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**Regional Aviation Safety Group
(Asia & Pacific Regions)**

Asia Pacific Regional Aviation Safety Team

**STANDARDISED CAPACITY BUILDING
PROGRAMME**

developed by

APRAST Capacity Building Task Force

Executive Summary

The purpose of this document is to provide an overview of a typical training framework which may help APAC Member States/Administrations to identify appropriate types of training and respective training providers that could help equip their technical personnel with the knowledge and the skill to discharge his/her safety oversight activities. This would in turn assist APAC Member States/Administrations in building the necessary safety oversight capabilities relating to the critical element CE-4 “qualified personnel”.

Version 1 dated 20 April 2017



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Preamble

Background on Regional Aviation Safety Group – Asia & Pacific (RASG – APAC)

The Regional Aviation Safety Group Asia-Pacific (RASG-APAC) was established in 2011 by the Council of ICAO. The RASG-APAC is tasked with improving aviation safety in the Asia & Pacific regions by developing and implementing a work programme, in line with the ICAO Global Aviation Safety Plan, aimed at identifying and implementing safety initiatives to address known safety hazards and deficiencies in the region.

The Asia Pacific Regional Aviation Safety Team (APRAST), a sub-group of the RASG-APAC, assists the RASG-APAC in its work by recommending safety interventions which will reduce aviation safety risks.

The full commitment and active participation of APAC States/Administrations and the industry partners is fundamental to the success of the RASG-APAC in reducing aviation safety risks and accident rates in the Asia and Pacific regions.

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Chapter 1

INTRODUCTION

1.1 OBJECTIVES OF THE DOCUMENT

1.1.1 The APAC region has one of the fastest air traffic growth rates and effective safety oversight systems are crucial in ensuring a high standard of safety to enable the growth.

1.1.2 At international level, the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP) are ICAO initiatives to improve global aviation safety and the efficiency of air traffic management respectively. However, at regional level, States/Administrations within each regions should enhance their safety oversight system as a high priority, and capacity building is an important element to enhance safety oversight capabilities.

1.1.3 This was further underscored by ICAO's recent comprehensive system approach audit result showing the area of Critical Element 4 (CE-4) "qualified personnel" having the highest lack of effective implementation. Thus, the objective of this document is to provide States/Administrations with the guidance to improve its CE-4 effective implementation scoring by increasing the number of qualified inspectors.

1.1.4 Like other regions, States/Administrations in the APAC region would need to strengthen the critical element CE-4 "qualified personnel" in order to enhance their safety oversight capabilities. Particularly, there is a need to focus on increasing the number of qualified safety inspectors in the APAC region.

1.1.5 To support GASP and GANP, Asia Pacific Regional Safety Team (APRAST) under the Regional Aviation Safety Group (RASG) - APAC established a Task Force with members from Brunei Darussalam, Malaysia, Papua New Guinea, United States of America and Singapore. The Task Force was formed in 2016 to assist APAC States/Administrations in building up the necessary safety oversight capabilities, particularly in the critical element CE-4 "qualified personnel".

1.1.6 To achieve this objective, this document provides a standardised capacity building programme (SCBP) that contains the relevant information which APAC States/Administrations could use to equip and skill its technical personnel in a more structured manner. With this, APAC States'/Administrations' safety oversight capability could be further strengthened which will result in improving its CE-4 effective implementation scoring.



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1.1.7 This programme also provides an overview of a typical training framework which may help APAC States/Administrations to identify appropriate types of training and respective training providers that could help equip their technical personnel with the knowledge and the skill to discharge his/her safety oversight activities. Figure 1 shows a typical capacity building flowchart that States/Administrations could use to build internal capacity.

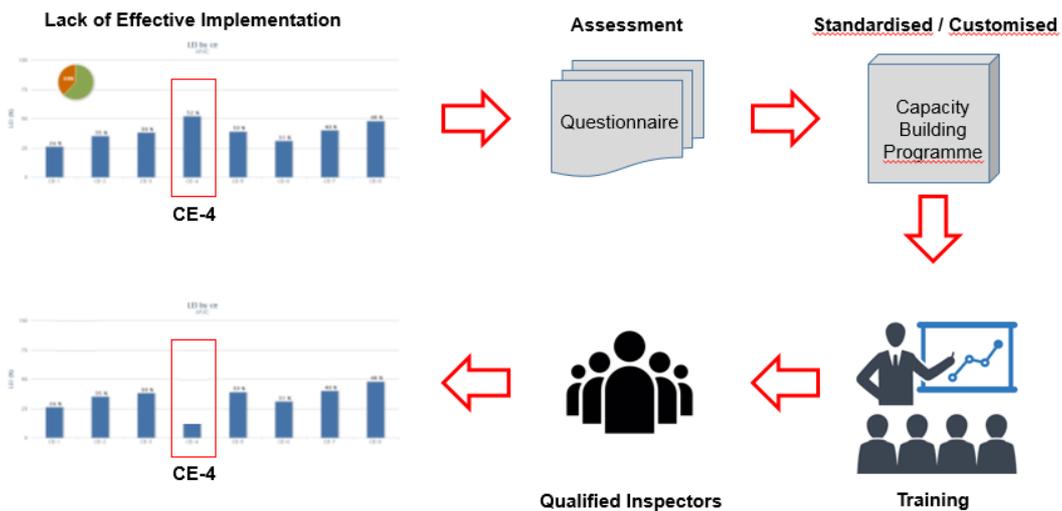


Figure 1. Typical Capacity Building Flowchart

1.1.8 In addition, this programme also suggests other possible ways for States/Administrations to source technical assistance or subject-matter-experts from various means including other States/Administrations who has the capacity to provide such support. APAC States/Administrations are also encouraged to customise this programme by making changes or improvement to the information provided in this document.

1.2 ABOUT THE DOCUMENT

1.2.1 ICAO safety oversight audits and other ICAO missions have shown that many Contracting States have not established effective safety oversight systems and that qualification of technical personnel are often deficient, thereby creating an opportunity for lack of safety oversight over approval holders. The establishment and management of an effective safety oversight system require a high-level government commitment, without which a Contracting State cannot fully satisfy its aviation system safety-related responsibilities

1.2.2 As such, this document reiterates States' responsibility in ensuring all technical staff are properly trained and provides related guidance derived from various sources so that the States' safety oversight activities could be adequately discharged.



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1.2.3 In addition, audit findings and other sources of information also convinced ICAO that it should further assist Contracting States in the development of a capacity building programme as well as provide them with related guidance material to deal with identified deficiencies.

1.2.4 In order to provide comprehensive and meaningful guidance on the development and management of States'/Administrations' capacity building, a training programme which includes typical training road maps for various functional areas is presented in Chapter 4. APAC States/Administrations are encouraged to implement such a programme which is capable of meeting their safety oversight responsibilities.

1.3 REFERENCE DOCUMENTS

The documents listed in **Appendix A** are referred to in this document and provide additional guidance material for the development of a capacity building programme.

1.4 DEFINITIONS

The definitions used in this document are similar to those found in relevant Annexes to the Convention on International Civil Aviation, other ICAO documentation (such as the ICAO lexicon) or are the definitions intended by the Safety Oversight Audit Section (SOA) solely for the purpose of this document and the safety oversight audit process.

1.5 ABBREVIATIONS/ACRONYMS

Some common abbreviations/acronyms used in this document are as follows:

AGA	Aerodrome
AIG	Aircraft Investigation
AIR	Airworthiness
ANS	Air Navigation Services
AOC	Air operator certificate
APRAST	Asia Pacific Regional Aviation Safety Team
CMA	Continuous Monitoring Approach
CE	Critical Element
EI	Effective Implementation
ICAO	International Civil Aviation Organization
LEI	Lack of Effective Implementation
OPS	Operations
PEL	Personnel Licensing



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RASG	Regional Aviation Safety Group
SMS	Safety management system
SSP	State Safety Programme
SOA	Safety Oversight Audit Section
USOAP	ICAO Universal Safety Oversight Audit Programme



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Chapter 2

STATE SAFETY OVERSIGHT

2.1 SAFETY OVERSIGHT OBLIGATION

2.1.1 When permitting or undertaking aviation activities, the Contracting State incurs certain obligations under Chicago Convention and its Annexes.

2.1.2 To ensure that the State's system is appropriate to the level and scope of their aviation activity, ICAO Document 9734, Part A, mentions that each of these obligations will require consideration of the critical elements of a safety oversight system. This should include State policy to systematically manage the safety-critical pressures, dependencies and conflicts affecting the community from internal as well as external sources. Part of that management process call for States to consider the adoption of national requirements that exceed ICAO SARPs in some areas for some circumstances.

