



HONG KONG AVIATION SAFETY PROGRAMME

Third Issue – May 2018



This Safety Programme is produced pursuant to Annex 19 to the Convention on International Civil Aviation – Safety Management by the Hong Kong Civil Aviation Department in conjunction with the concerned government departments.

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FOREWORD

The ICAO Annex 19 stipulates that each State/Administration shall establish a State Safety Programme (SSP) for the management of safety under its purview, in order to achieve an acceptable level of safety performance in civil aviation. The Civil Aviation Department (CAD) has the regulatory responsibilities for aviation safety in Hong Kong. It is therefore incumbent upon the CAD to undertake the implementation of SSP related activities in Hong Kong.

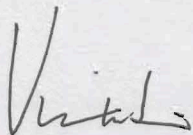
It is our long standing pledge and commitment to sustain and improve the aviation safety standards of Hong Kong and to maintain our position as a leader in the promotion of aviation safety within the region. This Hong Kong Aviation Safety Programme, developed pursuant to the ICAO Annex 19, sets out the strategies we have adopted for the implementation of SSP.

We will continue our efforts in pragmatically introducing performance-based regulatory elements in our safety oversight to focus on relatively higher risk areas based on all available information, and seek assurance that those risks are proactively mitigated through effective means. We will also strategically coordinate new global safety initiatives with reference to ICAO's Global Aviation Safety Plan which laid down a roadmap for safety up to 2030. In this connection, I am happy to note that in 2017, we have completed the actions needed to align with the ICAO SSP framework, as our proactive act to meet the global objectives.

Nonetheless, our journey does not end there. Recognising that a positive safety culture is a core tenet of safety management, we are committed to nurturing an environment conducive to the continuous maintenance and improvement of aviation safety, together with CAD colleagues and our industry partners.

Whilst we have implemented ICAO's mandates for aviation service providers to establish safety management systems, we strive to continuously enhance the safety oversight and performance monitoring of all functional areas in aviation. We will also continue to facilitate safety promotion with and amongst stakeholders including regulators and service providers, and encourage safety partnership across sectors.

Safety is our highest priority. We uphold our commitment to provide a safe, efficient and sustainable air transport system in Hong Kong.



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OVERVIEW

The ICAO Annex 19 – Safety Management stipulates the requirements for States/ Administrations to establish a State Safety Programme (SSP) in order to achieve an acceptable level of safety performance (ALoSP) in civil aviation. This Annex consolidates the overarching safety management provisions from Annexes 1, 6, 8, 11, 13 and 14 for personnel licensing, operation of aircraft, airworthiness of aircraft, provision of air traffic services, aircraft accident and incident investigations and aerodrome operations. As a means to verify satisfactory performance of the SSP and service providers’ SMS, States/ Administrations are also required to establish the ALoSP to be achieved.

In compiling this SSP, efforts have been made to align the format, structure and contents of the Programme as closely as possible with the ICAO Annex 19 and Safety Management Manual (Doc 9859) (SMM). This will not only enable Hong Kong to align its SSP development to meet the associated ICAO Standards, but also facilitate the ongoing maintenance of SSP in a structured and effective manner. Readers should read this Programme in conjunction with the ICAO Annex 19 and SMM.

Applicability

The provisions in this Hong Kong Aviation Safety Programme are developed with reference to the Standards and Recommended Practices (SARPs) contained in the ICAO Annex 19, and they shall be applicable to safety management functions related to, or in direct support of, the safe operation of aircraft.

In line with the basic principles of safety management, the ultimate objective of SSP is the continuous improvement of aviation safety. The four components in this Hong Kong Aviation Safety Programme are based on ICAO’s framework (Table 1).

This Programme will be periodically reviewed and enhanced, in the light of experience, such that it remains up-to-date, relevant and appropriate to the aviation industry in Hong Kong.

Table 1 - Hong Kong Aviation Safety Programme Framework (4 Components)

1. State Safety Policy, Objectives and Resources

- 1.1 Hong Kong safety legislative framework
- 1.2 Hong Kong safety responsibilities and accountabilities
- 1.3 Accident and incident investigation
- 1.4 Enforcement policy

2. State Safety Risk Management¹

- 2.1 Safety requirements for the service provider's SMS
- 2.2 Agreement of the service provider's safety performance

3. State Safety Assurance

- 3.1 Safety oversight
- 3.2 Safety data collection, analysis and exchange
- 3.3 Safety-data-driven targeting of oversight on areas of greater concern or need

4. State Safety Promotion

- 4.1 Internal training, communication and dissemination of safety information
- 4.2 External training, communication and dissemination of safety information

¹ Applicable to service providers and IGA operators

Amendment History

Amendment	Reference(s)	Subject(s)/Major Change	Applicable
1 st Issue	ICAO SMM 1 st Edition	An SSP for Hong Kong was developed with reference to relevant ICAO SARPs for implementation by aviation authorities within CAD.	1 Jan 2009
1 (2 nd Edition)	Annex 19 1 st Edition ICAO SMM 3 rd Edition	Programme renamed as “Hong Kong Safety Programme” and contents aligned with 1 st edition of the ICAO Annex 19 which became applicable on 14 November 2013, and other relevant reference in the 3 rd edition of the ICAO SMM, such as :- i) Safety Policy aligned with ICAO; ii) Programme structure aligned with the table of contents in the ICAO SMM as appropriate.	31 Oct 2014
2 (3 rd Edition)	Annex 19 2 nd Edition	Programme renamed as “Hong Kong Aviation Safety Programme”. Contents aligned with 2 nd edition of the ICAO Annex 19 which will become applicable on 7 November 2019.	May 2018

ABBREVIATIONS / DEFINITIONS

AESD	Air Traffic Engineering Services Division
AIO	Accident Investigation Office
AID	Accident Investigation Division
AMO	Airport Meteorological Office of the Hong Kong Observatory
AN(HK)O	Air Navigation (Hong Kong) Order 1995
ANS	Air Navigation Services
ANSP	Air Navigation Service Provider
APSD	Airport Standards Division
APSS	Airport Sub-sections
ASMD	Air Services and Safety Management Division
ATMD	Air Traffic Management Division
ATMSO	Air Traffic Management Standards Office
ATS	Air Traffic Service
AWO	Airworthiness Office
CAD	Hong Kong Civil Aviation Department
CMA	Continuous Monitoring Approach
CNS	Communications, Navigation and Surveillance
DGCA	Director-General of Civil Aviation
DGO	Dangerous Goods Office
FSAD	Flight Standards and Airworthiness Division
FSO	Flight Standards Office
HKIA	Hong Kong International Airport
HK AIP	Hong Kong Aeronautical Information Publication
HKO	Hong Kong Observatory
HKSARG	Government of the Hong Kong Special Administrative Region
ICAO	International Civil Aviation Organisation
IGA	International general aviation
MET	Meteorology
PELO	Personnel Licensing Office
SMS	Safety Management System
SRSS	Safety Regulation Sub-sections
SSO	Strategic Safety Office
SSP	State Safety Programme

Definition

In this document, where a term is used which is defined in a relevant ICAO Annex or ICAO publication, that definition will apply unless:-

- a) There is a different definition in the Civil Aviation Ordinance (Cap. 448) and its subsidiary legislation or other legislation of Hong Kong; or
- b) Differences to ICAO definitions are identified in GEN 1.7 of HK AIP.

