民航處
CIVIL AVIATION DEPARTMENT

Hong Kong Safety Programme 2014 - 2017

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.

Second Issue – October 2014

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Committed to a Safe, Efficient and Sustainable Air Transport System

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 Safety Programme, developed pursuant to the ICAO Annex 19, sets out the strategies we have adopted for the implementation of SSP.

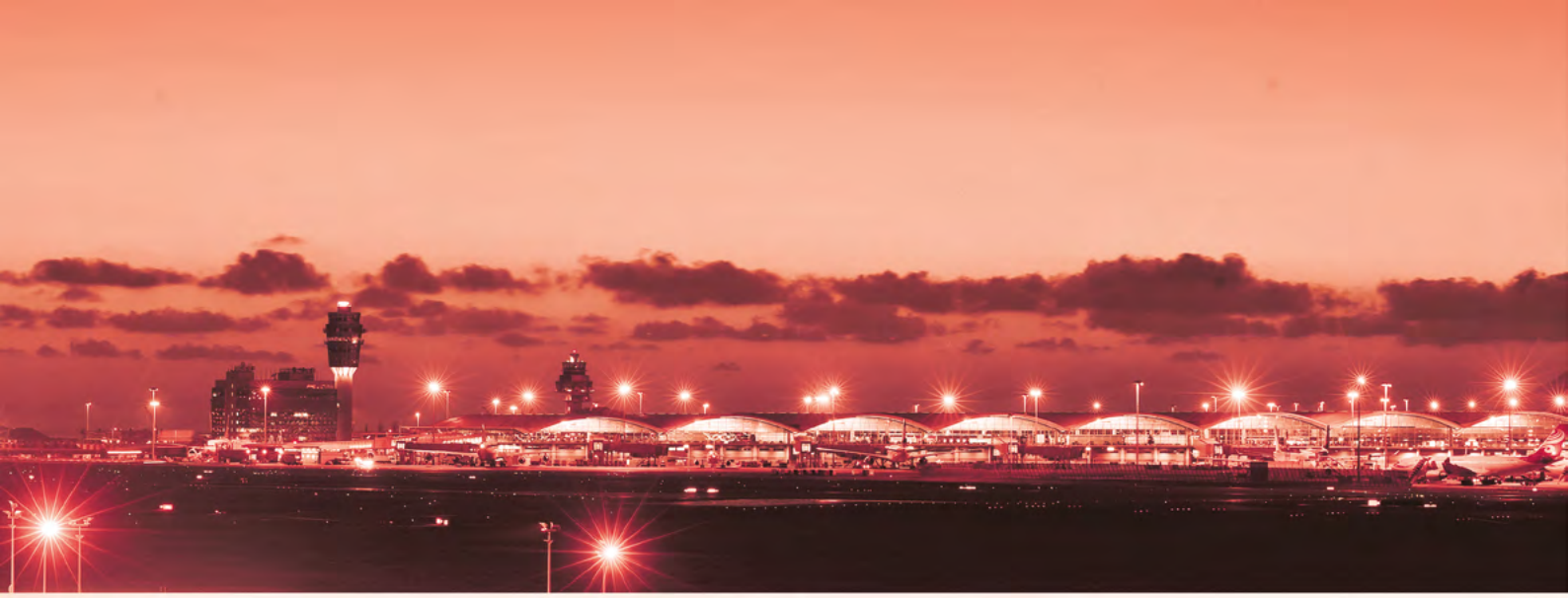
We will pragmatically introduce performance-based regulatory elements in our safety oversight to focus on relatively higher risk areas based on all available information, and seek assurance that those risks are proactively mitigated through effective means. We will also strategically coordinate new global safety initiatives with reference to ICAO's **Global Aviation Safety Plan** which laid down a roadmap for safety from 2013 to 2027. We will take a proactive step to **stay ahead of the global target** by implementing the SSP in full by 2017.

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.

As safety culture is a core tenet of safety management, we will 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.

Mr. Norman Shung-man LO
Director-General of Civil Aviation
31 October 2014



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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 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.