2.1.3 While public interest needs to be considered, States need to ensure that a proper system of checks and balances is maintained. The State should retain effective control of important inspection functions. Such functions cannot be delegated, otherwise, the aviation industry will end up regulating themselves and the State's oversight system not be effective.

2.2 CRITICAL ELEMENTS OF A SAFETY OVERSIGHT SYSTEM

2.2.1 All ICAO Contracting States, in their effort to establish and implement an effective safety oversight system, need to consider the critical elements (CE) for safety oversight.

2.2.2 ICAO Document 9734, Part A, mentions that CEs are essentially the safety defence tools of a safety oversight system and are required for the effective implementation safety oversight critical elements of a safety oversight system encompass the whole spectrum of civil aviation activities, including airworthiness of aircraft, accident/incident investigation, and transport of dangerous goods by air. The effective implementation of the CE is an indication of a State's capability for safety oversight.

2.2.3 ICAO has identified and defined the following critical elements of a State's Safety oversight system:



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- CE-1. Primary aviation legislation.** The provision of a comprehensive and effective aviation law consistent with the environment and complexity of the State's aviation activity and compliant with the requirements contained in the Convention on International Civil Aviation
- CE-2. Specific operating regulations.** The provision of adequate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation and providing for standardization operational procedures, equipment and infrastructures (including safety management and training systems), in conformance with the Standards and Recommended Practices (SARPs) contained in the Annexes to the Convention of International Civil Aviation
- CE-3. State civil aviation system and safety oversight functions.** The establishment of a Civil Aviation Authority (CAA) and/or other relevant authorities or government agencies, headed by a Chief Executive Officer, supported by the appropriate and adequate technical and non-technical staff and provided with adequate financial resources. The State authority must have stated regulatory functions, objectives and safety policies.
- CE-4. Technical personnel qualification and training.** The establishment of minimum knowledge and experience requirements for the technical personnel performing safety oversight functions and the provision of appropriate training to maintain and enhance their competence at the desired level. The training should include initial and recurrent (periodic) training.



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CE-5. Technical guidance, tools and the provision of safety-critical information.

The provision of technical guidance (including processes and procedures), tools (including facilities and equipment) and safety oversight functions in accordance with established requirements and in a standardized manner. In addition, this includes the provision of technical guidance by the oversight authority to the aviation industry on the implementation of applicable regulations and instructions.

CE-6. Licensing, certification, authorization and approval obligations.

The implementation of processes and procedures to ensure that personnel and organisations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a license, certificate, authorization and/or approval to conduct the relevant aviation activity

CE-7. Surveillance obligations.

The implementation of processes, such as inspections and audits, to proactively ensure that aviation license, certificate, authorization and/or approval holders continue to meet the established requirements and function at the level of competency and safety required by the State to undertake an aviation-related activity for which they have been licensed, certified, authorized and/or approved to perform. This includes the surveillance of designated personnel who perform safety oversight functions on behalf of CAA.

CE-8. Resolution of safety concerns.

The implementation of processes and procedures to resolve identified deficiencies impacting aviation safety, which may have been residing in the aviation system and have been detected by the regulatory authority or other appropriate bodies.

2.3 USOAP EFFECTIVE IMPLEMENTATION (EI) SCORE

2.3.1 The periodic reporting of the results of the ICAO Universal Safety Oversight Audit Programme has shown that Critical Element 4 (CE-4), technical personnel qualifications and training, has been consistently difficult to implement.

2.3.2 In the most recent USOAP report for the period ending December 2015, CE-4 is the least implemented of the eight CEs, with a 47.4 percent of lack of effective implementation worldwide. See Figure 2.



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Effective Implementation by CE (2012 vs 2015)

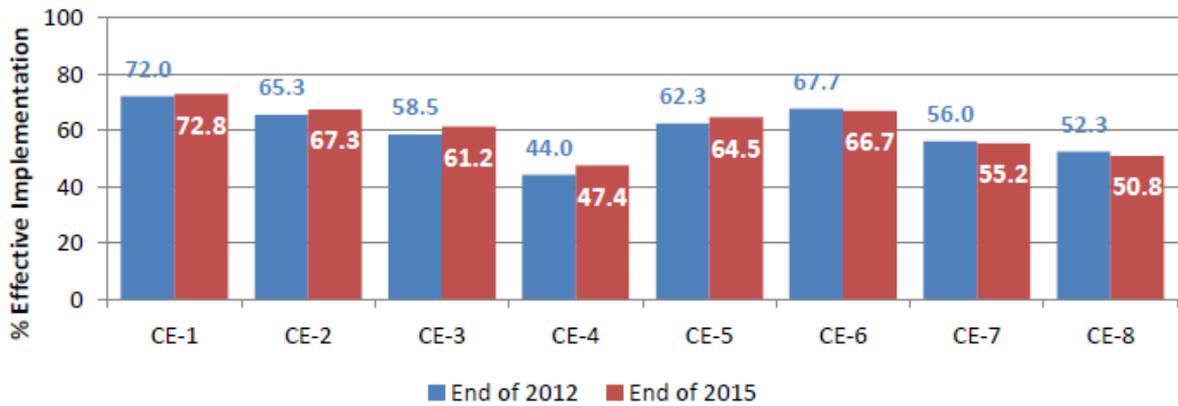


Figure 2 ICAO Continuous Monitoring Approach (USOAP CMA) Results 1 January 2013 to 31 December 2015

2.3.3 Specifically in APAC region, the USOAP CMA result in Figure 3 showed that CE-4 has the lowest EI (highest LEI) score by APAC States/Administrations. As this could have significant impact on APAC States’/Administrations safety oversight capability and safety standards, several working groups were formed by RASG-APAC through APRAST to develop various safety initiatives aiming to address high-consequence concerns resulting from the analysis of the USOAP CMA result.

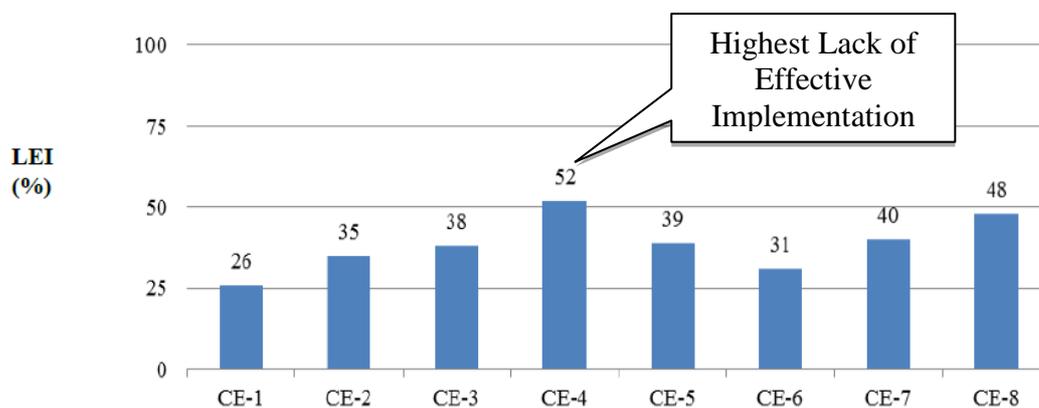


Figure 3 ICAO USOAP CMA – APAC Region LEI

2.3.4 While ICAO and RASG-APAC continue to help States/Administrations by providing guidance and relevant information on capacity building, ultimately it is the responsibility of respective States/Administrations to take a more active role in equipping its technical staff to perform the safety oversight role effectively.



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Chapter 3

TECHNICAL PERSONNEL TRAINING

3.1 ASIA PACIFIC CE-4 ASSESSMENT

3.1.1 ICAO Doc 9760 states that the States must be staffed with qualified and experienced personnel capable of successfully undertaking the wide variety of required tasks. ICAO Doc 8335 also states that the satisfactory execution of the various functions of the CAA Inspectorate depends to a large extent on the qualifications, experience, competence and dedication of individual inspectors. In addition, it is also important for CAA to have inspectors with a mix of disciplines to adequately oversee their aviation industry.

3.1.2 Following up from the need to push up the EI score for the APAC region, the APRAST Capacity Building Task Force proceeded to develop a CE-4 gap analysis questionnaire which was based on USOAP CMA CE-4 Protocol Questions (PQs) which was completed by all APAC States/Administrations. This questionnaire helped the Task Force to better understand and identify specific training requirements and in addition to the information collected from the questionnaire, information from the ICAO integrated Safety Trend Analysis and Reporting System (iSTARS) were also used.