CHAPTER 1

Hong Kong Aviation Regulatory System

1.1 Safety Management and Regulatory Responsibilities

Hong Kong adopts the international safety standards laid down by the ICAO where applicable for the safety regulation and safety management of our aviation system. In this connection, the Chief Executive of HKSARG, by virtue of delegation of powers, has authorised the DGCA to exercise any powers² or perform any duties under the Air Navigation (Hong Kong) Order [AN(HK)O]. Such authorisation provides the CAD with the authority and powers to conduct safety oversight on our aviation system.

The CAD, established as a government department under the Transport and Housing Bureau, has been designated to the ICAO as the primary aviation regulatory authority of Hong Kong, China as well as the authority in the provision of air navigation services. The Hong Kong Observatory (HKO) is the designated meteorological authority of Hong Kong, China to the ICAO and is responsible for the regulation of aviation meteorological services.

The structure and organisation chart of the existing aviation regulatory framework from the top level is shown at *Attachment A*. Individual authorities' safety regulatory/management responsibilities are described in Table 2.

Table 2 – Area of authority of regulatory / aviation authorities

Area	Regulatory Authorities / Aviation Authorities
Annex 1	PELO/FSAD - medical certification and assessments, licensing of pilots and maintenance engineers ATMSO/ASMD - licensing of air traffic controllers / approval of ATC training FSO & AWO/FSAD - approval of flight / maintenance training
Annex 3	HKO - MET Regulator & Authority
Annex 6	FSO/FSAD - certification of Hong Kong Air Operator's Certificate AWO/FSAD - approval of maintenance arrangements/organisations

² Except the power to make regulations

Area	Regulatory Authorities / Aviation Authorities
Annex 8	AWO/FSAD - airworthiness certification and related matters
Annex 11	ATMSO/ASMD - safety oversight on air navigation services
Annex 13	AID – aircraft accident and incident investigation ³
Annex 14	APSS/APSD - safety regulation of aerodrome operations
Annex 18	DGO/APSD - regulation of air transport of dangerous goods
Annex 19	SSO/ASMD - SSP implementation and coordination CAD/HKO - SSP implementation
ATS	ATMD - authority in the provision of air traffic services (ATS)
CNS	AESD - authority in the provision of communications, navigation and surveillance (CNS) services

³ With the establishment of the Accident Investigation Authority (AIA), the responsibilities of accident and incident investigation will be transferred from AID to the new AIA. Please refer to para 2.3 for details.

CHAPTER 2

State Safety Policy, Objectives and Resources

2.1 Hong Kong Safety Legislative Framework

Pursuant to the Chicago Convention⁴, Hong Kong has promulgated a legislative framework, operating regulations and guidance materials that define how aviation safety is managed in compliance with the international and local standards. Enforcement provisions are prescribed for the prosecution, or the suspension or revocation of certificates or licences issued by the CAD.

The safety legislative framework, operating regulations and guidance materials are periodically reviewed to ensure that they remain relevant and applicable to Hong Kong.

2.1.1 Primary Aviation Legislation

In Hong Kong, the primary legislation dealing with civil aviation matters is in the Civil Aviation Ordinance (Cap. 448). There is other legislation⁵ enacted to regulate aviation activities such as the Dangerous Goods (Consignment by Air) (Safety) Ordinance (Cap. 384).

2.1.2 Operating Regulations

Under Cap. 448, subsidiary legislation includes the AN(HK)O which contains provisions for the safety regulation of aviation activities, and the Hong Kong Civil Aviation (Investigation of Accidents) Regulations for the investigation of aircraft accidents and serious incidents.

There is other subsidiary legislation⁵, such as the Dangerous Goods (Consignment by Air) (Safety) Regulations (Cap. 384A) which controls, in the interests of safety, the preparation, packing, marking, labelling and offering of dangerous goods for carriage by air.

⁴ Convention on International Civil Aviation

⁵ A comprehensive list is in the internal CAD Exposition Appendices V - VI.

2.1.3 Operating Requirements

The CAD also promulgates regulatory requirements and technical guidance to outline the standards required to be demonstrated by the applicants in order to support the grant of licence, approval or certificate, or guidance to facilitate compliance with the legislation. Examples are as follows :-

ALRD	:	Aerodrome Licensing Requirements Document
ALRD(H)	:	Aerodrome Licensing Requirements Document (Heliport)
CAD 360	:	Air Operator's Certificates Requirements Document
CAD 54	:	Requirements Document for Pilot Licences and Associated Ratings
CAD 670	:	Air Navigation Services Safety Requirements
CAD 382	:	The Mandatory Occurrence Reporting Scheme
CAD 712	:	Safety Management Systems (SMS) for Air Operators and Maintenance Organisations
CAD 361	:	International Non-Public Transport Operations
HKAR-145	:	Approved Maintenance Organisations
HK AIP	:	Hong Kong Aeronautical Information Publication

2.1.4 Guidance Documents

Safety materials, technical guidance and safety-critical information will be promulgated by the CAD as appropriate.

2.1.5 Civil Aviation Authority's Framework and Accountabilities

Under Cap. 448, the Chief Executive in Council may make provisions for carrying out the Chicago Convention and any Annexes relating to international safety standards, and for regulating air navigation. Responsibilities of the CAD include the implementation of the ICAO safety standards, development of airspace policy and provision of necessary infrastructure to support air navigation services. The Organisation Chart of CAD is shown at *Attachment A1*. Functions are elaborated in CAD Website and CAD Exposition.

