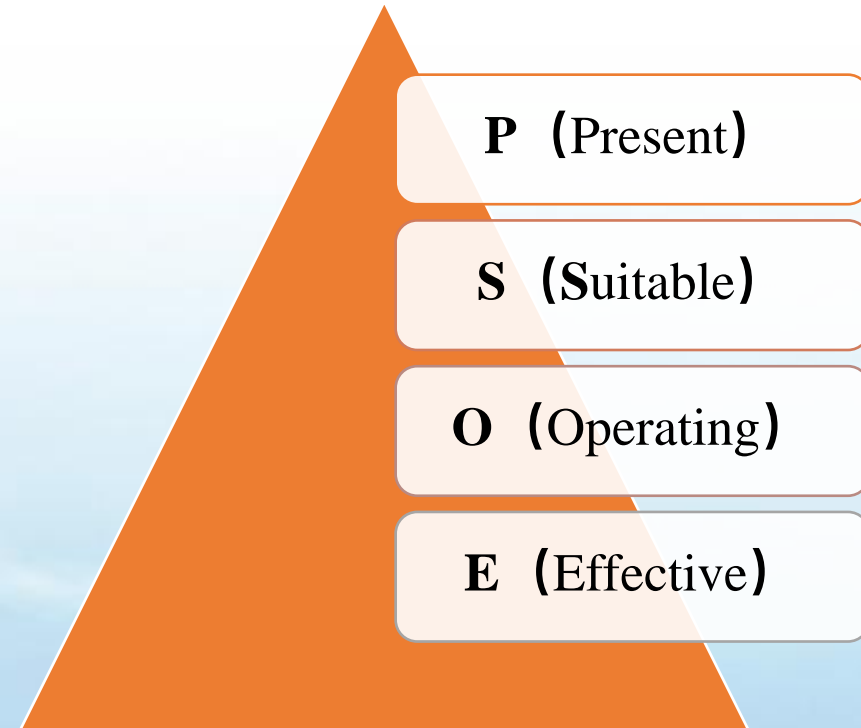
- **Conclusion and Effectiveness**



# Checklists

## Check Item Properties :

- System and Procedure
- Responsibility
- Personnel
- Tools
- Implementation
- Supervision
- Effectiveness



## “Yes/No”

Example: Is there a safety policy in place? (Single) *[System and Procedure]*

☐ No

☐ Yes

## Degree

Example : Do employees know the emergency response plan(ERP) very well?  
( Single ) *[Effectiveness]*

☐ Not well

☐ Well

☐ Very well

## Elements

Example: Is there a risk management procedure, at least including but not limited to the following elements: ( Multiple ) *[System and Procedure]*

- ☐ Organization and department responsibility on risk management
- ☐ Risk management triggering factors
- ☐ Risk management process
- ☐ Personnel requirement on risk management
- ☐ Links between risk management and other working procedures

## “Yes/No” + Quality

Example: Is there any appraisal for periodic review of the ERP to ensure its continuing relevance and effectiveness? (Single) *[Implementation]*

☐ No

☐ Yes

if yes, please select the appraisal status: (Single)

☐ Recording the results of the appraisal

☐ Recording the arrangement, process and result of the appraisal, but not detailedly.

☐ Recording the arrangement, process and result of the appraisal very detailedly.



## Degree + Quality

Example: Have they implemented the safety risk control measures? (Single)  
*[Implementation]*

- ☐ Almost no implementation
- ☐ Implemented some measures
- ☐ Almost all the measures have been implemented

Please select the quality of the record: (Single)

- ☐ Almost no implementation record
- ☐ There are records of implementation, but the contents are not complete.
- ☐ The implementation records are more detailed and complete



## Elements+ Quality

Example: Is there a safety inspection checklist , at least including but not limited to the following elements: ( Multiple ) *[Tools]*

- ☐ ☐ Check items for safety management work
- ☐ ☐ Check items for operational aspect
- ☐ ☐ Check items for other special safety work

Please select the quality of the checklist: (Single)

- ☐Lack operability
- ☐General operability
- ☐High operability

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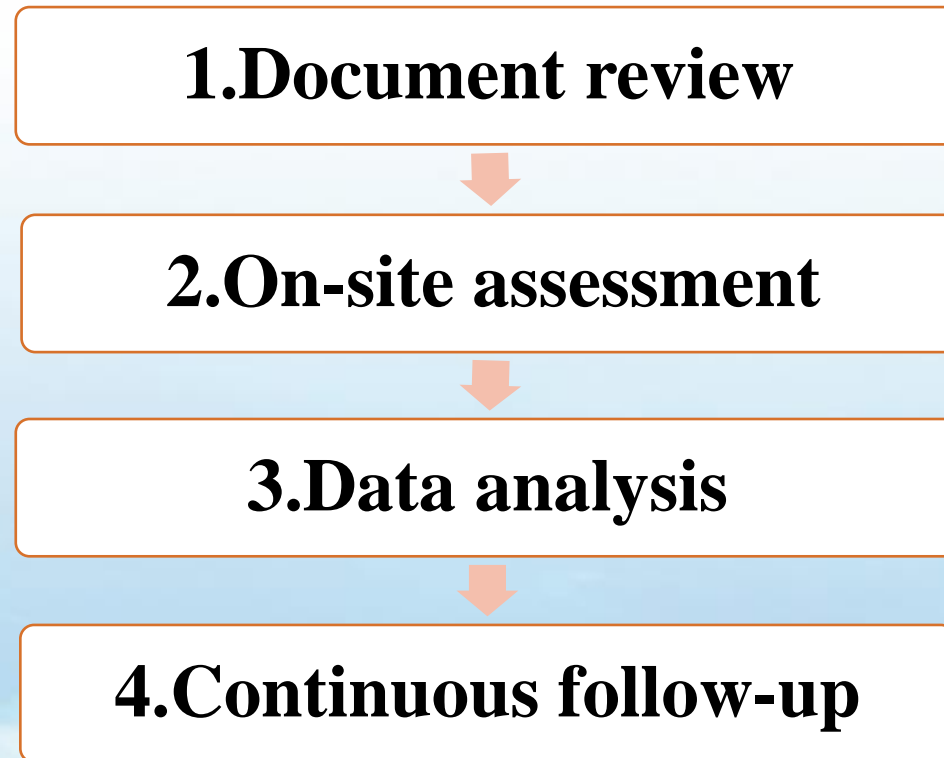
- **Process and Approach**

5

- **Conclusion and Effectiveness**

- The form of SMS performance evaluation
  - Comprehensive evaluation: Covering safety management department and operational departments
  - Special evaluation: Evaluating some departments or some elements

- The implementation process



## □ Document review

- The assessor shall review all the SMS documents according to the contents of the checklist, and *record the problems that need further verification on site.*
- The assessor shall initially *select some cases* related to safety risk management and safety assurance based on the information of occurrences.

## □ On-site assessment

- The assessor and the evaluated organization communicate on the relevant matters during the evaluation process.
- The assessor *verifies the problems* of document review on site.
- The assessor shall review the implementation and effectiveness of SMS according to the checklist.

## □ On-site assessment

- The assessor *conducts questionnaires of employees* at all levels according to the plan.
- According to the check case on site, the assessor *may need to design some questions for employee interviews temporarily* to verify the implementation effectiveness of the control measures.
- The assessor should communicate with the evaluated organization actively, to analyze the reasons and find out feasible solutions of the problems found on site.

- Document review
- Record inspection
- On-site inquiry
- Interview/questionnaire

## Methods

- System and Procedure、  
Responsibility: Document review  
On-site inquiry
- Personnel: On-site inquiry  
Record inspection
- Tools: On-site inquiry
- Implementation 、 Supervision、  
Effectiveness: Record inspection  
On-site inquiry Questionnaire

## Methods for various check items



## □ Data analysis

- Evaluating SMS performance （Automatic calculation ）
  - Overall SMS performance
  - SMS performance of each department
  - Performance of each component of SMS
- Writing the ‘SMS performance evaluation report’, the report mainly includes :
  - The overall evaluation of SMS implementation.
  - The specific problems and suggestions.

## □ Continuous follow-up



- Whether take some measures



- Whether the safety performance is improved

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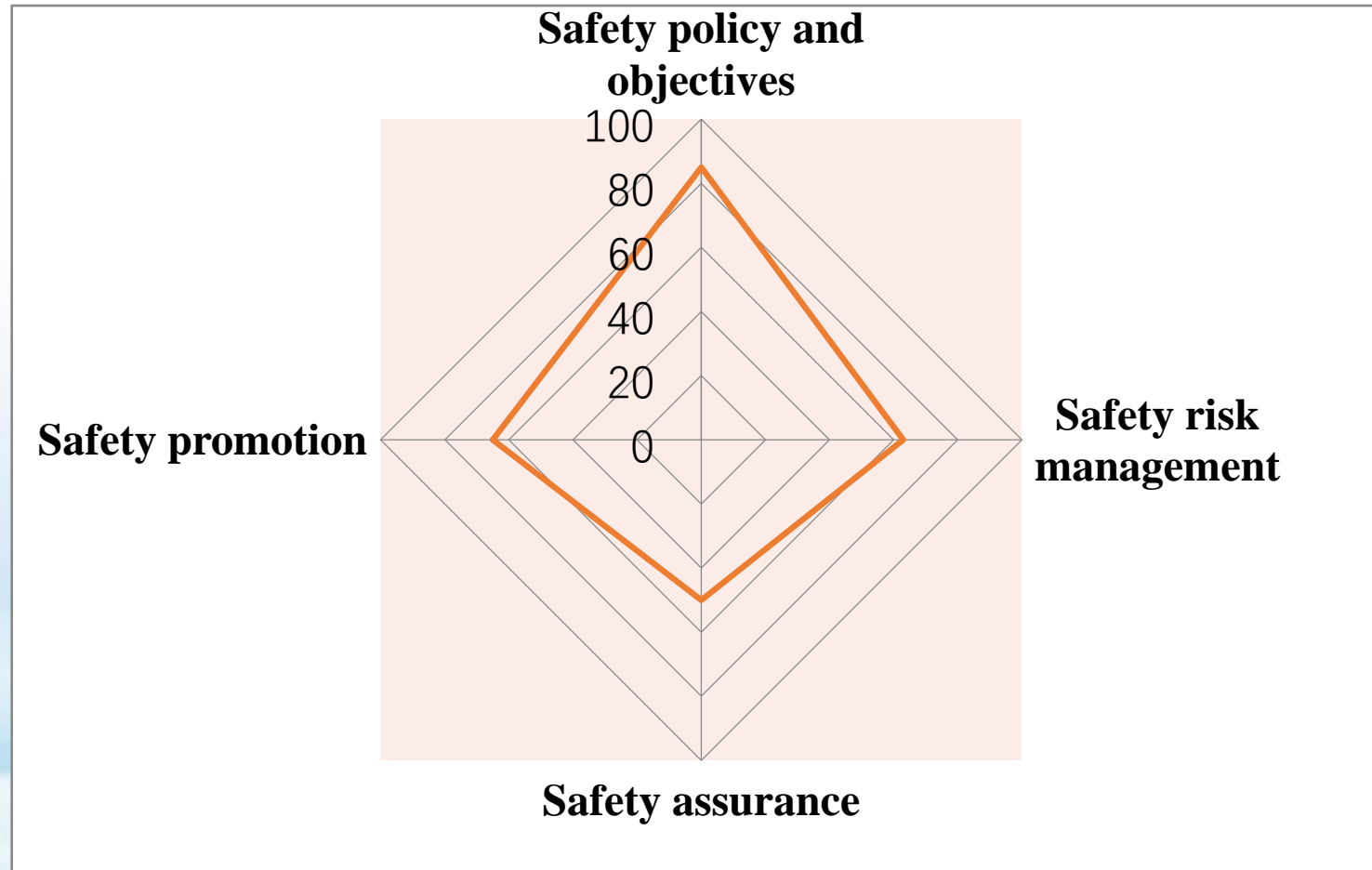
4

• **Process and Approach**

5

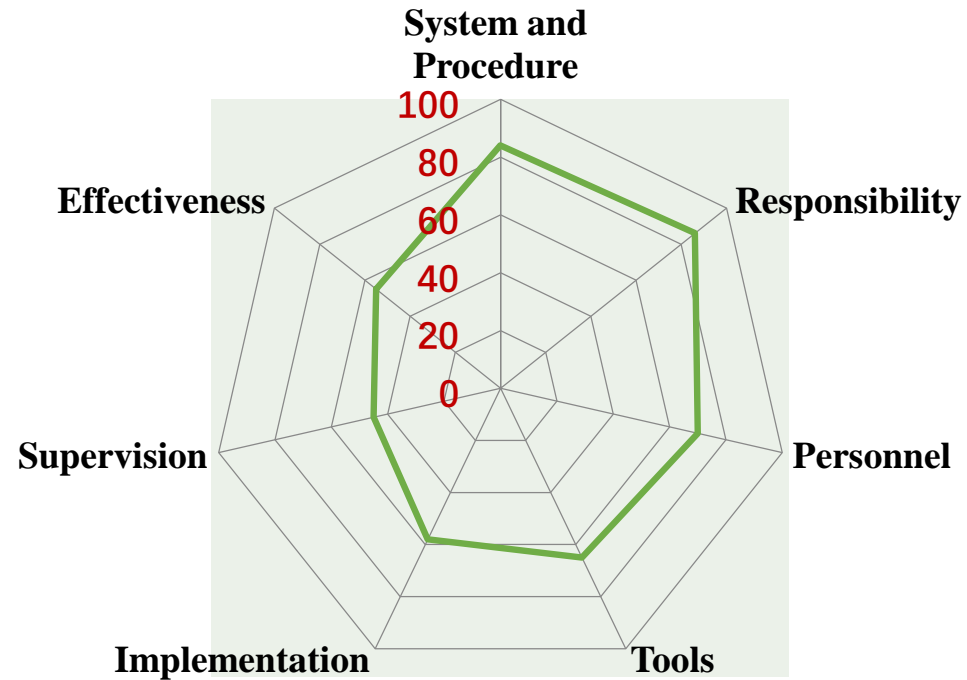
• **Conclusion and Effectiveness**

# Conclusion and Effectiveness

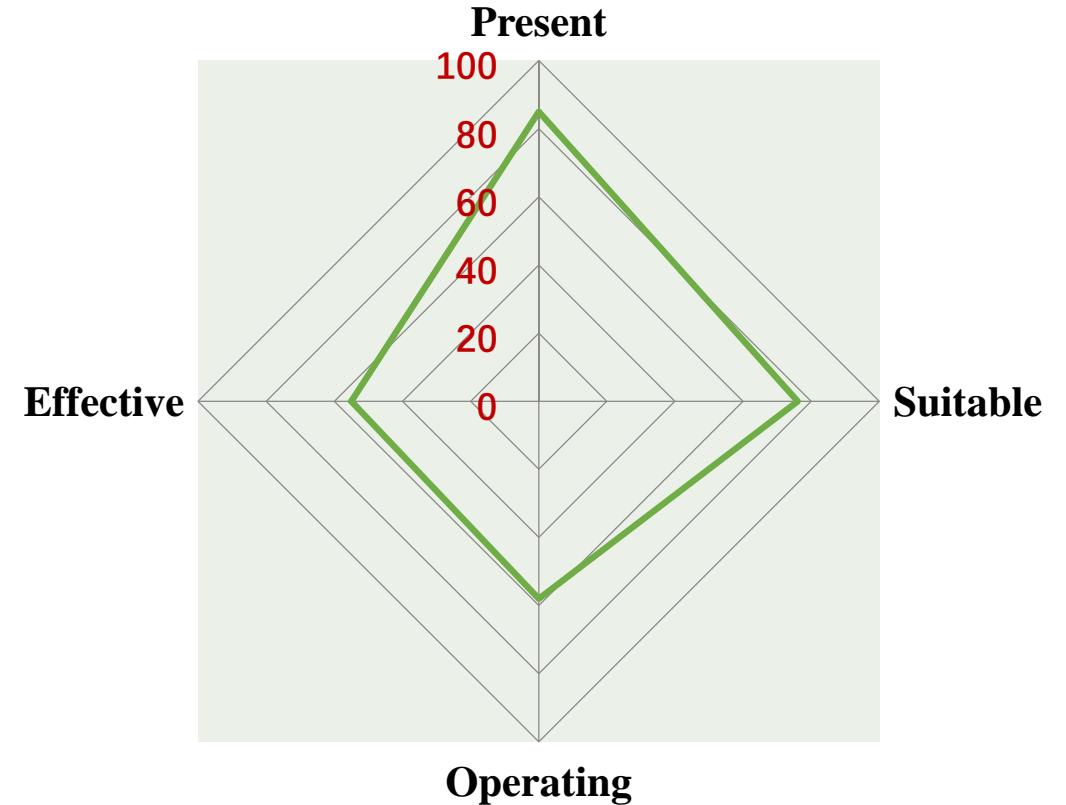


Comparison of four components of SMS

# Conclusion and Effectiveness



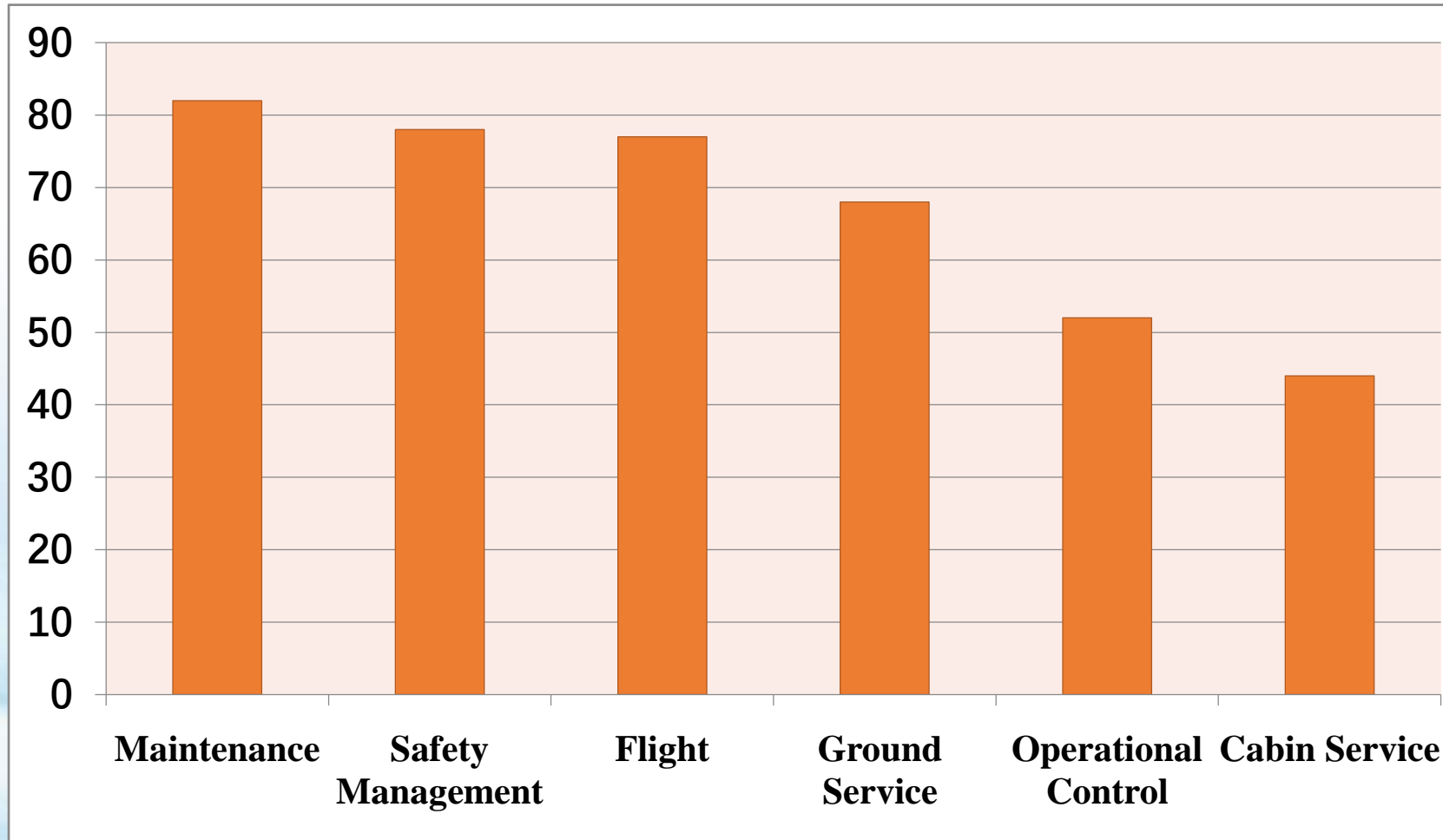
Comparison of seven system elements



Comparison of four properties of SMICG tool

# Conclusion and Effectiveness

APRAST/13  
Appendix C to the Report



Comparison of various departments

# Conclusion and Effectiveness

## □ Problems found in the evaluation and suggestions

### General report

**16 problems**

**6 suggestions**

### Sub-reports

**Nearly 100  
problems**

**Nearly 100  
suggestions**

# Conclusion and Effectiveness

## Works

- CAAC had implemented SMS performance evaluation for more than 40 certified operators and aerodromes by July 2018.

## Effectiveness

- The evaluated service providers have made significant improvements on safety culture, safety management and safety results.



# Conclusion and Effectiveness

	Number of voluntary reports	The ratio of the number of problems found by self- examination to the number of problems found by the organization	Number of incidents	Number of serious errors
2017	147	1.5	2	5
2018.1.-10.	758	3.7	0	2



**CAST**

China Academy of Civil Aviation

Science and Technology

APRAST/13  
Appendix C-2 to the Report

# Thanks!

[rongmei@mail.castc.org.cn](mailto:rongmei@mail.castc.org.cn)

# DATA-DRIVEN QUALIFICATION MANAGEMENT FOR AIRLINE PILOTS

Ming ZENG

Deputy Director of General Aviation Division

FSD. CAAC

Bangkok 3rd.Dec





Introduction to FSOP



Supporting principles for pilot qualification management



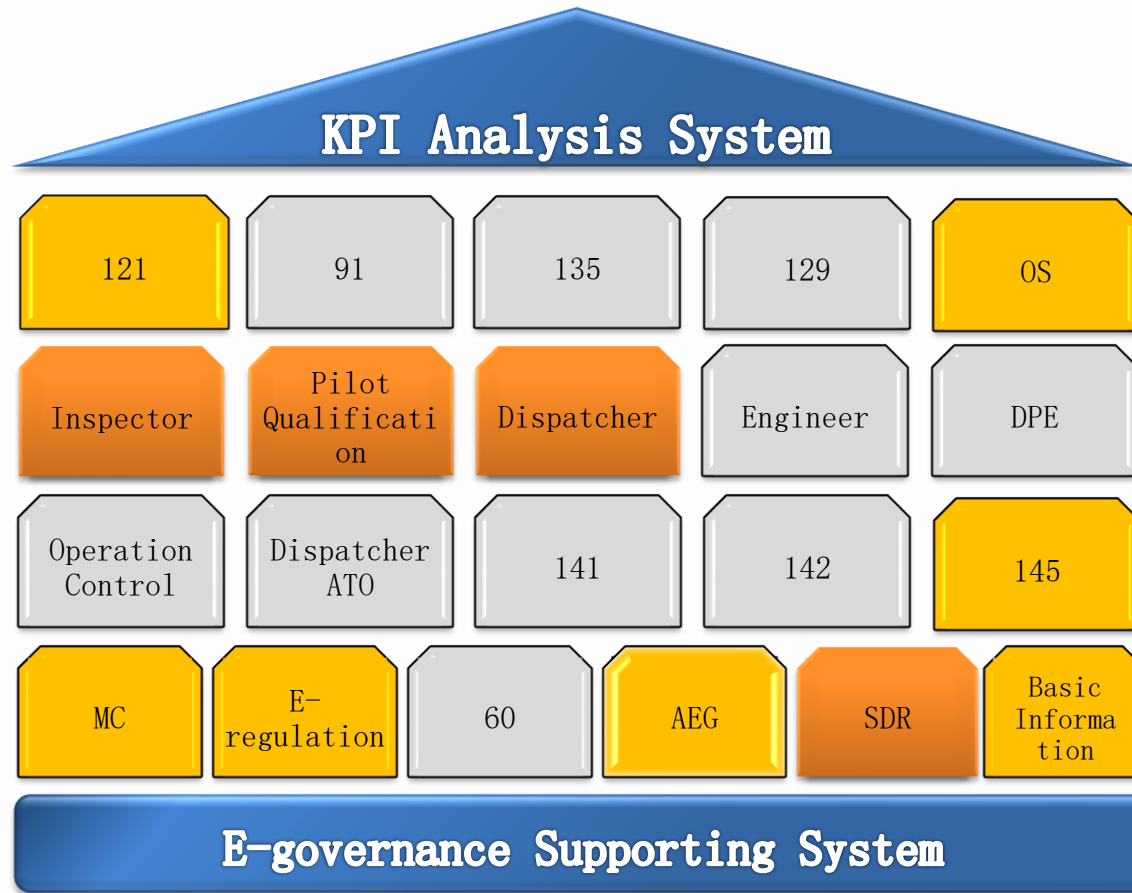
Supporting systems for pilot qualification management



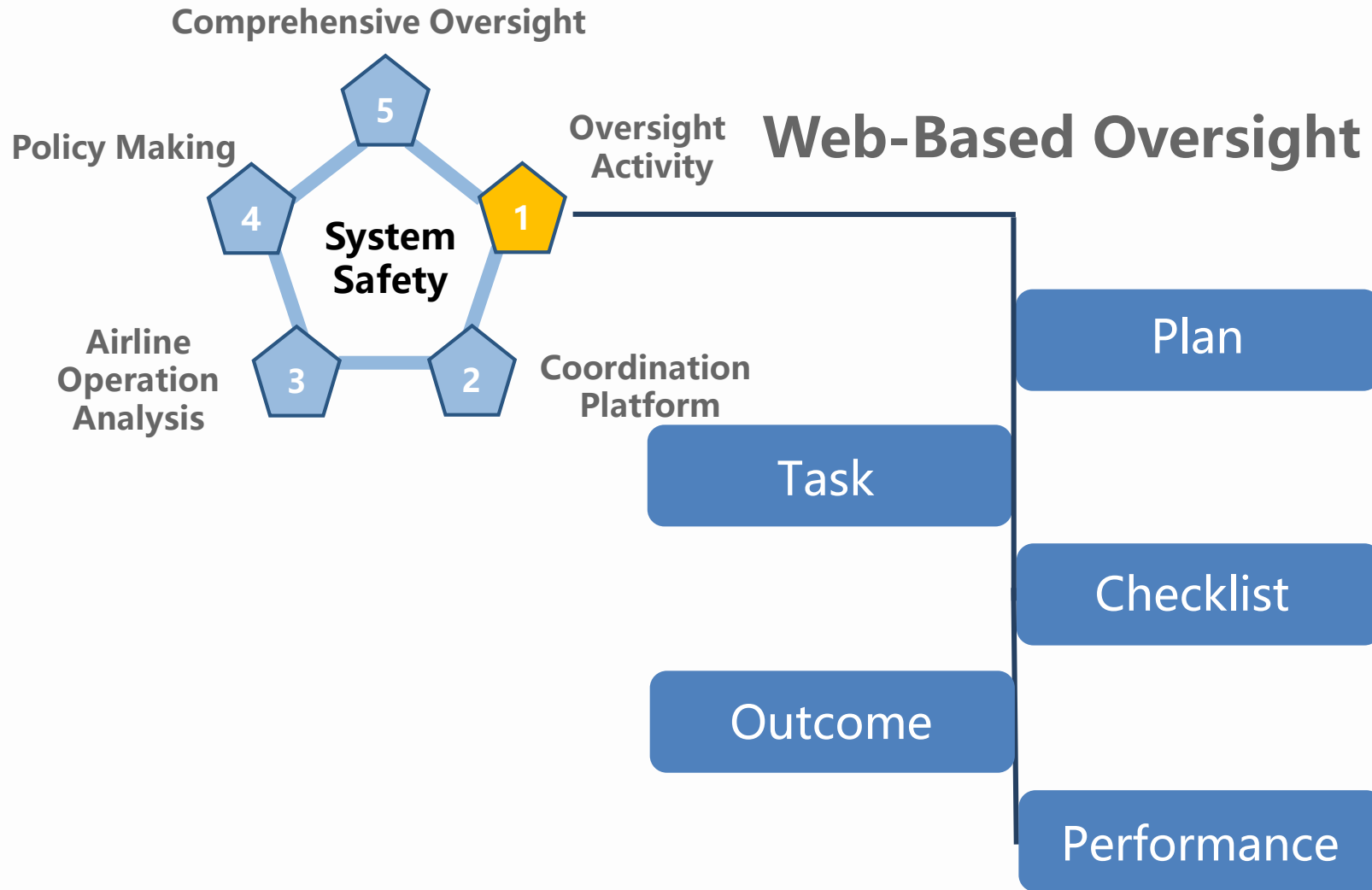
Full life-cycle qualification management