3.1.3 The CE-4 gap analysis questionnaire covers the following 3 areas that are applicable to the six auditable areas like OPS, AIR, PEL, AGA, ANS and AIG:

- a. Training Programme and Training Plan
 - Training programme - types of training
 - Implementation of training programme
 - Satisfactory completion of OJT
 - Initial & recurrent training
- b. Training Records
 - System to maintain training records
- c. SMS & SSP Training
 - Acceptance and oversight of SMS

3.1.4 The information collated from the questionnaire showed that generally APAC States/Administrations require assistance in all the six areas, however, most indicated that they need assistance in getting their technical personnel to complete their OJT in a satisfactory manner before being assigned to perform their tasks and responsibilities.

3.1.5 Although the iSTAR result showed that APAC region scored below 60% for most of the CE-4 PQs under these six areas (See **Appendix C**), the Task Force is



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aware that this result does not represent the entire APAC region as there are still quite a number of APAC States/Administrations who have not been audited in the recent five years under the CMA approach.

3.2 TRAINING PROGRAMME

3.2.1 It is important for States/Administrations to firstly recognise what are the key elements in a training programme. For example, a training programme should include a training policy statement and training objectives and competency-based training could also be considered an integral part of the overall training objectives. Once the States/Administrations have established these foundations, they can proceed to develop the respective training road maps and individual training plan as shown in Figure 4.



Figure 4. Training Programme Overview

3.2.2 Depending on the States'/Administrations' capability, the actual trainings may be carried out under the direct control of the States/Administrations or conducted by other training service providers.

3.2.3 Although States/Administrations adopt generic training road maps for a start, States/Administrations are encouraged to establish a customised training road maps where it serves its purposes and needs.

3.2.4 In reviewing the effectiveness of trainings conducted in-house or by a service provider, States/Administrations should always make a determination as to whether



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the training methods, syllabus, training standards, related facilities and record keeping are adequate for its technical personnel.

3.2.5 States/Administrations should also have a system where records are properly kept and can be retrieved in a timely manner. If States/Administrations choose to convert and keep all records in softcopy, it is advisable for States/Administrations to house the serve in a secure place with backup power available so that training related information can be kept safe and retrievable at any time.



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Chapter 4

STANDARDISED CAPACITY BUILDING PROGRAMME

4.1 INTRODUCTION

4.1.1 This Standardised Capacity Building Programme (SCBP) was developed based on the information collected from the Gap Analysis questionnaire, ICAO iSTAR, and the Task Force. The aim of this programme is to help APAC Member States/Administrations build up its safety oversight capabilities, which in turn would improve its USOAP Effective Implementation (EI) of CE-4.

4.1.2 As the SCBP relates to the training of qualified personnel, the development took into account relevant training-related references including the FAA Flight Standards Inspector Training Framework and the Safety Inspector Training Road maps (TRMs) developed by Singapore.

4.2 BACKGROUND

4.2.1 The establishment of a Civil Aviation Authority (CAA) is supported by both technical and non-technical personnel. However, in the safety oversight functions, the CAAs are mostly supported by appropriate and adequate technical personnel with specialisation. Thus, CAAs are required to equip these technical personnel with the right knowledge and skills to discharge their safety functions.

4.2.2 Prior to providing trainings and education to each of these technical personnel, CAAs must first determine a job description which lays out his/her major duties, responsibilities, organizational relationships, scope of work and amount of supervision when performing job tasks. Once the respective job descriptions are determined, CAAs could then define the training requirements for each of these roles and responsibilities.

4.2.3 Although most States/Administrations would have developed a standard/common job description for each technical personnel but it is important for States/Administrations to recognise that there are certain levels of specialty not only in functional areas like operations, airworthiness, personnel licensing, etc, but also the various levels of depth in each of these function areas ie subject-matter-expert (SME) in Special Ops, non-destructive testing (NDT), wildlife control, etc.



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4.2.4 In addition, States/Administrations must also consider that some of these technical personnel have joined the organisation at various qualification entry points (ie licence holder against a non-license holder, graduate against a non-graduate, etc) and with different levels of experience (ie new to the aviation industry against those with many years of aviation experience).

4.3 METHODOLOGY

4.3.1 Considering the varied entry points of technical personnel across different States/Administrations, the Task Force recognised that technical personnel should be progressively and effectively transited with basic foundation completed before moving on to next level of training. As such, the Task Force has adopted a training structure for its typical training road map which consists of three phases of training beginning with “Induction (Initial) Training”, follows by “Core (Regulatory) Training” and ends with “On-the-Job Training (OJT)”. Due to the uniqueness of each functional area, the training requirements under each of these three phases has to be well guided by the individual technical personnel’s job description.

4.3.2 Once the relevant training requirements are put together in this manner, this forms the final training road map for each of the functional areas. To encourage some levels of standardisation across APAC Member States/Administrations, the Task Force has suggested 15 common functional areas together with typical training road maps for States’/Administrations’ consideration and reference - see Appendix 1 to 15 of this Chapter which show the training requirements for each of the training road maps.

4.3.3 With the training road maps, the respective individual technical personnel could then develop its training plan aiming to fulfil all the training requirements spelled out in the training road map. As the training road map typically last over a period of 2 years, the three phases in the training road map serve as training milestones which the respective technical personnel or the training coordinator could easily monitor the progress of the individual technical personnel.

4.3.4 States/Administrations should be committed to manage both the training road maps and training plans efficiently and to also ensure these are effectively implemented. This is important as these training road maps and training plans would fundamentally determine the quality and capabilities of these technical personnel working for the CAAs.

4.3.5 Moreover, due to constant changes in the States’/Administrations’ aviation environment and complexity, States/Administrations are advised to keep the road map updated and relevant.



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4.4 TYPICAL TRAINING ROAD MAP

4.4.1 A typical Training Road Map (TRM) consists of 3 categories of training as follows:

Induction (Initial) Training

To equip new technical personnel with the basic skills and knowledge relevant to their job responsibilities and should begin at the start of employment and preferably be completed within the first six months.

Core (Regulatory) Training

Provides new technical personnel with knowledge and skills in specific technical areas to carry out their duties effectively. The duration for this category varies between one to 1.5 years depending on the availability of the required regulatory trainings.

On-the-Job Training

Hands-on training under the supervision of a senior technical personnel should be well planned and structured. Although this category usually concluded within the first two years of employment, however, if the new technical personnel is assessed to be incompetent in his/her new duties, he/she will have to undergo additional trainings till he/she reaches an acceptable level of competency.

4.4.2 States/Administrations are encouraged to use these TRMs as references when determining the respective TRM which is according to the technical personnel's key job functions. Once the respective TRMs have been developed accordingly to the needs of the States/Administrations, they are to ensure that these TRMs are appropriately implemented.

4.3.3 Training organisations may also use these typical TRMs to develop training syllabus and programmes that cater to the training needs of technical personnel. Although the TRMs do not include recurrent (or refresher) and advance training, after the technical personnel have been qualified, they should continue to receive training throughout their employment. ICAO Doc 8335 notes that the technical personnel are required to develop their competencies continually on areas that are related to their respective responsibilities. For technical personnel who are subsequently required to implement additional tasks or more in-depth tasks, specialty trainings or advance trainings are required to be completed before carrying out further assignments.



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Typical Training Road Map for Flight Operations Inspector

6 months

1.5 years

2 years

6 months	1.5 years		2 years
<div style="border: 1px solid black; padding: 5px; text-align: center;">Induction Training</div> <ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes • Overview of job functions, scope and responsibilities within State's CAA • Roles and Responsibilities of FOI • Knowledge on State's rules and requirements • Departmental Procedure Briefing • Overview of enforcement framework • Briefing on Dangerous Goods (ICAO, IATA, CAA's) • Briefing on Cabin Safety • SEP Training on Aircraft Type • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<div style="border: 1px solid black; padding: 5px; text-align: center;">Core Training Areas</div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;">On-Job-Training</div>		<div style="border: 1px solid black; padding: 5px; text-align: center;">Core Training Areas</div> <ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> • Regulatory Auditing Techniques and Skills • Accident & Incident Investigation
	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> • Basic Flight Operations Safety Oversight Inspection • Advance Flight Operations Safety Oversight Inspection • Aircraft Flight Type Training (First Type) • Foreign Aircraft Inspection • Flight Simulator Evaluation 	<ul style="list-style-type: none"> • Air Operator Certificate (AOC) holder audit • Line Station Inspection • En-route Inspection • Cabin Inspection • Dangerous Goods Inspection • Aircraft Ramp Inspection 	<ul style="list-style-type: none"> • Evaluation & Approval of Operations Manual • Evaluation & Approval of MEL • Evaluation & Approval / Acceptance of other key documents



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Typical Training Road Map for Safety Operations Inspector (Cabin Safety)

