

Doc 9379
AN/916



Manual of Procedures for Establishment and Management of a State's Personnel Licensing System

Approved by the Secretary General
and published under his authority

Second Edition — 2012

International Civil Aviation Organization

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AMENDMENTS

Amendments are announced in the supplements to the *Catalogue of ICAO Publications*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

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FOREWORD

As long as air travel depends on qualified pilots or other air and ground personnel, their competence, skills and training will remain the essential guarantee of efficient and safe operations. Adequate personnel training and licensing also instil confidence among States, leading to international recognition and acceptance of personnel qualifications and licences and greater trust in aviation on the part of the traveller.

Consequently, personnel licensing is an important element of an ICAO member State's safety oversight system. It is a complex endeavour which encompasses technical, economical and industrial issues. Most ICAO member States control only a limited number of licence holders and may not consider it feasible or economical to set up a fully staffed licensing section. Many of the licensing functions and duties mentioned in this manual can be and often are considerably reduced and compressed in those States with limited aviation activities. It is one of the aims of this manual to provide such States with the necessary tools to develop a personnel licensing system to suit their needs while fulfilling their obligations under the Convention on International Civil Aviation.

ICAO Standards and Recommended Practices for the licensing of flight crew members (pilots, flight engineers and flight navigators), air traffic controllers, aeronautical station operators, aircraft maintenance personnel and flight operations officers/flight dispatchers are provided in Annex 1 (*Personnel Licensing*) to the Convention on International Civil Aviation.

This manual contains further guidance for States on establishing and operating a personnel licensing system that meets the requirements of Annex 1. It is divided into two parts: Part I deals with the general principles of personnel licensing, the regulatory structure and the organization of a State's personnel licensing system; Part II contains procedures on the issuance of various licences and ratings and on the approval and surveillance of a training organization or programme.

The material in this manual is based on procedures used in many States and includes extracts of regulations and other licensing provisions. These extracts may assist a State in developing national regulations to ensure compliance with the minimum requirements laid down in Annex 1. However, the extracts are illustrative only and are not intended to be comprehensive or to reflect "best practice", and alternative procedures may be equally acceptable. It should also be noted that, because the samples quoted are from various sources, there may be differences in the use of terminology and titles.

This manual should be used in conjunction with the following Annexes to the *Convention on International Civil Aviation* (Doc 7300): Annex 1 — *Personnel Licensing* and Annex 6 — *Operation of Aircraft* (Part I — *International Commercial Air Transport — Aeroplanes*, Part II — *International General Aviation — Aeroplanes* and Part III — *International Operations — Helicopters*).

Comments on this edition of the manual would be appreciated. They will be taken into account in the preparation of subsequent editions. Comments concerning the manual should be addressed to:

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GLOSSARY

ABBREVIATIONS AND ACRONYMS

AFIS	Aerodrome flight information service
AIC	Aeronautical information circular
AIP	Aeronautical information publication
AOC	Air operator certificate
ATC	Air traffic control
ATO	Approved training organization
ATPL	Airline transport pilot licence
ATS	Air traffic services
CAA	Civil Aviation Authority
CCQ	Cross-crew qualification
CMO	Chief medical officer
COSCAP	Cooperative development of operational safety and continuing airworthiness programme
CPL	Commercial pilot licence
CPL/IR	Commercial pilot licence with instrument rating
CRM	Crew resource management
EASA	European Aviation Safety Agency
EFOD	Electronic filing of differences
FAA	Federal Aviation Administration
FCL	Flight crew licensing
FE	Flight engineer
FSB	Flight Standardization Board
FSTD	Flight simulation training device
HF	High frequency
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
ISD	Instructional systems design
JAR	Joint Aviation Requirements
LOFT	Line oriented flight training
MCTOM	Maximum certificated take-off mass
MFF	Mixed-fleet flying
MPL	Multi-crew pilot licence
NCMC	National continuous monitoring coordinator
OEB	Operations Evaluation Board
PEL	Personnel licensing
PIC	Pilot-in-command
PIC/US	Pilot-in-command under supervision
PPL	Private pilot licence
PPL/IR	Private pilot licence with instrument rating
QA	Quality assurance
QC	Quality control
RAeS	Royal Aeronautical Society
RSOO	Regional safety oversight organization
RTF	Radiotelephony
SARPs	Standards and Recommended Practices