As the primary regulatory agency of civil aviation in Hong Kong, it is incumbent upon the CAD to undertake the SSP responsibilities of Hong Kong. The CAD may issue licences, certificates and approvals and conduct safety oversight on the civil aviation system under the AN(HK)O. To conduct continued

surveillance, inspections or safety audits, CAD's personnel are empowered by the DGCA, through proper delegation of authority, to discharge duties under the law.

2.1.6 Framework/Regulations Review

Hong Kong will comply with ICAO's Standards and Recommended Practices wherever possible and applicable. To this end, new international standards will be incorporated and reflected in the legislation, operating regulations/requirements as appropriate in a timely and effective manner. Where adoption of ICAO provisions is not practicable, differences will be filed to ICAO and published in the HK AIP.

When ICAO standards cannot be effectively implemented by administrative measures, the CAD in conjunction with our policy bureau will seek legislative provisions⁶ in accordance with the guidance⁷ of the Department of Justice, which plays a significant role in the legal system of Hong Kong.

2.1.7 SSP Documentation and Records

The CAD applies HKSARG's filing system for the appropriate storage, archiving, protection and retrieval of all documents related to SSP activities. Confidential materials are subject to more stringent filing requirements. A sound documentation system facilitates the traceability of documents and records for update, reference or review by authorised CAD staff.

⁶ CAD's internal procedures for legislative review are in Section 7.5 of ASMD Exposition.

⁷ In Department of Justice's "How Legislation is Made in Hong Kong" Appendix 3 - HKSAR General Regulations Chapter V, government bureaux or departments should not seek legislative provision for matters that can be dealt with administratively.

2.2 Safety Responsibilities and Accountabilities

2.2.1 SSP Development

In 2009, the 1st edition of SSP for Hong Kong was issued. The primary responsibility for the SSP rests with the DGCA as the SSP Accountable Executive. An SSP Team was formed to initiate the implementation work.

In 2013, subsequent to a new **Annex 19 – Safety Management** developed by the ICAO, the level of SSP implementation activities was stepped up. A new SSP Implementation Committee was appointed by the DGCA.

SSP gap analysis exercises were periodically conducted in accordance with the ICAO Safety Management Manual. This process produced an SSP implementation plan 2014 – 2017 for actions to close the gaps. With the completion of all the near-term action items in closing the gaps, full implementation of the SSP was achieved in 2017. An SSP Implementation Plan for 2018 and beyond is further developed taking into consideration the new and amended provisions in Annex 19, 2nd Edition and our commitment to proactively enhancing our performance based regulation (See Appendix 2). Gap analysis will continue to be conducted with a view to further strengthening the Hong Kong Aviation Safety Programme.

2.2.2 SSP Responsibilities and Resources

The DGCA is accountable and has the authority for the implementation and maintenance of SSP in Hong Kong, as well as the authority on service provider certification and CAD's safety oversight processes. The Strategic Safety Office (SSO) was established in 2013 to assist the Accountable Executive in SSP coordination matters.

For the implementation of SSP, the DGCA has full control of human resources and financial resources related to the CAD. He may initiate requests to acquire additional resources through the established mechanism within the HKSARG as described in paragraph 2.8 of CAD Exposition.

The CAD also established requirements for the qualification of technical personnel. Arrangements for ensuring competence of those personnel in discharging safety related functions are outlined in the internal manuals of the respective Divisions.

2.2.3 Hong Kong SSP Coordination/ Implementation Committee

The SSP Implementation Committee comprises members from the regulatory authorities in Hong Kong, and assists the SSP Accountable Executive in driving the SSP implementation and development. It serves as an ongoing SSP coordination platform for the maintenance, activity monitoring and continuous improvement of SSP.

2.2.4 Aviation Safety Policy

To achieve a high level of safety, the CAD has developed a high level safety statement at [Appendix 1](#) that is applicable across Hong Kong's aviation regulatory framework.

2.2.5 Acceptable Level of Safety Performance of Hong Kong

Hong Kong has established the acceptable level of safety performance (ALoSP) to be achieved (see [Appendix 3](#)). Safety indicators facilitate the ongoing safety performance measurement and monitoring by the SSP Accountable Executive and the SSP Implementation Committee.

2.2.6 SSP Improvement/Review

With the full implementation of the Hong Kong SSP in 2017, the CAD will focus on the continuous improvement of the programme. The current task includes the refinement of SSP Element "Safety Risk Management" with periodic review of service providers' safety performance. The CAD will continue to strengthen the safety oversight functions and the SSP Element "Safety Assurance" and to progressively implementing performance based oversight to address high risk areas based on available safety information.

The SSP and the safety policy will be reviewed by the CAD annually or as required in the interest of continuous improvement and effectiveness.

2.3 Accident and Incident Investigation

Hong Kong has designated the **Accident Investigation Division** (AID) as the accident investigation authority to the ICAO. The AID plays an essential role in the prevention of accidents and incidents, thus supporting the management of aviation safety in Hong Kong.

The Hong Kong Civil Aviation (Investigation of Accidents) Regulations contain provisions for the appointment of the Chief Inspector and the inspectors of accidents, and provide appropriate powers for those inspectors to conduct independent investigations to accidents and serious incidents involving civil aircraft. The sole objective of investigations is the prevention of accidents and incidents, and not the apportioning of blame or liability.

The AID is established to be functionally independent from the regulatory authorities within CAD, and has an independent accident and incident investigation process. All inspectors are vested with the appropriate investigation authority. They are obliged to carry out investigations in a professional and fair

manner, and are required to be entirely independent and free from interference from other parties during the investigation⁸.

The Accident Investigation Office (AIO) of the Air Services and Safety Management Division (ASMD) deals with administration matters, including the regular manpower review, arrangements for training of AID staff, and maintenance of accident investigation facilities and equipment.

The CAD and the Transport and Housing Bureau (THB) have taken measures to establish an accident investigation authority (AIA) independent from the CAD. This is in response to an ICAO Annex 13 new requirement. The Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Cap 448B) was amended accordingly in 2017.

The new AIA will be established in mid 2018 with a full-time setup of one Chief Inspector and six Inspectors of Accidents. CAD will maintain close communication with THB and the industry to ensure a smooth transition.

2.4 Enforcement Policy

2.4.1 Considerations

According to the Chicago Convention Article 12, States/Administrations should implement and enforce the ICAO Standards and Recommended Practices to ensure that every aircraft flying within its territory, or aircraft carrying its nationality mark wherever it may operate will comply with the applicable regulations.