# Introduction to FSOP

## Flight Standards Oversight System



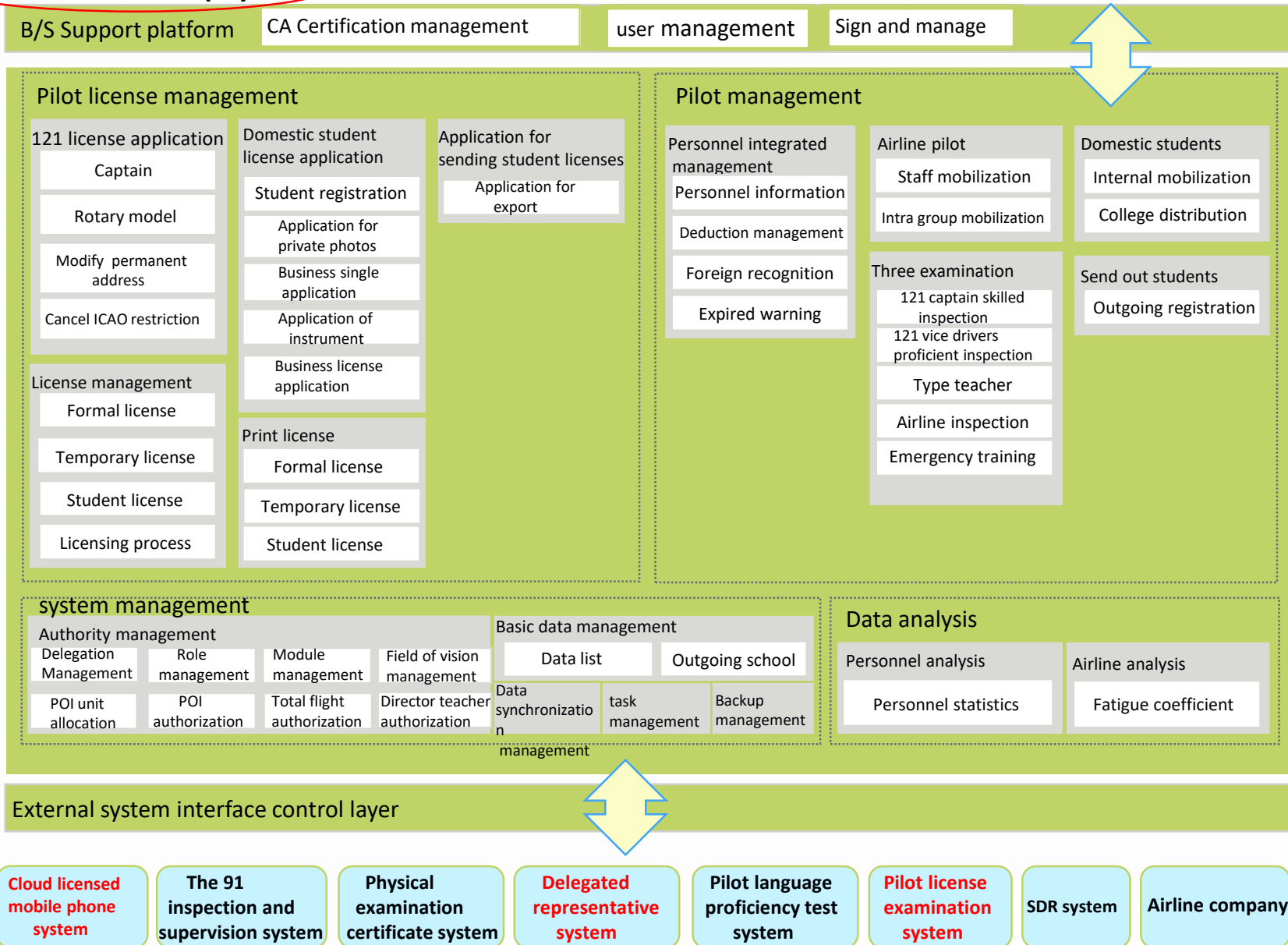
# Introduction to FSOP



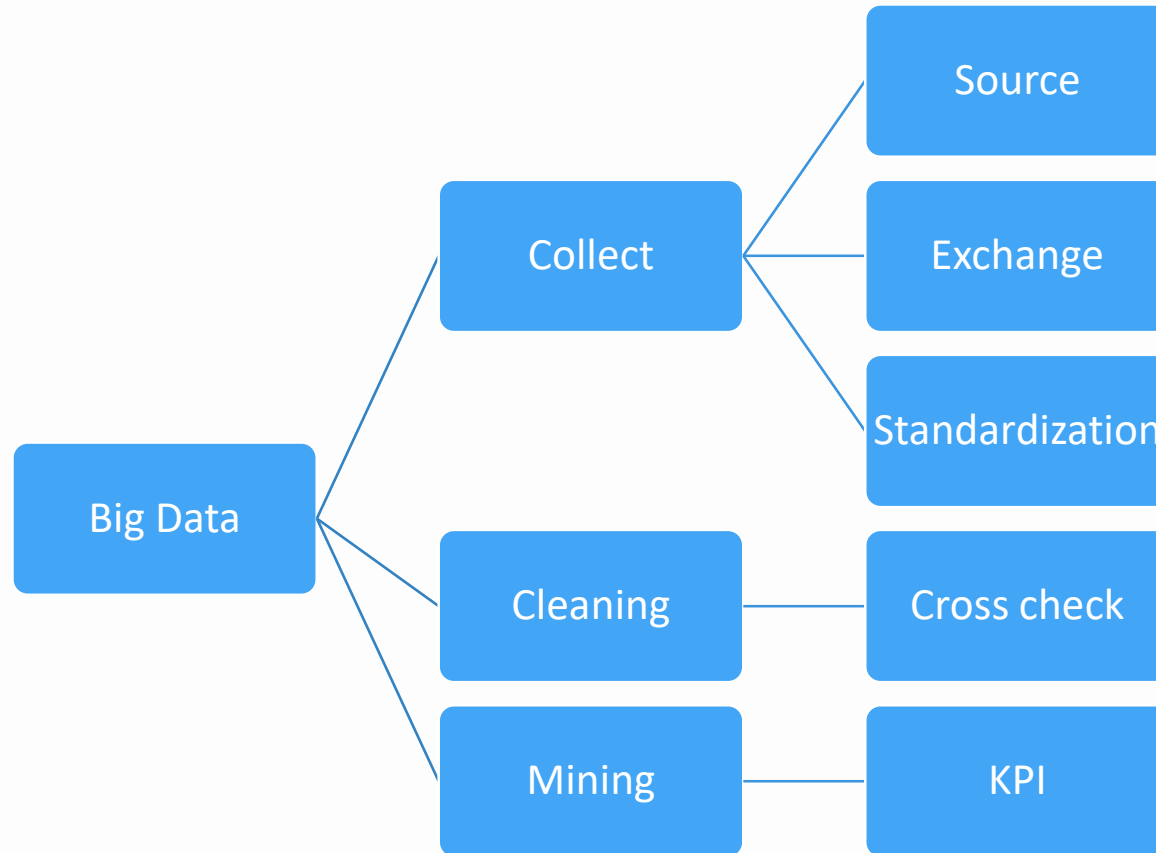
The civil  
aviation  
administration

airlines

Aviation school

**Cloud license desktop system**

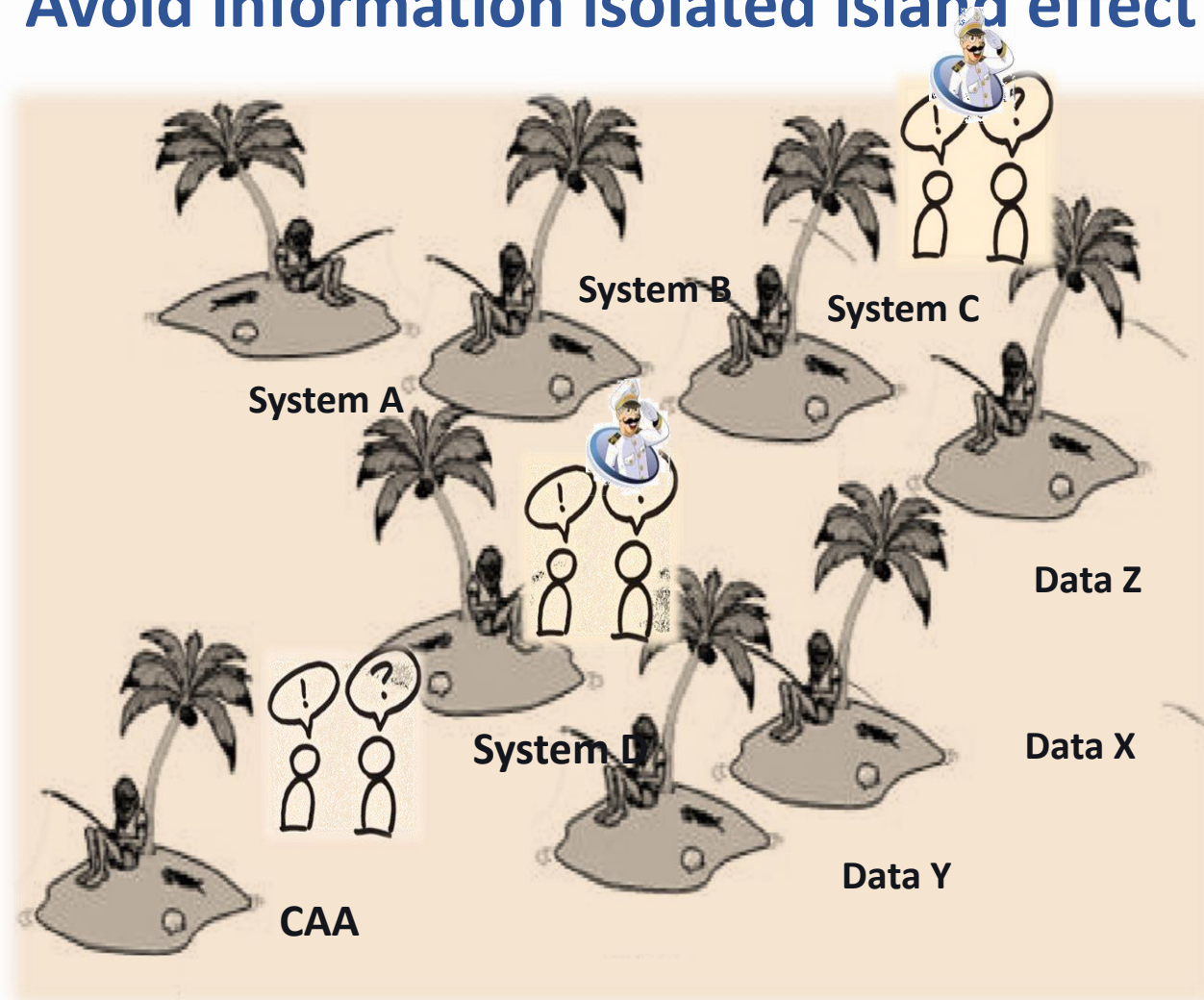
# Supporting principles





# Supporting principles – Data Exchange

## Avoid information isolated island effect



# Supporting principles – CBT/EBT



Australia  
Austria  
Belgium  
Canada  
China  
Colombia  
Denmark  
Finland  
France  
Germany  
Greece  
Iceland  
India  
Ireland  
Japan

Korea  
Malaysia  
Malta  
Oman  
Panama  
Peru  
Portugal  
Qatar  
Russia  
Singapore  
South Africa  
Spain  
Switzerland  
Taiwan  
UAE  
UK  
USA

# Supporting principles – CBT

## 9 competences



CRM

# Supporting principles – CBT

Training goal(Competency)  
lack of structure

Competency based

Designated Examiner's Report

Comments:

Result:

☐ Pass

☐ Fail

Examiner Cert. No. \_\_\_\_\_ Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

Training topic

Areas of Operation	Subject			Result		Remarks
	A	S	D	P	F	
I.PREFLIGHT PREPARATION						
A. Equipment examination						
B. Performance and limitation						
II.PREFLIGHT PROCEDURES						
A. Preflight Inspection ( Cockpit Only )						
B. Powerplant Start						
C. Taxiing						
D. Pre takeoff Check						

Topic  
evaluation

recurrent check

Aircraft

Date

Competencies	Competency Grading				
	1	2	3	4	5
Application of procedures					
Communication					
Flight path management- Automation					
Leadership and teamwork					
Problem solving and decision making					
Situation awareness					
Workload management					

Competency elements  
evaluation

Example scenario elements

Example scenario elements	Competency map				
	1	2	3	4	5
Predictive windshear warning before take-off, as applicable	x	x		x	
Adverse weather scenario, e.g. thunderstorm activity, precipitation, icing		x		x	x
Windshear encounter during take-off, not predictive	x		x	x	x
Predictive windshear warning during take-off		x		x	
Crosswinds with or without strong gusts on take-off	x	x		x	
Windshear encounter scenario during cruise	x	x	x	x	x
Read around	x	x	x	x	x
Predict around	x	x	x	x	x
Thun used	x			x	x
approach				x	x

Element evaluation

# Supporting principles – EBT

## Evidence Based Training

Standardized  
training  
syllabus

Standardized  
Instructor  
Evaluation

### Competency

Technique

Procedure

CRM

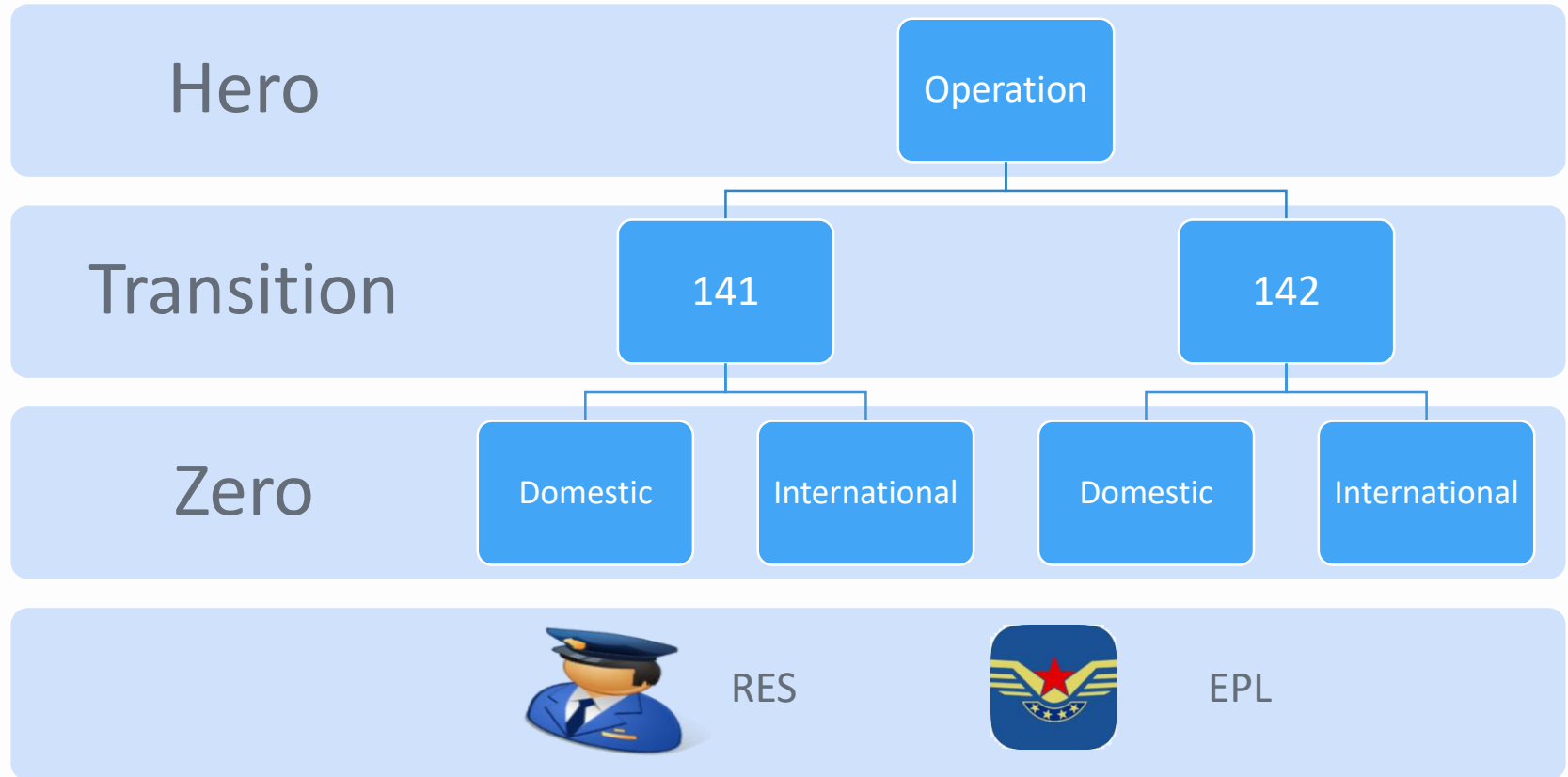
### Evidence

QAR

Unsafe  
Occurrence

LOSA

# Supporting systems





# Supporting systems - 141



Name	Region	Credit
张**	新疆管理局	-11
丁**	华北管理局	-10
齐**	中南管理局	-9
杜**	西北管理局	-7
索**	华东管理局	-7
聂**	西南管理局	-7
李**	中南管理局	-7
马**	华北管理局	-7
钱**	华东管理局	-6
孙**	华北管理局	-6
王**	新疆管理局	-6
何**	新疆管理局	-6
夏**	新疆管理局	-6
李**	华东管理局	-6
亓**	中南管理局	-6
晏**	西南管理局	-6

# Supporting systems - 141

## Data Analysis

Instructor  
recommendation  
pass rate

Knowledge  
deficiency

AR/VR training

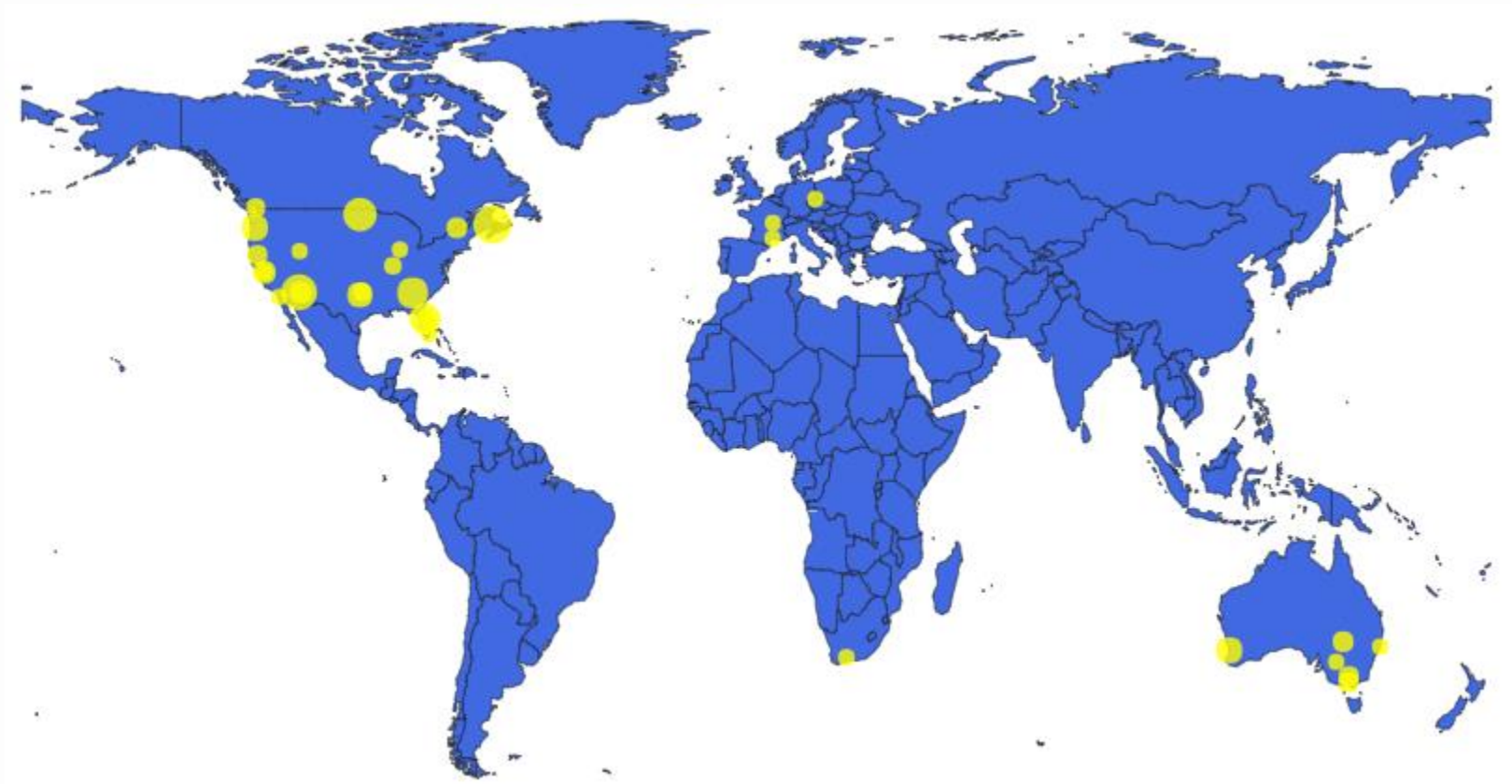
## Advanced Training Device





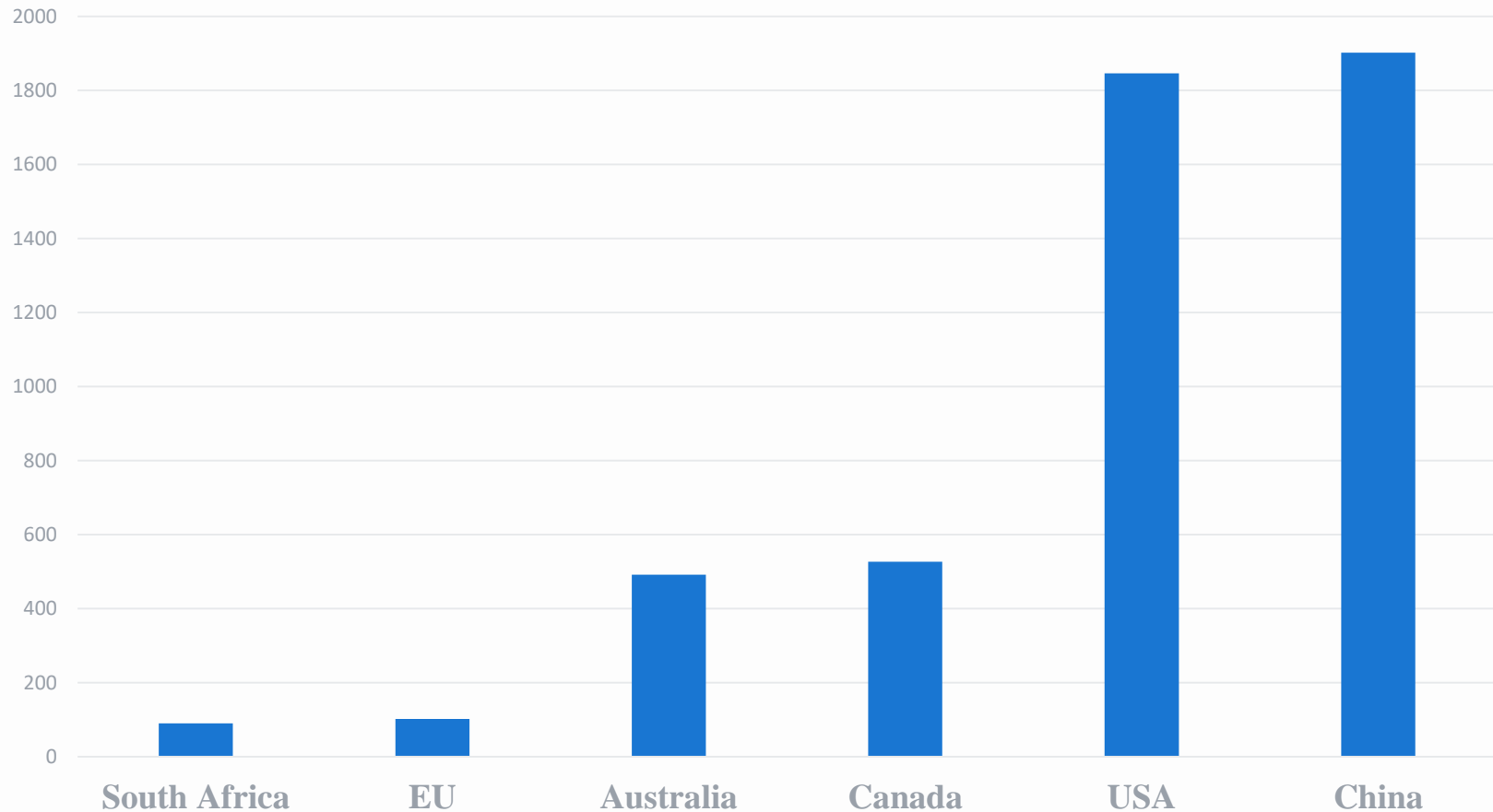
# Supporting systems - 141

Distribution of main operation bases of overseas CCAR-141 pilot schools in 2018




# Supporting systems - 141

Total number of graduates of integrated airline transport pilot course in 2018



# Supporting systems



民航飞行标准监督管理系统  
FLIGHT STANDARDS OVERSIGHT PROGRAM

曾鸣, 您好 [注销] 快速切换

141部驾驶员学校审定监察系统

检查单管理 申请事项 合格证管理 FAQ管理 问题反馈 日常持续监察 书架 国外航校合格审定 统计查询 基础信息管理

Certification of Pilot Schools

待审核记录

已审核记录

年度审定计划

未提交的记录

通告和参考资料

待审核记录

申请时间: 至 申请事项: (全部) Search

	申请事项编号	驾驶员学校名称	主业务办公室	申请日期	合格证类别	课程类别	审定小组负责人	工作节点	操作
1	54028118080320000010	ST AEROSPACE ACADEMY (AUSTRALIA) PTY LT	2 BOWRAL PLACE, MITCHELL PARK, BALLARAT, VICTOR	2018-08-30	申请事项变更	ATP(I), HPA	程雷萍 更改	待填写检查单	审核
2	54028118070320000003	U.S.Aviation Group, LLC dba U.S.Flight Academy	4850 Spartan Dr, Denton, Texas, USA	2018-07-31	合格证更新	ATP(I), HPA	韩光祖 更改	待填写检查单	审核
3	54028118070320000002	US AVIATION GROUP, LLC DBA US FLIGHT ACADEMY	4850 Spartan Drive, Denton, TX, USA	2018-08-01	合格证更新	ATP(I), HPA	韩光祖 更改	待填写检查单	审核
4	54028118090320000002	IASCO Flight Training	6460 Lockheed Drive, Redding, CA, USA	2018-09-10	合格证更新	ATP(I), HPA	程雷萍 更改	待填写检查单	审核
5	54028118080320000009	ENAC	7, avenue Edouard BELIN - CS54005, 31055 TOULOUSE cedex	2018-08-29	申请事项变更	ATP(I), HPA	程雷萍 更改	待填写检查单	审核
6	54028218030320000011	Spartan College of Aeronautics and Technology	8820 East Pine Street, Tulsa, Oklahoma, USA	2018-04-19	合格证更新	ATP(I), HPA	程雷萍 更改	待填写检查单	审核
7	54028218050320000004	TVSA Pilot Training	Cummings Road, Bacchus Marsh, VIC 3340, AUS	2018-05-21	初始申请	ATP(I)	韩光祖 更改	待填写检查单	审核
8	54028118090320000003	Clamback & Hennessy Pty Ltd	Hangar 61, Mildura Airport, MILDURA, AUS	2018-09-10	初始申请	ATP(I)	韩光祖 更改	待填写检查单	审核
9	54028118100320000003	AVIC-INTERNATIONAL FLIGHT TRAINING ACADEMY	P.O.Box 1093, Oudtshoorn, South Africa, 6620, West Cape, RSA	2018-10-12	合格证更新	ATP(I), HPA	程雷萍 更改	待填写检查单	审核

10 第 1 共 1 页 显示 1 到 9 共 9 记录

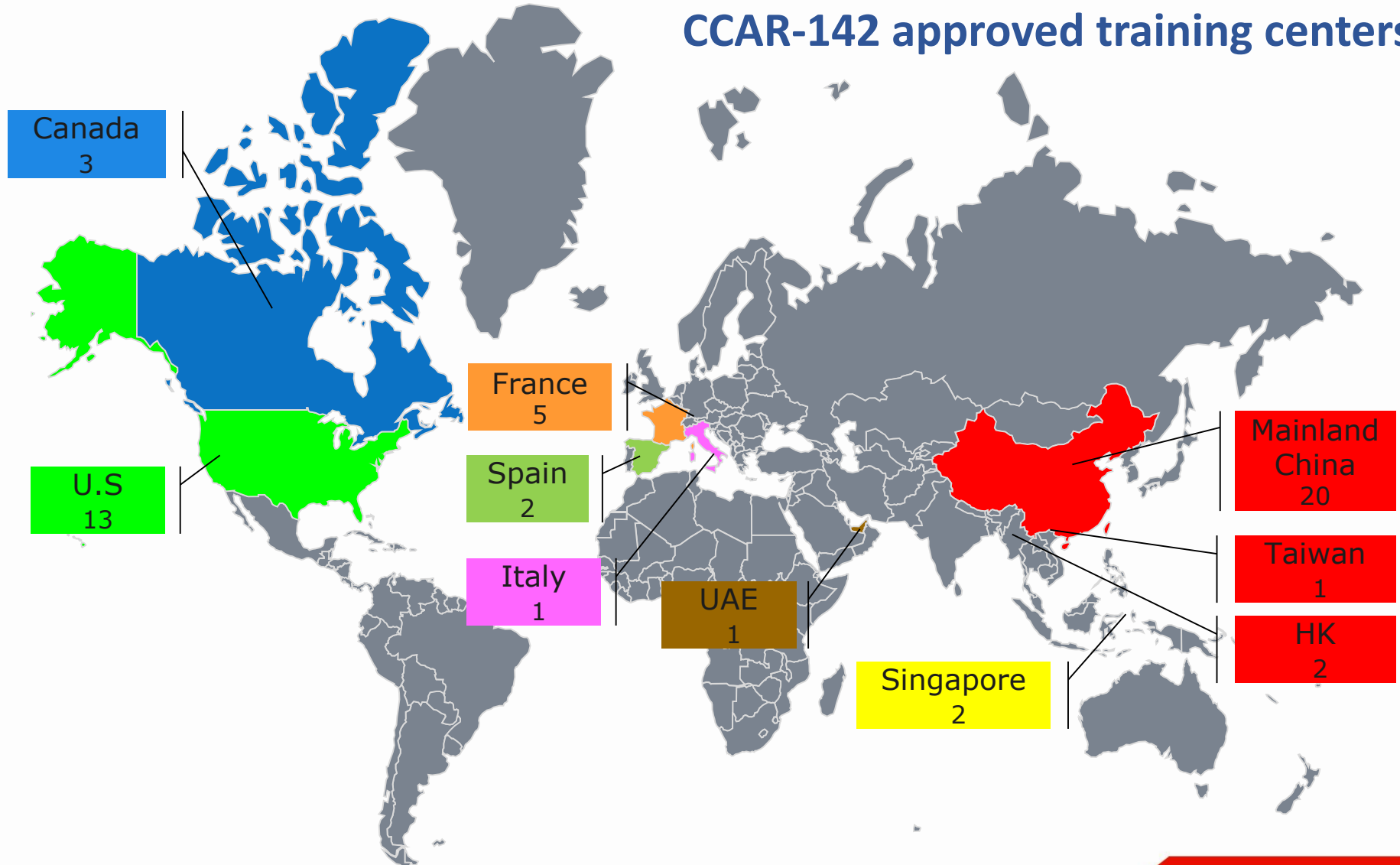
外送学校列表 新建

学校名称: 查询

	学校状态	许可证编号	英文名称	国家	地点	可接受人数	现有人数	操作
1	正常	V41	AVIC-INTERNATIONAL FLIGHT TRAINING ACADEMY (PTY) LTD	南非	P.O.Box 1003 Oudtshoorn, South Africa 6625	240	242	修改 删除
2	正常	V36	GRIFFITH AVIATION, INC	美国	1705 EAST MAIN STREET GRIFFITH IN 46319	90	59	修改 删除
3	正常	V13	L3 Commercial Training Solution Airline Academy	美国	2700 Flight Line Avenue Sanford, Florida 32773	330	362	修改 删除
4	正常	V02	MONCTON FLIGHT COLLEGE	加拿大	1719 CHAMPLAIN STREET DIEPPE NB E1A7P5	360	349	修改 删除
5	正常	V03	Montair Aviation Inc.	加拿大	7622 Montreal Street Boundary Bay Airport, Delta, BC V4K 0A7	180	173	修改 删除
6	正常	V05	CHINA SOUTHERN WEST AUSTRALIAN FLYING COLLEGE	澳大利亚	31-35 Eagle Drive Jandakot airport Western Australia, 6164 Australia	30	0	修改 删除
7	正常	V06	CARGAIR LTEE	加拿大	6100 CHEMIN DE L' AEROPORT ST-HUBERT, QC J3Y 8Y9 CAN	190	156	修改 删除
8	正常	V07	US AVIATION GROUP, LLC DBA US FLIGHT ACADEMY-GRAYS	美国	North Texas Regional Airport KGYI	140	155	修改 删除
9	正常	V08	FLIGHTSAFETY ACADEMY A DIVISION OF FLIGHT SAFETY INTERNATIONAL	美国	2805 AIRPORT DRIVE, VERO BEACH FLORIDA 32961 USA	0	258	修改 删除
10	正常	V09	HILLSBORO AERO ACADEMY, LLC DBA AIRMAN'S PROFICIENCY	美国	3565 N.E. CORNELL ROAD HELLSBORO, OREGON 97124 USA	270	298	修改 删除

# Supporting systems - 142

## CCAR-142 approved training centers



## Supporting systems - 142



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已办结

飞行训练中心

输入飞行训练中心名称

申请日期

至

申请项目描述

状态

请选择

查询

办理时限	事项编号	申请项目描述	申请类型	飞行训练中心	申请日期	状态	运行规范(已签字/总数)
2018-11-26[3]	54027018110310000029	新加地面理论教员和ACPC教员; 训练记录保存...	修订	春秋飞行培训有限公司飞行训练部-春秋飞行培训有限公司飞行训练部	2018-11-19	待受理	0/2
2018-11-22[1]	54027018110310000027	1) 由于云南飞培获得独立142部, 修订研发中...	修订	东航技术应用研发中心有限公司 China Eastern Technology Application Research and Development Center CO.,LTD.	2018-11-15	待受理	0/7
2018-11-02[已逾期]	54027018100310000019	申请新加模拟机教员和地面理论教员	修订	春秋飞行培训有限公司飞行训练部-春秋飞行培训有限公司飞行训练部	2018-10-26	待受理	0/1
公司补正中	54027018040310000007	CCAC approval	审定	CAE英国训练中心/CAE UK Training Center	2018-03-08	待受理	0/12
公司补正中	54027018110310000003	Change of Accountable Manager (Fabrice H...	修订	空客图卢兹训练中心/Airbus Training Centre of Toulouse	2018-11-02	退回	0/2
公司补正中		renewal of Airbus Training CCAR142 certi...	修订	空客图卢兹训练中心/Airbus Training Centre of Toulouse	2017-07-04	退回	0/16
公司补正中		Application for Flight Simulators Traini...	修订	CAE马德里训练中心/Servicios de Instrucción de Vuelo, S.L.	2017-05-17	退回	0/1
技术审查	54027018110310000031	Update of Approved Examiner - Tomaz Kori...	修订	空客图卢兹训练中心/Airbus Training Centre of Toulouse	2018-11-20	审批中	0/1
技术审查	54027018110310000025	Branch Training centre to be added	修订	CAE阿联酋飞行训练中心/EMIRATES-CAE Flight Training	2018-11-14	审批中	0/7
[0]	54027018110310000019	修改运行规范, 修订训练大纲, 添加ARJ21飞...	修订	上海飞机客户服务有限公司客户培训中心/上海飞机客户服务有限公司客户培训中心	2018-11-08	审批中	0/1
技术审查	54027018110310000015	A330、B738、B744 及 A350、B777 相融飞行...	审定	中华航空公司飞行训练中心/China Airlines Flight Training Center	2018-11-06	审批中	0/17
[0]	54027018100310000023	我培训中心第七台模拟机于2018年09月19日完...	修订	四川航空集团有限责任公司培训中心/Sichuan Airlines Training Center	2018-10-30	审批中	0/1
技术审查	54027018090310000032	Application for renewal of CCAR-142 cert...	审定	飞安国际东威奇塔训练中心/FSI Wichita East Learning Center	2018-09-29	审批中	0/17
技术审查	54027018090310000005	Application to renew certificate #008-US	审定	飞安国际威尔明顿训练中心/FSI Wilmington Learning Center	2018-09-05	审批中	0/17
[0]	54027018090310000002	增加王侯德、程真能、盛力、周琦、王闰超、...	修订	东航技术应用研发中心有限公司 China Eastern Technology Application Research and Development Center CO.,LTD.	2018-09-05	审批中	0/1
[0]	54027018080310000026	因山东航空股份有限公司培训部拟增加CC...	修订	山东航空股份有限公司培训部/Shandong International Aviation Training Co., Ltd	2018-08-16	审批中	0/7
[0]	54027018070310000003	C004合格证持有人聘用的教员信息资料补全	修订	春秋飞行培训有限公司飞行训练部-春秋飞行培训有限公司飞行训练部	2018-07-02	审批中	0/1



# Supporting systems - 142



## SIM QR Code

模拟机合格证

飞行模拟训练设备信息  
FLIGHT SIMULATION TRAINING  
DEVICE INFORMATION

合格证编号/CERTIFICATE NO.  
FSD-273

运营人名称/NAME OF OPERATOR  
上海青浦东方飞行培训有限公司  
Shanghai Qingpu Eastern Flight Training  
Co.,LTD.