SMS	Safety management system
SOLI	State of licence issue
SOPs	Standard operating procedures
TCDS	Type certificate data sheets
TEM	Threat and error management
USOAP	Universal Safety Oversight Audit Programme

EXPLANATION OF TERMS

When the following terms are used in this manual, they have the following meanings:

Ab initio. Literally “from the beginning”. Refers to trainees with no prior knowledge of, or exposure to, the subject or activity being taught.

Accredited medical conclusion. The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

Approved training. Training conducted under special curricula and supervision approved by a Contracting State.

Note 1.— Annex 1 requires that approved training of flight crew members and air traffic controllers for the purpose of obtaining a licence or rating is conducted within an approved training organization. Annex 1 also requires that competency-based approved training for aircraft maintenance personnel is conducted within an approved training organization.

Note 2.— Although not falling under the criteria of training specifically for the issue of a licence or a rating, flight crew members undergoing approved training for the maintenance of competency or for gaining an operational qualification that does not fall under the training criteria outlined in Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, Chapter 9, 9.3, or Part III — International Operations — Helicopters, Section II, Chapter 7, 7.3, should receive such training from an approved training organization.

Approved training organization (ATO). An organization approved by and operating under the supervision of a Contracting State in accordance with the requirements of Annex 1 to perform approved training.

Cross-crew qualification. A type rating qualification using a type rating transition course, for which a pilot receives training credit for the technical similarities and common operational and handling procedures of another aircraft type for which he or she is qualified.

Note.— The training credit allows an approved reduction in the type rating course, compared with the type rating course used to qualify those pilots who do not receive such a credit.

Director. The senior official who is the head of a State's aviation administration and Licensing Authority.

Error management. The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states.

Licensing Authority. The Authority designated by a Contracting State as responsible for the licensing of personnel.

Medical assessment. Evidence issued by a Contracting State that the licence holder meets specific requirements of medical fitness.

Mixed-fleet flying (MFF) operations. Operations in which the operator assigns qualified pilots to operate as flight crew members on more than one aircraft type or variant, in accordance with procedures and conditions acceptable to the State of the Operator.

PEL Office. The office within the Civil Aviation Authority responsible for personnel licensing functions and processes.

Pilot-in-command under supervision (PIC/US). Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Licensing Authority.

Powered-lift. A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

Quality. The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Quality assurance (QA). All the planned and systematic actions necessary to provide adequate confidence that all activities satisfy given standards and requirements, including the ones specified by the approved training organization in relevant manuals.

Quality audit. A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Quality control (QC). A system for verifying and maintaining a desired level of quality in a product, service or process through the effective implementation of documented inspection and testing procedures.

Quality management. A management approach focused on the means to achieve product or service quality objectives through the use of its four key components: quality planning; quality control; quality assurance; and quality improvement.

Rating. An authorization entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

State of licence issue (SOLI). The State that issues a licence according to Annex 1.