To this end, the CAD conducts enforcement actions according to the established internal policy and procedures. Where appropriate, enforcement actions will be taken, ranging from licensing actions to prosecution.

Various licences or certificates are issued pursuant to the AN(HK)O by the CAD, for example, licences issued to the pilots or certificates issued to the aircraft operators. Validity of licences or certificates is subject to the continued compliance with the conditions set out by the CAD. With sufficient ground, the CAD may exercise powers under the Order to revoke, suspend or vary any certificate or licence if it is no longer satisfied that the licensing or certification requirements are met.

Not all infringements constitute an offence and warrant prosecution. In the event that gross negligence, wilful infringement or deviations from legal requirements are suspected, the matter will be investigated, and referred to the Department of Justice as appropriate. The decision on whether to prosecute rests

⁸ Procedures are in the internal AID Exposition and the Handbook for Inspectors of Accidents.

with the Department of Justice which has the ultimate authority and responsibility on prosecution matters in Hong Kong, according to their Prosecution Code.

2.4.2 Specific Policies for SMS

Within the spirit and context of SMS, internal investigations and rectification by the service provider concerned (whose SMS has been accepted by the CAD under Article 102 of the AN(HK)O may be allowed subject to the agreement and satisfaction of the CAD.

Without prejudice to the decision of the Department of Justice, no proceedings should be recommended to be instituted in respect of unpremeditated or inadvertent breaches of the law, except in cases involving gross negligence or wilful infringement. Such principle applies to reports made under mandatory report, voluntary report, or safety information related to the operation of an SMS.

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CHAPTER 3

State Safety Risk Management

3.1 Safety Requirements for SMS

Hong Kong has established harmonised regulations in Article 102 of the AN(HK)O, and regulatory requirements to mandate service providers specified in ICAO Annex 19 to implement an SMS. Acceptance by the CAD is required. The Regulations also require service providers to identify hazards and manage safety risks.

SMS are required to be established in accordance with the SMS framework in Appendix 2 of Annex 19 and be commensurate with the size of individual service provider and complexity of its aviation products or services.

As part of the SSP gap analysis, regulations and regulatory requirements across disciplines were periodically reviewed. The SMS requirements for approved training organisations and IGA operators will be included in the AN(HK)O. The CAD will also update regulatory requirements as required to ensure they remain relevant and appropriate to the service providers.

3.1.1 Air Operator and Maintenance Organisation

For an SMS of a Hong Kong air operator or approved maintenance organisation to be accepted by the CAD, it must meet the requirements promulgated by the Flight Standards and Airworthiness Division (FSAD) in CAD 712 – Safety Management Systems (SMS) - For Air Operators, International Non-Public Transport Operators, Maintenance Organisations and Flying Training Organisations - A Guide to Implementation.

3.1.2 Type Design / Manufacture Organisation of Aircraft, Engines or Propellers

There is no type design / manufacture organization of aircraft, engines or propellers in Hong Kong.

3.1.3 Aerodrome Operator

Based on the ICAO standards, the SMS of the operator of the aerodrome certified in accordance with Annex 14 has been accepted by the CAD. Detailed requirements are stipulated in Chapter 13 of the Aerodrome Licensing Requirements Document (ALRD) by the Airport Sub-sections (APSS) of the Airport Standards Division (APSD).

3.1.4 Air Navigation Services Provider

The Air Traffic Management Division (ATMD) and the Air Traffic Engineering Services Division (AESD) of CAD are the air navigation service providers (ANSP) in Hong Kong. The SMS established by the ANSP has

been made acceptable to the Air Traffic Management Standards Office (ATMSO), according to SMS requirements promulgated in CAD 670 – Air Navigation Services Safety Requirements.

3.1.5 Approved Training Organisation

If exposed to safety risks related to aircraft operations during the provision of services, an organisation approved by the CAD which offers integrated training to flight crew or air traffic controllers is required to have an SMS accepted by the CAD. SMS acceptance requirements for CPL and MPL training are promulgated by FSAD in CAD 590(A) and CAD 590 (MPL) respectively. The Training Unit of ATMD is approved by CAD as an approved training organisation. The SMS of ATMD had been accepted by ATMSO in accordance with the SMS requirements for ANSPs stipulated in CAD 670.

3.1.6 Other Service Sector - IGA

The CAD has established criteria for IGA operators of large or turbojet aeroplanes (IGA) certified in Hong Kong to implement an SMS. Detailed regulatory requirements are prescribed in CAD 361 - International Non-Public Transport Operations.

3.2 Agreement and Management of Safety Performance

As part of the acceptance process of SMS, the service providers' and IGA operators' proposed safety performance (i.e. safety performance indicators (SPIs) and associated target/alert settings) will be reviewed and accepted by the relevant regulatory authorities. For new applicants, the CAD may accept a SMS implementation plan in phases, and allow the SPIs to be developed and accepted at a later stage.

For continuous monitoring purposes, the CAD may periodically review each organisation's SPIs and associated target and alert settings to ensure they remain effective, relevant and appropriate to the service provider. The CAD's agreement of the organisation's safety performance will take into account the scope, size, nature and complexity of individual organisation's specific operational context and activities.

Such agreement process may lead to certain safety assessments or risk mitigation actions to be carried out by the organisation, if specific risks are manifested in the organisation's data, or other industrial, regional or global safety data. The frequency of review by CAD may vary across disciplines. The CAD is aiming to align regulatory practices in a more consistent manner, with reference to the ICAO guidance.

3.3 Periodic Assessment of SMS

The SMS of individual service providers and IGA operators will be periodically assessed by the CAD to ensure that they remain relevant and appropriate to the organisations.

3.4 Management of Safety Risks

To manage safety issues so identified, CAD has established a mechanism for the resolution of safety issues. Safety actions, including but not limited to those taken by service providers, need to be documented and monitored to ensure that identified safety issues are addressed in a timely manner. CAD will review the need for new tools to assist in the monitoring and tracking of actions.

3.5 Safety Management Principles for Medical Assessment

The CAD will apply the basic safety management principles to the medical assessment process of licenced aviation personnel, that as a minimum include:

- a) routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and
- b) continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.

CHAPTER 4

State Safety Assurance

4.1 Safety Oversight

The CAD has implemented a safety oversight system in accordance with Appendix 1 of ICAO Annex 19. Each regulatory authority within CAD has established its own surveillance programme and procedures to ensure ongoing compliance with regulatory requirements by service providers or IGA operators. In addition, the HKO has established and implemented a safety oversight system for monitoring the compliance of aviation meteorological services.