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 6 & 19 and guidance materials relevant to cabin safety
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of SOI (CS)
- Knowledge on State's rules and requirements on cabin safety
- Departmental Procedure Briefing
- Overview of enforcement framework
- Briefing on Dangerous Goods (ICAO, IATA, CAA's)
- Briefing on Cabin Safety
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Safety Oversight Inspection
 - Cabin Safety Inspection
 - Foreign Aircraft Inspection
 - Safety Equipment and Emergency Procedures (SEP) Training on Aircraft Type
- Auditing
 - Regulatory Auditing Techniques and Skills
 - Accident & Incident Investigation

On-Job-Training

- Air Operator Certificate (AOC) holder audit
- Line Station Inspection
- En-route Cabin Inspection
- Aircraft Ramp Inspection
- Aircraft Door Trainer and Cabin Emergency Evacuation Trainer Validation
- Evaluation & Approval of Operations Manual
- Evaluation & Approval of MEL
- Evaluation & Approval / Acceptance of other key documents



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Typical Training Road Map for Safety Operations Inspector (Dangerous Goods)

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 6, 9, 17, 18, 19 and guidance materials relevant to dangerous goods
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of SOI (DG)
- Knowledge on State's rules and requirements on dangerous goods
- Departmental Procedure Briefing
- Overview of enforcement framework
- Briefing on Dangerous Goods (ICAO, IATA, CAA's)
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Safety Oversight Inspection
 - Dangerous Goods Inspection
 - Foreign Aircraft Inspection
 - SRP Training on Aircraft Type
- Auditing
 - Regulatory Auditing Techniques and Skills
- Accident & Incident Investigation

On-Job-Training

- Air Operator Certificate (AOC) holder audit
- Line Station Inspection
- Dangerous Goods Consignment and Document Inspection
- Aircraft Inspection
- Evaluation & Approval of Operations Manual
- Dangerous Goods permit issuance
- Munitions of War permit issuance
- Evaluation & Approval / Acceptance of other key documents



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Typical Training Road Map for Continuing Airworthiness Inspector

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 1, 6, 7, 8, 19 and guidance materials relevant to airworthiness
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of Continuing Airworthiness Inspector
- Departmental Procedure Briefing
- Overview of enforcement framework
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Airworthiness Safety Oversight Inspection
 - Advance Airworthiness Safety Oversight Inspection
 - Aircraft Flight Type Training (First Type)
 - Foreign Aircraft Inspection
- Flight Simulator Evaluation
- Auditing
 - Regulatory Auditing Techniques and Skills
- Accident & Incident Investigation

On-Job-Training

- Air Operator Certificate (AOC) holder audit
- Line Station Inspection
- Approved Maintenance Organisation holder audit
- Issuance and Renewal: Certificate of Registration and Airworthiness
- New and Used Aircraft Acceptance
- Aircraft Incident or Reportable Defects Investigation
- Evaluation & Approval of Maintenance Schedule / Programme
- Approval of Permit to Fly
- Inspection of Aircraft
 - Hangar
 - Ramp
 - Foreign Aircraft
- Evaluation & Approval of Maintenance Control Manual / Maintenance Procedure Manual
- Evaluation & Approval of MEL
- Approval / Acceptance of other key documents



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Typical Training Road Map for Airworthiness Engineering Inspector

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 1, 6, 7, 8, 19 and guidance materials relevant to airworthiness
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of Continuing Airworthiness Inspector
- Departmental Procedure Briefing
- Overview of enforcement framework
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Airworthiness Safety Oversight Inspection
 - Advance Airworthiness Safety Oversight Inspection
 - Flight Simulator Evaluation
 - Design Approval
 - Production Approval
- Auditing
 - Regulatory Auditing Techniques and Skills
 - Accident & Incident Investigation

On-Job-Training

- Air Operator Certificate (AOC) holder audit
 - Approved Design / Production Organisation holder audit
 - Approval of Permit to Fly
 - Approval of Design and Production Activities
 - Supplemental Type Certificates
 - Technical Standard Order
 - Modification Design Approval
 - Repair Design Approval
 - Acceptance to Type Certificate
 - Acceptance to New/Used Aircraft
- Inspection of Aircraft
 - Hangar
 - Ramp
 - Foreign Aircraft
 - Evaluation & Approval of Maintenance Exposition Manual
 - Evaluation & Approval / Acceptance of other key documents



International Civil Aviation Organization (ICAO)

Typical Training Road Map for Personnel Licensing Inspector / Manager (PEL)

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes 1 and guidance materials relevant to Flight Crew Licensing/Aircraft Maintenance Engineer (AME) Licensing/Air Traffic Controller (ATC) Licensing • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of Personnel Licensing Manager • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> ▪ Personnel Licensing Oversight ▪ Personnel Licensing System ▪ Aircraft Flight Type Training (First Type) • Flight Simulator Evaluation • SMS audit (Flying school) 	<ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> ▪ Regulatory Auditing Techniques and Skills • Accident & Incident Investigation • ISO / QMS Certification
	On-Job-Training	
	<ul style="list-style-type: none"> • Approved Training Organisation (Flight Training Organisation, Maintenance Training Organisation & Air Traffic Service training provider) audit • ISO / QMS certification process 	<ul style="list-style-type: none"> • Evaluation & Approval of Licensing Procedure Manual • Evaluation & Approval / Acceptance of other key documents
	<p>Note: Usually the Personnel Licensing Inspector / Manager will also be cross-trained in either as a Flight Operations Inspector, or a Airworthiness Inspector, or a Air Traffic Services Inspector.</p>	



International Civil Aviation Organization (ICAO)

Typical Training Road Map for Aerodrome Inspector

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 14, 19 and guidance materials relevant to aerodrome operations
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of aerodrome inspector
- Departmental Procedure Briefing
- Overview of enforcement framework
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Aerodrome Safety Oversight Inspection
- Inspection & Maintenance of Movement Areas
- Inspection & Maintenance of Visual Aids & Electrical Systems
- Auditing
 - Regulatory Auditing Techniques and Skills
- Accident & Incident Investigation
- Low Visibility Operations
- Security Fencing & Lighting

On-Job-Training

- Aerodromes audit (in various Core Training Areas)
- Visual Aids for Denoting Obstacles and Restricted Use Areas
- Movement Area & Airside Vehicle Control/Operations
- Apron Management
- Disabled Aircraft Removal
- Aerodrome Data
- Aerodrome Physical Characteristics
- Electrical Systems
- Aerodrome Emergency Planning
- Rescue and Fire Fighting
- Wildlife Hazard Management
- Obstacles Restriction & Control
- Visual Aids for Navigation
- Evaluation & Approval / Acceptance of key documents



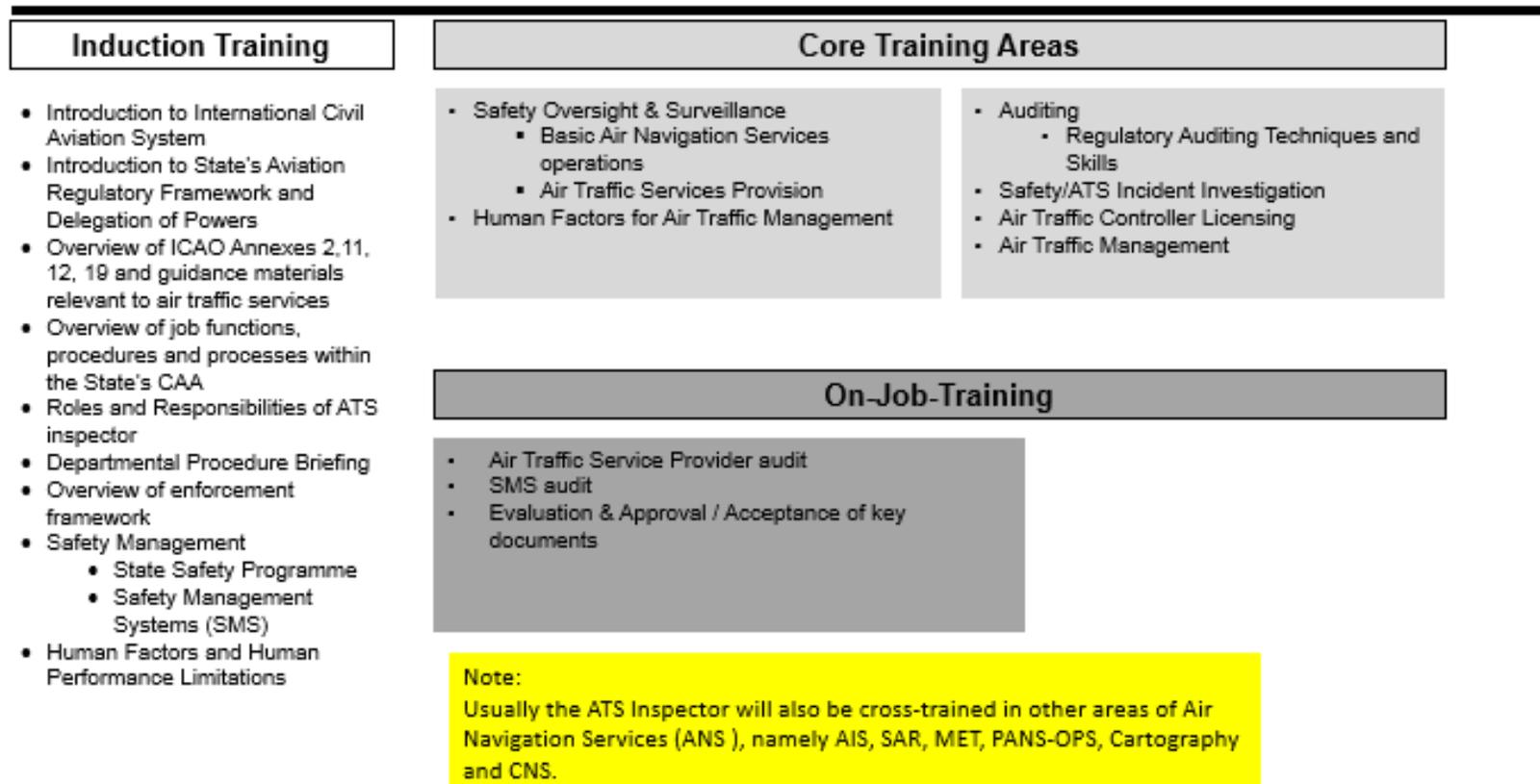
International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: ATS Inspector