设备型号/DEVICE MODEL  
A320-200

飞行模拟训练设备类型/TYPE OF FSTD  
A320-200 FFS #9

发动机型号/ENGINE MODEL  
CFM 56-5B4,CFM 56-5B4/AE V2527-  
A5,IAE V2527-A5

生产厂家、序列号/FSTD MAN./SN.  
CAE, 108736(2TYN)

设备安装地点/LOCATION  
上海, 青浦/Qingpu, Shanghai

有效期/VALID DATE (当前有效/Valid)  
二〇一九年二月二十日/FEB.20,2019

鉴定等级/LEVEL  
D级

制证日期/PRINT DATE  
二〇一八年八月二十日/AUG.20,2018

颁发单位/ISSUED BY  
中国民用航空局飞行标准司  
FLIGHT STANDARDS DEPT., CAAC

最近一次鉴定类型/RECENT  
IDENTIFICATION OF THE TYPE OF  
附加鉴定/Additional Identification

鉴定标准/IDENTIFICATION STANDARD  
CCAR-60

最近一次鉴定人员、电话和邮箱/RECENT  
IDENTIFICATION PERSONNEL/TEL AND  
EMAIL  
廖红伟/010-  
64473626/laohongwei@123.com  
黄健/010-64473583/huangjian@temo.com

最近一次鉴定日期/A RECENT APPRAISAL  
DATE  
二〇一八年八月十四日/AUG.14,2018

最近一次保留故障类型及故障数量/RECENT  
RETENTION FAULT LEVEL AND NUMBER  
III类故障 (12条) /Level III (12  
Article(s))

设备信息/DEVICE INFORMATION  
HUD,RNP  
AR,GPS,CDU,EGPWS,EFIS,WXR,TCAS,W/S,

我的服务

查看考试成绩 委任代表查询 检查员查询

报注申请 报注审批 学生注册

执照申请 教员维修 考试申请人

考试 考试检查 档案号二维码

扫一扫 扫一扫 扫一扫

关于 检查更新 退出登录

执照 体检合格证 记录本 我的

EPL

飞行模拟训练设备合格证  
FLIGHT SIMULATION TRAINING DEVICE CERTIFICATE

合格证编号/CERTIFICATE No. FSD-273

运营人名称/NAME OF OPERATOR  
上海青浦东方飞行培训有限公司  
Shanghai Qingpu Eastern Flight Training Co.,LTD.

飞行模拟训练设备类型、发动机型号/TYPE OF FSTD/ENGINE MODEL  
A320-200 FFS #9/ PW 1127G-JM, CFM Leap-1A26,  
CFM 56-5B4, IAE V2527-A5

飞行模拟训练设备生产厂家、序列号/FSTD MAN./SN.  
CAE/108736(2TYN)

地址/LOCATION  
上海, 青浦 / Qingpu, Shanghai

经鉴定, 确认该飞行模拟训练设备满足中国民用航空规章  
CCAR-60 部 D 级要求。  
除被放弃、暂扣或撤销外, 本合格证有效期遵循 CCAR-60 部第  
60.19 条的相关规定。  
This is to certify that this FSTD complies with CCAR-60 level D  
requirements upon evaluation.  
The validity of this certificate, unless waived, suspended, or revoked,  
shall comply with CCAR-60.19.

颁证单位/Issued by  
中国民用航空局飞行标准司  
FLIGHT STANDARDS DEPT., CAAC

签字/Signature

制证日期/Print Date 二〇一八年八月二十日/AUG.20,2018



Public

飞行模拟训练设备信息  
FLIGHT SIMULATION TRAINING DEVICE INFORMATION

合格证编号/CERTIFICATE NO.  
FSD-273

运营人/OPERATOR  
上海青浦东方飞行培训有限公司  
Shanghai Qingpu Eastern Flight Training Co.,LTD.

飞行模拟训练设备类型/TYPE OF FSTD  
A320-200 FFS #9

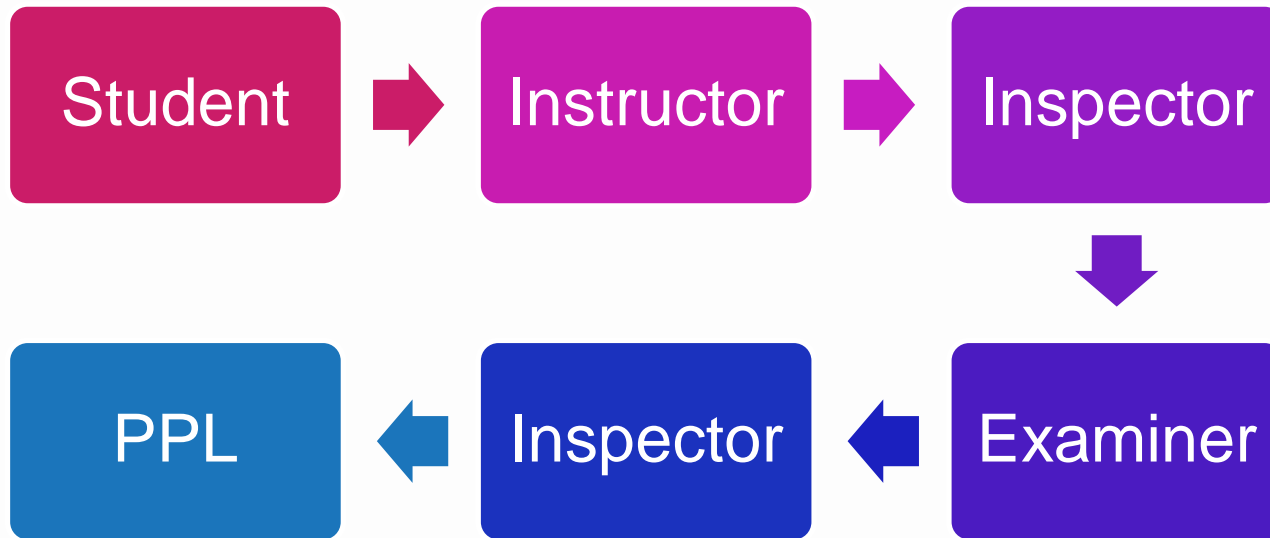
有效期/EXPIRY DATE (当前有效/Valid)  
二〇一九年二月二十日/FEB.20,2019

鉴定等级/QUALIFICATION LEVEL  
D级

制证日期/PRINT DATE  
二〇一八年八月二十日/AUG.20,2018

颁发单位/ISSUED BY  
中国民用航空局飞行标准司  
FLIGHT STANDARDS DEPT., CAAC

# Supporting systems - RES





# Supporting systems

## Mutual Evaluation ( applicant ) — count backwards top 10

No.	License No.	NAME	SCORE	No. of EXAM
1	37108XXXXXXXXX4801X	于X庆	-4	5
2	62288XXXXXXXXX0432	李X儒	-3	4
3	53252XXXXXXXXX0016	赵X翰	-3	4
4	61010XXXXXXXXX7336	俞X	-3	4
5	23032XXXXXXXXX0017	孙X	-3	3
6	14260XXXXXXXXX2831	钟X	-3	3
7	34262XXXXXXXXX2312	周X飞	-3	3
8	32012XXXXXXXXX1612	潘X	-3	3
9	23022XXXXXXXXX1714	崔X	-3	3
10	37030XXXXXXXXX6233	丁X磊	-3	3





# Supporting systems

## Mutual Evaluation ( DPE ) — count backwards top 10

No.	License No.	NAME	SCORE	No. of EXAM
1	43010XXXXXXXXX2516	田X	0	1
2	51070XXXXXXXXX1219	李X	3	1
3	42010XXXXXXXXX1539	张X	3	1
4	GBR.2XXXXX6A	Peter XXXX	3	1
5	12010XXXXXXXXX5138	王X明	3	1
6	GBR4XXXXX4L	Khosro XXXX	3	1
7	34080XXXXXXXXX2470	徐X	3	1
8	12011XXXXXXXXX0312	匡X	3	1
9	37021XXXXXXXXX8519	高X	3	1
10	42010XXXXXXXXX0454	彭X华	3	1

# Supporting systems - RES

## Dynamic performance push notifications

Supervision action	Test pass rate (2 months)	Test No.	Operator fatigue index
Suggest	$\geq 95\%$ 或 $\leq 30\%$	$\geq 20$	$\geq 1.05$
Urgent	$\geq 95\%$ 或 $\leq 30\%$	$\geq 30$	1.08
mandatory	$\geq 95\%$ 或 $\leq 30\%$	$\geq 40$	$\geq 1.1$



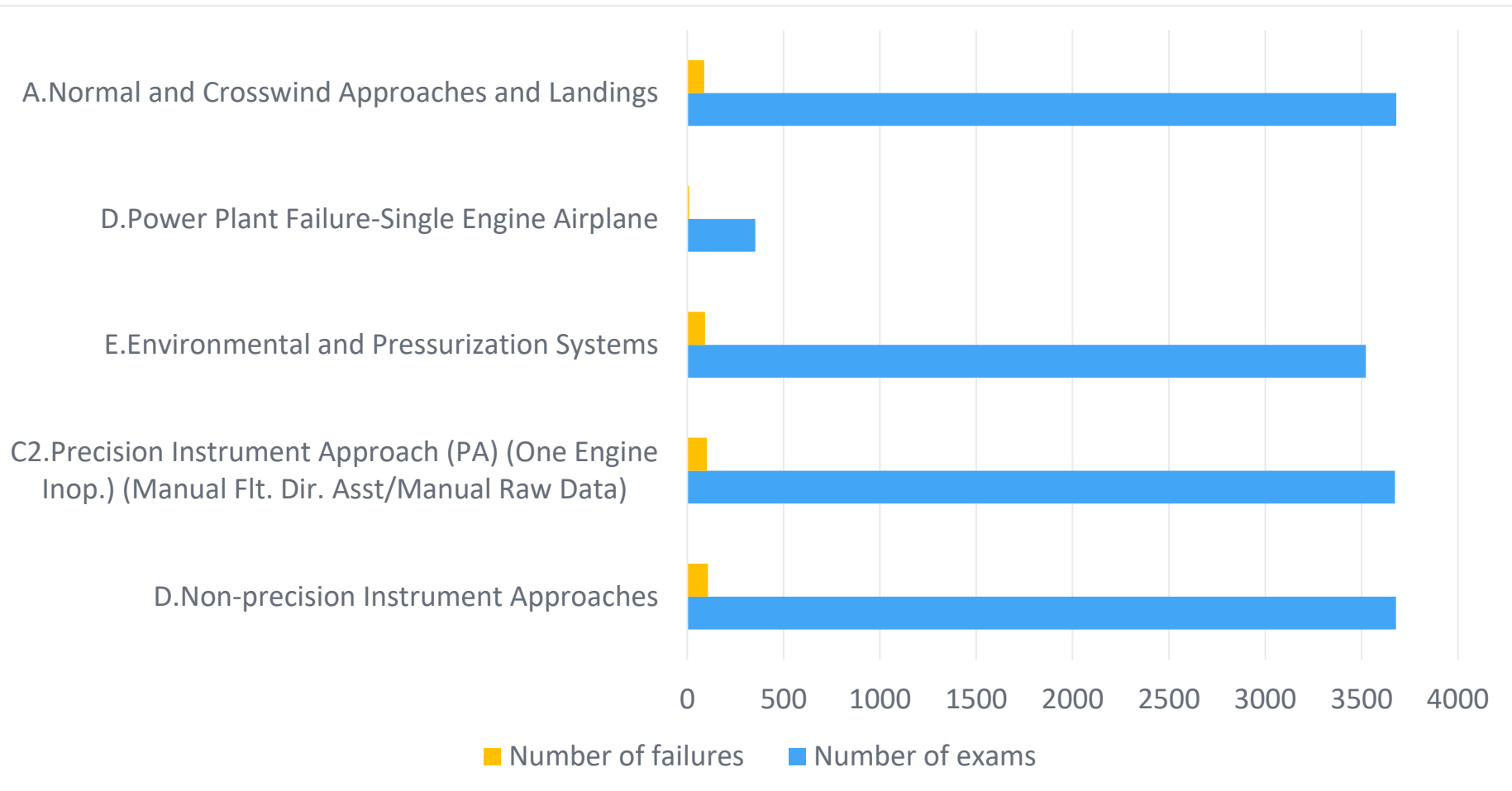
# Supporting systems

## PART 121 flight test and check pass rate TOP 10

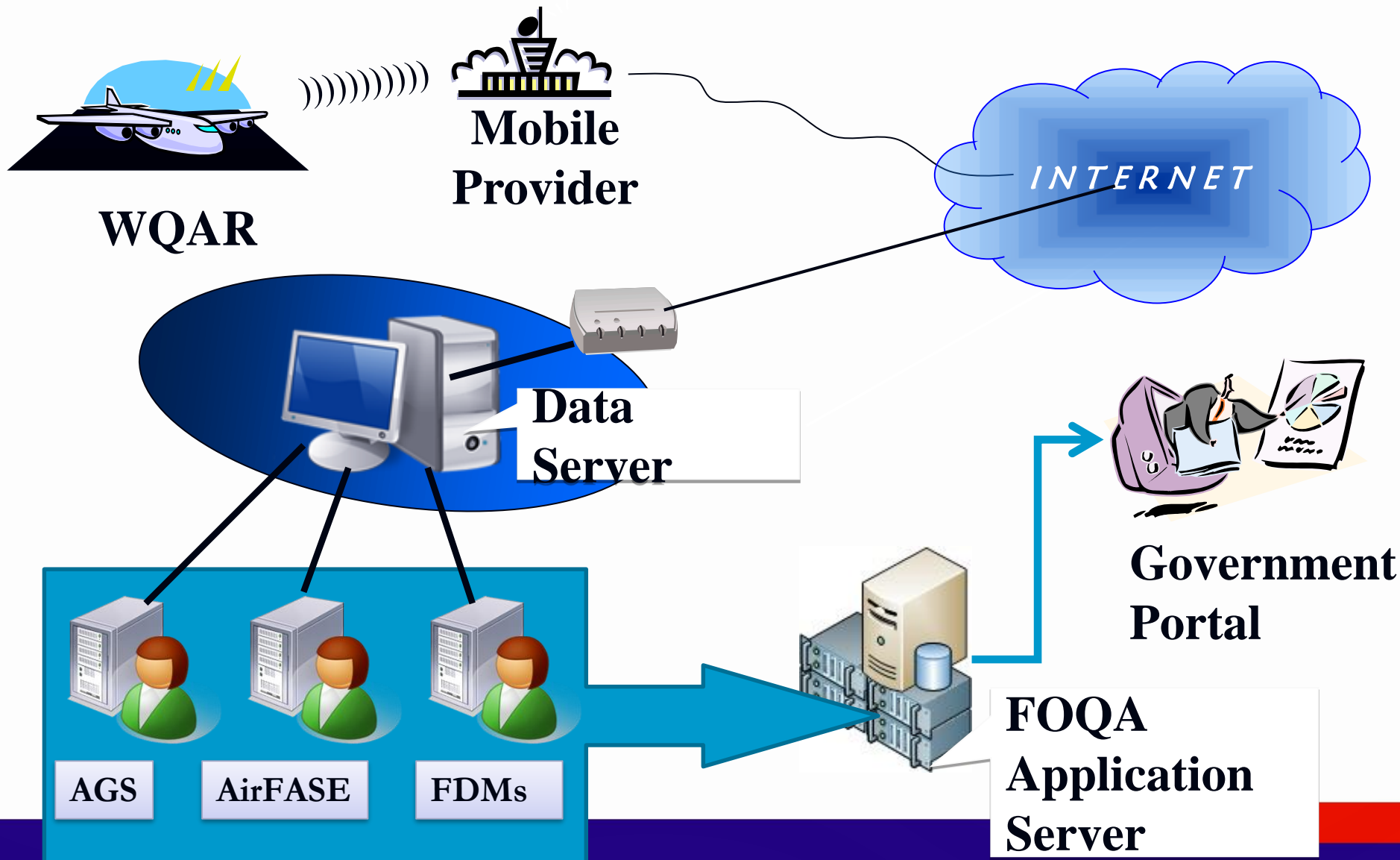
No.	DPE License No.	DPE NAME	PASS No.	TEST No.	Pass rate
1	21010XXXXXXXXX1214	郭X军	322	322	100%
2	42010XXXXXXXXX2038	王X太	129	129	100%
3	61010XXXXXXXXX3754	杨X刚	127	127	100%
4	4304XXXXXXXXX3518	汪X	113	113	100%
5	42010XXXXXXXXX3354	田X	108	108	100%
6	31010XXXXXXXXX4393	曹X波	108	108	100%
7	21130XXXXXXXXX0810	陈X刚	107	107	100%
8	44011XXXXXXXXX4817	张X	104	104	100%
9	42010XXXXXXXXX4018	李X华	103	103	100%
10	61010XXXXXXXXX5714	杨X生	103	103	100%

# Supporting systems

## PART 121 practical test fail items Top 5

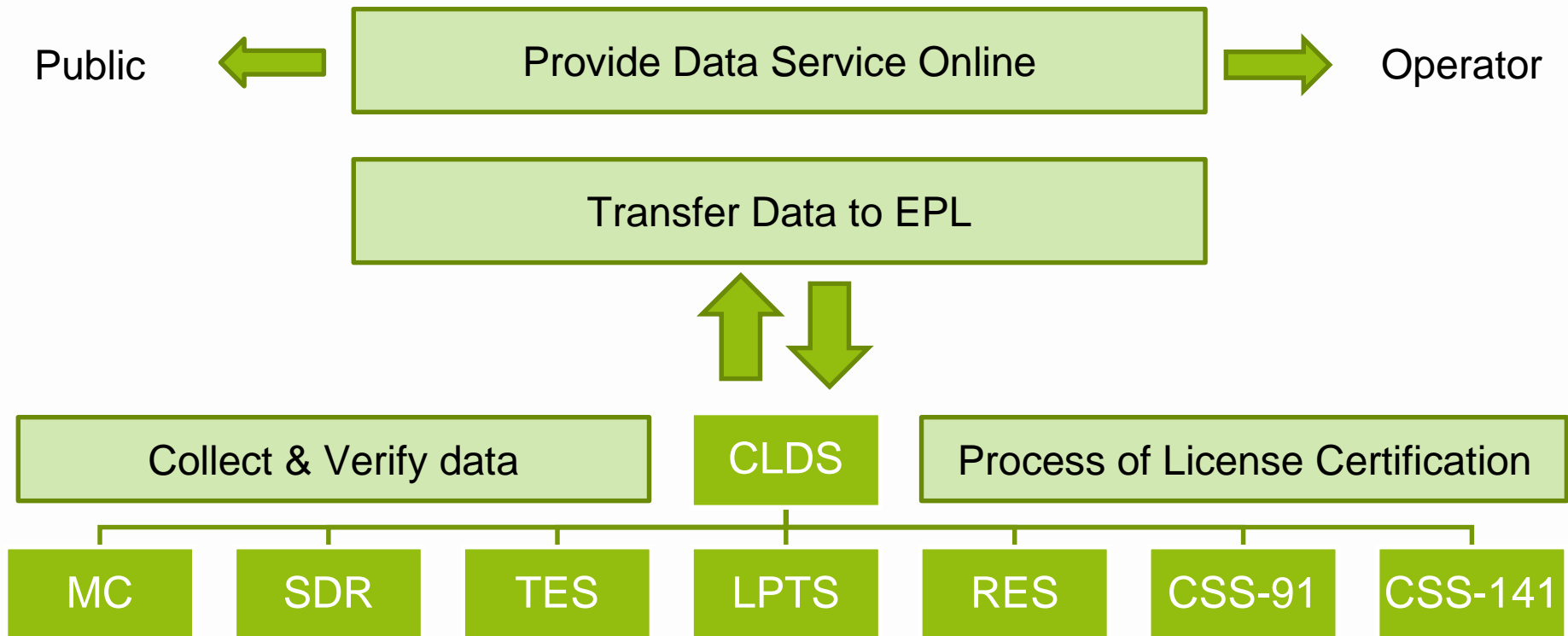


# Supporting systems - FOQA

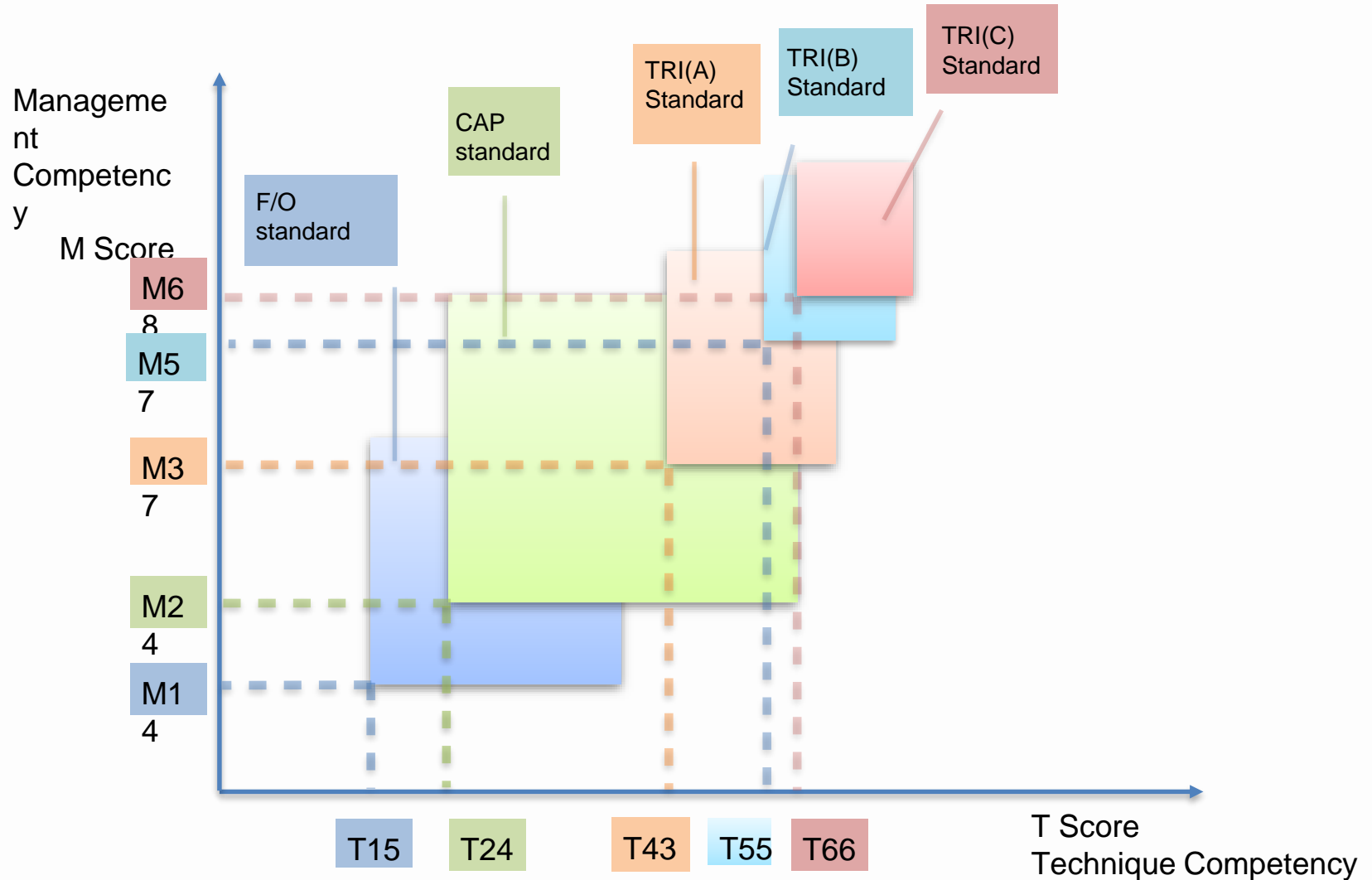


# Supporting systems

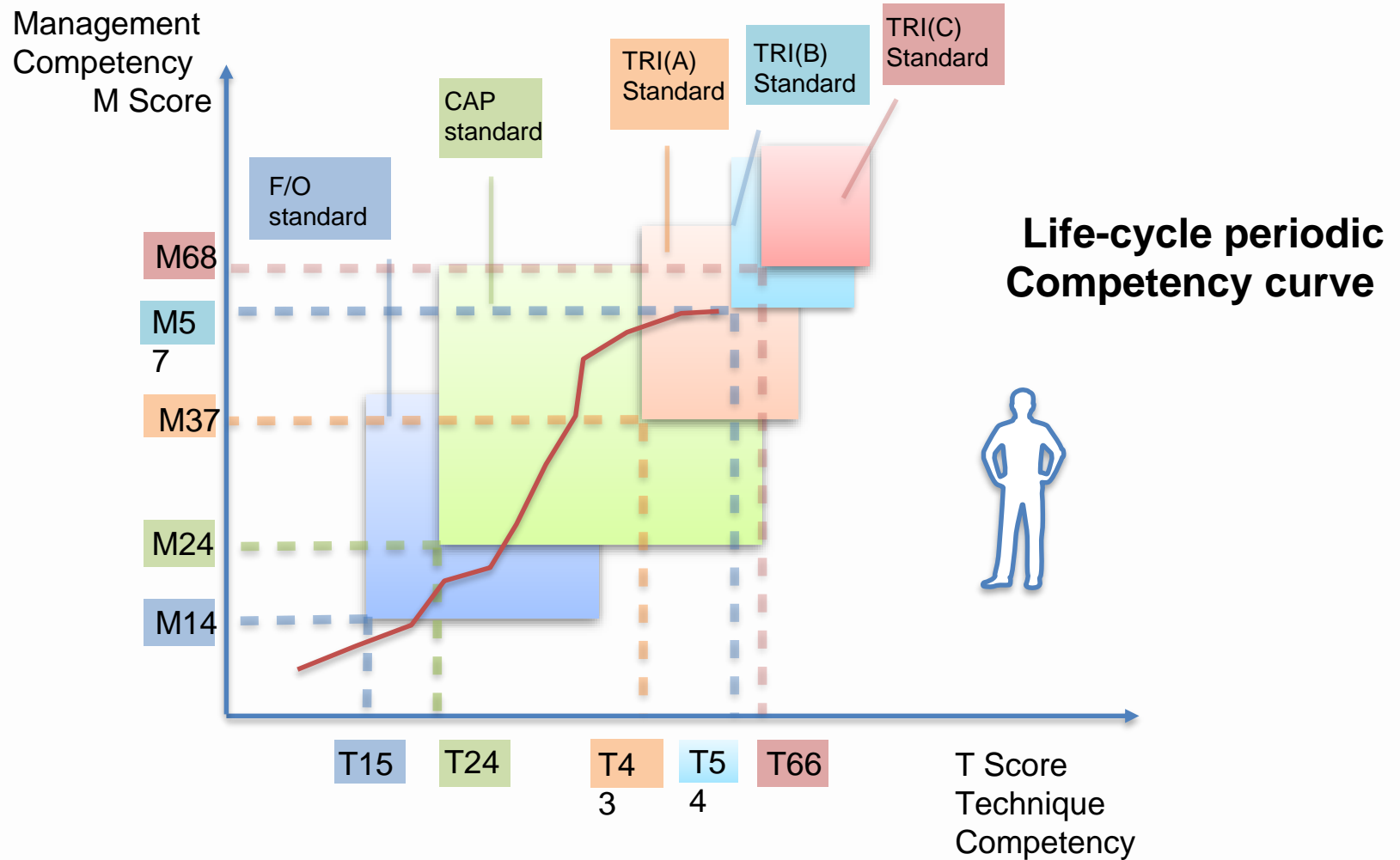
## Relationship between different support systems