The surveillance programme may include planned inspections, audits, and any other monitoring activities, including the organisations' SMS. Individual programmes will be maintained up-to-date. The CAD will progressively refine the data-driven approach to surveillance taking into account ICAO's safety management guidance. Regulatory resources may be prioritised according to areas of greater safety concern or need.

4.1.1 Certification, Approval and Licensing System

The Chicago Convention requires each Contracting State to issue licences and certificates for its aircraft, organisations and personnel engaged in international air navigation. In this connection, the CAD has implemented documented processes to ensure that the aviation personnel and organisations meet the required standards before they are allowed to exercise the privileges of a licence or certificate. Ongoing surveillance is conducted, and enforcement actions, ranging from warning letters to prosecution, may be taken as required.

4.1.2 Safety Oversight of Service Providers and IGA Operators

The CAD's safety oversight system and obligations include the initial approval and continued surveillance of aviation service providers and IGA operators to assure compliance with Hong Kong's legislation and regulatory requirements. The safety oversight and surveillance procedures will be maintained up-to-date by individual regulatory authorities.

4.1.3 Internal SSP Review/Quality Assurance

The SSP Implementation Committee meets on a half-yearly basis. The Committee's activities include the review of the SSP and its safety policy to assure continuing and effective conformance of the SSP and its related safety oversight functions; as well as to drive the continuing improvement of the SSP.

Each CAD Division maintains an internal quality system and management oversight on its activities and personnel. In addition, the CAD maintains an internal safety audit scheme based on the ICAO Continuous Monitoring Approach (CMA). The mechanism for independence is assured by internal audit

guidance. With the inclusion of the SSP elements in the ICAO CMA audit programme, the CAD has expanded the audit scope to embrace SSP activities.

4.1.4 External SSP Review/Audit

The ANS sector has established an external review process for some SSP activities. The Air Traffic Safety Assessment Committee (ATSAC) chaired by the CAD includes members from major local air operators. The ATSAC meets twice a year to review ANS safety matters including risk assessments of ANS occurrences and ANS safety performance.

Following the launch of the CMA audit by ICAO in 2013, SSP activities of Hong Kong are subject to the continuous external audit by the ICAO.

4.2 Safety Data and Safety Information Collection, Analysis, Protection, Sharing and Exchange

To ensure continued availability of safety data and information to support safety management activities, the CAD, through the SSO, has established mechanisms to capture and store safety data / safety information from the regulatory and aviation authorities, and to consolidate, analyze and evaluate those data at the aggregate level⁹. The CAD may derive information from the stored data, and will progressively develop arrangements for the active exchange of safety information with service providers or other States as appropriate.

4.2.1 Safety Reporting System

The CAD maintains a mandatory reporting system to facilitate the collection of information on actual or potential safety deficiencies. The system includes any mandatory reporting scheme prescribed by law or regulatory arrangements below.

Accident Reporting Scheme

Legal requirements to report aircraft accidents and serious incidents are prescribed in the Hong Kong Civil Aviation (Investigation of Accidents) Regulations. Reporting guidance is published by the AID in Accident Investigation Bulletin No. 1/09. The System utilises the ECCAIRS software database system. Guidance for investigators is in Chapter 9 of their internal AID Exposition.

⁹ Details of the safety data collection and processing system (SDCPS) are provided in the CAD SME.

Mandatory Occurrence Reporting Scheme

Requirements for aviation personnel, operators and service providers to submit Mandatory Occurrence Reports (MOR) are prescribed in Article 86 of the AN(HK)O. Relevant guidance on the reporting, processing and investigation system is set out in CAD 382 - The Mandatory Occurrence Reporting Scheme. While the MOR database is managed by FSAD, occurrences are reviewed and subject to risk assessment as appropriate by relevant regulators.

Other Regulatory Required Reporting

Other safety data collection processes established by regulatory arrangements between the regulatory Divisions and service providers include the following :-

- a) Special occurrences or safety data of the Hong Kong International Airport (HKIA); and
- b) Safety performance data of ATS, CNS and HKIA.

4.2.2 Voluntary/Confidential Reporting System

Hong Kong has established a voluntary safety reporting system to facilitate the collection of information on actual or potential safety deficiencies that may not be captured by the mandatory incident reporting system. The AID developed a Voluntary Incident Reporting System (VIR) and the Voluntary Incident Reporting Form (DCA234) to capture information other than that of accidents, serious incidents or mandatory reports for the purpose of promoting accident prevention and enhancing aviation safety. The source of information will not be disclosed unless required to do so by law, or authorised by the person concerned. Details are in Chapter 9 of AID Exposition and Accident Investigation Bulletin No. 1/09.

The non-disclosure arrangement also applies to any voluntary or confidential reports¹⁰ received by individual regulatory authorities. Those reports may be evaluated to verify their validity.

4.2.3 Safety Data and Safety Information Analysis

Each regulatory authority and our accident investigation authority has established safety database(s)¹¹ to identify hazards and to facilitate the effective analysis of information on actual or potential safety deficiencies / hazards identified. Relevant safety data, information, reports, including safety recommendations or reports issued by the accident investigation authorities where applicable, are assessed to determine if any actions will be required for the enhancement of safety, or any preventive actions needed to address actual or potential safety deficiencies.

¹⁰ Confidential reports are not anonymous reports.

¹¹ Accident / incident data reporting (ADREP)-compatible system will be used where possible, as this is the format recommended by the ICAO to facilitate data exchange.

The CAD has established a holistic data/information review and analysis mechanism. Multi-disciplinary safety performance reviews are regularly carried out with regulatory offices/ aviation authorities. Such review may identify safety concerns or hazards based on data, which enabled impacts or consequences to be assessed, and actions to be identified. The progress of implementation plans and the effectiveness of actions taken will be evaluated annually or as required. The CAD will continue to refine the processes and review the tools to assist in the monitoring and tracking of progress of the implementation of actions and the effectiveness of responses.

4.2.4 Safety Information Sharing and Exchange

Exchange within CAD

Authorities responsible for the implementation of the SSP, including the SSO and AIO, may have access to appropriate information in mandatory or voluntary reports to support their safety responsibilities. The integration of safety data enables safety performance measurement to be conducted on the aviation system of Hong Kong.