6 months

1.5 years

2 years





International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: AIS Inspector

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 15, 19 and guidance materials relevant to aeronautical information services (AIS)
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of AIS inspector
- Departmental Procedure Briefing
- Overview of enforcement framework
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Air Navigation Services operations
 - AIS provision
- Human Factors for AIS
- Auditing
 - Regulatory Auditing Techniques and Skills
- Aeronautical Information Management (AIM)
- ISO / Quality Management System Certification

On-Job-Training

- Aeronautical Information Service Provider audit
- ISO / QMS certification process
- Evaluation & Approval / Acceptance of key documents

Note:

Usually the AIS Inspector will also be cross-trained in other areas of ANS such as ATS, PANS-OPS and Cartography.



International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: SAR Inspector

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes 11, 12, 19 and guidance materials relevant to SAR services • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of SAR inspector • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> ▪ Basic Air Navigation Services operations ▪ SAR provision • Human Factors for SAR • SAR Mission Coordination 	<ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> ▪ Regulatory Auditing Techniques and Skills • Accident & Safety Incident Investigation • Search and Rescue
	On-Job-Training	
	<ul style="list-style-type: none"> • SAR Provider audit • National SAR Policy & Operations • Evaluation & Approval / Acceptance of key documents 	
	<p>Note: Sometimes the SAR Inspector will also be cross-trained in other areas of ANS such as ATS.</p>	



International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: MET Inspector

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annex 3, 19 and guidance materials relevant to aeronautical Meteorology services (MET) • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of MET inspector • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> ▪ Basic Air Navigation Services operations ▪ MET provision • Human Factors for MET 	<ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> • Regulatory Auditing Techniques and Skills • MET • ISO / Quality Management System Certification
	On-Job-Training	
	<ul style="list-style-type: none"> • MET Provider audit • ISO / QMS certification process • Evaluation & Approval / Acceptance of key documents 	
	<p>Note: Sometimes, the MET Inspector will also be cross-trained in other areas of Air Navigation Services (ANS), such as ATS and SAR.</p>	



International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: PANS-OPS Inspector

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes 4, 5, 11, 19 and guidance materials such as <i>Doc 8168 Vol II (Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) relevant to PANS-OPS services</i> • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of PANS-OPS inspector • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> ▪ Basic Air Navigation Services operations ▪ Air Navigation Services – Aircraft Operations (PANS-OPS) • Human Factors for PANS-OPS • Performance Based Navigation (PBN) Airspace 	<ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> ▪ Regulatory Auditing Techniques and Skills • Instrument Flight Procedure Design Process & PBN Procedure Design • Doc 9908 – Quality Assurance Manual for Flight Procedure Design Quality Assurance System
	On-Job-Training	
	<ul style="list-style-type: none"> • PANS-OPS Provider audit • Flight Procedure Designer Approval • Flight Procedure Designer Organization Approval • Evaluation & Approval / Acceptance of key documents 	
	<p>Note: Usually the PANS OPS Inspector will also be cross-trained in other areas of ANS such as ATS, AIS and Cartography.</p>	



International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: Cartography (CHART) Inspector

6 months

1.5 years

2 years

Induction Training

- Introduction to International Civil Aviation System
- Introduction to State's Aviation Regulatory Framework and Delegation of Powers
- Overview of ICAO Annexes 4,5, 19 and guidance materials relevant to Aeronautical Cartography services (CHART)
- Overview of job functions, procedures and processes within the State's CAA
- Roles and Responsibilities of CHART inspector
- Departmental Procedure Briefing
- Overview of enforcement framework
- Safety Management
 - State Safety Programme
 - Safety Management Systems
- Human Factors and Human Performance Limitations

Core Training Areas

- Safety Oversight & Surveillance
 - Basic Air Navigation Services operations
 - Aeronautical Cartography
- Human Factors for CHART
- Phases of flight of aircraft
- Auditing
 - Regulatory Auditing Techniques and Skills
- CHART
- Geospatial 101
- Electronic Terrain and Obstacle Data (eTOD)
- ISO / Quality Management System Certification

On-Job-Training

- CHART Service Provider audit
- Evaluation & Approval / Acceptance of key
- Processes of QMS

Note:

Usually the Cartography Inspector will also be cross-trained in other areas of ANS such as PANS-OPS and ATS.



International Civil Aviation Organization (ICAO)

Typical Training Road Map for ANS: CNS Inspector

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes 10, 11, 19 and guidance materials relevant to CNS • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of CNS inspector • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Safety Oversight & Surveillance <ul style="list-style-type: none"> ▪ Basic Air Navigation Services operations ▪ CNS provision • Human Factors for CNS • Inspection & Maintenance of ATCS equipment • PBN Procedures & equipment 	<ul style="list-style-type: none"> • Auditing <ul style="list-style-type: none"> • Regulatory Auditing Techniques and Skills • CNS
	On-Job-Training	
	<ul style="list-style-type: none"> • CNS Provider audit • Approval for ATCS equipment such as Radar system, Nav aids etc • Evaluation & Approval / Acceptance of key documents 	
	<p>Note: Sometimes the CNS Inspector will also be cross-trained in other areas of ANS such as ATS.</p>	



International Civil Aviation Organization (ICAO)

Typical Training Road Map for Air Accident Investigator

6 months

1.5 years

2 years

Induction Training	Core Training Areas	
<ul style="list-style-type: none"> • Introduction to International Civil Aviation System • Introduction to State's Aviation Regulatory Framework and Delegation of Powers • Overview of ICAO Annexes 13, 19 and guidance materials relevant to air accident investigation • Overview of job functions, procedures and processes within the State's CAA • Roles and Responsibilities of investigator • Departmental Procedure Briefing • Overview of enforcement framework • Safety Management <ul style="list-style-type: none"> • State Safety Programme • Safety Management Systems • Human Factors and Human Performance Limitations 	<ul style="list-style-type: none"> • Accident & Incident Investigation • Investigation Techniques and Management • Annex 13 Report Writing 	<ul style="list-style-type: none"> • Media Handling • Site safety and blood-borne pathogen avoidance • Specialty areas such as underwater search and recovery of flight recorders
	On-Job-Training	
	<ul style="list-style-type: none"> • Investigation equipment training • Crash exercise and field investigation • Participate as observer in foreign investigation 	<ul style="list-style-type: none"> • Environment and terrain training
	<p>Note: Usually the Air Accident Investigator will also be cross-trained in either as a Flight Operations Inspector, or a Airworthiness Inspector, or a Air Traffic Services Inspector.</p>	



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4.5 TYPICAL TRAINING PLAN

4.5.1 With the TRMs developed for each key job functions, the respective States'/Administrations' technical personnel can then use the relevant TRM to develop its training plan by detailing the course names, course dates, training organisations, etc, for the entire training year(s).