# Full life-cycle qualification management

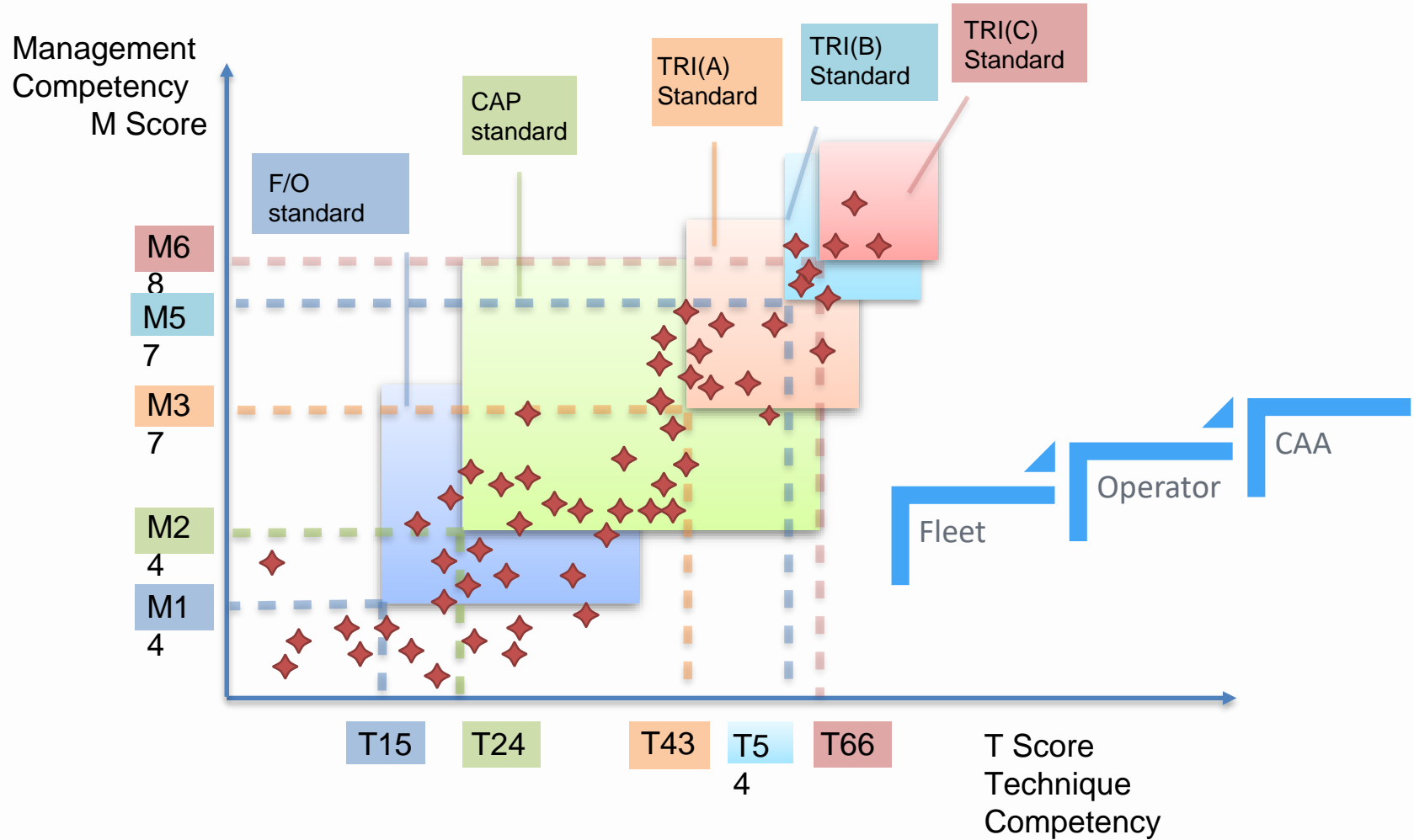


# Full life-cycle qualification management

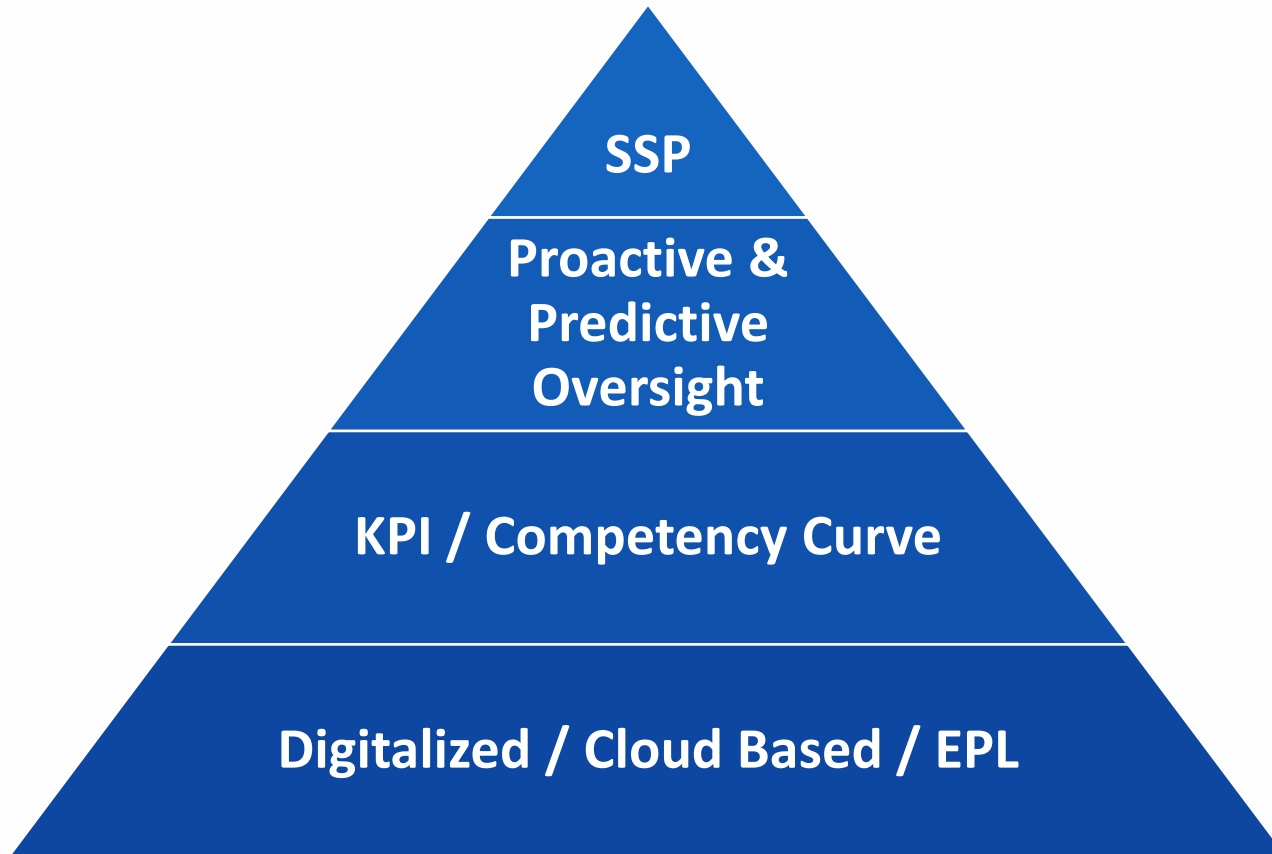




# Full life-cycle qualification management



# Conclusion





# THANK YOU!

**Ming ZENG**

[zengming@caac.gov.cn](mailto:zengming@caac.gov.cn)

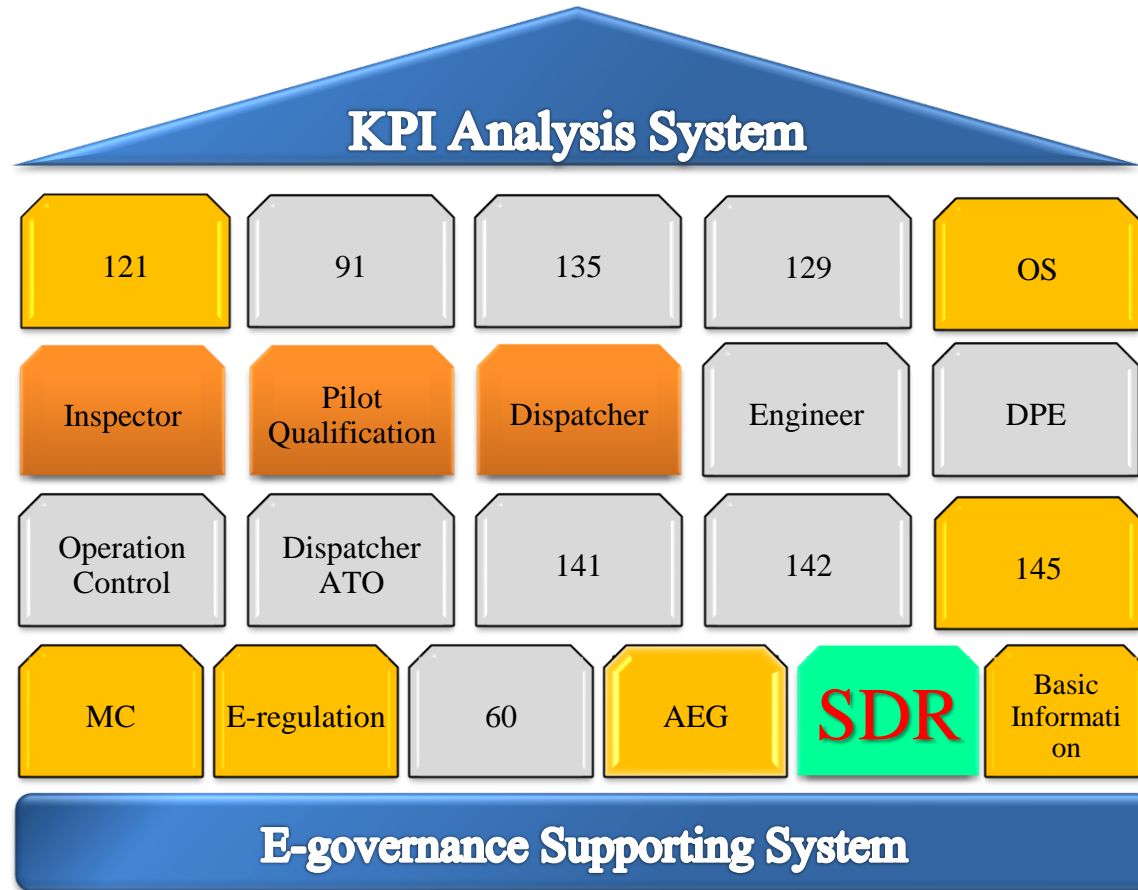


# Safety Performance Improvement By SDR Data Screening

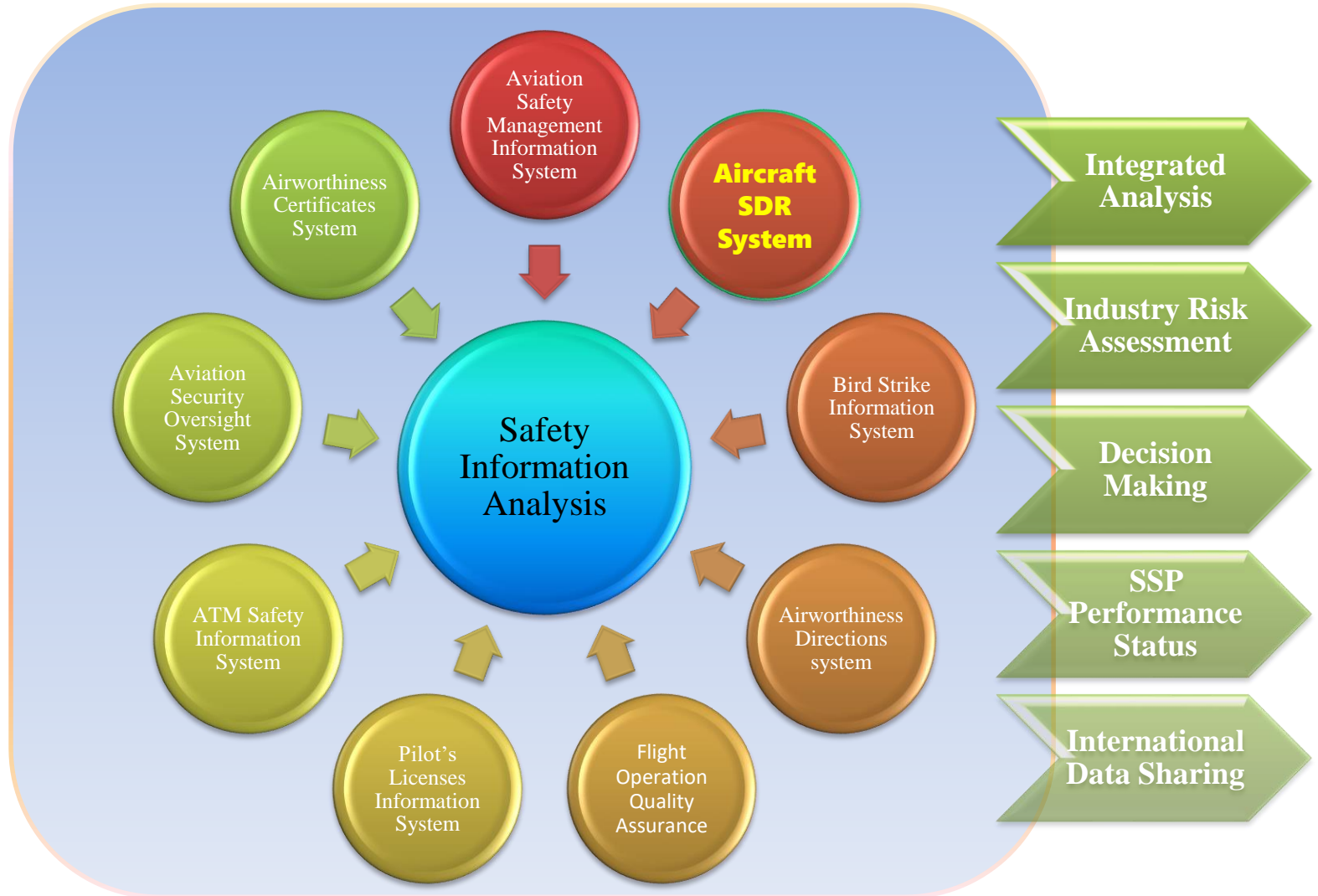
Huang Xin  
Inspector, Flight Standards Department, CAAC  
People's Republic of China  
2018.12.3

- Chinese operators are required to report abnormal events related to operation safety. The Service Difficulty Report (SDR) refers to failures, malfunctions or defects of aircraft systems, structures and components which might leads to operation unsafety.

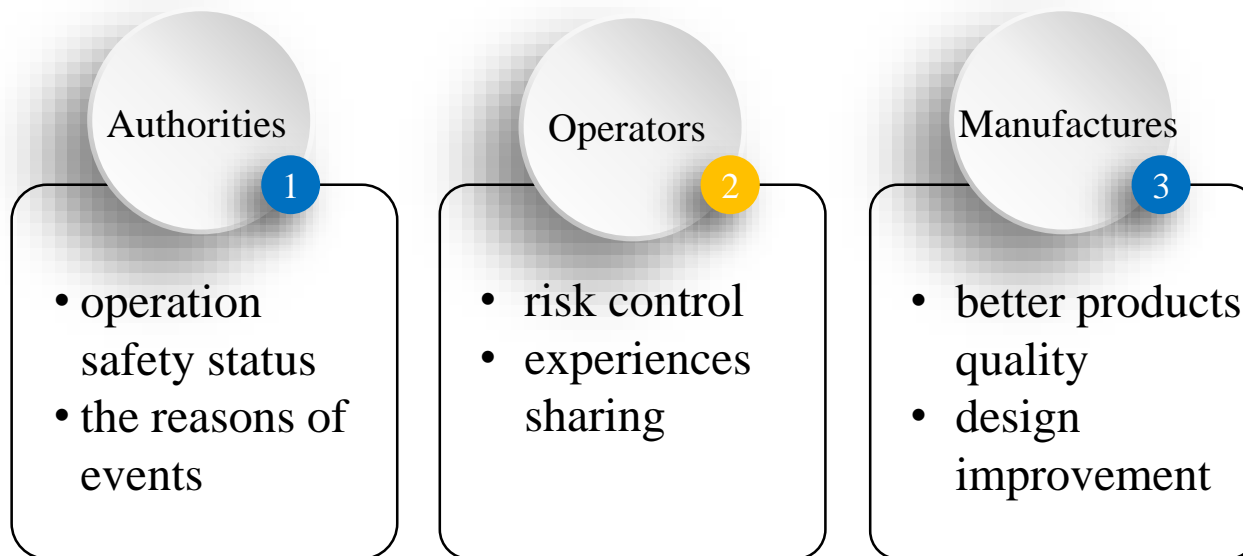
# Flight Standards Oversight System



# Safety Data Collection Analysis and Exchange

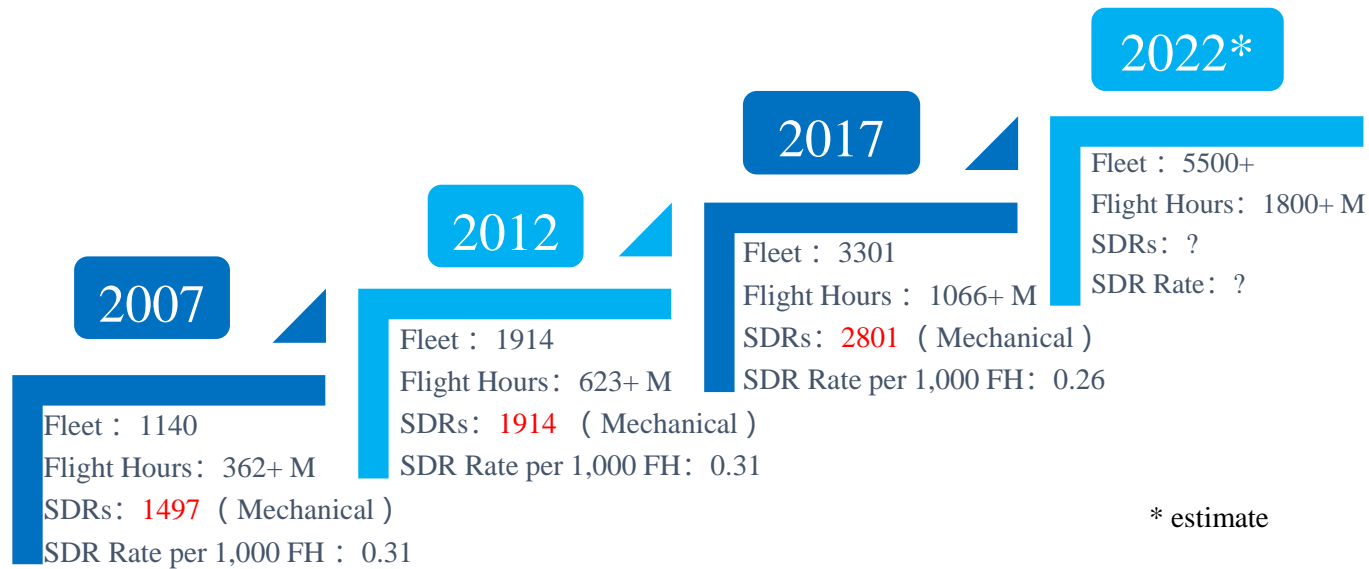


## How we use SDRs





## China SDRs In Recent Years

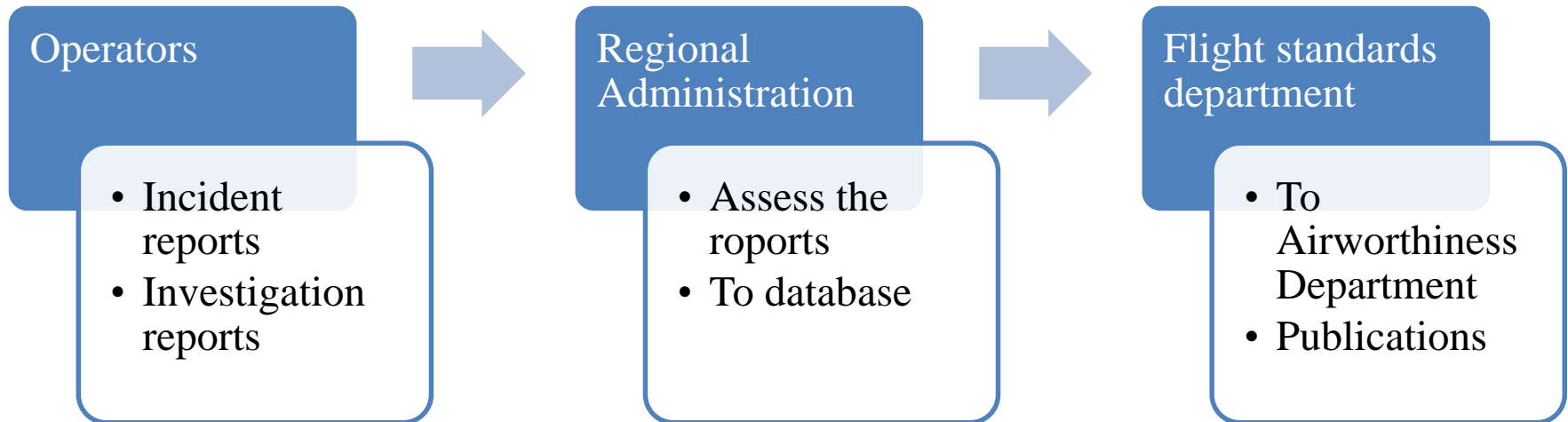


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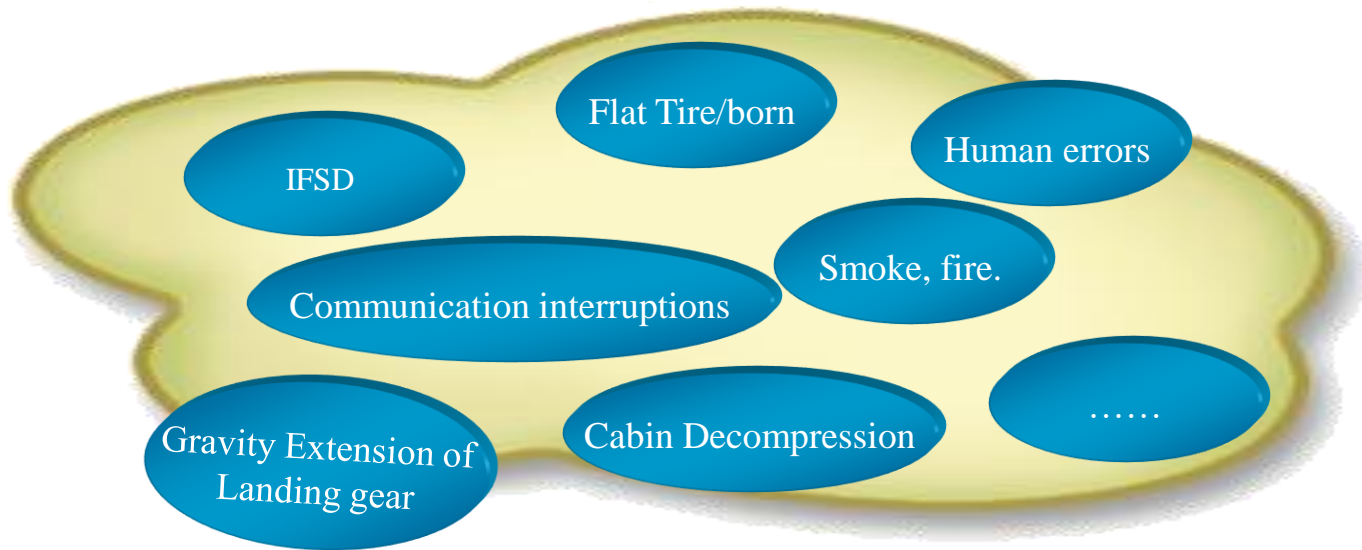
Since SDRs increased fast in recent years, (about 3 times in 10 years),  
it is tough to deal with all reports by limited human resource.

---

# How we deal with the SDRs



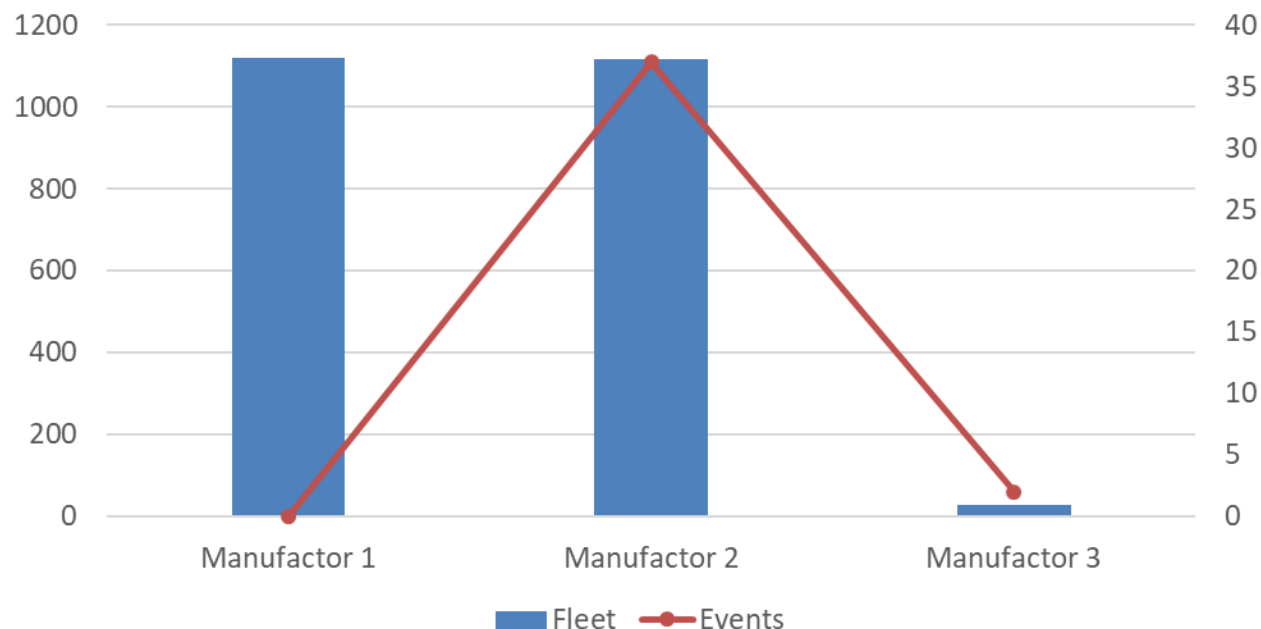
# Key Events Monthly



- Actually, the Service Difficulty Reports were investigated and treated well for each individual cases.
- But when we screening the Service Difficulty Reports for some reason, we find that some events happened more frequently in particular aircraft types and in particular operator. Further more, by analysing SDR information, more progress can be achieved. Safety performance level can be reflected as well.

## Summary of Landing Gear Gravity Extension from SDRs

The SDR system received 40 reports of Landing Gear gravity extension from 2012 to Sep. 2014, 37 SDRs of them from one Manufacturer's fleet (92.5%) and 31 SDRs from aircraft model B fleet.



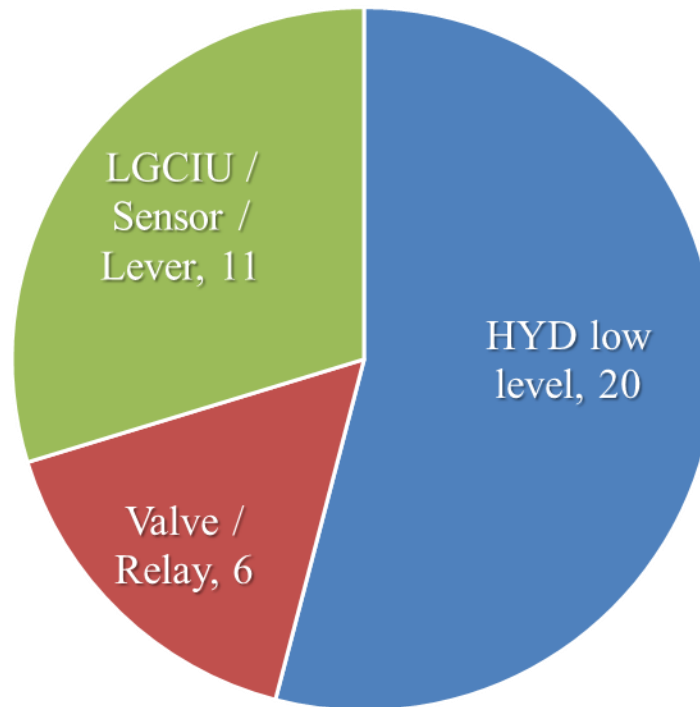
# Summary of Landing Gear Gravity Extension from SDRs

Airline 2 had the most events.

	AL1	AL2	AL3	AL4	AL5	AL6	AL7	AL8	AL9	AL10	AL11	AL12	Total
Model A		3											3
Model B	2	8	3	6	3	2	1	3		1		2	31
Model C		2			1								3
Model D											2		2
Model E									1				1
Total	2	13	3	6	4	2	1	3	1	1	2	2	40

## Analysis by Manufactor

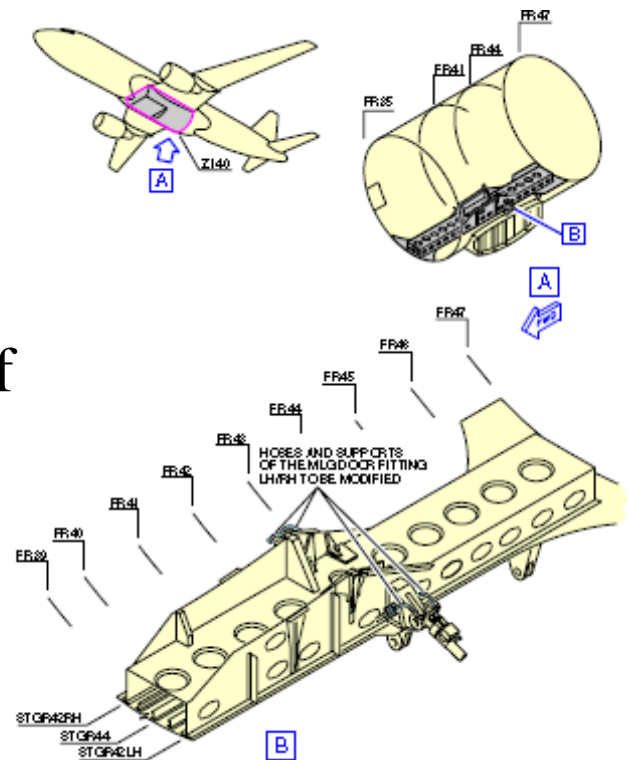
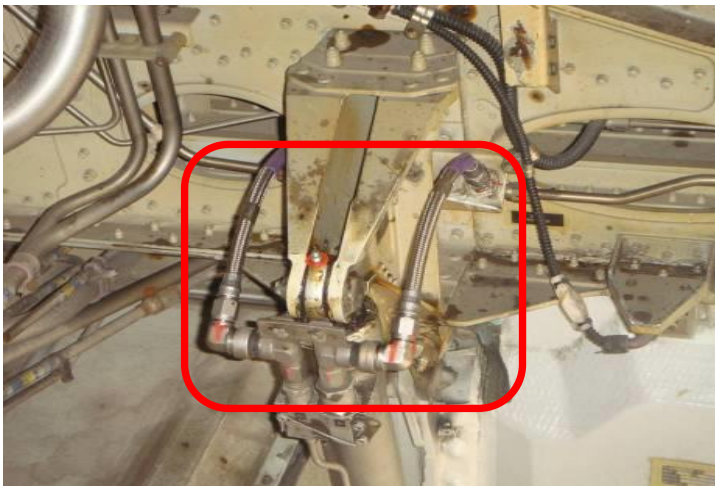
Total 37 cases



# Operator's Measurement

## ◆ Main L/G door actuator hose leakage

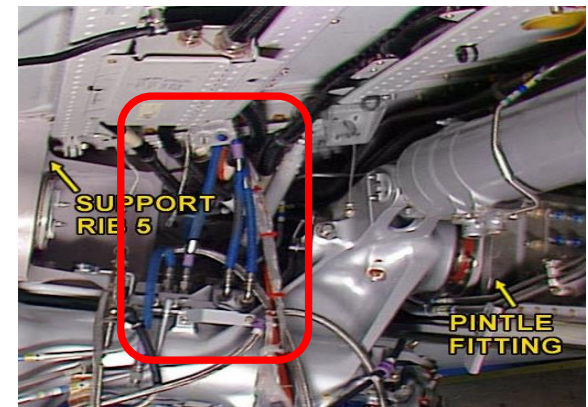
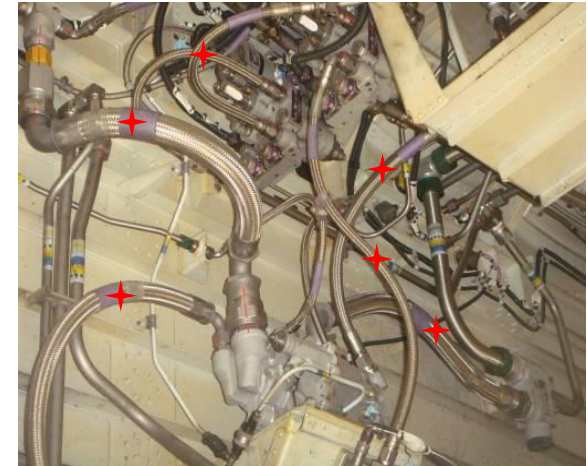
- Perform repetitive inspection on weekly check
- Preventive replacement every 6000 FC
- Complete SB modification before end of 2018





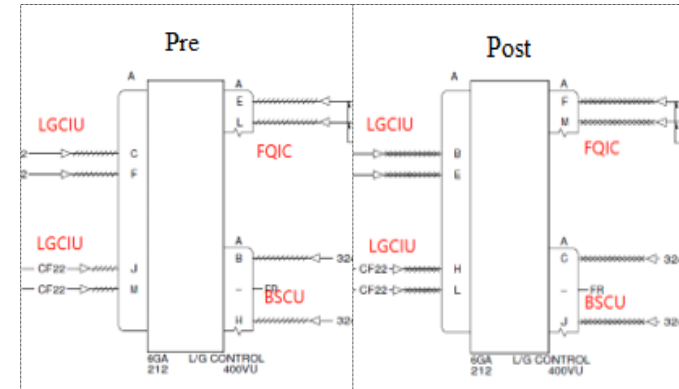
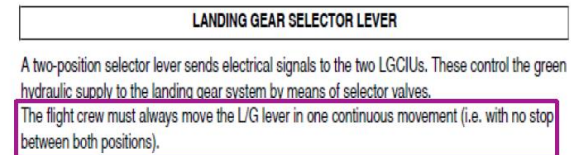
# Operator's Measurement

- ◆ Additional measurement for hydraulic hose
  - Release a one-time inspection directive for all L/G hydraulic hose
    - Perform the inspection with next aircraft weekly check
    - Completed on June 20, 2017
  - Replace all L/G hydraulic hose during overhaul
  - Inspect hydraulic hose with higher standard
    - Replace the hose with 1 broken wire VS 2 broken wires
  - For hoses hard to inspect routinely
    - Replace every 5 years regularly