Sharing with Other States or ICAO

If safety matters of interest to other States or ICAO are identified during the analysis of safety information contained in CAD's database, for example, critical aircraft defects or substandard safety performance of non-Hong Kong operators, ANSPs or aerodromes, the CAD may forward such information to those States without delay.

Other Safety Information Sharing and Exchange

The CAD may encourage the establishment of safety information sharing or exchange networks among users of the aviation system and may facilitate the sharing or exchange of information on actual and potential safety deficiencies. Safety information derived from databases has been disseminated to industries or States as required, for example, the ANSP safety newsletter. More systematic information sharing or exchange arrangements may be developed as SSPs are fully implemented worldwide.

4.2.5 Safety Data and Safety Information Protection

To foster a positive safety culture and to encourage safety reporting, safety data captured and safety information derived from a mandatory or voluntary safety reporting system or related sources shall be non-punitive and be afforded protection. The CAD will not make available or use safety data or safety information or reports in the mandatory or voluntary system for purposes other than maintaining or improving aviation safety, unless exceptionally, an appropriate authority such as the judicial authority of Hong Kong determines in accordance with the legislation of Hong Kong, the release of such data or information is necessary for maintaining or improving safety, and that the benefits of their release outweigh the adverse impact such release is likely to have on the future collection and availability of safety data and safety information.

In view of the developing nature of ICAO's guidance for safety information sharing, exchange and protection, the CAD will review the efficacy of safety information protection in Hong Kong, taking into consideration the principles specified in Appendix 3 of Annex 19, 2nd Edition.

4.3 Safety-Data-Driven / Risk-Based Regulatory System

The conventional approach for safety oversight, surveillance or inspection programmes tends to be consistently applied to every service provider in the same manner, with no mechanism for customising the frequency or scope of surveillance activities. Such an approach is no longer adequate for managing global air traffic growth projected to double in the next fifteen years, nor addressing emerging safety risks of an increasingly complex future air navigation system. To this end, the CAD will implement the global safety strategies appropriately in collaboration with the aviation community.

The 2014-2016 ICAO Global Aviation Safety Plan (GASP) laid down a roadmap¹² for safety management from 2013 to 2027. States that have a mature safety oversight system, i.e. achieved an effective implementation levels over 60%, are to fully implement SSP by 2017. Before 2022, all States must fully implement their SSP. The CAD has taken a proactive step and fully implemented the SSP in 2017 in accordance with the GASP roadmap. The 2017-2019 ICAO GASP further requires States to implement advanced safety oversight systems including predictive risk management by 2028. Performance-based oversight system is being progressively implemented by the CAD with procedures¹³ established to prioritise inspections, audits and surveys towards those areas of greater safety concern or need, based on the assessed safety risks from the prevailing safety information. The ICAO global and regional safety reports or safety information, or those published by major authorities and international organisations may also serve as inputs to our system.

The CAD will continue to refine these procedures, and expand such practice to all service sectors. While maintaining the prescriptive-based regulatory system where required, our goal is to establish a performance based regulatory system with an effective risk-based decision-making process which allows us to focus safety efforts on hazards posing greater risks. It is anticipated that there will be increasing

¹² Global safety roadmap sets out by the ICAO for all States/Administrations :

Near term - Establish an effective safety oversight system before 2017.

Mid Term - Fully implement SSP before 2022.

Long Term - Implement safety capabilities to support future air navigation system before 2027.

¹³ Risk-based surveillance is established for the oversight of Hong Kong air operators, approved maintenance organisation, ANSP, aerodrome operator, flight training organisation, IGA operator, aeromedical assessment on aviation personnel as well as foreign operators.

collaboration with industries and study of safety information exchange and development of safety intelligence, as safety data is the quintessence of the new regulatory approach.

CHAPTER 5

State Safety Promotion

5.1 Internal Communication and Dissemination of Safety Information

Hong Kong's safety promotion involves the establishment of internal processes to provide or facilitate safety training, communication and dissemination of safety information. The SSP of Hong Kong is shared with stakeholders.

5.1.1 Internal SSP, SMS and Safety Training

The CAD has a long established mechanism for Divisional management to ensure organisational as well as individual competence of their personnel in discharging safety oversight or safety management duties. The departmental training programme is prepared every fiscal year and is updated as required. Safety management training or workshop is arranged for staff.

CAD aims at arranging training on SSP Implementation on a regular basis. Following up on an action identified from the SSP gap analysis in 2014, the CAD has developed processes in 2016 to identify SSP/SMS training needs and arrange competency-based training for staff as required.

5.1.2 Internal Communication and Dissemination of Safety Information

Hong Kong has developed a mechanism for the consolidation of safety information by the SSO of the CAD. The Hong Kong SSP documentation, safety/enforcement policies and procedures and safety data consolidated from all aviation sectors are shared among regulatory and aviation authorities.

In 2016, an electronic CAD Safety Library System was launched to facilitate the promulgation of guidance to CAD personnel and to promote learning through user-friendly document subscription features.

5.2 External Communication and Dissemination of Safety Information

The CAD has facilitated external safety promotion by promoting awareness of safety risks and facilitating the sharing and exchange of safety information with the aviation community. We will continue to do so as we believe it will foster and support the development of a positive safety culture which will be conducive to the maintenance and improvement of safety.

5.2.1 Safety Seminars

The CAD organises safety seminars and conferences to facilitate learning and information sharing with the industry. The CAD also actively participates in ICAO regional and global meetings or conferences, and will facilitate industries' participation in those safety forums. We will continue to support continuous SMS training or SSP familiarisation with Hong Kong's service providers.

5.2.2 Exchange and Sharing of Safety Information

The CAD will continue to strengthen our partnership with the industry in promoting a safety culture and experience sharing on safety management issues. In 2013, a public Aviation Education Path to promote interests in aviation, especially amongst students and our younger generation, was launched by the CAD with assistance from the industry, which echoes ICAO's initiatives in the Next Generation of Aviation Professionals (NGAP). External safety promotion with Hong Kong's industry will be arranged more regularly.

In 2016, CAD began to issue "Safety Links" newsletter to foster a positive safety culture and to promote safety information sharing with the aviation community. The CAD will progressively introduce new initiatives, including the dissemination of SSP document and safety indicators with service providers and other States, as the SSP progresses locally and globally.