State Safety Programme (SSP) for Hong Kong

In line with the basic principles of safety management, the ultimate objective of SSP is the continuous improvement of aviation safety. The four components and eleven elements in this Hong Kong 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 Safety Programme Framework (4 Components and 11 Elements)

1.	**State Safety Policy and Objectives**
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 Management**
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

Amendment History

Amendment	Reference(s)	Subject(s)/Major Change	Applicable
1st Issue	ICAO SMM 1st 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 (2nd Issue)	Annex 19 1st Edition ICAO SMM 3rd Edition	Programme renamed as "Hong Kong Safety Programme" and contents aligned with 1st edition of the ICAO Annex 19 which became applicable on 14 November 2013, and other relevant reference in the 3rd 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

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
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[1], by virtue of delegation of powers, has authorised the DGCA to exercise any powers[2] 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
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
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

[1] Government of the Hong Kong Special Administrative Region
[2] Except the power to make regulations

CHAPTER 2
State Safety Policy and Objectives

2.1 Hong Kong Safety Legislative Framework

Pursuant to the Chicago Convention[3], Hong Kong has promulgated a legislative framework and operating regulations 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 and operating regulations are periodically reviewed to ensure they remain relevant and applicable to Hong Kong.

2.1.1 Primary Legislation

In Hong Kong, the primary legislation dealing with civil aviation matters is in the Civil Aviation Ordinance (Cap. 448). There is other legislation[4] 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 Air Navigation (Hong Kong) Order 1995 [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 legislation[4], 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.

[3] Convention on International Civil Aviation
[4] A comprehensive list is in the internal CAD Exposition Appendices V - VII.

2.1.3 Operating Requirements

The CAD also promulgates regulatory requirements[4] 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 Industry Guidance Documents

Safety materials or guidance published by industries or international organisations 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 provisions[5] in accordance with the guidance[6] 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.

[5] CAD's internal procedures for legislative review are in Section 4.9 of ASMD Exposition.

[6] 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.

Several SSP gap analysis exercises were conducted in accordance with the ICAO Safety Management Manual in 2010, 2012 and 2014. This process produced an SSP implementation plan for actions to close the gaps (see *Appendix 2*).

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.

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.

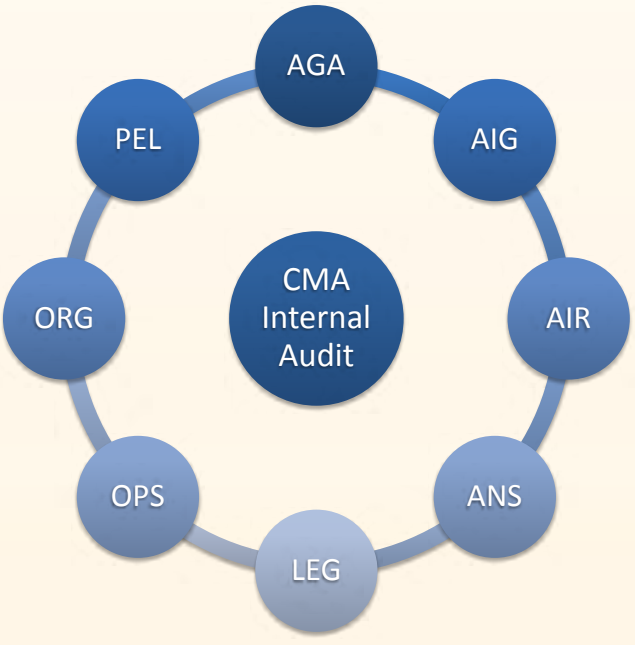
2.2.5 Acceptable Level of Safety Performance of Hong Kong

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

Since the SSP of Hong Kong was implemented in 2009, the CAD has continuously improved the programme. The current task includes the refinement of SSP Element "Safety Risk Management". A periodic review of service providers' safety performance will be applied. The CAD also plans to strengthen the safety oversight functions and SSP Element "Safety Assurance", and to introduce performance-based regulatory system 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.