4.5.2 However, the new technical personnel's training plan may be subjected to unforeseen changes ie course cancellation/postponement, therefore, it has to be regularly updated and tracked to ensure that the plan is successfully carried out in a timely manner. Depending on the availability of the required courses, States/Administrations are advised to prioritise the trainings according to the level of importance to each key job function.

4.5.3 In addition, the selection of courses should not be based on whatever courses are available but rather based on courses that meet the specific training needs of the technical personnel. For example, a similar topic offered by various training organisations could come with different / varied syllabus ie basic or advance, or course name/title, as such, technical personnel should find out more about the course before registration.

4.5.4 In most instances, the training plan for new technical personnel normally stretch over a period of 2 years. After the technical personnel has fully completed his/her required trainings, his/her subsequent training plan could be just a yearly plan covering new trainings due to new work scope or recurrent trainings, as required.

4.5.5 States/Administrations are also encourage to develop and maintain a training management system where the training of each technical personnel can be traced and training related records can be kept on completion of each training. This system should be made available to both internal and external auditors, as and when necessary, during audit.



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Chapter 5

TRAINING RESOURCES

5.1 TRAINING FACILITIES

5.1.1 Some States/Administrations do not have the resources to have their own internal training facility to train its technical personnel, ICAO Doc 8335 notes that more often such training will need to be obtained through courses offered by the manufacturers, private training facilities, other States or under ICAO auspices. As majority of these training areas in this SCBP are for CAA safety oversight inspectors, trainings are mainly from the regional States or under ICAO auspices.

5.1.2 As such, to further assist APAC Member States/Administrations in implementing this programme, the Task Force has identified training providers in the APAC region who could potentially provide recommended regulatory related trainings as reflected in the typical TRMs. The list of potential training providers and its details can be found in **Appendix D**.

5.1.3 APAC States/Administrations may use this list to find appropriate training providers and to contact them directly for any training engagements. For more information on the training providers, please visit the respective training providers' website.

5.2 SUBJECT-MATTER-EXPERTS

5.2.1 In addition to developing TRMs and sending technical personnel for trainings, some States/Administrations would need further help in improving its safety oversight capabilities. More often, this is done through the engagement of subject-matter-experts (SMEs) to perform in-depth assessment and provide customised enhancements to requested States/Administrations.

5.2.2 Before any APAC Member States/Administrations consider engaging SMEs for additional help, the Task Force would like to highlight the following initiatives that ICAO has put in place to support APAC Members States/Administrations improve its capabilities and implement ICAO SAPRs effectively.

APAC CAT

APAC Combined Action Team (CAT) is a program undertaken by the ICAO as a subsidiary program under “No Country Left Behind” initiative. The objective of the APAC CAT is to support APAC Member States/Administrations with Effective Implementation (EI) below the global average of 60% in the USOAP Audit, in enhancing their capabilities to



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effectively use the ICAO CMA On-line Framework and extending assistance to address the non-satisfactory Protocol Questions (PQs) which will improve the EI of the State's Safety Oversight System. The APAC CAT mission would be tailor-made for each State/Administration comprising of experts chosen for different areas where the concerned States have low EIs (i.e. EI < 60%).

ICAO Programme for Aviation Volunteers (IPAV)

The ICAO programme for aviation volunteers provides a framework for the deployment of aviation professionals, working as volunteers, to develop capabilities in the implementation of ICAO SAPRs and to foster self-reliance and growth. The IPAV in the immediate term will be part of a larger ICAO strategy for assisting States in addressing shortcomings identified during audits. Client States/Administrations will benefit from the wealth of experience of the volunteer at a minimal cost or at no cost. Assistance will be provided at the request of a State/Administration or a UN or other international agency on behalf of the State/Administration. Requests may include institution/capacity building activities, operational advice, assessing the needs of States/Administrations in their civil aviation system, review or development of document, delivering workshops, seminars and non-certification on-the-job training.

Cooperative Development of Operational Safety & Continuing Airworthiness Programme (COSCAP)

COSCAP facilitates dialogue and exchange of information and experience on aviation safety matters among Members and promote solutions to common problems as well as provide a vehicle for the harmonization of policies, regulations and procedures related to an aviation safety oversight. It also ensure a coordinated, cost-effective approach for obtaining technical assistance in the field of safety oversight, by minimizing duplication of efforts and allowing the sharing of available resources to maximum extent. In addition, COSCAP makes every effort to enhance the knowledge and skills of the safety oversight professional personnel of Members, through a variety of formal training course and on-the job training; and assist Members in preparing for ICAO USOAP audits and in rectifying deficiencies identified by these audits, as well as in conducting air operator inspections and follow-up actions requested by Members which currently lack the capability to do so independently.

Pacific Aviation Safety Office (PASO)

PASO provides safety and security regional aviation regulatory oversight and technical advice to address fundamental problems of compliance with ICAO standards, as identified by ICAO in State audits and CMA programs. PASO also aims to improve aviation safety and security in Pacific Island States through better cooperation and use of best practices; and work closely with all stakeholders to achieve an effective safety and security partnership in the Pacific.



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5.2.3 APAC Members States/Administrations are highly encouraged to consider seeking additional help through the above ICAO related initiatives.

5.2.4 However, if States/Administrations so decide to engage SMEs directly, they could consider engaging training providers (listed in **Appendix D**) who may provide SMEs for onsite technical assistance.

5.2.5 Alternatively, States/Administrations could also engage USOAP auditors from other States/Administrations but such arrangement shall be privately agreed between both States/Administrations.



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Appendix A

RELATED DOCUMENTS

ICAO Doc. 8335, Manual of Procedures for Operations Inspection, Certification and Continued Surveillance

ICAO Doc 9379, Manual of Procedures for Establishment and Management of a State's Personnel Licensing System

ICAO Doc. 9734A, Safety Oversight Manual

ICAO Doc. 9734B, Regional Safety Oversight Manual

FAA, Flight Standards Inspector Training Framework

CAA Singapore, Safety Inspector Training Roadmap



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Appendix B

CE-4 GAP ANALYSIS QUESTIONNAIRE – APAC

Instruction Page

This CE-4 gap analysis checklist was developed using the ICAO USOAP Protocol Question (PQ) 2014 revision H and covers all seven auditable modules namely PEL, OPS, AIR, AGA, ANS, AIG and ORG. However, this checklist only consist of three areas (A) Training Programme & Plan, (B) SMS & SSP Training and (C) Training Records, and does not include areas like personal recruitment, training policy and State's training requirements.

In order to help Task Force better understand and identify specific training requirements, States are encouraged to tick the appropriate box for each of the question and email the completed checklist to the Task Force Champion at michael_pang@caas.gov.sg and copy the Secretariat at APAC@icao.int by 24 October 2016.

Example

				Tick the appropriate box
Q1	Is a formal training programme established that details the type of training that should be provided to personnel? (initial training, regulatory training, OJT, recurrent training, specialized training requirements, minimum duration for each type of training)	PEL: • Personnel licensing section inspectorate staff CAA Meriva has established a training programme for all its technical personnel, including personnel licensing inspectors, and it is documented in the Personnel Licensing Section Inspectorate Procedure. The programme includes initial training (induction training), basic training, OJT, recurrent training and specialized training.	PEL: PQ 3.113	<input checked="" type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q3	Is the training programme appropriately implemented?	PEL: • Personnel licensing section inspectorate staff and • Other technical personnel CAA Meriva's internal audit reviewed that some of its personnel licensing inspectors have not undergone recurrent training since 2013.	PEL: PQ 3.117	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input checked="" type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q12	Has a system been established to maintain the training records of personnel?	OPS: • Flight operations inspectors, • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc, and • Dangerous goods inspectors During a recent ICAO USOAP CMA, a finding was recorded for missing training records of Captain Sean Lee, a CAA Meriva Flight Ops Inspector.	OPS: PQ 4.059	<input type="checkbox"/> No Improvement Required <input checked="" type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable

Important Note:

Please refer to the attached reference for more information on each PQ.