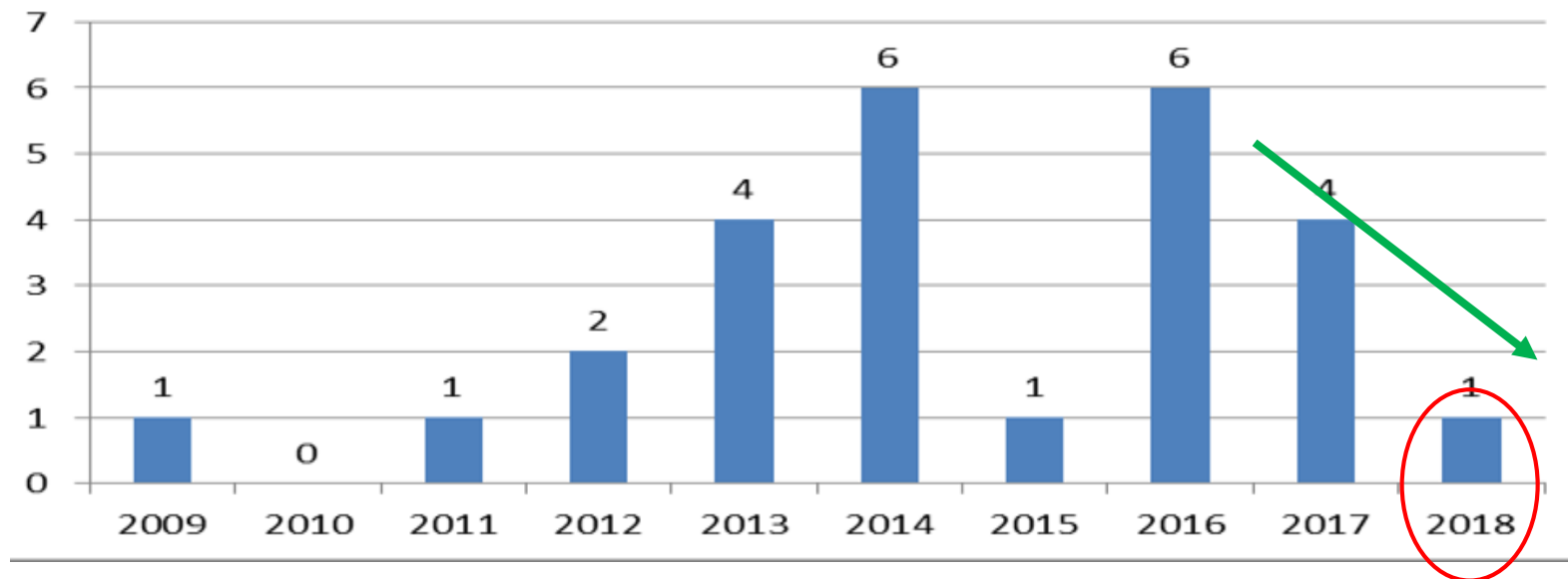
# Operator's Measurement

- ◆ L/G safety valve relay
  - Replace all existing relays with new model
  - Modifications completed before June 2018
- ◆ L/G safety valve
  - Replace safety valve together with new model safety valve relay
- ◆ L/G control lever
  - Flight crew must comply with FCOM strictly to operate the control lever
  - Relocate internal contacts to minimize dual LGCIU fault
  - Remove the nylon thread from oscillating spring support assembly
  - Complete SB modification before end of 2018

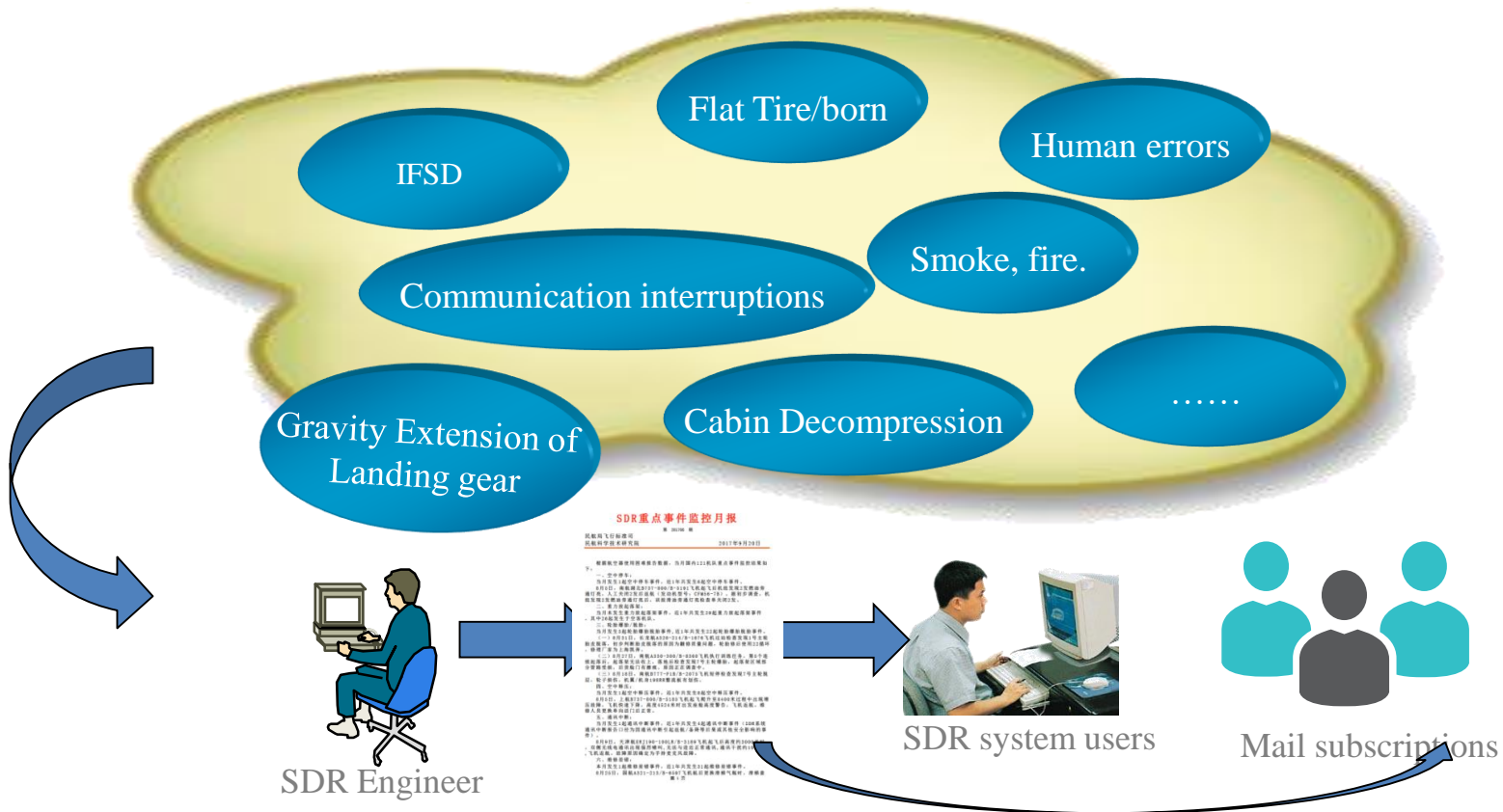


# Operator's Achievement

With the joint efforts of Manufacturer and Operator ,  
the amount of Operator's Model B fleet L/G gravity  
extension reduced significantly.



# SDR Key Events Monthly Report



## Monthly report on key events monitored:

- fleet operation trend analysis
- events analysis
- critical system operation quality analysis, such as engine, landing gear

# SDR Key Events Monthly Report

## SDR 重点事件监控月报

第 201708 期

民航局飞行标准司  
民航科学技术研究院

2017年9月20日

根据航空器使用困难报告数据，当月国内121机队重点事件监控结果如下：

- 一、空中停车：  
当月发生1起空中停车事件，近1年共发生6起空中停车事件。  
8月5日，南航湖北B737-800/B-5191飞机起飞后机组发现2发燃油旁通灯亮，人工关闭2发后返航（发动机型号：CFM56-7B）。据初步调查，机组发现2发燃油旁通灯亮后，误按滑油旁通灯亮检查单关闭2发。
- 二、重力放起落架：  
当月未发生重力放起落架事件，近1年共发生29起重力放起落架事件，其中26起发生于空客机队。
- 三、轮胎爆胎/脱胎：  
当月发生3起轮胎爆胎脱胎事件，近1年共发生22起轮胎爆胎脱胎事件。  
（一）8月31日，长龙航A320-214/B-1676飞机过站检查发现1号主轮胎皮脱落，初步判断胎皮脱落的原因因为翻修质量问题，轮胎修后使用22循环，修理厂家为上海凯奔。  
（二）8月27日，南航A330-300/B-8360飞机执行训练任务，第5个连续起落后，起落架无法收上，落地后检查发现7号主轮爆胎，起落架区域部分管路受损，后货舱门有擦痕，原因正在调查中。  
（三）8月18日，南航B777-F1B/B-2075飞机短停检查发现7号主轮脱层，轮子损伤，机翼/机身198RR整流板有划伤。
- 四、空中释压：  
当月发生1起空中释压事件，近1年共发生8起空中释压事件。  
8月5日，上航B737-800/B-5185飞机起飞爬升至8400米过程中出现增压故障，飞机快速下降，高度4524米时发出座舱高度警告，飞机返航。维修人员更换单向活门后正常。
- 五、通讯中断：  
当月发生1起通讯中断事件，近1年共发生4起通讯中断事件（SDR系统通讯中断报告口径为因通讯中断引起返航/备降等后果或其他安全影响的事件）。  
8月9日，天津航ERJ190-100LR/B-3189飞机起飞后高度约3000米时，双侧无线电通讯出现强烈啸叫，无法与进近正常通讯，通讯干扰约10分钟，飞机返航。故障原因确定为手持麦克风故障。

具体监控报告附后。

第 1 页

- brief description of the key events of the month
- key event statistics chart
  - trend charts of number and failure rate of key events
  - by manufacturers, operators and other dimensions
- summaries of key events for reference



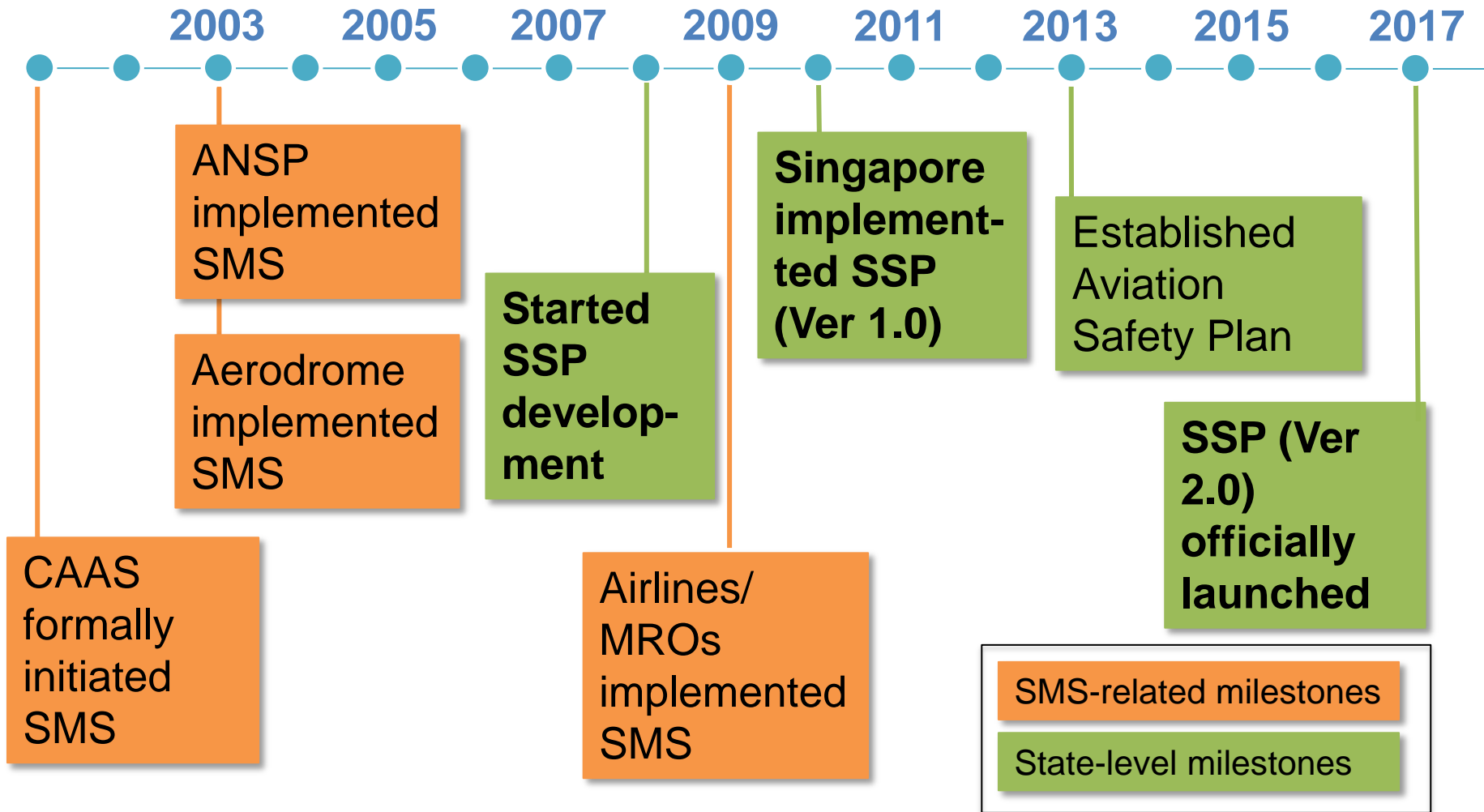
THANK YOU !



# Singapore's SSP Implementation Journey

3 December 2018

# Singapore's Safety Management Journey



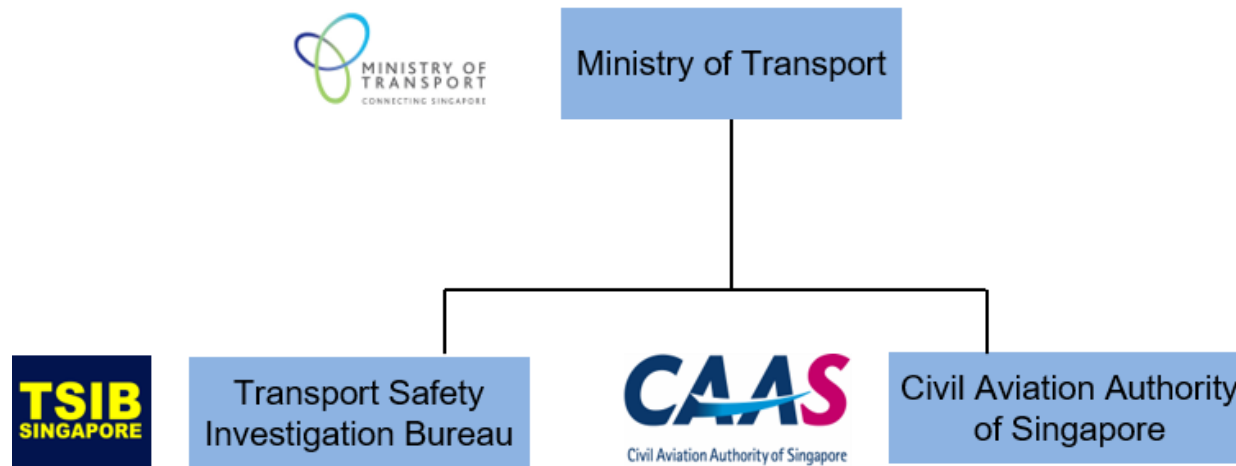


# Focus for today

- Oversight of the SSP
- Identifying and monitoring State-level risks
- Engagement, collaboration and safety promotion

# Oversight of the SSP

- **Singapore SSP** is endorsed by the Minister for Transport who oversees civil aviation matters
- **Director-General CAAS** designated by the Minister for Transport as the person accountable for Singapore's SSP.
- Key State agencies responsible for SSP implementation are **CAAS** and **TSIB**



# Oversight of the SSP

## National Aviation Safety Committee

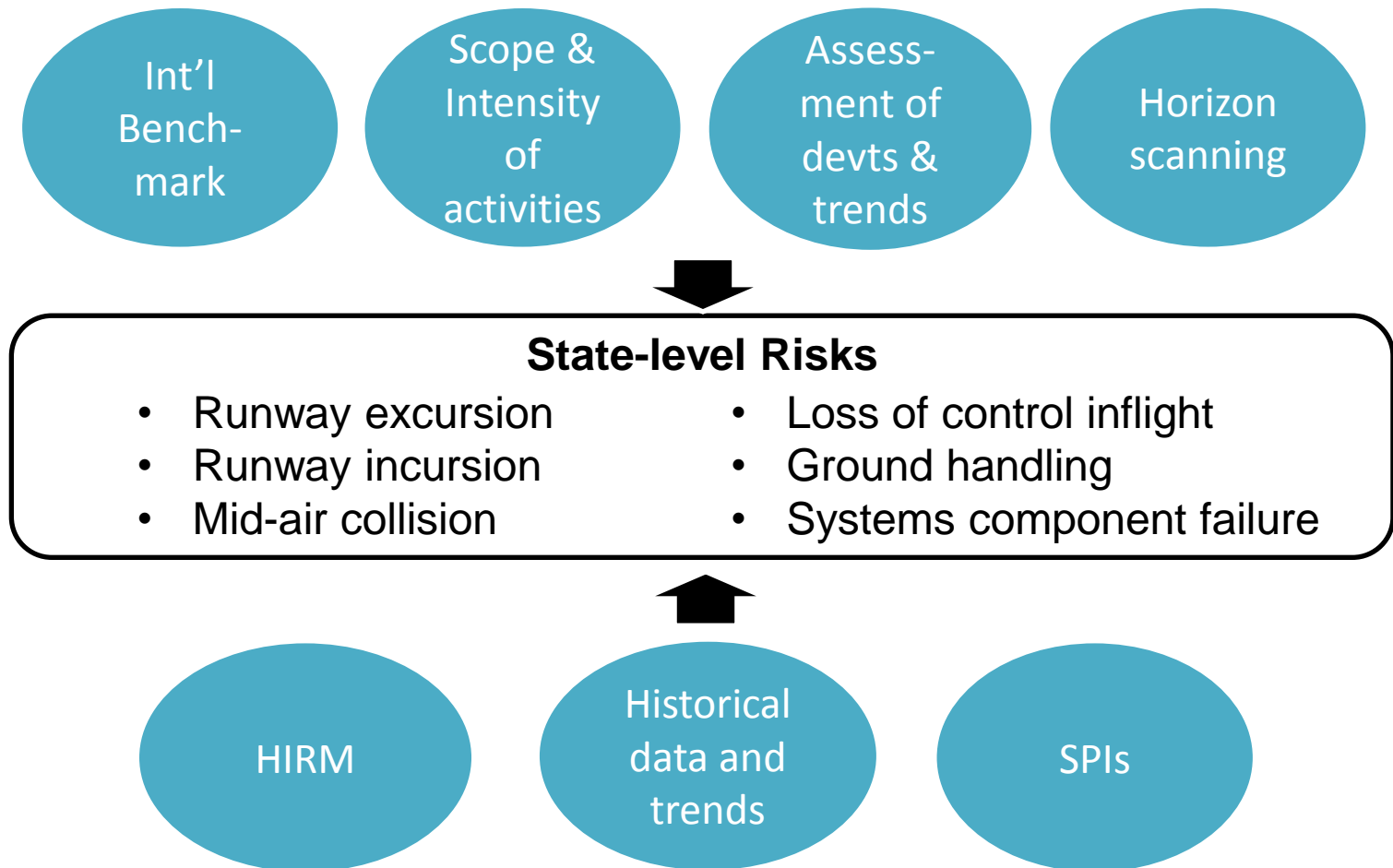
**Chaired by Director-General, CAAS**

**Members:** Ministry of Transport  
Republic of Singapore Air Force  
Transport Safety Investigation Bureau  
Safety Regulation Group, CAAS  
Legal, CAAS

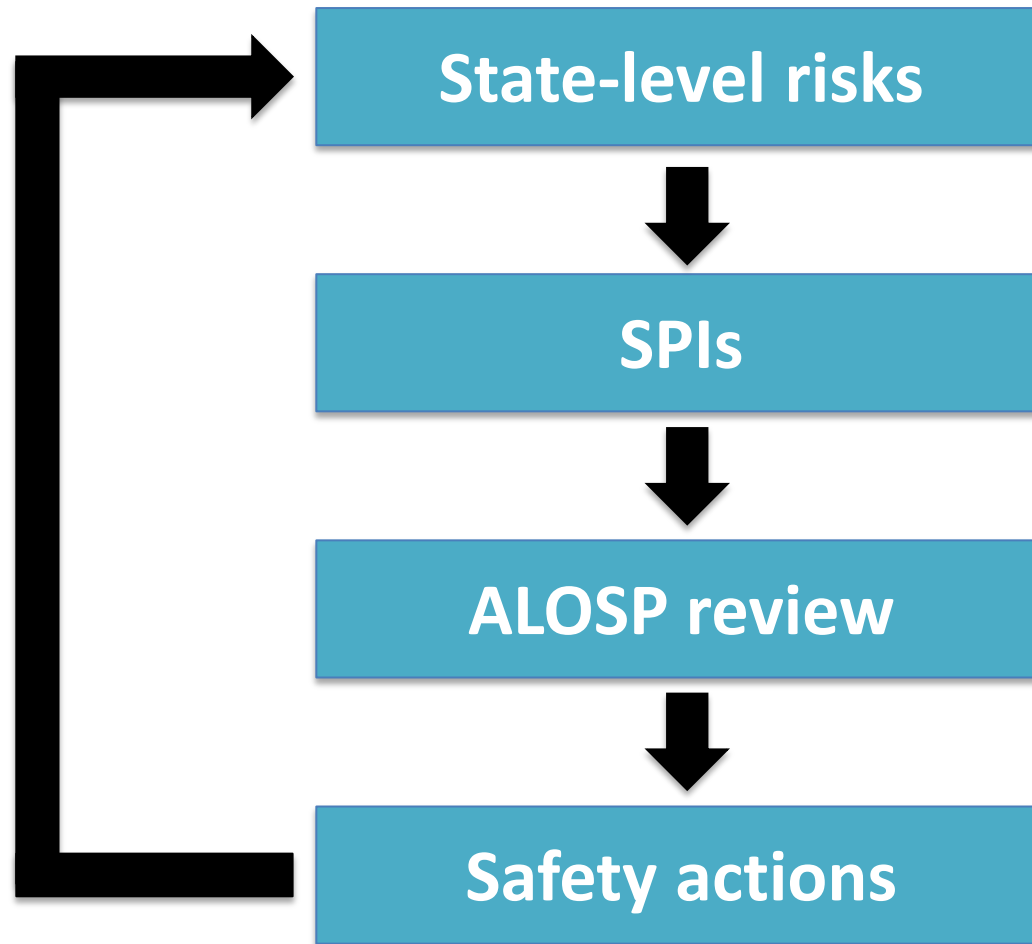
## SSP Working Committee and sub-committees

## Safety Regulation Group Divisions

# Identifying and monitoring State-level risks



# Identifying and monitoring State-level risks



# Tracking of SSP SPIs

APRAST/13  
Appendix D to the Report




●	Accidents occurring in Singapore FIR or involving Singapore-registered aircraft		
●	Serious incidents occurring in Singapore FIR or involving Singapore-registered aircraft		
<b>Within Singapore FIR/Certified Aerodromes</b>		<b>Involving Singapore-registered aircraft</b>	
●	Aerodrome occurrences at Changi	●	9V-operator technical occurrences (FH)
●	Aerodrome occurrences at Seletar	●	9V-operator technical occurrences (FC)
●	Wildlife strikes in Singapore at Changi	●	9V-operator flight operations occurrences (FH)
●	Wildlife (> 300 g) strikes in Singapore at Changi		
●	Wildlife strikes in Singapore at Seletar		
●	Runway incursion at Changi	●	9V-operator flight operations occurrences (FC)
●	Runway incursion at Seletar	●	9V-aircraft engine Inflight shutdown (IFSD)
●	Runway excursion at Changi		
●	Runway excursion at Seletar		
●	Airspace / ATC-related occurrences in Singapore FIR	●	Traffic Collision Avoidance System – Resolution Advisory (TCAS-RA)
●	Loss of separation in Singapore FIR	●	Ground Proximity Warning System (GPWS)
●	Traffic Collision Avoidance System – Resolution Advisory (TCAS-RA) in Singapore FIR		

# Target Monitoring & Review

- SPIs are tracked and reported monthly to CAAS' Deputy Director-General and Safety Regulation Group management
- The SPIs on high consequence occurrences (i.e. accidents and serious incidents) are monitored based on their absolute number of occurrences, instead of normalized rates, to give more focus on each occurrence
- For monitoring of incidents, a 12-month rate is used. The 12-month rate should ideally not exceed the target set.
- A review of a target will be triggered if the safety performance meets the target consecutively for 18 months or more
  - The review period of at least 18 months, which is about 1.5 times the monitoring period, provides for stabilisation and confirmation of trends

# Safety actions

- Safety actions are triggered and reported to the National Aviation Safety Committee (NASC) when the safety performance starts to show adverse trend or signs that they are not achieving targets

Colour Code	Defining conditions	Safety Interventions
RED 	<ul style="list-style-type: none"><li>• 2 or more consecutive increasing or non-decreasing 12-month rate above the set target.</li></ul>	<ul style="list-style-type: none"><li>• Form multi-disciplinary working group (involving relevant stakeholders if necessary), to analyse and address any adverse trend.</li><li>• Review and monitor occurrences.</li><li>• Report analysis and relevant follow-up actions to NASC.</li></ul>
AMBER 	<ul style="list-style-type: none"><li>• 4 or more consecutive increasing or non-decreasing 12-month rate up-trend points below the target; or</li><li>• 12-month rate is at or above the target.</li></ul>	<ul style="list-style-type: none"><li>• Review and monitor incidents.</li><li>• Report analysis and relevant follow-up actions to NASC.</li></ul>
GREEN 	None of the above.	<ul style="list-style-type: none"><li>• No further action required. Monitor incidents.</li></ul>



# Collaboration, Engagement & Promotion

## Industry Engagement

- Regular industry engagement and dialogue
- Safety Forums and Seminars

## Safety Communication

- Safety newsletters
- Website and targeted safety campaigns

## Industry Collaboration

- Joint Committee on Airside Safety
- Industry consultation

# Industry Engagement and Communication

- Regulator-industry engagement sessions e.g. “CAAS Safety Series” seminars
- Targeted safety campaigns
- Periodic safety publications



With increasing aircraft movements and growing complexities in the airfield, the risk of runway safety incidents occurring has also increased. Indeed, runway safety incidents now account for over 50% of all accidents involving scheduled commercial air traffic globally. Therefore, improving runway safety is a key area of focus for the global aviation industry.

Runway incursions are an example of runway safety incidents and are defined by the International Civil Aviation Organization (ICAO) as an occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a "surface designated for the landing and take-off of aircraft", i.e. the runway. Singapore has a fair share of such incidents. While many of these incidents have been classified as Category D incursions, and Singapore's runway incursion rate remains lower than the average of Asia region, CAAS is relentlessly vigilant in keeping our runways safe.

**Categorising a Runway Incursion**  
ICAO ranks runway incursions according to their severity. Category A being the most severe and Category D the least:

A – a collision narrowly avoided  
B – significant potential for collision  
C – ample time / distance to avoid a collision  
D – no immediate safety consequences

CAAS, together with our stakeholders, continues to explore and implement measures to enhance runway safety at Singapore's airports. For instance, detailed investigation into runway incursions provide us with insights and enable us to identify safety gaps leading to these incidents. Measures can then be formulated and implemented to address these gaps. To ensure that runway safety measures are implemented by the stakeholders in a coordinated manner, ICAO recommends that Runway Safety Teams (RST) be established at aerodromes. An RST is a multidisciplinary team comprising key stakeholders in runway safety, such as the aerodrome operator, the air traffic services provider, airline operators, the pilots' association, and the meteorological services provider.

Changi and Seletar Airports each have their respective RST. Each RST meets regularly to identify current and emerging runway safety issues, develop initiatives to address these issues, and ensure that these initiatives are implemented in a targeted, tailored and timely manner. One such initiative is to extend the installation of microwave barrier

The Asia region registered a runway incursion rate of 1.12 runway incursions per 100,000 aircraft arrivals in 2012, according to the 2012 Civil Air Navigation Services Organisation Safety Performance Benchmarking Report.

THE LEADING EDGE ISSUE 3/2014



# Industry Collaboration

- **Joint Committee on Airside Safety** established by CAAS with Changi Airport Group (CAG) for a collaborative approach to identify and mitigate safety risks and hazards
  - Committee involves ground handling agents, airlines, pilot association, airside workers
- **Air Operations Industry Working Group (AOIWG)** for industry consultation on new regulations.
- **Industry consultation** on new and changes to regulatory frameworks e.g Unmanned Aerial Pilot Licensing framework



# Some thoughts from our SSP experience

- There is no right answer. The SSP must be tailored for our own aviation environment.
- SSP is a continuous process. Plan, Do, Check, Act
- Change Management is essential – People, Processes, Systems
- SSP is part of daily safety oversight activities! Not ‘additional tasks

Thank you

# SMS for ANSPs

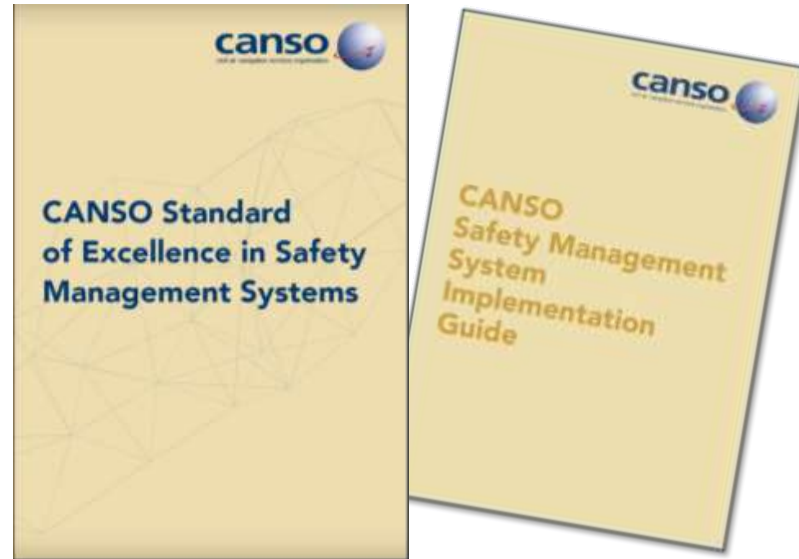
CANSO Standard of Excellence in SMS  
and SEANS-Safety

## CANSO Guidance Materials

CANSO published an updated version of the ***CANSO Standard of Excellence in Safety Management Systems***

This version of the ***CANSO SoE in SMS*** is aligned to ***ICAO Annex 19, Safety Management***.

CANSO also provides an ***Implementation Guide***



# CANSO Tools for SMS Measurement

1. Guidance Material: ***CANSO Standard of Excellence in Safety Management Systems***

Intend to lead the industry in developing best practices in safety management while aligning to ICAO Annex 19.