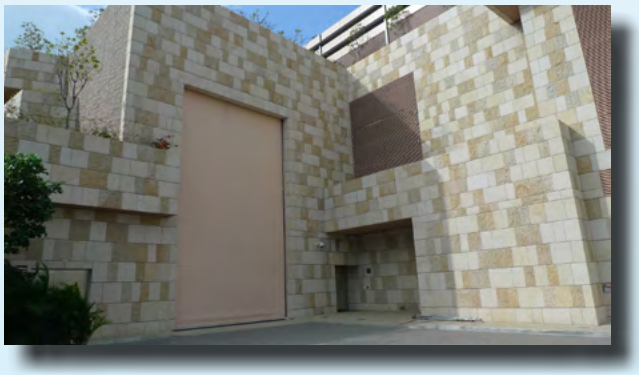
2.3 Accident and Incident Investigation

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.

To enable the AID to fulfil obligations under the ICAO Annex 13, 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 investigation[7].

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.



[7] Procedures are in the internal AID Exposition and the Handbook for Inspectors of Accidents.

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 Air Navigation (Hong Kong) Order 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 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.

CHAPTER 3
State Safety Risk Management

3.1 Safety Requirements for Service Providers' 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 contained in Appendix 2 of Annex 19, and be commensurate with the size of individual service provider and complexity of its aviation products or services.

In 2014, as part of the SSP gap analysis, regulations and regulatory requirements across disciplines were reviewed. The SMS requirements for approved training organisations 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.

Other Service Sector - International General Aviation

The CAD also requires international general aviation operators of large or turbojet aeroplanes certified in Hong Kong to implement an SMS. Detailed regulatory requirements are prescribed in CAD 361 - International Non-Public Transport Operations.

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 and Maintenance Organisations.

3.1.2 Aircraft Type Design/ Manufacture Organisation

There is no organisation responsible for the type design or manufacture of aircraft in Hong Kong.

3.1.3 Aerodrome Operator

Based on the ICAO standards, the SMS of the aerodrome operator 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, a flight training organisation approved by the CAD to offer integrated training courses is required to have an SMS. SMS acceptance requirements for CPL and MPL training are promulgated by FSAD in CAD 509(A) and CAD 509 (MPL) respectively.

3.2 Agreement of Service Provider's Safety Performance

As part of the acceptance process of SMS, the service provider's 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 an 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 service provider'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 service providers' safety performance will take into account the scope, size, nature and complexity of individual service provider'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 service providers, if specific risks are manifested in the service provider'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 Service Provider's SMS

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

3.4 Safety Management Principles for Medical Assessment

The CAD may 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. 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 service providers' 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

The CAD's safety oversight system and obligations include the initial approval and continued surveillance of aviation service providers 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 quarterly 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. The CAD may expand the audit scope to more 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.

In 2013, following the launch of the CMA audit by ICAO, SSP activities of Hong Kong are subject to the continuous external audit by the ICAO. The CAD may expand this arrangement in the future.

4.2 Safety Data Collection, Analysis and Exchange

To support safety management activities, the CAD, through the SSO, has established mechanisms to capture and store safety data from the regulatory and aviation authorities, and to consolidate and evaluate those data at the aggregate level. 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 Occurrence Reporting System

The CAD maintains a mandatory incident 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. To collect incident related data not covered by those regulations, AID has also established an Incident Reporting System, which includes voluntary incident reporting (VIR). The System utilises the ECCAIRS software database system. Guidance for investigators is in Chapter 9 of their internal AID Exposition.

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) ATS and CNS occurrences ;

b) Special occurrences or safety data of the Hong Kong International Airport (HKIA) ;

c) Safety performance data of ATS, CNS and HKIA ; and

d) Aircraft Proximity (AIRPROX) Report, Wake Vortex Encounters Report and Bird Strikes Report.

4.2.2 Voluntary/Confidential Reporting System

Hong Kong has established a voluntary incident 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 reports[8] received by individual regulatory authorities. Those reports may be evaluated to verify their validity.

4.2.3 Safety Data Analysis

Each regulatory authority has established and maintained a safety database(s)[9] to facilitate the effective analysis of information on actual or potential safety deficiencies observed, including that from its incident reporting systems. Data or reports 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.