5.3 Future Work

CAD will continue to maintain and enhance the following :-

- a) establish a process to disseminate regulatory information, or communicate SSP/SMS-related or safety information to the industry ;
- b) continue to develop up-to-date SMS implementation guidance ;
- c) continue to communicate safety related issues, safety policies and procedures through publications or websites as appropriate ; and
- d) promote the sharing and exchange of safety information with and amongst different sectors of the aviation community and other States.

APPENDIX 1

Safety Policy Statement (See Chapter 2.2.4)

The Civil Aviation Department of Hong Kong promotes and regulates the safety of aviation in Hong Kong, China. We are committed to developing and implementing effective strategies, regulatory frameworks and processes to ensure that aviation activities under our oversight achieve the highest practicable level of safety.

To this end we will:

- 1) set safety standards that are in line with the Standards, Recommended Practices and Procedures of the International Civil Aviation Organisation;
- 2) adopt a data-driven and performance-based approach to safety regulation and industry oversight activities where appropriate;
- 3) identify safety trends within the aviation industry and adopt a risk-based approach to address areas of greater safety concern or need;
- 4) monitor and measure the safety performance of our aviation system continuously through the aggregate safety performance indicators of Hong Kong as well as our service providers' safety performance indicators;
- 5) collaborate and consult with the aviation industry to address safety matters and continuously enhance aviation safety;
- 6) promote good safety practices and a positive organisation safety culture within the industry based on sound safety management principles;
- 7) encourage safety information collection, analysis, sharing and exchange amongst all relevant industry organisations and service providers, with the intent that such information is to be used for safety management purposes only;
- 8) allocate sufficient financial and human resources for safety management and oversight; and
- 9) equip staff with the proper skills and expertise to discharge their safety oversight and management responsibilities competently.

LIU Chi-yung, Victor, JP
Director-General of Civil Aviation
Civil Aviation Department
SSP Accountable Executive of Hong Kong, China

APPENDIX 2 - SSP Implementation Plan

Table 3 - SSP Implementation Plan 2018 – 2028*(See Chapter 2.2.1)

SSP Action Items	Target Completion
Near Term (2018 - 2022)	
Implement the new standards where applicable in Annex 19 2 nd Edition which will become applicable in November 2019.	2019
Develop appropriate protocols with the new accident investigation authority and industry for the sharing of occurrence reports or safety reports, under appropriate safeguards against misuse of information.	2019
Conduct a SSP gap analysis on the safety systems in Hong Kong after ICAO's new guidance is published.	2019
Further promote a positive safety culture with industry, including encouragement of voluntary reporting, and sharing / exchange of safety information.	2020
Review the effectiveness of compliance-based and performance-based safety oversight regime, with a view to further enhancing the risk-based decision-making process so that safety efforts can be focused on hazards posing greater risks.	2020
Long Term (2023 and beyond)	
Implement safety capabilities making use of proactive/predictive safety information to support the future air navigation system.	Before 2028

* The SSP Implementation Plan will be reviewed and updated as appropriate.

APPENDIX 3

Hong Kong Safety Indicators and ALoSP (See Chapter 2.2.5)

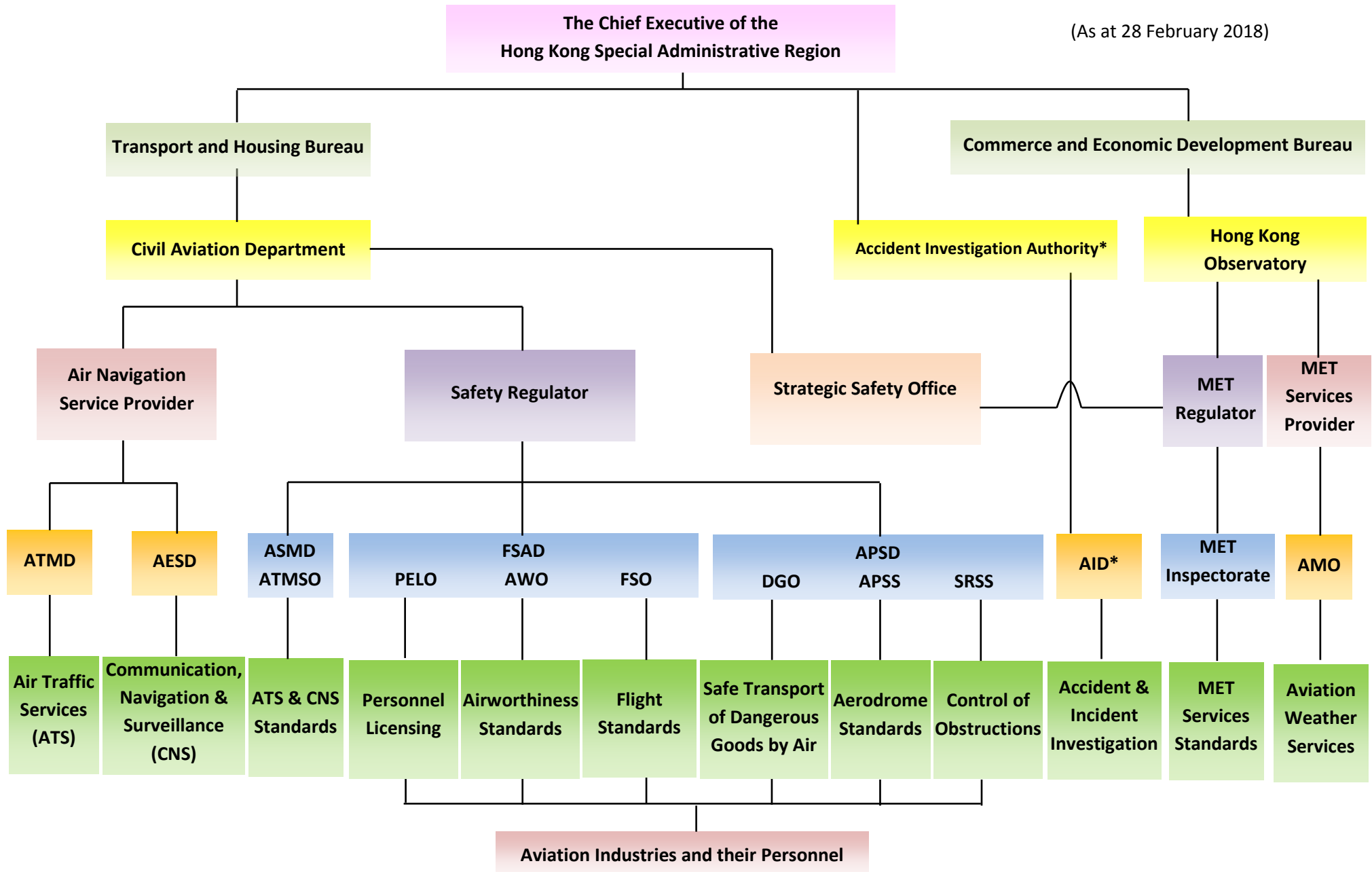
Safety Indicator	Safety Target
Compliance with International Standards	
Differences filed to the ICAO related to the implementation of international aviation safety standards.	< 5 %
ICAO CMA ¹⁴ audit result - effective implementation of ICAO Standards and Recommended Practices.	> 90 %
Accident/Serious Incident Rates	
“Large Aircraft” 5-YMA ¹⁵ Rate (per million movements) (MTOW > 5,700 kg)	< 2008-17 average
(i) Accidents/Serious Incidents in Hong Kong territory	
(ii) Accidents/Serious Incidents of aircraft registered in Hong Kong	