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State / Administration:		Date of Submission:	
Contact Person:		Contact Email:	

No	Aspect to be analysed or question to be answered	Types of Personnel	PQ References	Response Required
(A) Training Programme and Training Plan				
Q1	<p>Is a formal training programme established that details the type of training that should be provided to personnel? (initial training, regulatory training, OJT, recurrent training, specialized training requirements, minimum duration for each type of training)</p> <p>Note 1: SMS & SSP training requirement covered in Section B.</p> <p>Note 2: In the event where aircraft accident investigators are seconded from other divisions, such personnel should be included in the AIG's training programme/plan.</p>	PEL: <ul style="list-style-type: none"> Personnel licensing section inspectorate staff Other technical personnel 	PEL: PQ 3.113	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		OPS: <ul style="list-style-type: none"> Flight operations inspectors, Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and Dangerous goods inspectors 	OPS: PQ 4.051	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIR: <ul style="list-style-type: none"> Airworthiness inspectors Airworthiness engineers 	AIR: PQ 5.047 AIR: PQ 5.485	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AGA: <ul style="list-style-type: none"> Aerodrome inspectors 	AGA: PQ 8.051	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		ANS: <ul style="list-style-type: none"> ATS inspectorate personnel PANS-OPS inspectorate 	ANS: PQ 7.085 ANS: PQ 7.211 ANS: PQ 7.277 ANS: PQ 7.333	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding]



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		<ul style="list-style-type: none"> • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.381 ANS: PQ 7.425 ANS: PQ 7.495	<input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIG: <ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.123	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q2	Has a periodic training plan been developed detailing and prioritizing the type of training that will be provided to personnel during the established period?	PEL: <ul style="list-style-type: none"> • Personnel licensing section inspectorate staff and • Other technical personnel 	PEL: PQ 3.115	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		OPS: <ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors sq ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 	OPS: PQ 4.053	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIR: <ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.049 AIR: PQ 5.487	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AGA: <ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.053	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		ANS: <ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate 	ANS: PQ 7.067 ANS: PQ 7.213 ANS: PQ 7.279 ANS: PQ 7.335	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding]



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		<ul style="list-style-type: none"> • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.383 ANS: PQ 7.427 ANS: PQ 7.497	<input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIG: <ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.125	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q3	Is the <u>training programme</u> appropriately implemented?	PEL: <ul style="list-style-type: none"> • Personnel licensing section inspectorate staff and • Other technical personnel 	PEL: PQ 3.117	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		OPS: <ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 	OPS: PQ 4.055	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIR: <ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.051 AIR: PQ 5.489	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AGA: <ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.055	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		ANS: <ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate 	ANS: PQ 7.089 ANS: PQ 7.215 ANS: PQ 7.281 ANS: PQ 7.337	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding]



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		<ul style="list-style-type: none"> • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.385 ANS: PQ 7.429 ANS: PQ 7.499	<input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIG: <ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.127	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q4	Are <u>inspectors</u> required to satisfactorily complete OJT before being <u>assigned</u> their tasks and responsibilities?	OPS: <ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors <u>eg.</u> ground ops inspectors, cabin safety inspectors, <u>etc.</u> and • Dangerous goods inspectors 	OPS: PQ 4.057	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIR: <ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.053 AIR: PQ 5.491	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		ANS: <ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.071 ANS: PQ 7.217 ANS: PQ 7.283 ANS: PQ 7.339 ANS: PQ 7.387 ANS: PQ 7.431 ANS: PQ 7.501	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q5	Does the investigation authority provide investigators with <u>initial and recurrent training</u> related to safety at the accident site?	AIG: <ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.131	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable



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Q6	Does the State ensure that designated medical examiners (DMEs) receive <u>training in aviation medicine and have practical knowledge and experience</u> of the conditions in which the holders of <u>licences and ratings</u> carry out their duties?	<p>PEL:</p> <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.453	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q7	Does the State ensure that designated medical examiners (DMEs) attend <u>refresher training in aviation medicine at regular intervals</u> ?	<p>PEL:</p> <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.455	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q8	Does the State require designated medical examiners (DMEs) to <u>demonstrate their competency</u> in aviation medicine before designation?	<p>PEL:</p> <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.457	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable

(B) SMS & SSP Training

Q9	<p>Have the personnel who are <u>involved in SSP implementation</u> and its operation completed appropriate <u>SSP and SMS training</u>, as applicable?</p> <p>Notes 1: In the event where aircraft accident investigators are seconded from other divisions, such personnel should be considered for the above PQ.</p>	<p>PEL:</p> <ul style="list-style-type: none"> Personnel licensing staff 	PEL: PQ 3.116	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		<p>OPS:</p> <ul style="list-style-type: none"> Flight operations inspectors, Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and Dangerous goods inspectors 	OPS: PQ 4.052	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		<p>AIR:</p> <ul style="list-style-type: none"> Airworthiness inspectors Airworthiness engineers 	<p>AIR: PQ 5.046 AIR: PQ 5.486</p>	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable



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		AGA: • Aerodrome inspectors	AGA: PQ 8.052	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		ANS: • ATS inspectorate personnel	ANS: PQ 7.066	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
		AIG: • Aircraft accident investigators	AIG: PQ 6.124	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q10	Is the regulatory technical staff trained in the <u>acceptance and oversight of SMS, including aeronautical studies and risk assessments?</u>	AGA: • Aerodrome inspectors	AGA: PQ 8.371	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
Q11	Does the State ensure that <u>personnel involved in SSP implementation and its operation have undergone appropriate SSP training or familiarization?</u>	ALL	ORG: PQ 2.107	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable

(C) Training Records

Q12	Has a <u>system</u> been established to <u>maintain the training records</u> of personnel?	PEL: • Personnel licensing staff	PEL: PQ 3.119	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
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	<p>OPS:</p> <ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 	OPS: PQ 4.059	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
	<p>AIR:</p> <ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	<p>AIR: PQ 5.055</p> <p>AIR: PQ 5.493</p>	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
	<p>AGA:</p> <ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.057	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
	<p>ANS:</p> <ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	<p>ANS: PQ 7.073</p> <p>ANS: PQ 7.219</p> <p>ANS: PQ 7.285</p> <p>ANS: PQ 7.341</p> <p>ANS: PQ 7.389</p> <p>ANS: PQ 7.433</p> <p>ANS: PQ 7.503</p>	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable
	<p>AIG:</p> <ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.129	<input type="checkbox"/> No Improvement Required <input type="checkbox"/> Improvement Required [USOAP Finding] <input type="checkbox"/> Improvement Required [No USOAP Finding] <input type="checkbox"/> Not Applicable



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Appendix C

APAC CE-4 SCORING - ICAO iSTARS

ICAO USOAP CRITICAL ELEMENT 4 – GAP ANALYSIS [DATA from iStar]

PQ_2014_Rev_H

State / Administration:	APAC	Date of Submission:	Sep 2016
Contact Person:	ICAO iStar	Contact Email:	

No	Aspect to be analysed or question to be answered	Types of Personnel	PQ References	APAC EI (70% as min)
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(A) Training Programme and Training Plan

Q1	Is a formal training programme established that details the type of training that should be provided to personnel? (initial training, regulatory training, OJT, recurrent training, specialized training requirements, minimum duration for each type of training) Note 1: SMS & SSP training requirement covered in Section B. Note 2: In the event where aircraft accident investigators are seconded from other divisions, such personnel should be included in the AIG's training programme/plan.	<ul style="list-style-type: none"> • Personnel licensing section inspectorate staff • Other technical personnel 	PEL: PQ 3.113	34.3%
		<ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 	OPS: PQ 4.051	31.4%
		<ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.047 AIR: PQ 5.485	40% 50%
		<ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.051	22.9%
		<ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.065 ANS: PQ 7.211 ANS: PQ 7.277 ANS: PQ 7.333 ANS: PQ 7.381 ANS: PQ 7.425 ANS: PQ 7.495	48.6% 45.7% 37.1% 34.3% 57.1% 48.6% 31.4%
		<ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.123	37.1%
Q2	Has a periodic training plan been developed detailing and prioritizing the type of training that will be provided to personnel during the established period?	<ul style="list-style-type: none"> • Personnel licensing section inspectorate staff and • Other technical personnel 	PEL: PQ 3.115	28.6%
		<ul style="list-style-type: none"> • Flight operations inspectors, 	OPS: PQ 4.053	23.5%
		<ul style="list-style-type: none"> • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 		
		<ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.049 AIR: PQ 5.487	42.9% 80% (Airworthiness Engineers)
		<ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.053	28.6%
		<ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate • SAR inspectorate 	ANS: PQ 7.067 ANS: PQ 7.213 ANS: PQ 7.279 ANS: PQ 7.335 ANS: PQ 7.383 ANS: PQ 7.427 ANS: PQ 7.497	45.7% 40% 42.9% 34.3% 54.3% 48.6% 34.3%
		<ul style="list-style-type: none"> • Aircraft accident investigators 	AIG: PQ 6.125	26.5%
		Q3	Is the training programme appropriately implemented?	<ul style="list-style-type: none"> • Personnel licensing section inspectorate staff and • Other technical personnel
<ul style="list-style-type: none"> • Flight operations inspectors, • Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and • Dangerous goods inspectors 	OPS: PQ 4.055			20.6%
<ul style="list-style-type: none"> • Airworthiness inspectors • Airworthiness engineers 	AIR: PQ 5.051 AIR: PQ 5.489			34.3% 50%
<ul style="list-style-type: none"> • Aerodrome inspectors 	AGA: PQ 8.055			17.1%
<ul style="list-style-type: none"> • ATS inspectorate personnel • PANS-OPS inspectorate • AIS inspectorate • Cartographic inspectorate • CNS inspectorate • MET inspectorate 	ANS: PQ 7.069 ANS: PQ 7.215 ANS: PQ 7.281 ANS: PQ 7.337 ANS: PQ 7.385 ANS: PQ 7.429 ANS: PQ 7.499			42.9% 45.7% 42.9% 40% 51.4% 48.6% 37.1%
<ul style="list-style-type: none"> • Aircraft accident investigators 				