In 2013, the CAD established a holistic safety data review and analysis mechanism. A multi-disciplinary safety performance review was coordinated with all regulatory/ aviation authorities. The review identified safety concerns based on data, actions taken or actions required. Where possible, the effectiveness of actions was evaluated. The CAD will conduct such a review annually or as required, and continue to refine the processes for monitoring the implementation of actions and the effectiveness of responses.

[8] Confidential reports are not anonymous reports.

[9] 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.

4.2.4 Safety Information 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.

Exchange 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

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

4.2.5 Safety Data Protection

A mandatory or voluntary incident reporting system shall be non-punitive and afford protection to the sources of the information. The CAD will not make available or use mandatory or voluntary reports for other than safety-related purposes, unless exceptionally, an appropriate authority such as the judicial authority of Hong Kong determines in accordance with the legislation of Hong Kong, the value of its disclosure or use in any particular instance, outweighs the adverse impact such action may have on aviation safety.

In view of the developing nature of ICAO's proposed amendment of guidance for the protection of safety information, the CAD will review the efficacy of safety information protection in Hong Kong.

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 2014-16 ICAO Global Aviation Safety Plan laid down a roadmap[10] for safety management from 2013 to 2027. Before 2022, all States must fully implement their SSP. The CAD will take a proactive step and fully implement the SSP by 2017. The SSP gap analysis revealed that a system was in development by the CAD with procedures[11] 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 by 2017 which allows us to focus safety efforts on hazards posing greater risks. It is anticipated that there will be increasing 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.

[10] 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.

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

CHAPTER 5
State Safety Promotion

5.1 Internal Training 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.

In 2013, two training events on Annex 19 and SSP implementation (including hazard identification and gap analysis) were conducted. More will be arranged on a regular basis in the future. Following the SSP gap analysis, the CAD will develop processes before 2017 to verify SSP/SMS training records to ensure training has been provided to 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.

5.2 External Training and Dissemination of Safety Information

Hong Kong facilitates external safety promotion by promoting awareness of safety risks and facilitating two-way communication of safety information to support, among service providers, the development of an organisational culture that fosters an effective SMS.

5.2.1 External SMS and SSP Training/ Education Facilitation

The CAD frequently organises safety seminars and conferences. In 2013, 20 events were hosted by the CAD. Two were related to the ICAO Annex 19 and the implementation of SSP. Both events had an excellent level of industry participation, and marked a fruitful and auspicious start to our safety collaborations with aviation partners in the years to come. We will continue to do more in the future.

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 External Communication and Dissemination of Safety Information

The CAD plans to strengthen our partnership with the industry in promoting a safety culture and experience sharing on safety management issues. In 2013, a public Education Path to promote aviation was launched by the CAD with assistance from the industry. External safety promotion with Hong Kong's service providers will be arranged more regularly. 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.

We will continue to maintain and enhance the following :-

a) establish a process to disseminate regulatory information, or communicate SSP/SMS-related information to service providers ;

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 exchange of safety information with and amongst service providers 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 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 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.

Mr Norman Shung-man LO
Director-General of Civil Aviation
Civil Aviation Department
SSP Accountable Executive of Hong Kong, China
31 October 2014

APPENDIX 2

SSP Implementation Plan 2014 - 2017 *(See Chapter 2.2.1)*

SSP Action Items	Target Completion
Near Term	
Full and effective implementation of the SSP.	2017
Refinement of "Safety Risk Management" by applying a periodic review of service providers' safety performance.	2017
Strengthen "Safety Assurance" by introducing performance-based regulatory system which enables the CAD to focus efforts on hazards posing greater risks based on safety intelligence.	2017
Develop internal processes within the CAD to verify SSP/SMS training records to assure training has been provided to staff as required.	Before 2017
Enhance external safety promotion and safety information sharing with Hong Kong's service providers and States/Administrations.	2017
Review the efficacy of safety information protection and voluntary reporting arrangements, taking into consideration the developing nature of ICAO's proposed new guidance for information protection.	2017
Long Term	
Implement safety capabilities making use of proactive/predictive safety information to support the future air navigation system.	Before 2027