Threat management. The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

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PUBLICATIONS

(referred to in this manual)

ICAO PUBLICATIONS

Convention on International Civil Aviation (Doc 7300)

Annexes to the Convention on International Civil Aviation

Annex 1 — Personnel Licensing

Annex 6 — Operation of Aircraft

Part I — International Commercial Air Transport — Aeroplanes

Part II — International General Aviation — Aeroplanes

Part III — International Operations — Helicopters

Annex 9 — Facilitation

Annex 10 — Aeronautical Telecommunications

Volume II — Communication Procedures including those with PANS status

Annex 17 — Security

Procedures for Air Navigation Services (PANS)

Aircraft Operations (PANS-OPS, Doc 8168)

Volume I — Flight Procedures

Volume II — Construction of Visual and Instrument Flight Procedures

Training (PANS-TRG, Doc 9868)

Manuals

Human Factors Training Manual (Doc 9683)

Manual of Civil Aviation Medicine (Doc 8984)

Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625)

Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335)

Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654)

Manual on the Approval of Training Organizations (Doc 9841)

Manual on the Implementation of ICAO Language Proficiency Requirements (Doc 9835)

Preparation of an Operations Manual (Doc 9376)

Safety Management Manual (SMM) (Doc 9859)

Safety Oversight Manual (Doc 9734)

Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)

Training Manual (Doc 7192)

Universal Safety Oversight Audit Programme Continuous Monitoring Manual (Doc 9735)

Circulars

Aerodrome Flight Information Service (AFIS) (Cir 211)

Guidance on the Implementation of Article 83 bis of the Convention on International Civil Aviation (Cir 295)

Threat and Error Management (TEM) in Air Traffic Control (Cir 314)

PUBLICATIONS OF OTHER STATES OR ORGANIZATIONS

International Air Transport Association (IATA)

Flight Simulation Training Device Design and Performance Data Requirements, 7th ed.

Simulated Air and Ground Traffic Environment for Flight Training, Rev. 2.

Royal Aeronautical Society (RAeS)

The Aeroplane Flight Simulator Evaluation Handbook, Volumes I and II

Part I

GENERAL PRINCIPLES AND ORGANIZATION

Chapter 1

THE ACTION OF PERSONNEL LICENSING

1.1 GENERAL

1.1.1 The need to have proper authorization to carry out certain functions in aviation has been an accepted principle since the early days of aviation. The first pilot licence was issued in January 1909, only a few years after the first powered flight took place, and the first international licensing standards were published ten years later in 1919.

1.1.2 Today, the action of personnel licensing is based on principles laid down in the Convention on International Civil Aviation¹ and the International Standards and Recommended Practices (SARPs) contained in Annex 1 to the Convention.

1.1.3 The basic principles of personnel licensing established by the Chicago Convention are the following:

- a) The State that has the responsibility for the licensing of flight crew is the State of Registry of the aircraft flown (Article 32 a). This responsibility can be transferred to the State of the Operator when an agreement under Article 83 *bis* of the Chicago Convention exists between the State of the Operator and the State of Registry;
- b) A State can render valid, for use on aircraft on its registry, licences issued by other Contracting States (Article 32 a);
- c) Contracting States recognize licences issued by other Contracting States provided that the licence is issued in full compliance with ICAO Standards and used on an aircraft registered in the State which has issued or validated the licence (Article 33);
- d) A licence should be endorsed with the particulars on which the Standards are not met (Article 39); and
- e) International flight by a holder of an endorsed licence shall be undertaken only with the permission of the States having jurisdiction over the airspace entered (Article 40).

1.1.4 In addition, the Chicago Convention contains several articles which are not exclusively directed at personnel licensing but which are, nevertheless, relevant:

- a) Contracting States can, without causing unreasonable delay to aircraft on landing or departure, inspect certificates and other documents prescribed by the Chicago Convention (Article 16); and
- b) Each State endeavours to follow ICAO Standards and procedures to the highest practicable degree and undertakes to notify ICAO of any difference which may exist between its practices and ICAO Standards (Articles 37 and 38).

1. Also referred to as the "Chicago Convention".

1.2 DEFINITION OF PERSONNEL LICENSING

1.2.1 ICAO defines personnel licensing as follows: "A licence is the means by which a State authorizes a licence holder to perform specific activities which, unless performed properly, could jeopardize the safety of aviation. The licence provides evidence that the issuing State is satisfied that the holder has demonstrated an internationally acceptable degree of competency."²

1.2.2 The first part of the definition indicates clearly that personnel licences cover only activities that are critical to the safety of aviation. The second part of the definition indicates that the licence provides evidence of competency in that a licence holder has demonstrated the required combination of skills, knowledge and attitudes. However, the competency itself is the result of the selection and training and not of the licence.