2. Self Assessment and Annual Survey: ***EUROCONTROL/CANSO SoE in SMS Maturity Questionnaire***

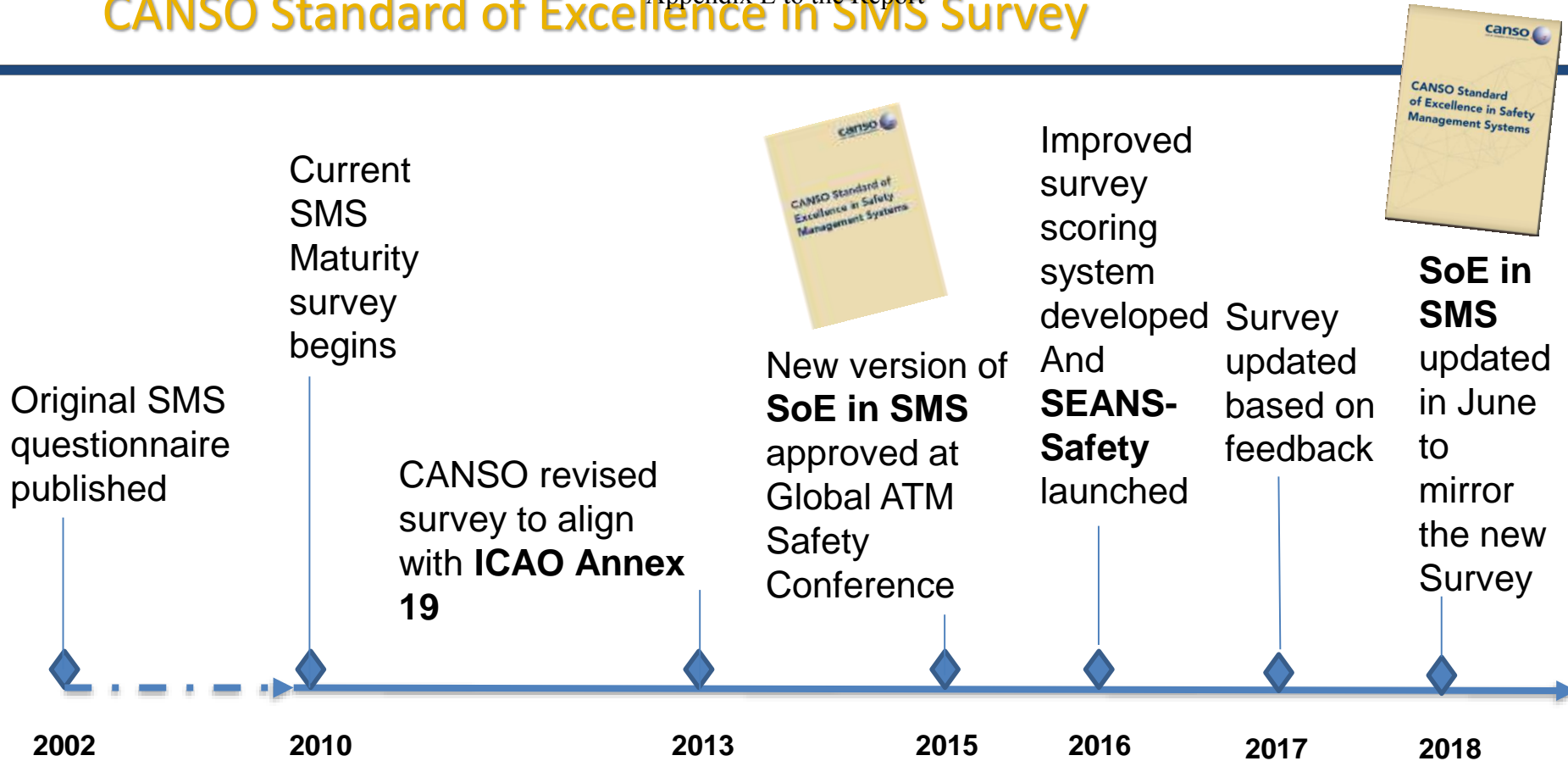
Provide ability to compare and learn from other ANSPs and support achievement of higher levels of SMS Maturity.

3. Independent Expert Assessment: ***SEANS-Safety***

On-site assessments of ANSP's SMSs to determine SMS maturity levels and opportunities for improvement in a confidential environment.



# CANSO Standard of Excellence in SMS Survey



# Elements (Study Areas) of SMS in CANSO SoE

1. Positive and Proactive Safety Culture
2. Safety Policy
3. Safety Accountabilities
4. Coordination of Emergency Response Plan
5. Safety Management System Documentation
6. Compliance with International Obligations
7. Safety Risk Management
8. Safety by Design
9. Safety Interfaces
10. Fatigue-related Risk Management
11. Safety Reporting, Investigation and Improvement
12. Operational Safety Surveys and SMS Audits
13. Safety Performance Monitoring and Measurement
14. The Management of Change
15. Continual Improvement of the SMS
16. Training and Education
17. Safety Communication



# Relationship between SoE and ICAO Annex 19: it's (not) complicated

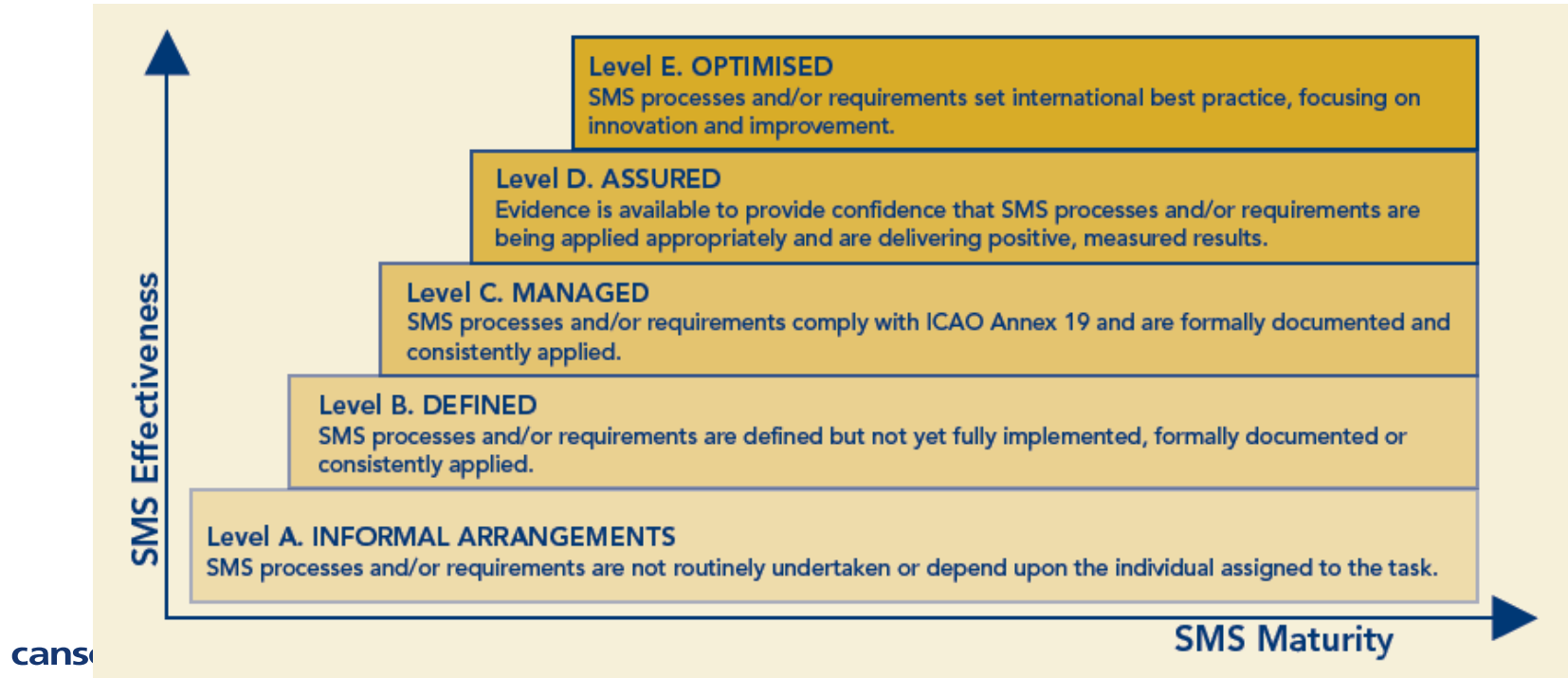
The SoE goes *further* than Annex 19 so these elements **DO NOT** relate to Annex 19 compliance:

- Positive and Proactive Safety Culture
- SMS Documentation
- Safety Interfaces
- Safety by Design
- Fatigue Related Risk Management

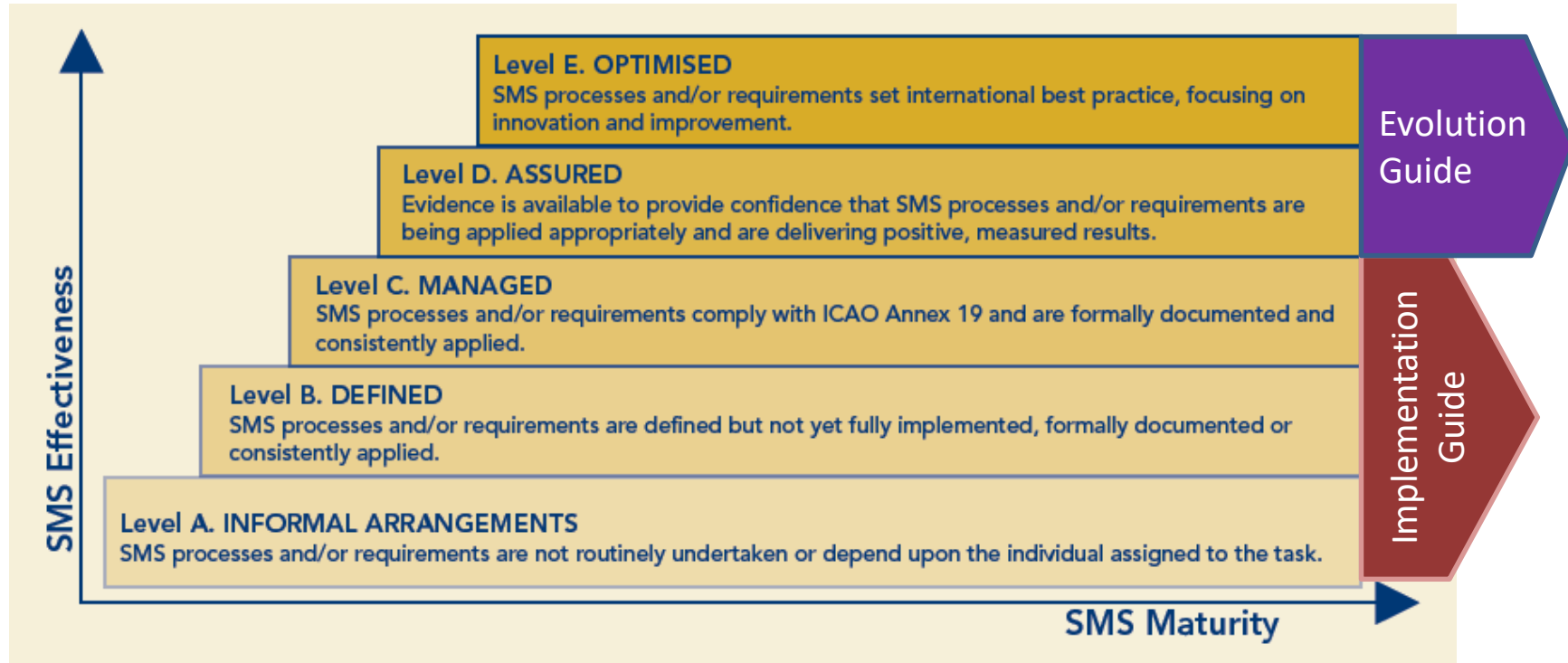
✖ Out of Scope of Annex 19



Each element of SMS has descriptors of requirements for each level of system maturity



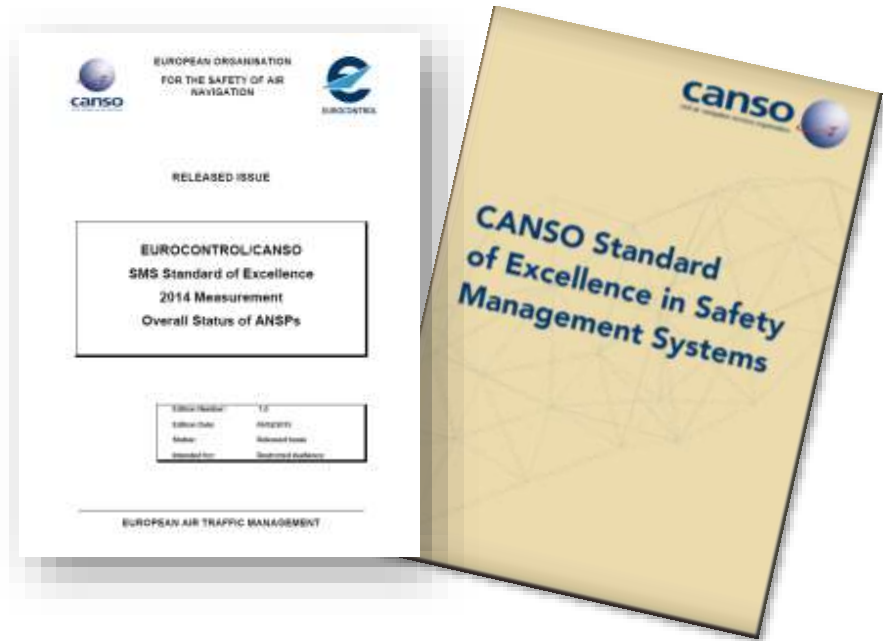
## How does the SMS Maturity Scheme work – scoring by level



# Self-Assessment and Annual Survey

The ***EUROCONTROL/CANSO Standard of Excellence in Safety Management Systems Questionnaire*** walks the user through 17 Elements / Study Areas covered in the ***CANSO Standard of Excellence in SMS*** asking specific questions about the components of their SMS

By answering the questionnaire, the ANSP is able to identify areas of strength, as well as areas that need improvement in their SMS.



# Self-Assessment and Annual Survey

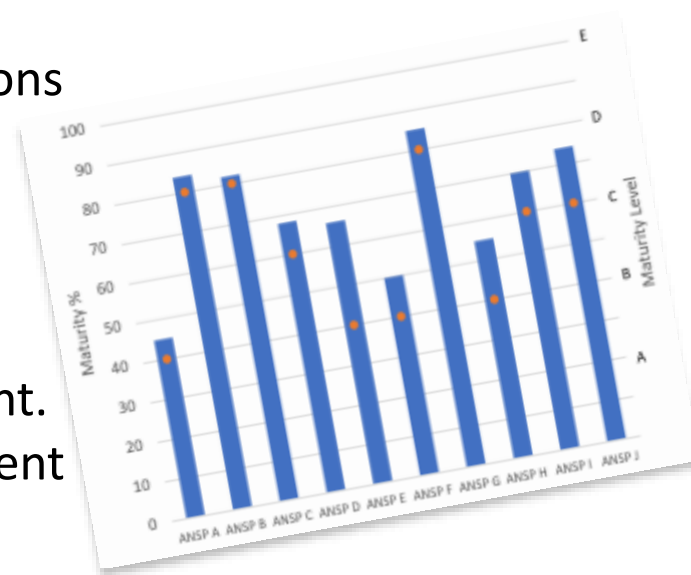
To allow an ANSP to conduct a self-assessment of their SMS against this Standard, CANSO partnered with EUROCONTROL to develop the ***EUROCONTROL/CANSO Standard of Excellence in Safety Management Systems Questionnaire***

- Each year the CANSO Safety Standing Committee invites ANSP Members to participate in confidential Safety Performance Benchmarking



# Self-Assessment and Annual Survey

- After ANSP members fill out the EUROCONTROL/CANSO Standard of Excellence in Safety Management Systems Questionnaire, moderations may include face-to-face interviews, telephone Interviews or follow up questions via email.
- Report is provided in a “De-identified” format
- Members may also choose to participate in “Identified” Report under confidential agreement.
- Measuring the health of ANSP Safety Management System by looking at its maturity level can be a leading indicator of safety performance.





# Sample questionnaire – Study Area 16 : Training and Education

16.1	Staff, and contractors where appropriate, who are educated and trained in safety and safety management, and where required, licensed. Note that this objective is primarily focused on ATC, engineering and senior staff who have the ability to affect the safety of the operational service.	Yes/No	Justification	Evidence
A	Staff, and contractors where appropriate, are provided with training for safety and safety management activities on an ad hoc basis.			
B	Does your organisation regularly provide staff and contractors with training and education in safety and safety management?			
	Does your organisation provide staff and contractors with training and education to help them apply required safety management practices and procedures?			
C	Does your organisation have an annual planning process for safety management training?			
	Does your organisation's annual training plan ensure that appropriate staff are aware of all safety management practices and procedures that are applicable to their role?			
	Does your organisation's annual training plan ensure that staff are aware of your organisation's approach to safety?			

# Sample questionnaire – Study Area 16 : Training and Education (2)

Potential Justification:

- Briefly describe how those who receive training are able to provide feedback on the effectiveness of the training.

**Justifi-  
cation**

**Evidence**

**i**

Are those who receive training given an opportunity to provide feedback on the effectiveness of the training?

Are your organisation's training programmes updated on the basis of that feedback?

D

Does your organization use any indicator to measure the effectiveness of its training programme? **i**

Is the training constantly adapted to include identified risks and address shortcomings (highlighted through e.g. feedback from courses).

E

Has your organisation set any best practices for safety management for this objective? If so, are you willing to share best practices with other ANSPs/organisations?

To answer Yes, you must be able to  
i) identify deficiencies,  
ii) identify improvement actions to manage deficiencies,  
iii) design appropriate training, and  
iv) measure improvements such as less time taken to write a safety case, improved investigation reports and fewer errors in incident reporting.

# Self-Assessment and Annual Survey – 2017 Results

## **Weakest elements (study areas)**

- Element 1: Positive and Proactive Safety Culture
- Element 15: Continual Improvement of the SMS
- Element 10: Fatigue Risk Management

## **Strongest elements (study areas)**

- Element 2: Safety Policy
- Element 6: Compliance with International Obligations
- Element 11: Safety Reporting, Investigation and Improvement
- Element 14: Management of Change

# CANSO Expert Assessment Programme

**SEANS-Safety** provides an independent, expert assessment and validation of the SMS maturity levels of CANSO Member ANSPs

The **CANSO Standard of Excellence in Safety Management Systems** is the guidance for all SEANS-Safety Assessments

SEANS-Safety results are **confidential and are not shared by CANSO** – *only the ANSP receiving the SEANS-Safety Assessment will know their score*

Assessment can used to determine **compliance with ICAO Annex 19: Safety Management**



1-2	A brief and open structure for reporting and investigation of harassment, sex discrimination and sexual harassment must protect the complainant's privacy, ensure confidentiality and impartiality of the investigation, uphold reporting, exchange of lessons learned and effective monitoring.	Introduction	Evaluation
A	Management believes there are no issues regarding the existing reporting and investigation culture and therefore does not see the need for any activity or dialogue with the staff in this area		
B	Have there been any discussion, between staff and management about developing a JAIL Culture to encourage reporting?		
	Are there policies and procedures in place to support JAIL Culture principles?		
C	Are safety determining and publication policies supported by the staff in making data sufficiently protected from external undesirable public legal scrutiny?		
D	Is the risk-relevant association and prosecutable behaviors known and accepted by all levels within your organization?		
	Are JAIL Culture reporting and investigation principles and processes consistently accepted within your organization?		
	Is there a clear and published policy on how dialogue with political institutions and media is established and followed under certain legal regimes?		
E	Have your organization moved by a JAIL Culture approach despite changes in management?		
	Are lessons from within the organization and different safety contexts used to inform the JAIL Culture?		



## SEANS-Safety

**SEANS-Safety** requires that the ANSP fill out the EUROCONTROL/CANSO Standard of Excellence in Safety Management Systems Questionnaire prior to the SEANS-Safety Assessment.

	Justification	Evidence
<b>A</b> Management declares there are no issues regarding the existing reporting and management culture and therefore does not use the tool for any activity or dialogue with the staff in this area.		
<b>B</b> Have there been any discussions between staff and management about developing a tool? Culture to encourage reporting?		
Are there policies and procedures in place to support Just Culture principles?		
<b>C</b> Are safety data mining and publication policies supported by the staff?		
Is safety data sufficiently protected from external dissemination (public legal risks)?		
<b>D</b> Is the relationship accountable and non-accountable functions known and recognised by all levels within your organisation?		
Are Just Culture reporting and investigation principles and processes systematically applied within your organisation?		
Is there a clear and published policy on how dialogue with public stakeholders and media is established and followed under certain legal regimes?		
<b>E</b> Does your organisation intend to use a Just Culture approach? Details changes in management?		
Are resources from within the organisation and external industry entities used to develop and implement the Just Culture approach?		

The ANSP must provide justification and evidence for all “Yes” answers – once this is complete they are prepared for the on-site SEANS-Safety assessment. Any CANSO Member ANSP can have an on-site SEANS-Safety assessment done, but they will need to pay for travel expenses for the SEANS-Safety assessor.

## For More Information...

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*The Standard of Excellence in Safety Management Systems* is  
available on the CANSO Website:

<https://www.canso.org/canso-standard-excellence-safety-management-systems-0>

<https://www.canso.org>

APRAST/13  
Appendix E to the Report

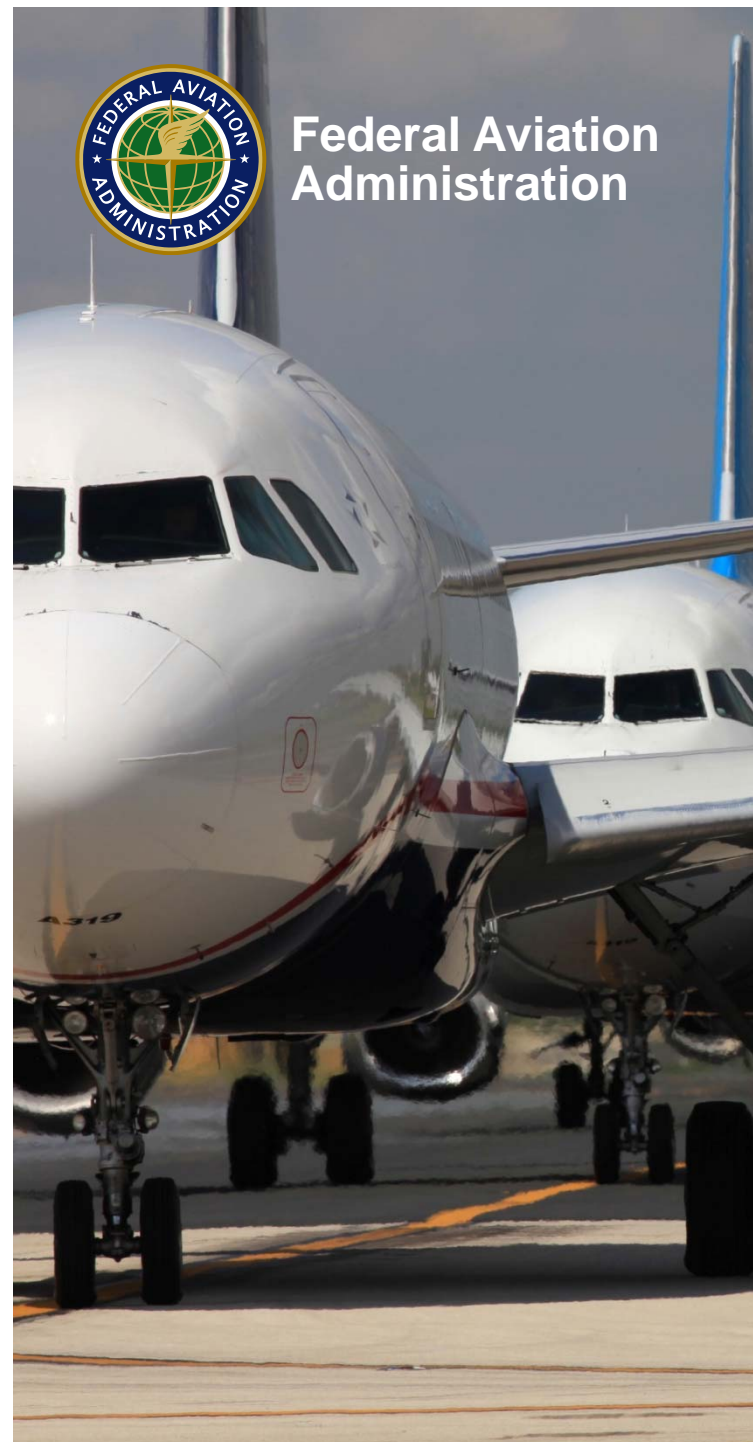


# Driving Change Through Safety Management

**Presented to:** Thirteenth Meeting of the Asia  
Pacific Regional Aviation Safety Team  
(APRAST/13)

**Presented by:** U.S. Federal Aviation Administration

**Date:** December 3-7, 2018



## Discussion Topics

- Regulator/Service Provider Relationship
- U.S. ANSP SMS History
- Current U.S. ANSP SMS Maturity
- Safety Management and Wake Turbulence
- Realized Benefits from SMS
- SMS Tools



# Foundation for Safety Management

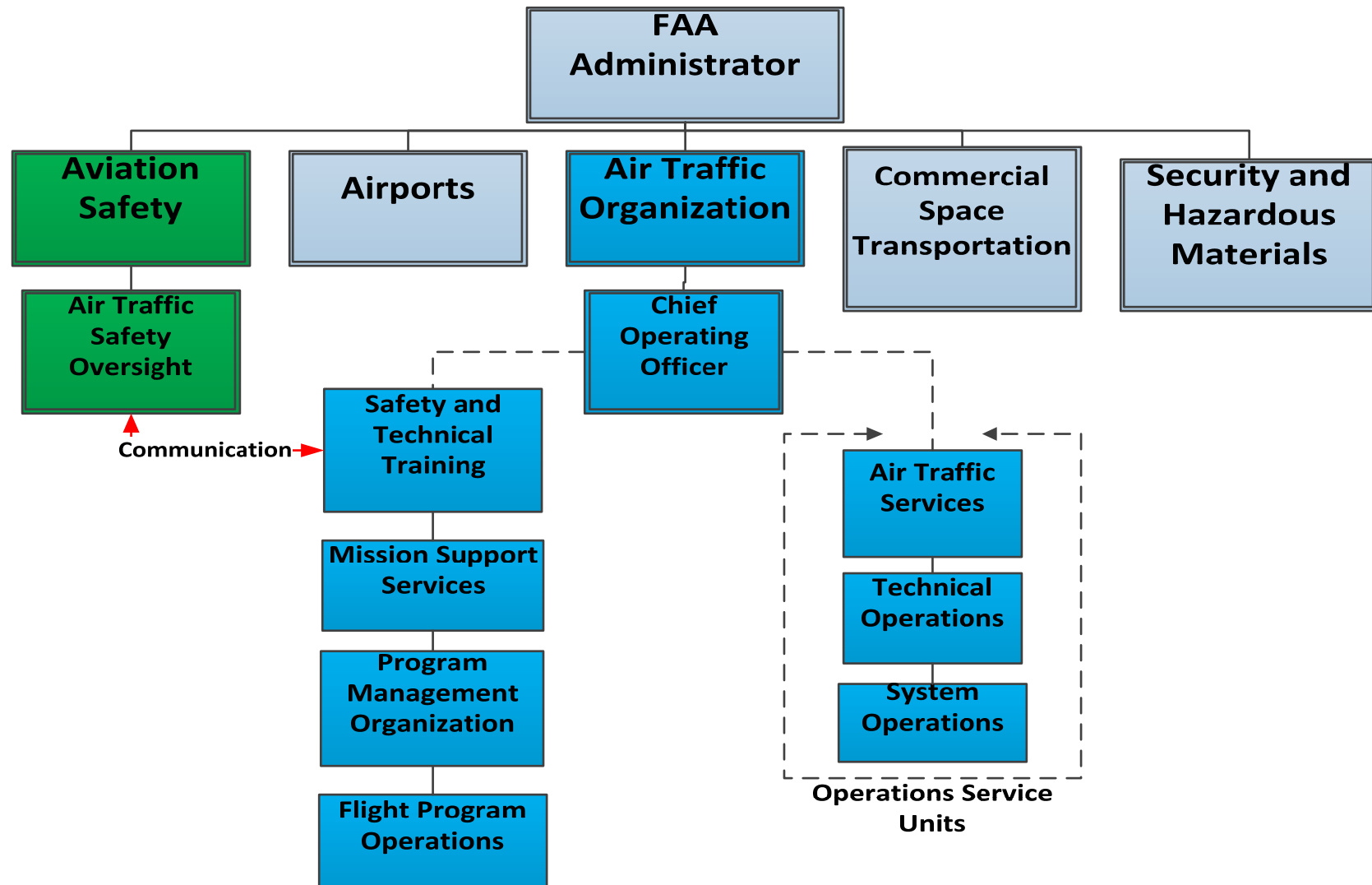


December 3, 2018



FEDERAL AVIATION  
ADMINISTRATION

# Regulator/Service Provider Relationship

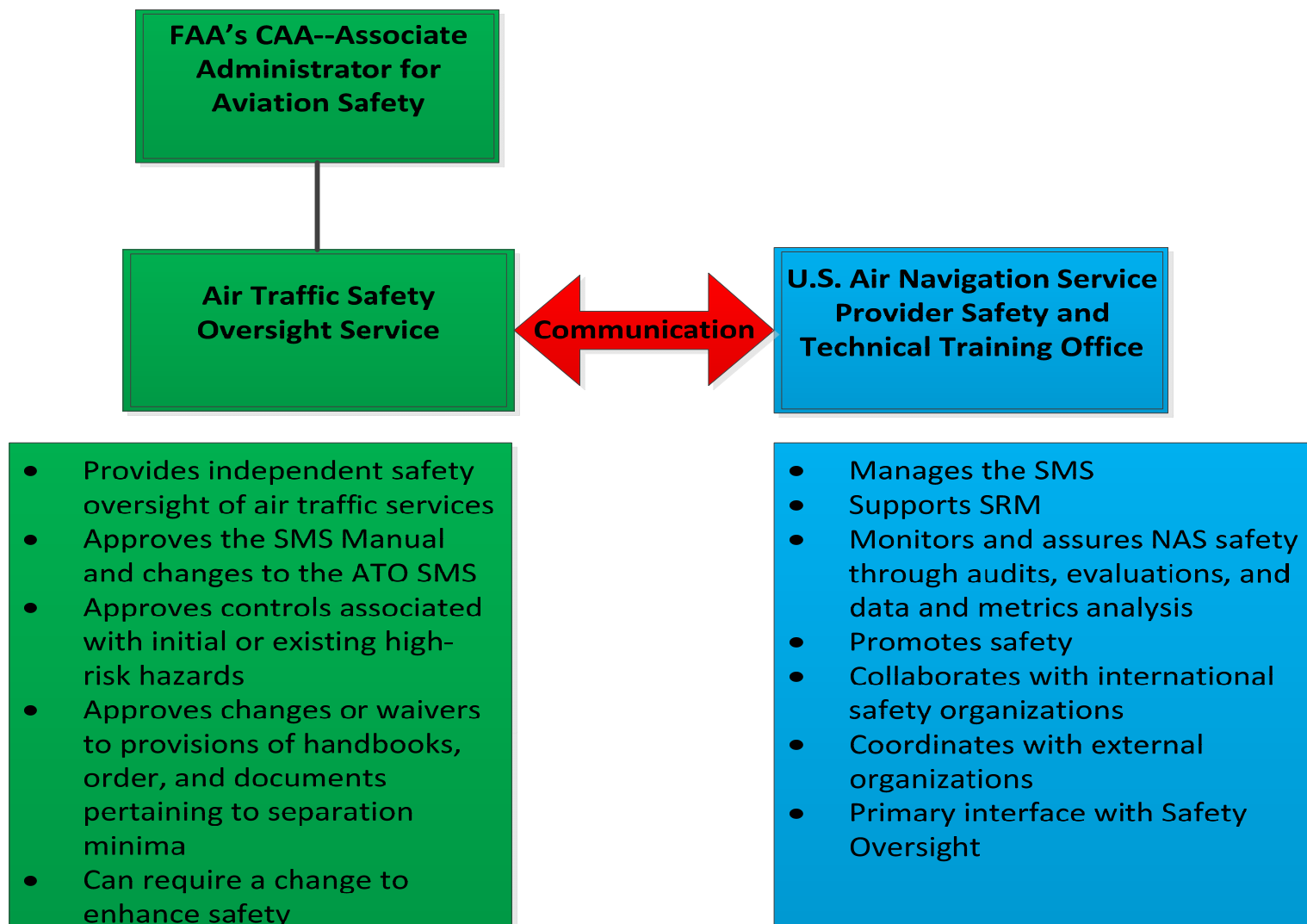


December 3, 2018



FEDERAL AVIATION  
ADMINISTRATION

# FAA ANSP SMS: Roles and Responsibilities



December 3, 2018



FEDERAL AVIATION  
ADMINISTRATION

# U.S. ANSP SMS: Chronological Overview

2000

SMS Gap Analysis conducted

2003

U.S. ANSP SMS implementation begins

2004

SRM Integration Plan completed; first SMS Manual published

2005

U.S. Regulator mandated U.S. ANSP to implement an SMS in five years

2007

U.S. Regulator validated minimum requirements; U.S. ANSP published first U.S. ANSP SMS order

2009

Over 28k employees completed SMS training; U.S. ANSP began implementation of Voluntary Safety Reporting Program