APPENDIX 3

Hong Kong Safety Indicators and ALoSP *(See Chapter 2.2.5)*

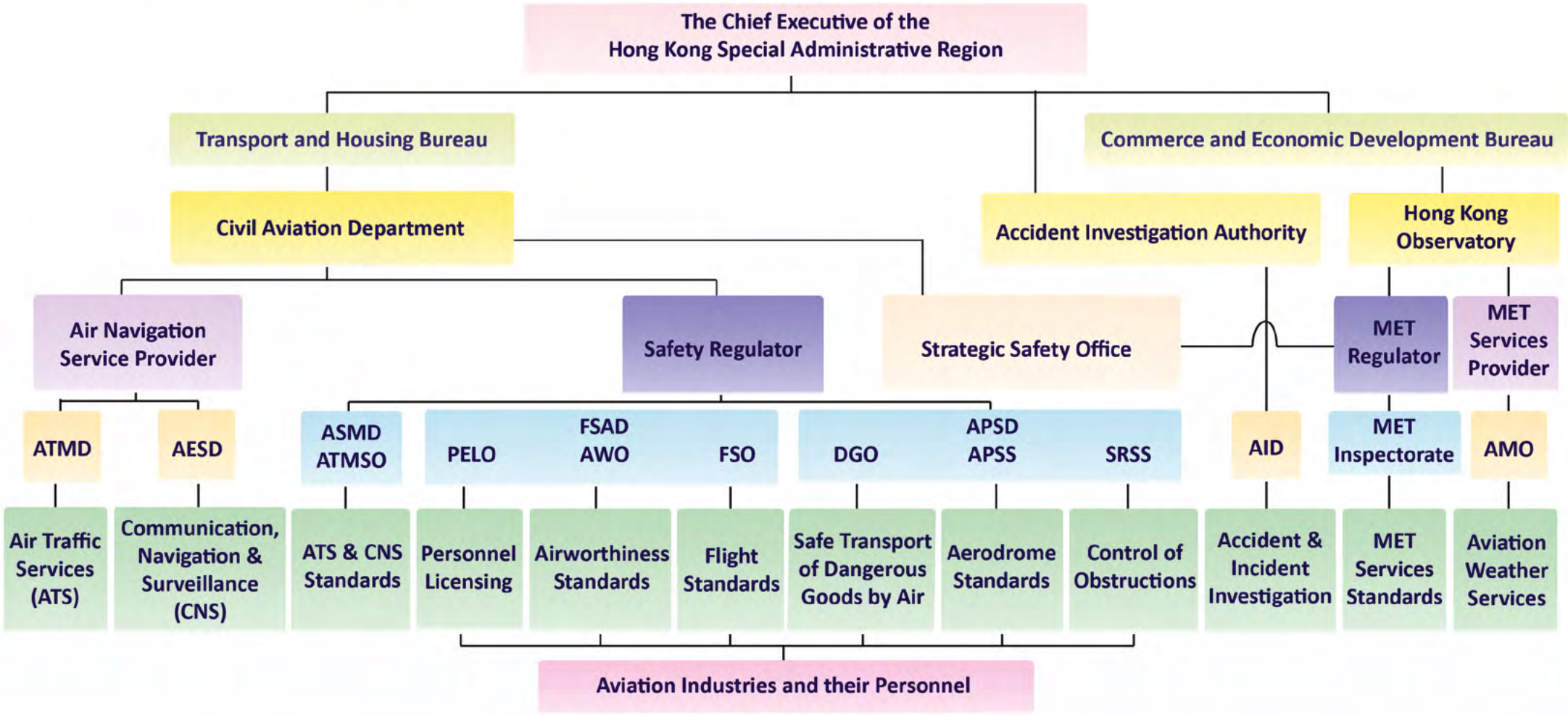
Safety Indicator	Safety Target
Compliance with International Standards	
Differences filed to the ICAO related to the implementation of international aviation safety standards.	**< 5 %**
ICAO CMA[12] audit result - effective implementation of ICAO Standards and Recommended Practices.	**> 90 %**
Accident/Serious Incident Rates	
"Large Aircraft" 5-YMA[13] Rate (per million movements) (MTOW > 5,700 kg)	
(i) Accidents/Serious Incidents in Hong Kong territory	**< 2003-13 average**
(ii) Accidents/Serious Incidents of aircraft registered in Hong Kong	

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

[12] CMA refers to the Continuous Monitoring Approach by the ICAO on States/Administrations.
[13] 5-YMA means 5 year-moving-average.