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		<ul style="list-style-type: none"> SAR inspectorate 		
		<ul style="list-style-type: none"> AIG: <ul style="list-style-type: none"> Aircraft accident investigators 	AIG: PQ 6.127	23.5%
Q4	Are inspectors required to satisfactorily complete OJT before being assigned their tasks and responsibilities?	<ul style="list-style-type: none"> OPS: <ul style="list-style-type: none"> Flight operations inspectors, Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and Dangerous goods inspectors 	OPS: PQ 4.057	35.3%
		<ul style="list-style-type: none"> AIR: <ul style="list-style-type: none"> Airworthiness inspectors Airworthiness engineers 	AIR: PQ 5.053 AIR: PQ 5.491	54.3% 70% (Airworthiness Engineer)
		<ul style="list-style-type: none"> ANS: <ul style="list-style-type: none"> ATS inspectorate personnel PANS-OPS inspectorate AIS inspectorate Cartographic inspectorate CNS inspectorate MET inspectorate SAR inspectorate 	ANS: PQ 7.071 ANS: PQ 7.217 ANS: PQ 7.283 ANS: PQ 7.339 ANS: PQ 7.387 ANS: PQ 7.431 ANS: PQ 7.501	54.3% 42.9% 45.7% 45.7% 60% 60% 34.3%
Q5	Does the investigation authority provide investigators with initial and recurrent training related to safety at the accident site?	<ul style="list-style-type: none"> AIG: <ul style="list-style-type: none"> Aircraft accident investigators 	AIG: PQ 6.131	31.4%
Q6	Does the State ensure that designated medical examiners (DMEs) receive training in aviation medicine and have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties?	<ul style="list-style-type: none"> PEL: <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.453	65.6%
Q7	Does the State ensure that designated medical examiners (DMEs) attend refresher training in aviation medicine at regular intervals?	<ul style="list-style-type: none"> PEL: <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.455	59.38%
Q8	Does the State require designated medical examiners (DMEs) to demonstrate their competency in aviation medicine before designation?	<ul style="list-style-type: none"> PEL: <ul style="list-style-type: none"> Designated medical examiners (DMEs) 	PEL: PQ 3.457	71.9% (DMEs)

SMS & SSP Training

Q9		<ul style="list-style-type: none"> PEL: <ul style="list-style-type: none"> Personnel licensing staff 	PEL: PQ 3.116	
	<p>Have the personnel who are involved in SSP implementation and its operation completed appropriate SSP and SMS training, as applicable?</p> <p>Notes 1: In the event where aircraft accident investigators are seconded from other divisions, such personnel should be considered for the above PQ.</p>	<ul style="list-style-type: none"> OPS: <ul style="list-style-type: none"> Flight operations inspectors, Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and Dangerous goods inspectors 	OPS: PQ 4.052	
		<ul style="list-style-type: none"> AIR: <ul style="list-style-type: none"> Airworthiness inspectors Airworthiness engineers 	AIR: PQ 5.048 AIR: PQ 5.486	
		<ul style="list-style-type: none"> AGA: <ul style="list-style-type: none"> Aerodrome inspectors 	AGA: PQ 8.052	
		<ul style="list-style-type: none"> ANS: <ul style="list-style-type: none"> ATS inspectorate personnel 	ANS: PQ 7.066	
		<ul style="list-style-type: none"> AIG: <ul style="list-style-type: none"> Aircraft accident investigators 	AIG: PQ 6.124	
Q10	Is the regulatory technical staff trained in the acceptance and oversight of SMS, including aeronautical studies and risk assessments?	<ul style="list-style-type: none"> AGA: <ul style="list-style-type: none"> Aerodrome inspectors 	AGA: PQ 8.371	
Q11	Does the State ensure that personnel involved in SSP implementation and its operation have undergone appropriate SSP training or familiarization?	<ul style="list-style-type: none"> ALL 	ORG: PQ 2.107	

Training Records

Q12	Has a system been established to maintain the training records of personnel?	<ul style="list-style-type: none"> PEL: <ul style="list-style-type: none"> Personnel licensing staff 	PEL: PQ 3.119	57.1%
		<ul style="list-style-type: none"> OPS: <ul style="list-style-type: none"> Flight operations inspectors, Other operations inspectors eg. ground ops inspectors, cabin safety inspectors, etc. and Dangerous goods inspectors 	OPS: PQ 4.059	50%
		<ul style="list-style-type: none"> AIR: <ul style="list-style-type: none"> Airworthiness inspectors Airworthiness engineers 	AIR: PQ 5.055 AIR: PQ 5.493	54.3% 80% (Airworthiness Engineer)
		<ul style="list-style-type: none"> AGA: <ul style="list-style-type: none"> Aerodrome inspectors 	AGA: PQ 8.057	54.3%
		<ul style="list-style-type: none"> ANS: <ul style="list-style-type: none"> ATS inspectorate personnel PANS-OPS inspectorate AIS inspectorate Cartographic inspectorate 	ANS: PQ 7.073 ANS: PQ 7.219 ANS: PQ 7.285 ANS: PQ 7.341 ANS: PQ 7.389 ANS: PQ 7.433	57.1% 54.3% 57.1% 57.1% 65.7% 62.9%
		<ul style="list-style-type: none"> CNS inspectorate MET inspectorate SAR inspectorate 	ANS: PQ 7.503	48.6%
		<ul style="list-style-type: none"> AIG: <ul style="list-style-type: none"> Aircraft accident investigators 	AIG: PQ 6.129	37.1%



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Appendix D

TRAINING FACILITIES

	Website	Contact Person	Contact Email	Remarks
FAA Academy	https://www.faa.gov/training/	-	9-awa-aia-intl-training@faa.gov	
Civil Aviation Management Institute of China	http://www.camic.cn/	-	camic@admissions.cn	
Malaysia Aviation Academy	http://mava.dca.gov.my/	Mohd Razi Bin Abu Samah	razi@dca.gov.my	
Singapore Aviation Academy	http://www.saa.com.sg/	Michael Pang	michael_pang@caas.gov.sg	
Incheon Airport Aviation Academy (IAAA)	http://academy.airport.kr/	-	iaaa@airport.kr	
Civil Aviation Trg Centre, Thailand	http://www.catc.or.th/	-	infocatc@catc.or.th	
Indian Aviation Academy (IAA)	http://www.iaa.edu.in/	-	edtraining.niamar@aai.aero	
Bangladesh Civil Aviation Training Centre	http://www.caab.gov.bd/	-	dcatc@caab.gov.bd	
Civil Aviation Academy Nepal	http://caanepal.org/	-	contact@caanepal.org	
Pakistan Civil Aviation Training Institute	http://www.caapakistan.com.pk/	-	support@caapakistan.com.pk	
Philippines Civil Aviation Training Centre	http://www.caap.gov.ph/	-	catc_manila@yahoo.com.ph	



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Types of Training for Regulators	Introduction to ICAO Annexes	Basic SMS	Basic SSP	Audit Technique	Human Factor	Safety Oversight Inspector							
						OPS Flight Operations	OPS Dangerous Goods	OPS Cabin Safety	AIR	AGA	ANS	PEL	AIG
FAA Academy	X	X	X	X	X	X	X	X	X	X	X	X	X
Civil Aviation Management Institute of China	X	X	X			X	X		X		X	X	
Malaysia Aviation Academy	X	X	X	X	X		X			X	X		
Singapore Aviation Academy	X	X	X	X	X	X	X	X	X	X	X	X	X
Incheon Airport Aviation Academy (IAAA)	X	X								X	X		
Civil Aviation Trg Centre, Thailand		X			X	X				X	X		
Indian Aviation Academy (IAA)	X			X	X	X	X						
Bangladesh Civil Aviation Training Centre	X			X	X					X	X		
Civil Aviation Academy Nepal	X	X			X								
Pakistan Civil Aviation Training Institute		X								X			
Philippines Civil Aviation Training Centre		X	X				X						X