1.2.3 Annex 1 specifies SARPs covering both minimum and broad requirements for personnel licensing. The aim of Annex 1 is to standardize practices and procedures so that States can issue licences based on a common standard. By accepting and adopting the provisions of Annex 1, each Contracting State will contribute to the idea expressed in Article 37 of the Chicago Convention which states that: "Each Contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation."

1.2.4 In the sense in which it is used in Annex 1, licensing is the process of giving official authorization to a person to perform specific activities that are otherwise prohibited either by law or by custom and which, unless performed properly, could jeopardize the safety of international aviation. The licence provides evidence that the issuing State is satisfied that the individual licence holder has demonstrated an internationally acceptable degree of competency meeting the requirements of Annex 1 (except if otherwise endorsed). The action of licensing, therefore, consists in the granting of privileges to applicants who meet the prescribed requirements. The term "licence" is commonly used to describe the authorization given when the licensing processes have been completed. Those rights that the holder of a licence enjoys, and which are denied to unlicensed individuals, are referred to in Annex 1 as "privileges". Depending on the type of licence issued, these privileges may or may not have a time limitation imposed. They may or may not be limited with respect to the functions to be performed, and they may depend on certain conditions to be observed prior to the exercise of certain privileges. Such conditions, if they exist, can be termed the "obligations of the licence holder". It will be shown later how such obligations are usually expressed in a State's laws and regulations.

1.3 THE COMPONENTS OF A STATE'S PERSONNEL LICENSING SYSTEM

Before issuing or validating a licence, the State's Licensing Authority must satisfy itself that the applicant meets in all respects the standards of experience, knowledge and proficiency and other requirements so as to be competent to perform the functions authorized under the privileges granted by the licence. In addition, many licences require the applicant, or holder, to meet certain standards in regard to medical fitness. In order to carry out its responsibility for ensuring that the applicant meets all of these conditions, a State must establish its own licensing system. Such a system can vary considerably both in size and complexity, depending on the level and type of aviation activities of the State. However, each State's personnel licensing system, notwithstanding its size, is made of two basic components:

- a) a regulatory structure; and

2. This definition is posted on the public Internet website of ICAO (<http://legacy.icao.int/anb/FLS/flslicence.html>) and has now been incorporated in this document.

- b) an organization that has the authority and the technical capacity to put the regulation into effect.

Subsequent chapters will address in detail these two basic components of a State's personnel licensing system.



Chapter 2

THE LICENSING AUTHORITY

2.1 GENERAL

2.1.1 Depending on the size and complexity of a State's aviation activity and on its administrative structure, the functions of civil aviation administration will be articulated at levels which may be different from State to State. For instance, in some States, a separate Ministry of Civil Aviation may exist; in others, the civil aviation administration may be a department or a directorate in the Ministry of Communications, the Ministry of Transport, or another ministry, or may be a semi-autonomous authority. The organization with the responsibility for aviation administration is referred to throughout this document as the Civil Aviation Authority (CAA). The senior official, acting as head of the CAA, is often called the Director General of Civil Aviation or the Director of Civil Aviation and is referred to throughout this document as the "Director".

2.1.2 Annex 1 makes reference to a Licensing Authority which is "the Authority designated by a Contracting State as responsible for the licensing of personnel". In most States, the Licensing Authority referred to in Annex 1 is the Civil Aviation Authority. In such a case, the terms of reference of the Director should include responsibility for the licensing of aviation personnel involved in the operation or maintenance of aircraft registered in the State or providing air traffic control services. Normally, this responsibility is delegated, to a greater or lesser degree, to a licensing office acting under the Director which carries out the functions and administrative processes of issuing a personnel licence, rating or other certificate. The head of the Personnel Licensing Office is referred to throughout this document as the "Chief of Personnel Licensing".