2010

U.S. ANSP SMS approved by U.S. Regulator

Today

Level C Maturity

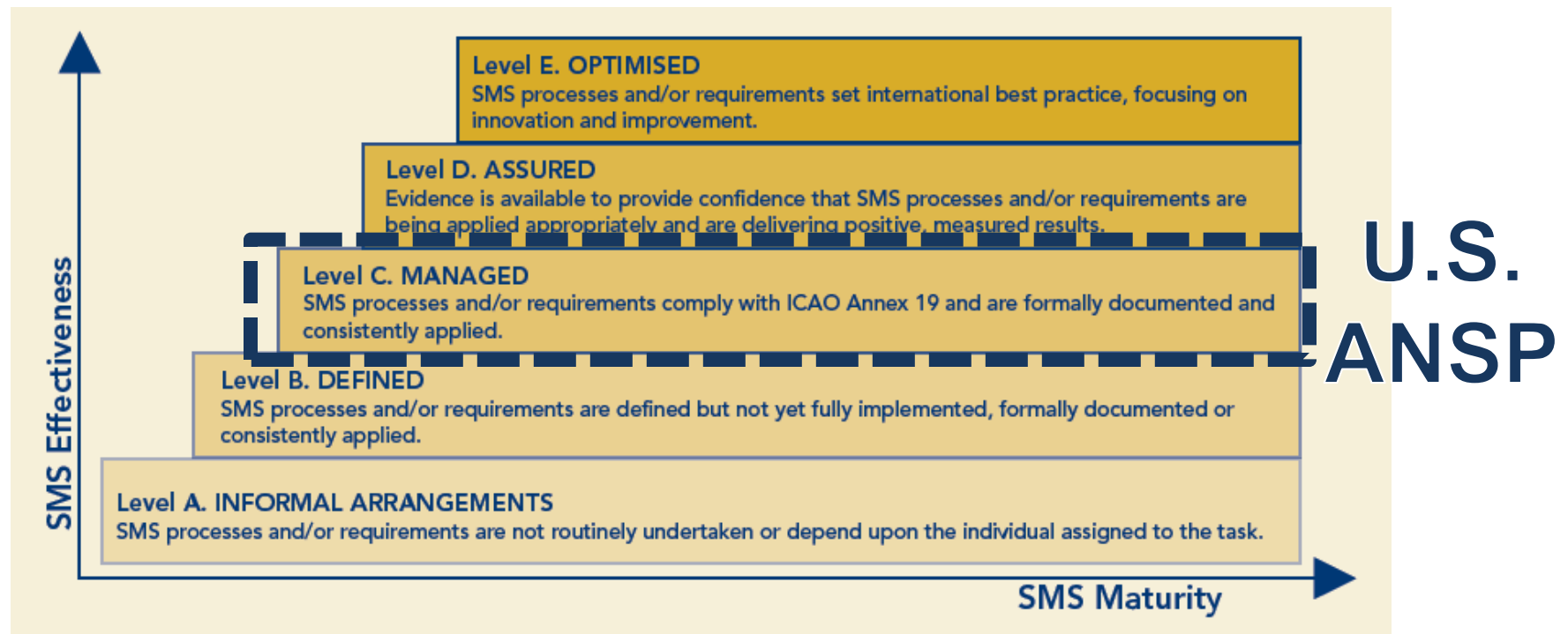
December 3, 2018



FEDERAL AVIATION  
ADMINISTRATION

# U.S. ANSP SMS Maturity

- Every year, we assess our maturity using the CANSO Standard of Excellence



December 3, 2018



FEDERAL AVIATION  
ADMINISTRATION

## SMS Maturity Challenges

- **Since formal implementation was approved, a few items have presented challenges over the years:**
  - Safety Culture Evaluation
  - Safety Professional Competencies
  - Capturing and Communicating Lessons Learned/Best Practices



# Fatal Accident: Wake Turbulence Encounter

- ❑ August 3, 2016
- ❑ Reno/Tahoe International Airport (KRNO)
- ❑ Leading Aircraft: B757
- ❑ Trailing Aircraft: Beechcraft A-36 Bonanza
- ❑ Fatal injuries involving pilot and passenger

## Findings:



“The accident pilot's likely misidentification of his traffic, the controller's lack of awareness of that apparent error, and the controller's failure to monitor, detect, or intervene in a situation conducive to a wake vortex encounter enabled the accident to occur.”—National Transportation Safety Board (NTSB)

“...[T]he airplane appeared to be approaching normally, without any unusual sounds or dynamics, or any smoke or other outward signs of distress. ...[A]t an altitude of less than 200 ft, it rapidly rolled and descended to the ground.”--NTSB

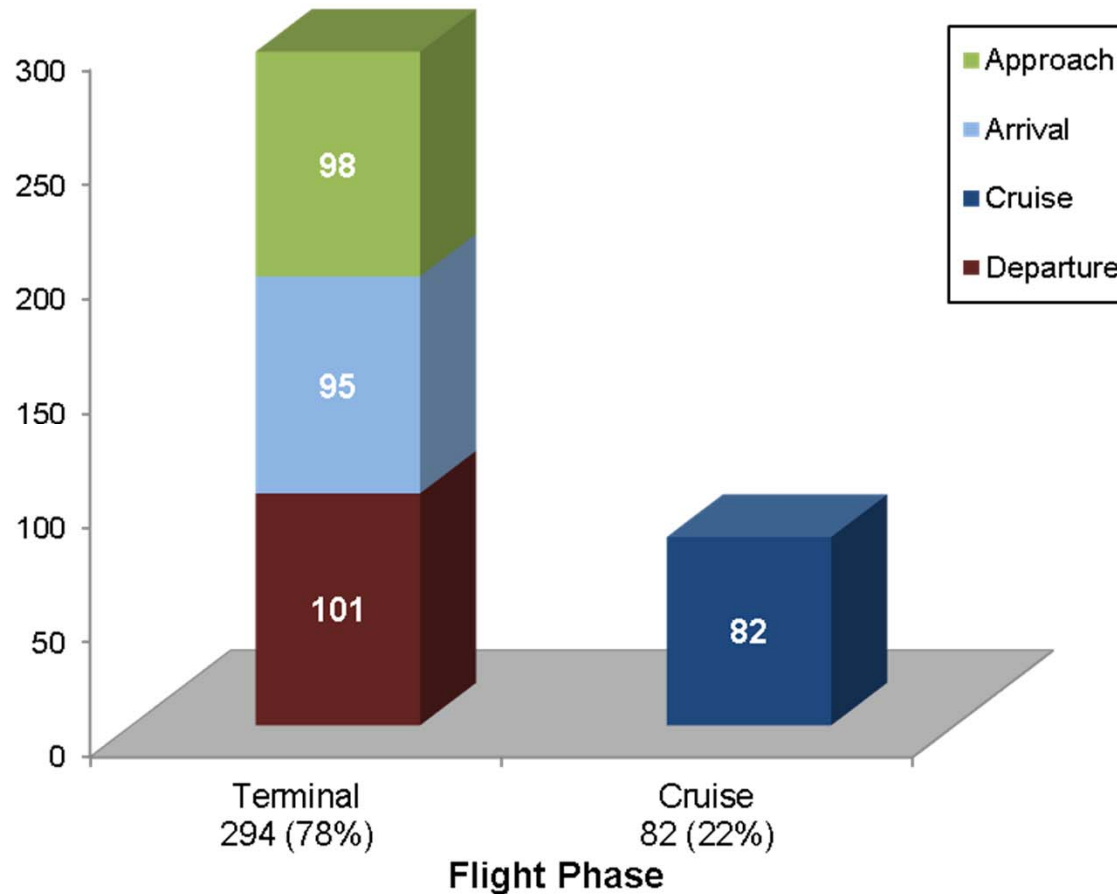
“A wake vortex analysis study revealed that the airplane most likely encountered the wake vortices that were generated by a B757 landing on the parallel, upwind runway. The vortices were of sufficient size and strength to radically upset the airplane at an altitude too low to recover.”--NTSB

December 3, 2018



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# Wake Turbulence—Joint Study with NASA

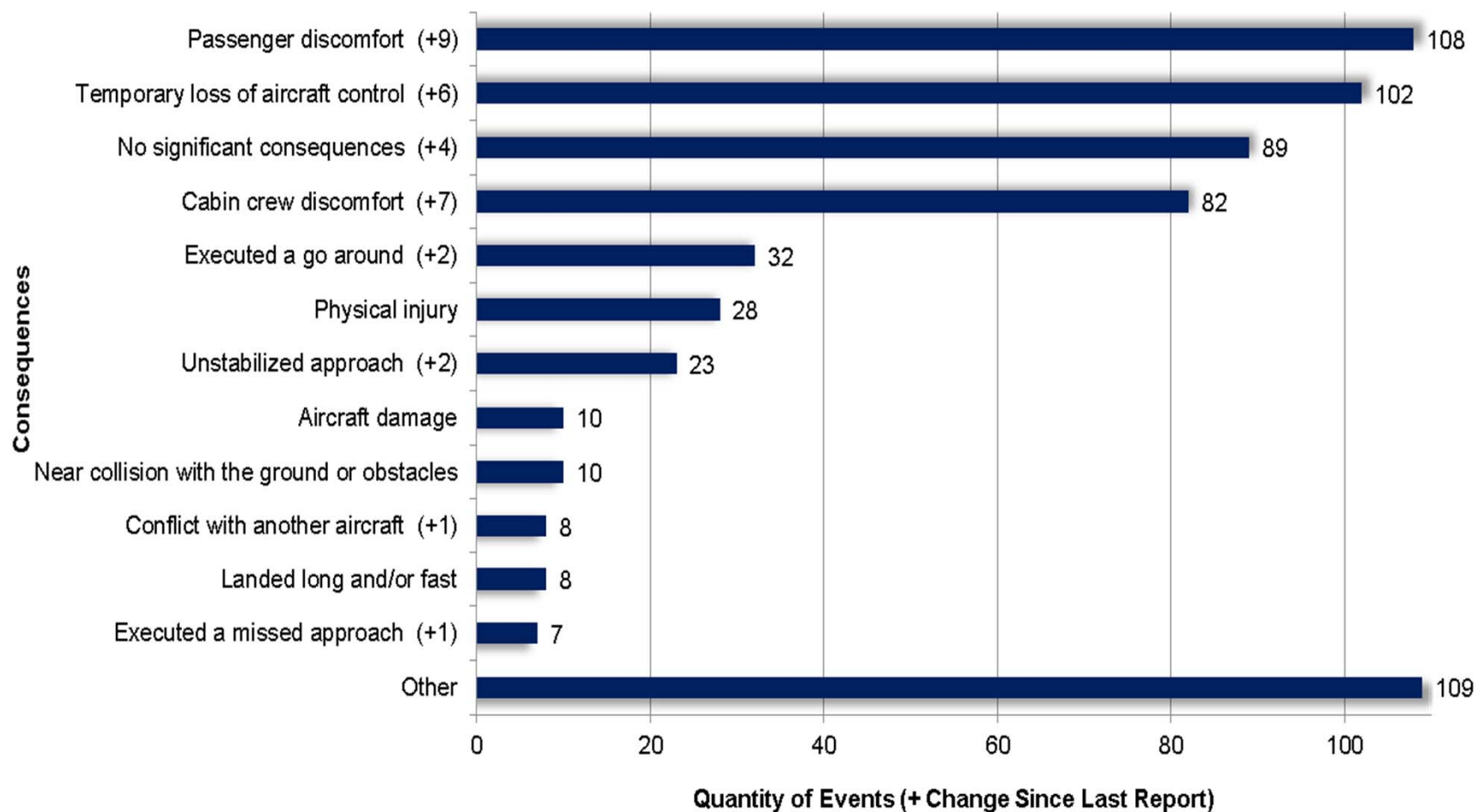


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# Wake Turbulence—Joint Study with NASA



December 3, 2018



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# SMS Benefits: Learning Culture

**Are current processes and operations sufficient for preventing harm (e.g., wake turbulence standards)?**

- **U.S. ANSP actions to support a learning culture:**
  - Persistent analysis of safety processes to help understand safety risk and effects on flying public
  - Creating new ways to understanding safety risk
    - Measuring procedural compliance vs. potential for harm
  - Continue to find new ways to improve the collection of data from pilots

# Realizing SMS Benefits

## There's Still Work to Do!

- Making sense of our data
  - Determining why events are happening as opposed to merely counting them.
- Keeping safety at the forefront
  - Ensuring that new safety professionals have a safety mindset, improving our safety culture.

December 3, 2018



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# U.S. ANSP SMS Toolbox

- **Order JO 1000.37, Air Traffic Organization Safety Management System**
  - Establishes SMS for the organization; requires risk management, analysis, and safety communications.
- **ATO Safety Management System Manual**
  - Process document for performing Safety Risk Management and writing safety analyses; documents processes for administering change implementation and accepting safety risk.
- **Safety Risk Management Guidance for System Acquisitions**
  - Establishes safety risk management requirements for ATM hardware and software systems.
- **SRM Panel Orientation Briefing**
  - Presentation for participants in the U.S. ANSP SRM process.

*Resources available upon request*



# Contact Information

**For more information about the U.S. ANSP SMS, or for copies of U.S. ANSP SMS policies and processes contact:**

**Maggie.E.Geraghty@FAA.GOV**

December 3, 2018



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**List of Updated RASG-APAC/8 Decisions and Conclusions**

<b>Decision Ref.</b>	<b>Description</b>	<b>Remarks</b>
<b>Decision RASG-APAC 8/1 —</b> Implementation on the Outcome of the First Asia/Pacific Ministerial conference on Civil Aviation – WP/3	That, APRAST be requested to look into the Safety Aspects and related Human Resources Development.	<b>Propose to close.</b> Decision noted and related tasks are included in the yearly work programme 2018-2019.
<b>Decision RASG-APAC 8/2 —</b> Implementation on the Outcome of the First Asia/Pacific Ministerial conference on Civil Aviation – WP/3	That, APAC-AIG to be requested to look into the matters related to Accident Investigation with a view to develop the Action Plan and monitor the progress as articulated in the Beijing Declaration.	<b>Propose to close.</b> Decision noted and related tasks are included in the yearly work programme 2018-2019.
<b>Decision RASG-APAC 8/3 —</b> Enhancing Support for the Implementation of Effective Safety Management - WP/4	That,  a) the nominated focal points submit practical implementation examples and tools using the secure portal; and  b) States are encouraged to make use of the updated tools and training once made available.	<b>Propose to close.</b> Decision noted. States are requested to use the SMI and iSTAR tools. In addition, States are encouraged to participate in AD3M course and Safety Symposium to be conversant with safety management and data driven tools.  State Letter sent on Aviation Data-driven and Decision Making (AD3M) Programme and Safety Management Capacity Building Workshop to be held in Bangkok, Thailand, 4 – 7 February 2019 and 11-14 February 2019 respectively.  [ICAO-APAC State Letter Ref.: T 6/13.1.1 (2019) – AP157/18 (FS) of 26 November 2018 and State Letter Ref.: T 6/15.2 – AP158/18 (FS) of 26 November 2018]
<b>Decision RASG-APAC 8/4 —</b> Review of Progress of RASG-APAC/7 Decisions and Conclusions - WP/5	That, the Meeting endorsed the recommendations of the 7 Decisions and 5 Conclusions of RASG-APAC/7 presented in Attachment A and B to WP/5 of RASG 8.	<b>Propose to close.</b> All decisions and Conclusions of RASG 7 are closed.



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Decision Ref.	Description	Remarks
<b>Decision RASG-APAC 8/5</b> — Update of RASG- APAC 2017/2018 Work Programme - WP/6	That, the Meeting endorsed the recommendation as described in Attachment to WP/6 of RASG 8.	<b>Propose to close.</b> Out of 11 items, 03 open items (RASG-PIRG Coordination, dedicated Web Portal and SEI RE-1 for 10 priority items from FSF and IATA) from the Work Programme 2017/18 are taken care in 2018/19 programme and 08 are closed.
<b>Decision RASG-APAC 8/6</b> — Update of RASG-APAC 2017/2018 Work Programme - WP/6	That, APRAST looks into a proposal to enable delegation of certain decision making from RASG-APAC to APRAST and table it for consideration and approval at RASG-APAC/9.	<b>Open.</b> APRAST to ascertain on the delegation of certain decision making process from RASG.  <b>APRAST 13 Update:</b>  A Working paper may be presented by the Secretariat in APRAST 14 for identifying the decisions that can delegated to APRAST for efficient decision making process.
<b>Decision RASG-APAC 8/7</b> — Review of Decisions and Conclusions Adopted at APRAST/11 and APRAST/12 and its Progress - WP/7	That, Conclusions adopted at APRAST/11 and APRAST/12 as described in Attachments A and B of WP/7 of RASG/8 be endorsed.	<b>Propose to close.</b> Decision noted. All the Decisions and Conclusions of APRAST/12 are endorsed in RASG/8 as Closed.
<b>Decision RASG-APAC 8/8</b> — Proposal for APAC-AIG direct reporting to RASG-APAC and change of the ToRs in RASG-APAC Procedural Handbook - WP/8	That, proposed changes to the APAC AIG ToRs as described in Attachment A (WP/8) is endorsed by RASG-APAC/8 for onward insertion in Appendix 'B' of RASG-APAC procedural handbook replacing the existing APAC-AIG ToRs.	<b>Propose to close.</b> Decision noted. The amended ToRs will be incorporated in the RASG-APAC Procedural Handbook and forwarded in RASG/9.
<b>Decision RASG-APAC 8/9</b> — Update on Asia Pacific Regional Priorities and Targets - WP/9	That, RASG-APAC/8 endorsed the revisions to the Regional Aviation Safety Priorities and Targets as described in paragraph 2.2.	<b>Open.</b> Continue to follow the Appendix C of WP/9 of RASG APAC/8 for Regional Aviation Safety Priorities and Targets.

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Decision Ref.	Description	Remarks
<b>Decision RASG-APAC 8/10</b> — Update on Asia Pacific Regional Priorities and Targets - WP/9	<p>That, RASG-APAC/8 endorsed the Mechanism described in Appendix C of WP/9 for future reviews as described in paragraph 2.3.</p>	<p><b>Open.</b></p> <p>Proposed Mechanism is as follows;</p> <p>APRAST/12 also agreed with the RASGAT ad-hoc Working Group's recommendation not to form a permanent Working Group for future reviews of the APAC Regional Aviation Safety Priorities and Targets, and that it would be appropriate for the Secretariat (ICAO APAC Office) to be the custodian of the Asia Pacific Regional Aviation Safety Priorities and Targets. This will allow APRAST the flexibility to configure an ad-hoc "task-force"-type mechanism to assist the Secretariat in the review process, and for the rotation of members of this task-force among APAC States/ Administrations and Industry Organisations.</p> <p>However, a permanent mechanism and frequency for the review should be determined, and a progress report should continue to be presented by the APRAST Co-Chairs at every APRAST meeting.</p> <p><b>Update in APRAST 13:</b></p> <p>A working paper seeking a mechanism and frequency may be presented in APRAST 14.</p>
<b>Decision RASG-APAC 8/11</b> — Safety Enhancement Initiative (SEI) LOC-6 Output for RASG-APAC Consideration and Approval - WP/12	<p>That, the Meeting endorsed the APRAST Conclusion 11/7 and action taken on SEI LOC/6 and consider completed and removed from the work programme.</p>	<p><b>Propose to close.</b> Decision noted.</p>

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Decision Ref.	Description	Remarks
<b>Decision RASG-APAC 8/12 —</b> Formulating a Regional Aviation Safety Plan (RASG) and role of RASG – WP/13	That, APRAST be requested to look into formulating a Regional Aviation Safety Plan (RASG) for 2020-22 in collaboration with APAC-AIG (wherever required) by APRAST/14 and present the Draft RASG in RASG-APAC/9 for approval.	<p><b>Open.</b> The work programme 2018-2019 include the task of formulating a RASG and be presented in RASG/9.</p> <p>APRAST 13 formed an Ad-hoc Working Group nominating Singapore from the State and AAPA from the Industry to co-lead/champion the team comprising Australia, Bangladesh, Cambodia, China, Hong Kong (China), India, Macau (China), Nepal, Thailand, USA, ACI, Airbus, Boeing, IFALPA and IATA.</p> <p>The team presented the initial framework of formulating the RASG for APAC. The task to be completed by APRAST 14 and be presented at RASG/9 for approval.</p>
<b>Decision RASG-APAC 8/13 —</b> Update of the Global Aviation Safety Plan (GASP) – IP/5	That, the Meeting endorsed that the States are urged to initiate the development of a national aviation safety plan, including goals and targets consistent with the regional aviation safety plan, and in line with the GASP 2020-22, including the global aviation safety roadmap, and based on the operational safety needs and provide feedback on the new global aviation safety roadmap and suggestions for the future 2020 - 2022 Edition of the GASP via email to: <a href="mailto:GASP@icao.int">GASP@icao.int</a> .	<p><b>Propose to close.</b></p> <ul style="list-style-type: none"> <li>- RASG will contribute to scope out the NASP</li> <li>- One Workshop on NASP Development already conducted in 9-10 May 2018.</li> <li>- ICAO APAC Office proposed to ICAO HQ to assist the States in developing NASP under a Project named 'Special Implementation Project' or SIP funded/steered by ICAO.</li> </ul>
<b>Decision RASG-APAC 8/14 –</b> RASG-APAC Yearly/Standing Work Programme 2018-2019 (Proposed) for Consideration and Approval –WP/21	That, the proposed RASG-APAC 2018/2019 Yearly and Standing Work Programme is approved, as in <b>Attachment D</b> of this Report.	<p><b>Open.</b></p> <ul style="list-style-type: none"> <li>- The Work Programme mainly focuses the tasks arising from Beijing Declaration. RASG tasked the APRAST to formulate the action plan to achieve the target of the Ministerial Declaration (Also addresses Decision RASG-APAC 8/1 and 8/2)</li> </ul>

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Decision Ref.	Description	Remarks
		<ul style="list-style-type: none"><li>- Development of RASP is a priority. Hence APRAST is tasked to present the RASP for APAC at RASG/9.</li><li>- Formulating ASR 2019 on time.</li></ul> <p><b>Update in APRAST-13</b></p> <p>The Ad-hoc Working Group will update on the progress of the tasks arising from Beijing Declaration.</p>

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**List of RASG-APAC/8 Conclusions**

Conclusion Ref.	Description	Remarks
<b>Conclusion RASG-APAC 8/1 —</b> Presentations PPT-1, PPT-2 and PPT-3	<p>That, given the fast growth in aviation and the advent of new entrants, it is imperative that:</p> <ul style="list-style-type: none"> <li>a) ICAO through Regional and national planning and implementation be prioritized and seamlessly linked to Global Planning;</li> <li>b) a project management structure be required as a vehicle to address the process from planning to implementation; and</li> <li>c) in order to elevate political will and increase opportunities for funding, projects be linked to the UNSDGs and the National Development plans.</li> </ul>	<p><b>Propose to close.</b></p> <ul style="list-style-type: none"> <li>- Pursue with the development of RASP and NASP in line with GASP Roadmap.</li> <li>- Continuation of Ministerial Conference for greater commitment by the States and political will in terms of SDG and NDP implementation.</li> </ul> <p><b>Update in APRAST-13</b></p> <p>The APRAST sub-groups and the Ad-hoc Working Group will continue to update on the GASP and Beijing Declaration tasks and objectives. APRAST should monitor the accomplishment of priorities and targets.</p>
<b>Conclusion RASG-APAC 8/2 —</b> Progress of development of Annual Safety Report – WP/11	<p>That, RASG-APAC/8 endorsed the Annual Safety Report 2017 and 2018. The Meeting also agreed the timeline of the Annual Safety Report 2019.</p>	<p><b>Propose to close.</b></p> <p>ICAO APAC Annual Safety Reports for 2018 and 2019 will be delivered within agreed timelines and remain focussed on current regional priorities. A draft APAC ASR will be sent to SRP WG members through the Secretariat by May 31<sup>st</sup> 2019, for members to provide feedback, prior to the draft report being finalised.</p> <p>Every effort will be made to deliver the report earlier than previous APAC ASR's with the delivery date for the 2019 report scheduled for October 15 2019. Where possible, contributing factor information will also be included in APAC ASR's.</p>

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Conclusion Ref.	Description	Remarks
		SRP Co-Chairs to present a working paper at APRAST 14 discussing the development, by the SRP WG, of a regional risk register. The risk register will be distinct from the APAC Annual Safety Report and be supported by the IAT. A decision will be sought at APRAST 14 as to whether the SRP WG / IAT can proceed with this initiative.

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**PROGRESS OF RASG-APAC 2018/2019 YEARLY AND STANDING WORK PROGRAMME**

S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
1	4/4, 4/23	Decisions APRAST 5/9, 6/28 and 7/23  Conclusion APRAST 5/4  Decision APRAST 10/4  APRAST/10 Report para 6.5.11	-	APRAST Co-Chairs	<p><b>Coordination with APANPIRG and its sub-groups</b></p> <p>Pursue the development of the coordination mechanism between APANPIRG and RASG-APAC at the next APANPIRG – RASG-APAC coordination meeting in 2015. The coordination mechanism should address issues such as:</p> <ul style="list-style-type: none"> <li>a) the attendance of RASG-APAC /APRAST representatives at relevant APANPIRG bodies and vice versa;</li> <li>b) the development of an analysis body (similar to the RMA/EMA models that report to RASMAG for vertical and horizontal safety analysis) that manages ATS safety concerns/occurrences for onward reporting to APRAST/RASG-APAC; and</li> <li>c) the review and endorsement of subsequent versions of the APAC Seamless ATM Plan by APANPIRG and RASG-APAC.</li> </ul>
<p><b>STATUS S/N-1:</b></p> <p><b>Open –</b></p> <p>In addition to the progress updated at previous meetings, APRAST/10 agreed to focus on the following three issues: <i>large height deviations</i>, <i>English language proficiency</i> and <i>terrain/obstacle databases</i>, with respect to coordination between APANPIRG and RASG-APAC. <b>Decision APRAST 10/4 refers.</b></p> <p>APRAST/10 also agreed for SRP WG to work with IATA to obtain more information on issues related to TCAS-RA and Large Height Deviations for further discussion at APRAST/11. (<b>APRAST/10 Report para 6.5.11 refers</b>).</p> <p>APANPIRG and RASG-APAC Secretariats discussed. As the topics on large height deviations and terrain/obstacle databases are already being looked at in APANPIRG, it is recommended RASG-APAC do not duplicate work for these subjects and that SRP WG to take up the subject on English Language proficiency for discussion with between APANPIRG. Further discussion at APRAST/12.</p>					

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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
<p><b>APRAST/12 update:</b> No further discussion in APRAST/12. But there is an initiative ongoing with ICAO HQ where PIRG/RASG Focus Group is working out a methodology to introduce PIRG and RASG together under one Plenary and coordinate the subgroups accordingly. After the ToRs are finalized, it will be discussed in PIRG and RASG forum.</p> <p><b>APRAST/13 update:</b> PIRG-RASG coordination process is on-going with the Focused Group by ICAO HQ till ToRs are finalized.</p>					
2		Decisions APRAST 7/3, 8/24	-	Secretariat  Nokscoot	<p><b>Dedicated web portal for RASG-APAC/APRAST</b></p> <p>Develop a two-tier online access to RASG-APAC website to allow for:</p> <ul style="list-style-type: none"> <li>a) A documents management system for public view; and</li> <li>b) A protected workspace to allow APRAST members to collaborate and exchange working information.</li> </ul> <p>This item aims to enhance access and visibility of RASG-APAC/ APRAST work and for more efficient collaboration among its members.</p>
<p><b><u>STATUS S/N-2:</u></b></p> <p><b>Closed –</b></p> <p>NokScoot and Secretariat have outlined the scope and contents of the two-tier website. NoksScoot presented the progress of the protected workspace for APRAST members to collaborate and exchange working information which included the scope and outline of the two-tier web site for RASG-APAC. NokScoot will continue to develop the website and later its website user guide.</p> <p><b>APRAST/12 update:</b> No further update from the champion. New Champion may be nominated in APRAST/13 or Close the item.</p> <p><b>APRAST/13 update:</b> Closed considering no progress from the Champion.</p>					



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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
3		Decisions APRAST 7/31, 8/13  Decision APRAST 10/5	RE 1	FSF and IFALPA	<b>Causal factors with pilot decision to not go-around</b>  Promote pilot adherence to SOPs for approaches including go-around decision making
<p><b><u>STATUS S/N-3:</u></b></p> <p><b>Open –</b></p> <p>FSF presented to APRAST/10 its report on Go-Around Decision- Making and Execution Project Report related to SEI RE/1. FSF, with assistance from Secretariat, will disseminate the report to APRAST members, to seek comments on the report's recommendations, for discussion on possible next steps at APRAST/11. SL Ref T 6/8.2.1 - AP075/17 (FS) dated 21 July 2017 and FSF Report disseminated with deadline for comment by 29 Sep 2017 - 5 responses received. FSF and SEI WG updated. SEI WG is working with FSF to review the responses. Pending further up from SEI WG.</p> <p><b>APRAST/11 update:</b> Following the SEI WG Breakout Session, it was decided that with assistance FSF and IATA will circulate the list of prioritized recommendations to APRAST members to seek comments for discussion on possible next steps at APRAST12</p> <p><b>APRAST/12 update (Decision APRAST12/6 refers):</b> FSF and IATA to provide the Secretariat with the 10 priority items to be circulated to APRAST members for further clarification, if any in order to decide any item as APAC SEI. Those 10 priority items from FSF and IATA will be circulated amongst the States for review along with FSF final report and IATA guidance on unstable approaches as attachments/hyperlinked for background information from these 2 documents when they review the 10 priority items.</p> <p><b>APRAST/13 update:</b> A comparison table of those 10 priority items between FSF and IATA was created in order to give a full picture of those common prioritized recommendations from both FSF and IATA reports. This comparison table contains the details recommendations from both FSF and IATA reports with reference. However, this comparison table of those 10 priority items have not been circulated prior to this APRAST/13. As the Decision APRAST 12/6 is still open, this comparison table will be circulated to all APRAST members by Secretariat for members' consideration and if any clarification need from both FSF and IATA prior to APRAST/14, in order to decide if any those recommendations will be considered to be APAC SEI(s) in APRAST/14.</p>					

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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
4	RASG- APAC Decision 8/12 and 8/14	APRAST 13 (Agenda 7: RASP Break out)		Singapore & AAPA	Formulating the Regional Aviation Safety Plan (RASP) for APAC Region

**STATUS S/N-4:**

**Open –**

**APRAST/13 update:** The first meeting of the AP-RASP ad-hoc WG was attended by Singapore and AAPA (Co-Leads), Australia, Bangladesh, Cambodia, China, Hong Kong (China), India, Macau (China), Nepal, Thailand, US, ACI, Airbus, Boeing, IATA, IFALPA, and ICAO APAC Office. The group discussed the structure, contents and flow of the RASP, and agreed that the AP-RASP would follow draft GASP 2020-2022 Edition structure for consistency, albeit the document would be kept brief, concise and easy to understand. Also, no new operational SEIs would be added, and the work to develop the AP-RASP would focus more on integrating existing building blocks and enhancing information links/ flows between these. The group also noted the preliminary RASP development timeline as follows:

- Jan 2019: Co-Leads to perform comprehensive gap analysis, and disseminate the following to ad-hoc WG members, ICAO APAC Office and other relevant stakeholders:
  - Confirmed ad-hoc WG member list
  - Ad-hoc WG TOR
  - Draft AP-RASP outline
  - Reference materials
  - Assigned tasks and deadlines to respective Custodians
- By end-Jun: Complete development and review of draft
- Jul: APRAST/14 to endorse AP-RASP
- Nov: RASG-APAC/9 to approve AP-RASP

The participants of the first AP-RASP ad-hoc WG were reminded to inform APRAST Secretary/ ICAO APAC Office ([APAC@icao.int](mailto:APAC@icao.int)) details of their designated Points-of-Contact by 31 December 2018.