Note :- More details on indicators are maintained in CAD’s internal document.

¹⁴ CMA refers to the Continuous Monitoring Approach by the ICAO on States/Administrations

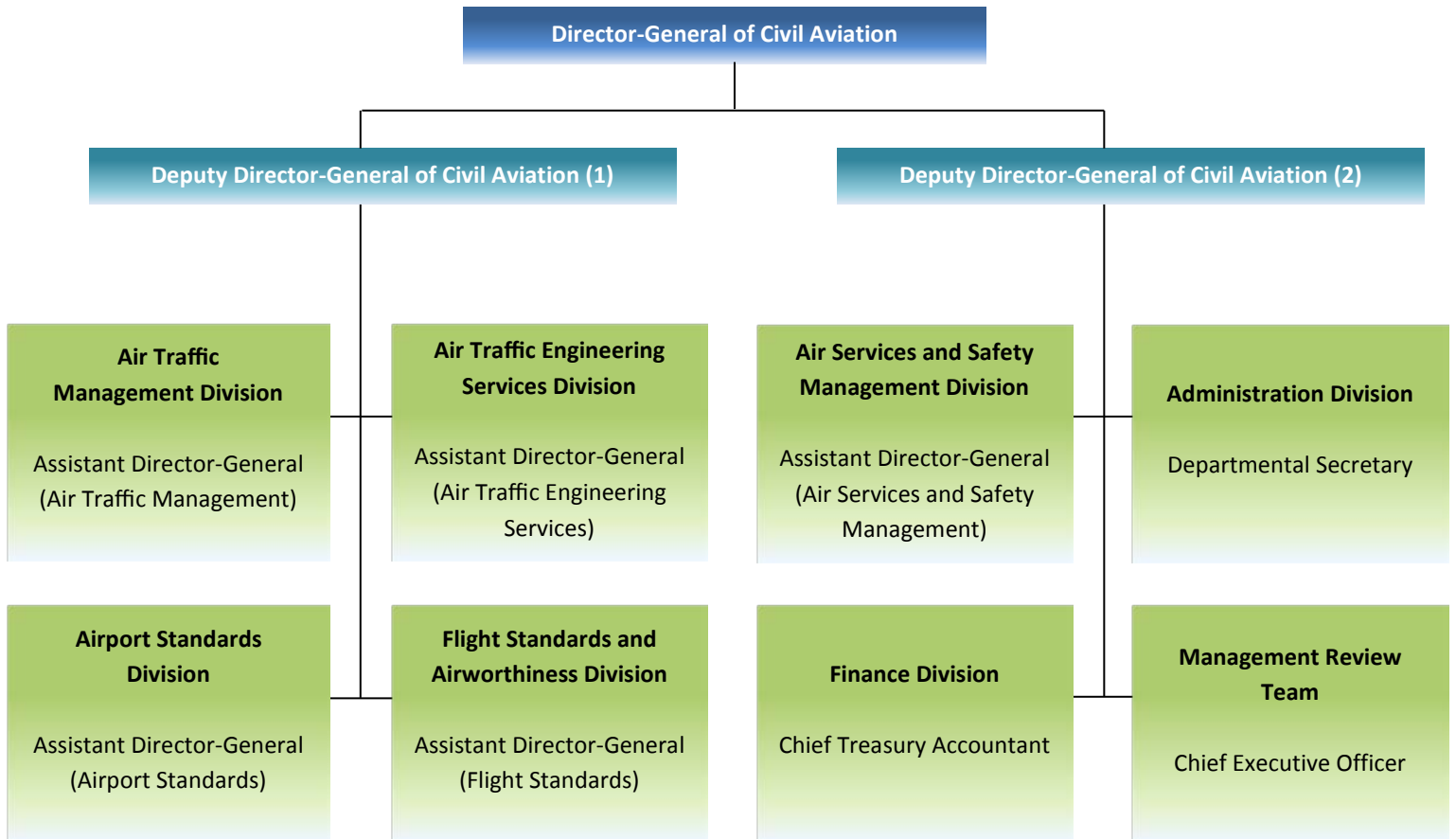
¹⁵ 5-YMA means 5 year-moving-average.

Attachment A – Hong Kong Civil Aviation System (See Chapter 1.1)

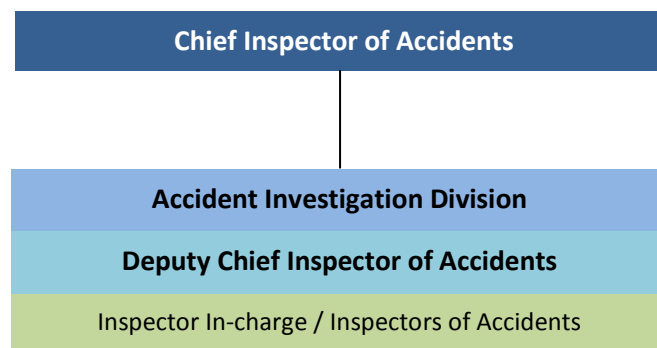


* With the establishment of the Accident Investigation Authority, the AID will be dissolved. Please refer to para 2.3 for details.

Attachment A1 - Organisation Chart of the CAD (See chapter 2.1.5)



Organisation Chart of the Accident Investigation Division



With the establishment of the Accident Investigation Authority (AIA), the responsibilities of accident and incident investigation will be transferred from AID to the new AIA. Please refer to para 2.3 for details.