2.1.3 In current CAA organizations, the Personnel Licensing (PEL) Office may be given different names such as training and licensing unit, section, department or division, Personnel Licensing Office or examining and licensing unit. In this manual the term "PEL Office" will be used when referring to the office responsible for the licensing functions and processes detailed in this manual.

2.1.4 Just as a CAA can be created at different levels and located in different places within a State's general administrative structure, so can the PEL Office be placed at different levels. Each State will have to establish the kind of structure that suits it best. Regardless of what organizational structure is decided upon, a PEL Office would be expected to carry out the functions and obligations described in 2.2.

2.2 TASKS OF A PEL OFFICE

2.2.1 General

2.2.1.1 To discharge its responsibilities, the PEL Office has to carry out many tasks which are normally organized around five major functional areas: examinations (flight crew, aircraft maintenance personnel, air traffic controller, etc.), licensing, training, regulatory and administration. In some States, the organizational structure is based on these functions. Other States may have different titles and different combinations of duties. However, each PEL Office needs to implement directly or indirectly these functions.

2.2.1.2 In addition, the PEL Office may be called to cooperate or assist in the investigation of an accident or an incident. This task is not further elaborated in this manual but usually falls within the five major functional areas described in 2.2.2 to 2.2.6, depending on the particulars of the investigation.

2.2.2 Examination tasks

Examination tasks are complex and require a high level of experience and expertise in the various areas of licensing (typically flight crew, aircraft maintenance personnel and air traffic controller). Executing the tasks also requires the highest degree of technical and ethical integrity as well as good judgement. Because such specialized, high-level skills are often scarce, some States use staff from the operations, airworthiness and air traffic control departments of the CAA to carry out examinations and, in particular, flight and practical tests. These staff members are CAA examiners who are trained, qualified and supervised for the conduct of examinations. The tasks related to the examination function may also be delegated externally, under the oversight of the CAA, to an organization or an appropriate person (a "designated examiner" with appropriate qualifications). The examination tasks include:

- a) designing written examinations for flight crew members, aircraft maintenance personnel, air traffic controllers and ground operations personnel who intend to apply for the issue or renewal of licences or to add new aircraft types, ratings or authorizations to their licence;
- b) reviewing, evaluating and marking written tests;
- c) administering oral examinations of different specialities, as required;
- d) administering flight and simulator tests followed by generating the required test reports;
- e) administering practical tests as required for the different specialities and generating the necessary test reports;
- f) coordinating with the Chief Medical Officer of the CAA those aspects related to medical examinations and the issuance of medical assessments, in compliance with Annex 1 provisions and supporting guidance in Doc 8984;
- g) administering language proficiency examinations, as required; and
- h) participating in committees or advisory groups to review and recommend improvements to examination syllabi, questions, practical tests and licensing matters.

2.2.3 Licensing tasks

Licensing tasks cover the routine tasks associated with the physical issuance and maintenance of personnel licences and include:

- a) drafting detailed procedures for licensing staff both at head office and regional offices;
- b) evaluating foreign licences and certificates, and military pilot qualifications, and taking appropriate action, including consultation with the State of licence issue (SOLI) as necessary;
- c) reviewing the limitations and recent experience of flight crew members, maintenance personnel, air traffic controllers and ground operators and taking the necessary action;
- d) reviewing and studying the application for a licence and related documentation and recommending actions to be taken by appropriate sections; and

- e) issuing and renewing licences, adding ratings and issuing temporary approvals or special authorizations.