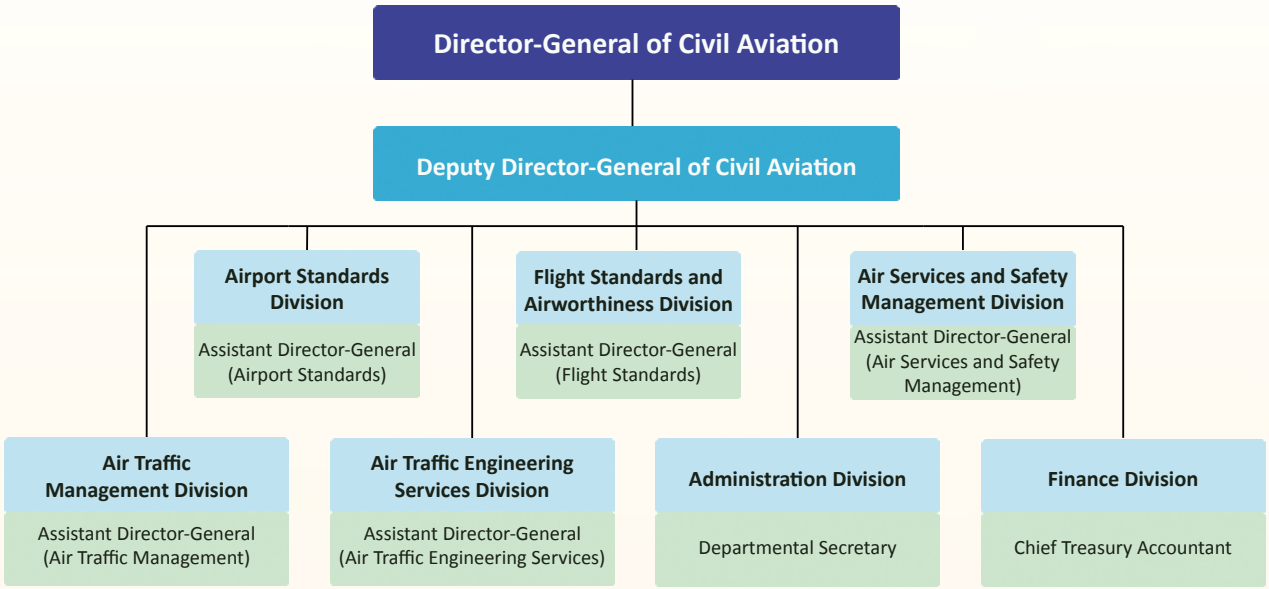
ATTACHMENT A

Hong Kong Civil Aviation System *(See Chapter 1.1)*

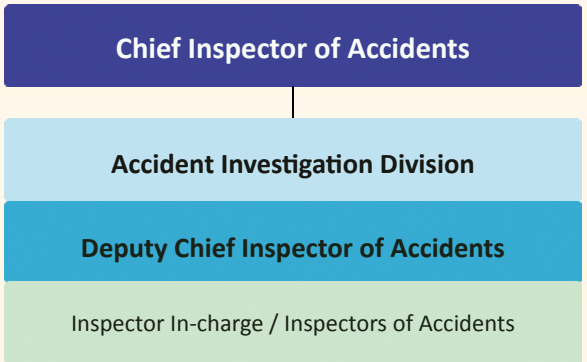


Attachment A1

Organisation Chart of the CAD *(see Chapter 2.1.5)*



Organisation Chart of the Accident Investigation Division



Hong Kong Civil Aviation Department