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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description	
5	RASG- APAC Decision 8/14				<b>Production of Annual Safety Report 2018 &amp; 2019</b>	
<p><b><u>STATUS S/N-5:</u></b></p> <p><b>Open –</b></p> <p><b>APRAST/13 update:</b> ICAO APAC Annual Safety Reports for 2018 will be published by 15 December 2018. ASR 2019 will be delivered within agreed timelines and remain focussed on current regional priorities. A draft APAC ASR will be sent to SRP WG members through the Secretariat by 31 May 2019, for members to provide feedback, prior to the draft report being finalised.</p> <p>Every effort will be made to deliver the report earlier than previous APAC ASR's with the delivery date for the 2019 report scheduled for 15 October 2019. Where possible, contributing factor information will also be included in APAC ASR's.</p> <p>SRP Co-Chairs to present a working paper at APRAST/14 discussing the development, by the SRP WG, of a regional risk register. The risk register will be distinct from the APAC Annual Safety Report and be supported by the IAT. A decision will be sought at APRAST/14 as to whether the SRP WG / IAT can proceed with this initiative.</p>						
6	RASG- APAC Decision 8/14	APRAST-13, Agenda 8		Related APRAST Working group	<b>Follow up of Beijing Declaration</b>  <b>Safety:</b> <ul style="list-style-type: none"> <li>a) Progressively enhance safety oversight capability to achieve a USOAP EI score higher or equal to the global average by 2022;</li> <li>b) Implement an effective State Safety Programme (SSP) by 2025;</li> <li>c) Endeavour not to have any Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any future SSCs within the time frame agreed with ICAO;</li> </ul>	

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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
					<ul style="list-style-type: none"> <li>d) Certify all aerodromes used for international operations by 2020;</li> <li>e) Use data driven methodologies to identify high risk categories of occurrences (e.g. runway safety, loss of control in flight and controlled flight into terrain), and implement collaborative solutions to reduce accident rates and fatalities in the Region; and</li> <li>f) Include aviation safety in national planning frameworks such as National Development Plans (NDPs) supported by robust Civil Aviation Master Plans.</li> </ul>

**STATUS S/N-6:**

**Open –**

**APRAST/13 update:** Representatives of all the groups participated in the break out session. The Work Programme mainly focuses the tasks arising from Beijing Declaration. RASG tasked the APRAST to formulate the action plan to achieve the target of the Ministerial Declaration in 2018/2019 work programme relevant to aviation safety. It was revealed that task as described in serial a, b, c, e, and g are within the purview of the APRAST and those tasks are a continuous process and ongoing. Serial d on the task of Aerodrome Certification is taken over by APANPIRG. Serial f, APRAST can assist States providing guidance in developing a National Aviation Safety Plan (NASP). Serial h, I and j are not within APRAST ToRs. However, Secretariat will be responsible to provide required feedback time to time on the below tasks taking feedback from the States.

**Follow up of Beijing Declaration : "Safety"-**

- a) Progressively enhance safety oversight capability to achieve a USOAP EI score higher or equal to the global average by 2022; - **APRAST**
- b) Implement an effective State Safety Programme (SSP) by 2025; - **APRAST**
- c) Endeavour not to have any Significant Safety Concerns (SSCs) under the USOAP Continuous Monitoring Approach (CMA), and to resolve any future SSCs within the time frame agreed with ICAO; - **APRAST**
- d) Certify all aerodromes used for international operations by 2020; - **APANPIRG**
- e) Use data driven methodologies to identify high risk categories of occurrences (e.g. runway safety, loss of control in flight and controlled flight into terrain), and implement collaborative solutions to reduce accident rates and fatalities in the Region; - **APRAST**

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S/N	Decision RASG- APAC	APRAST Ref	Subject Ref (if any)	Champion	Brief Description
					<p>f) Include aviation safety in national planning frameworks such as National Development Plans (NDPs) supported by robust Civil Aviation Master Plans. – <b>NOT WITHIN THE PURVIEW OF APRAST EXCEPT MONITORING THE NASP.</b></p> <p><b>Collaboration:</b></p> <p>a) Promote regional government and industry collaboration for sharing of best practices in safety management through the Regional Aviation Safety Group (RASG). – <b>APRAST</b></p> <p><b>Independent Accident Investigation Body:</b></p> <p>b) Accident Investigation: Commit to either establish an accident investigation authority that is independent from State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation or where appropriate develop a bilateral, sub-regional or regional partnership to support the establishment of accident investigation capabilities to serve the Region, sub-region or State" - <b>AIG</b></p> <p><b>Human Resource Development:</b></p> <p>c) Establish access to quality training; and</p> <p>d) Encourage sharing of resources bilaterally and/or multi-laterally as well as with industry partners.”</p> <p>- <b>NOT WITHIN THE PURVIEW OF APRAST EXCEPT MONITORING ANY CAPACITY BUILDING INITIATIVE.</b></p>

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**UPDATE ON APRAST/12 DECISIONS AND CONCLUSIONS**

<b>APRAST Decision / Conclusion Number</b>	<b>Description</b>	<b>Status</b>
<b>Decision APRAST 12/1 — Update of APRAST/10 and APRAST/11 Decisions and Conclusions – WP/4</b>	That, the recommendations of APRAST/11 Conclusions as summarised in <b>Appendix D</b> be submitted for RASG-APAC/8 for endorsement.	<b>Closed.</b>  RASG/8 endorsed the WP-07 on the update of APRAST 11 & 12 Decisions & Conclusion .
<b>Decision APRAST 12/2 — Proposal for APAC-AIG direct reporting to RASG-APAC and change of the ToRs in RASG-APAC Procedural Handbook (WP/13)</b>	That, proposed changes to the APAC AIG ToRs as described in Appendix C (WP/13 of APRAST-12) be submitted for RASG/8 endorsement.	<b>Closed.</b>  RASG/8 endorsed the WP-08 on the update of AIG ToRs.
<b>Decision APRAST 12/3 — Outcomes of the Review of the Asia Pacific Regional Aviation Safety Priorities and Targets (WP/6)</b>	That, the Proposed Mechanism (Mechanism mentioned in APRAST/12, WP/6) for future review of Regional Priorities and Targets be submitted for approval at RASG-APAC/8.	<b>Closed.</b>  RASG/8 endorsed the WP-09 on the Mechanism for future review of Regional Priorities and Targets.
<b>Decision APRAST 12/4 — Outcomes of the Review of the Asia Pacific Regional Aviation Safety Priorities and Targets (WP/6)</b>	That, the proposed changes of Regional Priorities and Targets described in Appendix C of WP/6 (APRAST-12) be submitted for approval at RASG-APAC/8.	<b>Closed.</b>  RASG/8 endorsed the WP-09 presented on the outcomes and review of RASPAT.
<b>Decision APRAST 12/5 — Presentation on GASP and NASP - Secretariat</b>	That, the Secretariat to present a Working Paper at RASG-APAC/8 on the need to develop a Regional Aviation Safety Plan (RASP).	<b>Closed.</b>  RASG/8 endorsed the WP-13 on RASP in line with GASP and NASP and inserted in the Working Programme 2018-19.

**APRAST/13**  
Appendix I to the Report

APRAST Decision / Conclusion Number	Description	Status
<b>Decision APRAST 12/6 — SEI WG Break Out Session – RE/1</b>	<p>That, FSF and IATA to provide the Secretariat with the 10 priority items to be circulated to APRAST members for further clarification, if any in order to decide any item as APAC SEI.</p>	<p><b>Open.</b></p> <p>RASG/8 agreed on the circulation of priority items by FSF and IATA amongst the States for further clarification.</p> <p><b>Update at APRAST/13</b>  A <a href="#">comparison table</a> of those 10 priority items between FSF and IATA was created in order to give a full picture of those common prioritized recommendations from both FSF and IATA reports. This comparison table contains the details recommendations from both FSF and IATA reports with reference. However, this comparison table of those 10 priority items have not been circulated prior to this APRAST/13.  As the Decision APRAST 12/6 is still open, this comparison table will be circulated to all APRAST members by Secretariat for members' consideration and if any clarification need from both FSF and IATA prior to APRAST/14, in order to decide if any those recommendations will be considered to be APAC SEI(s) in APRAST/14.</p>

**APRAST/13**  
Appendix I to the Report

APRAST Decision / Conclusion Number	Description	Status
<b>Decision APRAST 12/7 — SEI Implementation Survey</b>	<p>That, SEI WG to prepare a survey on current SEI implementation for secretariat to disseminate to APRAST members to seeking feedback on applicability, priority, implementation challenges as well as if any particular assistance is required during the SEI implementation.</p>	<p><b>Open.</b></p> <p>RASG/8 agreed on the Draft Survey Questionnaire developed. But few inputs received from the States after circulating twice.</p> <p><b>Update at APRAST/13</b></p> <p>Due to the low number of responses to this survey, the received feedback may not give APRAST a full picture of all the views from APRAST members regarding the SEIs and safety tools implementation. As the discussion from the APRAST/13, APRAST should obtain further inputs from those non-responded APRAST Members.</p> <p>During the SEI WG breakout session, some members commented that the PoC(s) did not receive the State Letter regarding this survey from ICAO Regional Office and sufficient time should also be given.</p> <p>In order to the obtain sufficient information and feedback from APRAST Members for supporting the implementation of all those SEIs, SEI WG concluded and proposed the following:</p> <ul style="list-style-type: none"> <li>• To extend the submission date of this survey to 28 Feb 2019;</li> <li>• To validate the PoC (Point of Contact) of APRAST during the Plenary Session in APRAST/13 or further action to be taken from Secretariat;</li> <li>• This survey will be disseminated to both PoC and Director General of APRAST members.</li> </ul>



**APRAST/13**  
Appendix I to the Report

APRAST Decision / Conclusion Number	Description	Status
<b>Decision APRAST 12/8 — Annual Safety Report (ASR) 2018</b>	That, Draft Annual Safety Report 2018 to be completed by June 2018 and be submitted for approval by the RASG-APAC/8.	<b>Closed.</b>  ICAO APAC Annual Safety Reports for 2018 will be published by mid December 2018.
<b>Decision APRAST 12/9 — Time line for development of ASR 2019</b>	That, the SRP WG to finalize the timeline for the development of the 2019 APAC Annual Safety Reports by APRAST/13	<b>Open.</b>  ASR 2019 will be delivered by 15 October 2019.
<b>Decision APRAST 12/10 — SRP WG Safety Risk Area</b>	The SRP WG to develop a process to prioritize the identified Regional Safety Risk Area(s) by APRAST/13.	<b>Open.</b>  Pending updates from SRP WG at APRAST-13.  APRAST 13 Update (Conclusion APRAST 13/2):  That, SRP Vice-chairs to present a working paper at APRAST/14 discussing the development, by the SRP WG, of a Regional Risk Register. The risk register will be distinct from the APAC Annual Safety Report and be supported by the IAT. A decision will be sought at APRAST/14 as to whether the SRP WG / IAT can proceed with this initiative.

**APRAST/13**  
Appendix I to the Report

Conclusions		
APRAST Decision / Conclusion Number	Description	Status
<b>Conclusion APRAST 12/1 — IATA-ICAO Workshop on IOSA Programme – WP/14</b>	That, IATA to liaise with the Secretariat to facilitate the IOSA Audit Workshop.	<b>Closed.</b>  The Workshop has been conducted successfully from 25-28 Sep 18 in collaboration with ICAO and IATA RO Bangkok. Details can be found ;  <a href="https://www.icao.int/APAC/Meetings/Pages/2018-IATA-OSAW.aspx">https://www.icao.int/APAC/Meetings/Pages/2018-IATA-OSAW.aspx</a>

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# APRAST 13

## SEI WG Breakout Session

The 13th Meeting of the Asia Pacific Regional Aviation Safety Team

# SEI WG Agenda Items

1. Review the Status of Safety Enhancement Initiatives (SEIs)
2. Review the SEIs under the yearly work programmes
3. Review the SEIs under Registry of Emerging
4. Review the work of SEI Core Group and SEI Review Group
5. Review any other open APRAST Decisions and Conclusions related to SEI WG
6. Items from APRAST/13 Plenary Session
7. AOB



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# Review the Status of Safety Enhancement Initiatives (SEIs)

# Status of Safety Enhancement Initiatives

	Priority 1	Priority 2	Priority 3	Total
Completed SEIs	11	3	4	17 (1)
Open SEIs under 2018/2019 yearly programme	0	1	0	1

# Other SEIs including Emerging Issue

## CFIT Sub-Group

### **CFIT 9 – Review of existing and emerging technologies for enhanced flight visibility**

## LOC Sub-Group

LOC 13 – Loss of control: information sharing (Priority 3)

LOC xx – Flight crew training verification and validation

LOC xx – Scenario based training for low altitude maneuvers

LOC xx – Enhanced crew resource management training

## RS Sub-Group

RI 6 – Scenario based training for air traffic controllers [see Paragraph 6.5.7 of APRAST/10 Meeting Report]

## Others

Mitigations for hazardous material fires [see Paragraph 7.4.11 of APRAST/9 Meeting Report]

SEI of turbulence procedures for reducing cabin injuries [Decision APRAST 11/5 refers]



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# Review the SEIs under the Yearly Work Programmes





# Review the 2017/2018 & 2018/2019 RASG- APAC Work Programme

**LOC/6 - Upset Prevention Recovery Training (UPRT)**

**RE/1 – Causal factors with pilot decision to not go-around**

# Review the 2017/2018 & 2018/2019 RASG-APAC Work Programme

## LOC/6 - Upset Prevention Recovery Training (UPRT)

### In APRAST/11

The Meeting agreed to submit the SEI LOC/6 to RASG/8 for approval with following Conclusion.

### **Conclusion APRAST 11/7—SEI LOC/6 - Upset Prevention Recovery Training (UPRT)**

That, RASG-APAC consider:

- a) requesting States/Administrations to note the ICAO SARPs regarding upset prevention and recovery training (UPRT) in Annex 1 and Annex 6, Part I;
- b) encouraging States/Administrations to take actions to implement these ICAO Annexes provisions regarding the UPRT if they have not yet done so;
- c) encouraging APRAST members to review and utilize the guidance, procedures and recommendations in ICAO Doc 10011, Doc 9868 and AUPRTA to implement the ICAO UPRT SARPs; and
- d) closing SEI LOC/6 and removed SEI LOC/6 from the work programme.



# Review the 2017/2018 & 2018/2019 RASG-APAC Work Programme

## **LOC/6 - Upset Prevention Recovery Training (UPRT)**

### **Update at APRAST/13**

SEI WG submitted and presented WP/12 regarding the SEI LOC/6 to RASG/8 on September 2018 for approval.

### **Decision RASG-APAC 8/11**

That, the Meeting endorsed the APRAST Conclusion 11/7 and action taken on SEI LOC/6 and consider completed and removed from the work programme.

# Review the 2017/2018 & 2018/2019 RASG- APAC Work Programme

## **RE/1 - Causal factors with pilot decision to not go-around**

(Champion: FSF/IATA)

### **In APRAST/12**

In line with Decision APRAST 11/3, FSF and IATA have identified 10 priority items from the common recommendations between FSF report on Go-Around Decision Making and IATA guidance on Unstable Approaches.

SEI WG reviewed and discussed the feasibility of adopting the 10 priority items identified from the FSF and IATA materials as APAC SEI(s). Seeing that conclusion could not be reached during the SEI WG breakout session, SEI WG agreed to circulate the 10 priority items to APRAST member seeking further clarification from FSF/IATA if any, in order to decide any item as APAC SEI(s).

# Review the 2017/2018 & 2018/2019 RASG- APAC Work Programme

## **RE/1 - Causal factors with pilot decision to not go-around**

(Champion: FSF/IATA)

### **In APRAST/12**

The Meeting agreed to the following Decision:

### **Decision APRAST 12/6 - RE/1**

That, FSF and IATA to provide the Secretariat with the 10 priority items to be circulated to APRAST members for further clarification, if any in order to decide any item as APAC SEI.

# Review the 2017/2018 & 2018/2019 RASG-APAC Work Programme

## **RE/1 - Causal factors with pilot decision to not go-around**

(Champion: FSF/IATA)

### **Update at APRAST/13**

A [comparison table](#) of those 10 priority items between FSF and IATA was created in order to give a full picture of those common prioritized recommendations from both FSF and IATA reports. This comparison table contains the details recommendations from both FSF and IATA reports with reference. However, this comparison table of those 10 priority items have not been circulated prior to this APRAST/13.

As the Decision APRAST 12/6 is still open, this comparison table will be circulated to all APRAST members by Secretariat for members' consideration and if any clarification need from both FSF and IATA prior to APRAST/14, in order to decide if any those recommendations will be considered to be APAC SEI(s) in APRAST/14.



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## Review the SEIs under Registry of Emerging

# Review the SEIs under Registry of Emerging

## Prior to APRAST/13

**CFIT 9 – Review of existing and emerging technologies for enhanced flight visibility  
(SE FAA AC90-106)**

**RI 6 – Scenario based training for air traffic controllers**

**LOC 13 – Loss of control: information sharing (Priority 3)**

**LOC xx – Flight crew training verification and validation (CAST SE 195)**

**LOC xx – Scenario based training for low altitude maneuvers**

**LOC xx – Enhanced crew resource management training (CAST SE 199)**

**Others – Mitigations for hazardous material fires (CAST SE 126)**

**Others – SEI of turbulence procedures for reducing cabin injuries (CAST SE 78)**

All above SEIs are under the Registry of Emerging Issue and no champion(s) are identified yet.





# Review the SEIs under Registry of Emerging

## Update at ARPAST/13

SEI WG members commented and provided latest development on the topic of “Enhanced crew resource management training”. A need for developing the safety assessment on the runway was raised from a member. After the discussion with agreement, instead of inventing a new SEI at this moment, COSCAP-SA will coordinate with COSCAP-SEA for sharing the guidance from COSCAP-SEA if any.

Apart from this, no proposal was made and no champion is identified during SEI WG breakout session. All above SEIs will maintain under the Emerging Issues registry till APRAST/14.



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# Review the work of SEI Core Group and SEI Review Group



# Review the work of SEI Core Group and SEI Review Group

## **SEI Core Group and Review Group**

### **SEI Core Group**

In APRAST/12, with the aim of facilitating administration and cooperation within the SEI WG in order to have a better communication between APRAST meetings. The SEI Core Group develop the SEI implementation Survey as presented in WP/11 and circulate to all APRAST Members for their feedback.

Currently, 17 members in this SEI Core Group including States/Administrations, International & Regional Organizations and COSCAPs.



# Review the work of SEI Core Group and SEI Review Group

## SEI Core Group and Review Group Members

### SEI Review Group

Besides individual feedback can be provided by APAC members to RASG/APRAST Secretariat, SEI WG concluded in APRAST/12 to form a SEI Review Group to conduct periodic review of current SEI outputs between every APRAST meeting and provide update report back to APRAST meetings.

The priority on which SEIs to be reviewed will be based on the date of the creation of the SEIs and/or the information received from the forthcoming SEI implementation survey. Prior to APRAST/13, SEI Review Group has reviewed 3 CFIT SEIs which were approved by RASG-APAC 5 year ago. A review form was used to facilitate this review if the SEIs are still valid, any error found and any suggestion to change on the SEIs.

Currently, 11 members in this SEI Review Group including States/Administrations, International Organizations and COSCAPs.

# Review the work of SEI Core Group and SEI Review Group

## Update on SEI Core Group and Review Group Members at APRAST/13

Members	SEI Core Group	SEI Review Group	APRAST/13		Additional contact person	
Cambodia	X	X	Mr. Sophondarith TAN	<a href="mailto:sophondarith-tan@civilaviation.gov.kh">sophondarith-tan@civilaviation.gov.kh</a>		
China	X	X	Mr. Ming ZENG	<a href="mailto:zengming@caac.gov.cn">zengming@caac.gov.cn</a>		
Macao, China	X	X	Mr. Wa Kin PUN, Stanley	<a href="mailto:stanleypun@aacm.gov.mo">stanleypun@aacm.gov.mo</a>		
Hong Kong, China	X	X	Capt. Michael SL LAU	<a href="mailto:msslau@cad.gov.hk">msslau@cad.gov.hk</a>		
India	X	X	Mr. Maneesh KUMAR	<a href="mailto:maneesh.dgca@nic.in">maneesh.dgca@nic.in</a>		
Indonesia	X	X	Capt Alfin Bastain Firdaus	<a href="mailto:alfin_bastian@duphub.go.id">alfin_bastian@duphub.go.id</a>	Capt. Rd. Achmad Sadikin	<a href="mailto:achmadsadikin@airasia.com">achmadsadikin@airasia.com</a>
Singapore	X	X	Mr. Kah Han TAN	<a href="mailto:tan_kah_han@caas.gov.sg">tan_kah_han@caas.gov.sg</a>		
IFALPA	X	X	Capt. Bhudhibhuntu Teinwan	<a href="mailto:bhudhibhuntu.t@thaairways.com">bhudhibhuntu.t@thaairways.com</a>		
COSCAP-SA	X	X	Ms. Marie Helene ZUBRYCKYJ	<a href="mailto:marie.zubryckyj@coscap-icao.org">marie.zubryckyj@coscap-icao.org</a>		
	SEI Core Group Only					
AAPA	X		Mr. Martin R. ERAN-TASKER	<a href="mailto:merantasker@aapa.org.my">merantasker@aapa.org.my</a>		
Bangladesh	X		S M Lutful Kabir	<a href="mailto:kabircaab@gmail.com">kabircaab@gmail.com</a>		
Lao	X		Mr. Khine SIMVONGSA	<a href="mailto:k_simvongsa@yahoo.com">k_simvongsa@yahoo.com</a>		
Mongolia	X		Mr. YERKHANAT Syesyer	<a href="mailto:erkhanat@mcaa.gov.mn">erkhanat@mcaa.gov.mn</a>		
Thailand	X		Mr. Buntoeng Megchai	<a href="mailto:buntoeng.m@caat.or.th">buntoeng.m@caat.or.th</a>		
COSCAP-SEA	X		Mr. Michiel VREEDENBURGH	<a href="mailto:mvreedenburg@icao.int">mvreedenburg@icao.int</a>		
COSCAP-NA	X		Capt. Wayne Loe	<a href="mailto:wayne.loe@coscap-icao.org">wayne.loe@coscap-icao.org</a>		
US CAST	X		Mr. Chad BREWER	<a href="mailto:chad.brewer@faa.gov">chad.brewer@faa.gov</a>		
		SEI Review Group Only				
Japan		X	Mr. Yusuke Urano	<a href="mailto:urano-y2c3@mlit.go.jp">urano-y2c3@mlit.go.jp</a>	Mr. Yoshikazu Matsushige	<a href="mailto:matsushige-y46z8@mlit.go.jp">matsushige-y46z8@mlit.go.jp</a>
Malaysia		X	Capt Chow Weng Cheong	<a href="mailto:chowwc@caam.gov.my">chowwc@caam.gov.my</a>		
	17	11				

# Review the work of SEI Core Group and SEI Review Group

## SEI Review Group Members

5 review feedback received from China, Japan, Macau – China, Malaysia and Singapore as the members of SEI review group prior to APRAST/13 and these 3 SEIs are considered valid and no revision is need. The APRAST/13 Plenary is proposed to endorse this review result.

		Safety Enhancement Initiatives	Date of RASG-APAC approval	Reviewed / Partially Reviewed by States or Administrations (42) at APRAST/12	Review Results
1.	CFIT 1	Model Regulation on Ground Proximity Warning System (GPWS)	Approved at RASG-APAC/3 (Jun 2013)	10 / 2	VALID
2.	CFIT 1	Advisory Circular — Guidance for Operators to Ensure Effectiveness of GPWS Equipment	Approved at RASG-APAC/3 (Jun 2013)	9 / 2	VALID
3.	CFIT 1	Advisory Circular — Guidance for Operators on Training Programme on the use of Ground Proximity Warning System (GPWS)	Approved at RASG-APAC/3 (Jun 2013)	7 / 2	VALID

# Review the work of SEI Core Group and SEI Review Group

## SEI Review Group Members

SEI WG decided to conduct the review for the following 3 SEI outputs as the periodic SEI review process. The review result from the SEI review group will be reported back to APRAST/14.

		Safety Enhancement Initiatives	Date of RASG-APAC approval	Reviewed / Partially Reviewed by States or Administrations (42) at APRAST/12
1.	CFIT 5	Advisory Circular — Crew Resource Management Training Programme (CRM)	Approved at RASG-APAC/3 (Jun 2013)	8 / 2
2.	CFIT 6	Advisory Circular — Controlled Flight into Terrain (CFIT) and Approach and Landing Accident Reduction (ALAR) Training Programme	Approved at RASG-APAC/3 (Jun 2013)	7 / 2
3.	LOC 5	Advisory Circular — Mode Awareness and Energy State Management Aspects of Flight Deck Automation	Approved at RASG-APAC/3 (Jun 2013)	6 / 2



# Review any other open APRAST Decisions and Conclusions related to SEI WG





# Review any other open APRAST Decisions and Conclusions related to SEI WG

Besides Decision APRAST 12/6—SEI WG Break Out Session – RE/1 is consider open, **NO** other open ARPAST/12 Decision or Conclusion related to SEI WG in accordance with APRAST/13–WP/9 presented by the Secretariat.



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## Tasks from APRAST/13 Plenary Session

# Tasks from APRAST/13 Plenary Session

## WP/11 – SEIs Implementation Survey

Due to the low number of responses to this survey, the received feedback may not give APRAST a full picture of all the views from APRAST members regarding the SEIs and safety tools implementation. As the discussion from the APRAST/13, APRAST should obtain further inputs from those non-responded APRAST Members.

During the SEI WG breakout session, some members commented that the PoC(s) did not receive the State Letter regarding this survey from ICAO Regional Office and sufficient time should also be given.

In order to obtain sufficient information and feedback from APRAST Members for supporting the implementation of all those SEIs, SEI WG concluded and proposed the following:

- To extend the submission date of this survey to 28 Feb 2019;
- To validate the PoC (Point of Contact) of APRAST during the Plenary Session in APRAST/13 or further action to be taken from Secretariat;
- This survey will be disseminated to both PoC and Director General of APRAST members.

# Items from APRAST/13 Plenary Session

## Recommendation from SEI WG:

Decision APRAST 13/XX:

Why	To extend the deadline of the SEIs survey till 28 Feb 2019 and get sufficient feedback from APRAST Members in order to identify what is the need to support the implementation of all SEIs
What	That, Secretariat to disseminate the survey with the new submission deadline (28 Feb 2019) to those APRAST members who have not yet submitted the survey.
Who	ICAO APAC RO, APAC States/Administrations
When	Dec 2018

# Tasks from APRAST/13 Plenary Session

## WP/13 – Proposed approach to develop the Asia-Pacific Regional Aviation Safety Aviation Safety Plan (AP-RASP)

SEI WG reviewed the proposed approach for developing the AP-RASP as proposed by the AP-RASP adhoc working group. The input from SEI WG has been forwarded and further discussed in the AP-RASP adhoc working group breakout session on 5 Dec 2018.



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# THANK YOU

**The 13th Meeting of the Asia Pacific Regional Aviation Safety Team**

## LIST OF APRAST/13 DECISIONS AND CONCLUSIONS

### LIST OF APRAST/13 DECISIONS

<b>Decision APRAST 13/1 : SEI Implementation and other Safety Tools Survey</b>	
<p>That, Secretariat to send out the survey again to the non-responsive States considering the following points;</p> <p>a) Submission date of this survey to 28 Feb 2019;</p> <p>b) Further action to be taken from Secretariat to validate the POC of APRAST members;</p> <p>c) This survey will be disseminated to both PoC and Director General of APRAST members.</p>	<p><b>Expected impact:</b></p> <p><input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets</p> <p><input type="checkbox"/> Enhancement of USOAP Effective Implementation</p> <p><input type="checkbox"/> Monitoring and Administration</p> <p><input type="checkbox"/> Capacity Building and Sharing of Information</p> <p><input type="checkbox"/> Inter-Regional</p>
<p><b>Why:</b> To extend the deadline of the SEIs survey till 28 Feb 2019 and get sufficient feedback from APRAST Members in order to identify what is the need to support the implementation of all SEIs.</p>	
<p><b>When:</b> Immediately</p>	<p><b>Status:</b> In progress</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> APRAST <input type="checkbox"/> APAC-AIG <input type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF</p> <p><input checked="" type="checkbox"/> APAC States/Administrations <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: Industry Organization</p>	

<b>Decision APRAST 13/2 : Confirmation of the Asia-Pacific Regional Aviation Safety Plan (AP-RASP) ad-hoc Working Group members</b>	
<p>That, participants of the first AP-RASP ad-hoc WG inform APRAST Secretary/ ICAO APAC Office (<a href="mailto:APAC@icao.int">APAC@icao.int</a>) of the details of their designated Points-of-Contact by 31 December 2018.</p>	<p><b>Expected impact:</b></p> <p><input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets</p> <p><input type="checkbox"/> Enhancement of USOAP Effective Implementation</p> <p><input type="checkbox"/> Monitoring and Administration</p> <p><input type="checkbox"/> Capacity Building and Sharing of Information</p> <p><input type="checkbox"/> Inter-Regional</p>
<p><b>Why:</b> Development of Regional Aviation Safety Plan for Asia-Pacific region</p>	
<p><b>When:</b> Immediate</p>	<p><b>Status:</b> In progress</p>
<p><b>Who:</b> <input checked="" type="checkbox"/> APRAST <input checked="" type="checkbox"/> APAC-AIG <input checked="" type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF</p> <p><input checked="" type="checkbox"/> APAC States/Administrations <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: Industry Organization</p>	

**APRAST/13**  
Appendix K to the Report

<b>Decision APRAST 13/3 : SEI WG</b>	
That, the Secretariat will circulate the comparison table to all APRAST members' consideration and if any clarification is needed from both FSF and IATA prior to APRAST/14, in order to decide if any of those recommendations may be considered to be APAC SEI(s) in APRAST/14.	<b>Expected impact:</b> <input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets <input type="checkbox"/> Enhancement of USOAP Effective Implementation <input type="checkbox"/> Monitoring and Administration <input type="checkbox"/> Capacity Building and Sharing of Information <input type="checkbox"/> Inter-Regional
<b>Why:</b>	
<b>When:</b> Immediately	<b>Status:</b> In progress
<b>Who:</b> <input checked="" type="checkbox"/> APRAST <input type="checkbox"/> APAC-AIG <input type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF <input checked="" type="checkbox"/> APAC States/Administrations <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: IATA, FSF	

**LIST OF APRAST/13 CONCLUSIONS**

<b>Conclusion APRAST 13/1 : Proposed Approach to Develop the Asia-Pacific Regional Aviation Safety Plan (AP-RASP)</b>	
That, APRAST, with support from ICAO APAC Office and other regional mechanisms including the COSCAPs, establish an ad-hoc Working Group Comprising States/Administrations and Industry Organizations, with Singapore and AAPA as Co-Leads, to develop the Asia-Pacific Regional Aviation Safety Plan (AP-RASP) for endorsement at APRAST/14, with a view to seek approval at RASG-APAC/9.	<b>Expected impact:</b> <input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets <input type="checkbox"/> Enhancement of USOAP Effective Implementation <input type="checkbox"/> Monitoring and Administration <input type="checkbox"/> Capacity Building and Sharing of Information <input type="checkbox"/> Inter-Regional
<b>Why:</b> Development of Regional Aviation Safety Plan for Asia-Pacific region	
<b>When:</b> Started	<b>Status:</b> In progress
<b>Who:</b> <input checked="" type="checkbox"/> APRAST <input checked="" type="checkbox"/> APAC-AIG <input checked="" type="checkbox"/> SRP WG <input checked="" type="checkbox"/> SEI WG <input type="checkbox"/> Capacity Building TF <input checked="" type="checkbox"/> APAC States/Administrations <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: Industry Organizations	



**APRAST/13**  
Appendix K to the Report

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<b>Conclusion APRAST 13/2: Addressing the issues or areas of unmitigated risk that are not covered in the Annual Safety Reports (ASR).</b>	
<p>That, SRP Vice-chairs to present a working paper at APRAST/14 discussing the development, by the SRP WG, of a Regional Risk Register. The risk register will be distinct from the APAC Annual Safety Report and be supported by the IAT. A Decision will be sought at APRAST/14 as to whether the SRP WG / IAT can proceed with this initiative.</p>	<p><b><i>Expected impact:</i></b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Achievement of global and regional aviation safety priorities and targets</li> <li><input type="checkbox"/> Enhancement of USOAP Effective Implementation</li> <li><input checked="" type="checkbox"/> Monitoring and Administration</li> <li><input type="checkbox"/> Capacity Building and Sharing of Information</li> <li><input type="checkbox"/> Inter-Regional</li> </ul>
<p><b>Why:</b>     Address the areas of unmitigated risks</p>	
<p><b>When:</b>    Immediate</p>	<p><b>Status:</b>    In progress</p>
<p><b>Who:</b>     <input checked="" type="checkbox"/> APRAST   <input checked="" type="checkbox"/> APAC-AIG   <input checked="" type="checkbox"/> SRP WG   <input checked="" type="checkbox"/> SEI WG   <input type="checkbox"/> Capacity Building TF  <input checked="" type="checkbox"/> APAC States/Administrations   <input checked="" type="checkbox"/> ICAO APAC RO   <input type="checkbox"/> ICAO HQ   <input type="checkbox"/> Other: Industry Organization</p>	

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