2.2.4 Training tasks

Training tasks cover the activities related to the certification, approval and surveillance of training organizations (or schools) and training programmes, as well as initial and continuation training delivery for CAA staff. These tasks include:

- a) studying the PEL training standards and making the necessary recommendations for improvement of domestic and foreign training programmes and oversight;
- b) developing and executing plans for the surveillance of different aviation training activities;
- c) reviewing training curricula and programmes submitted for approval and taking appropriate action;
- d) approving training organizations and training sections at operational and maintenance organizations, air traffic control units, manufacturers and other approved agencies as appropriate;
- e) qualifying flight simulation training devices, conducting their recurrent evaluations and authorizing their use for defined training tasks;
- f) exercising continued surveillance of approved training organizations, in cooperation with other Contracting States as necessary;
- g) organizing the appropriate initial and recurrent training for CAA staff; and
- h) establishing and maintaining personnel training records.

Note.— The organization of CAA staff training and the maintenance of training records in g) and h) can be managed by a separate training department of the CAA or can be shared among several CAA departments, as long as initial and recurrent training are appropriately conducted.

2.2.5 Regulatory tasks

Regulatory tasks cover the development and maintenance of the regulatory support of personnel licensing and include:

- a) drafting and amending regulations and rules (or specific operating regulations) related to the training and licensing of aviation personnel;
- b) enforcing licensing laws and regulations; and
- c) developing procedures, taking into account best practices and applicable quality standards.

2.2.6 Administrative tasks

Administrative tasks include:

- a) maintaining an up-to-date, efficient and secure record system for licensing, certification, designation, approval and authorization actions;

- b) maintaining lists of CAA and designated examiners;
- c) maintaining the PEL Office library;
- d) providing supplies, equipment and facilities to the PEL Office;
- e) maintaining currency of all regulatory material and PEL documents in use by staff;
- f) drafting and promulgating examination schedules in cooperation with the Chief Examiner(s);
- g) where paper examinations are provided, printing and collating examination papers and distributing them in order to meet the published scheduled times;
- h) handling routine correspondence in respect of requests for matters such as study guidance material, dates of examinations, application forms and examination fees;
- i) dealing with the public when necessary on matters related to:
 - 1) scheduled examinations;
 - 2) requests for explanatory pamphlets and queries related to examination administration;
 - 3) licence, rating, approval or examination applications; and
 - 4) requests for regulatory interpretation;
- j) handling routine correspondence with respect to applications for licences or ratings, flight tests or other routine clerical matters;
- k) processing all licence applications and preparing the material for review and action by technical licensing officers;
- l) completing licence forms and preparing licences for official signature; and
- m) managing the PEL Office computer system.

2.3 ORGANIZATIONAL STRUCTURE OF A PEL OFFICE

2.3.1 General

2.3.1.1 In order to function effectively, a PEL Office must be suitably organized and staffed with qualified personnel. The size of the office will depend on the scale of the aviation activity in the State and the number and types of licences to be issued. A small State can comply with the provisions of Annex 1 by scaling its activities to those licensing needs that it can accomplish within its available resources and by seeking assistance from other States or organizations to provide the services that may be currently beyond its resources. In a larger organization, the day-to-day work of the PEL Office may have to be carried out in separate regional areas.

2.3.1.2 To illustrate the wide range of possible organizations for a PEL Office, examples of organizational structures and functions for three different levels of activities are described below. Many PEL Office organizations will not be exactly as described but may lie somewhere in between the three examples below and exercise a unique combination of functions.

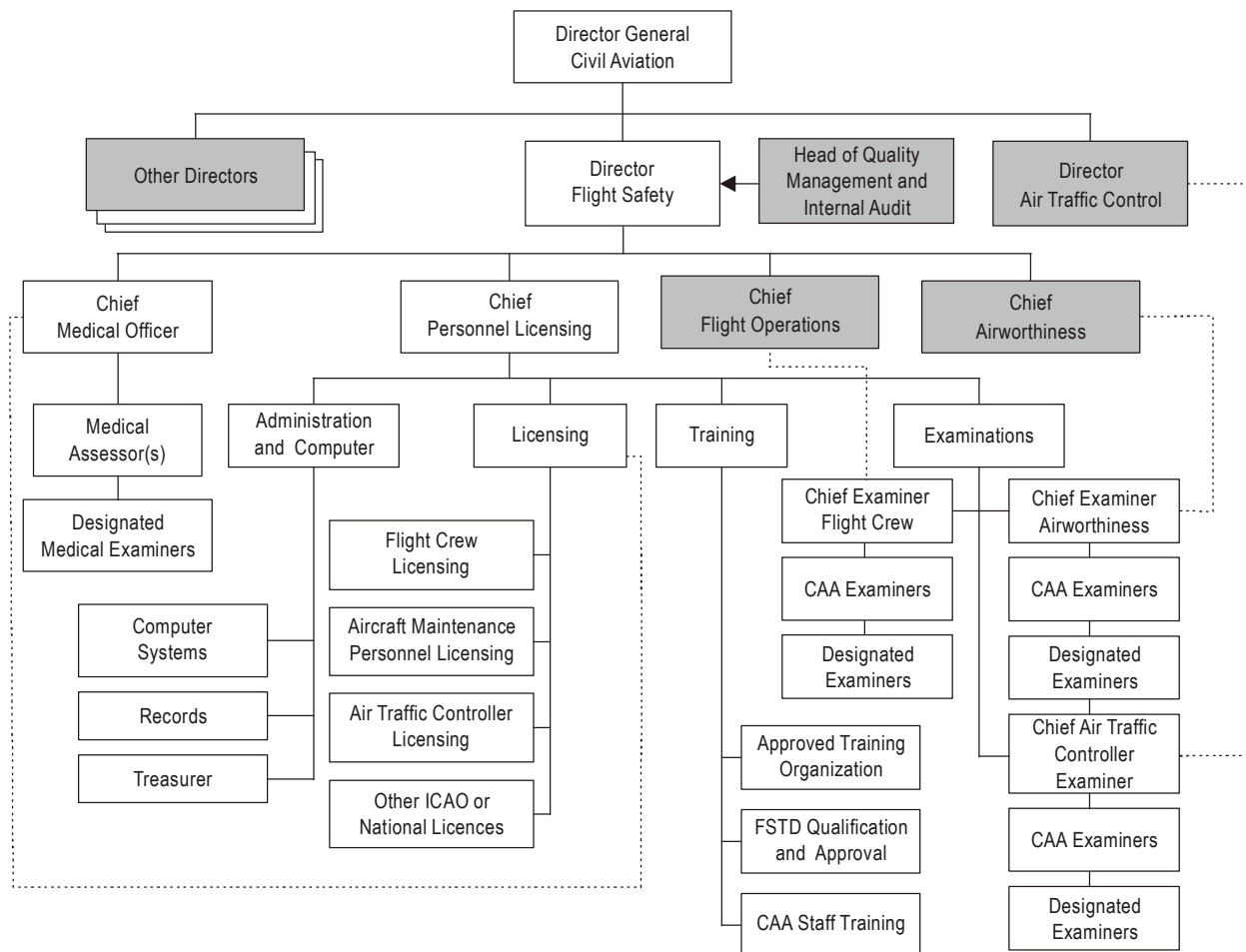


Figure I-2-1. The organizational structure of a typical large PEL Office and its relation to other CAA directorates and offices

2.3.2 Large PEL Office

2.3.2.1 The large PEL Office is an office that has the authority and the capacity to discharge all of the tasks and functions described in 2.2. This type of office is usually organized around these functional areas and may also have one or more regional offices. In such case, responsibilities may be shared: for example, the PEL Office headquarters may be responsible for developing policy and procedures regarding knowledge and skill requirements for licence applicants while regional offices may arrange flight or practical testing and actual examinations.

2.3.2.2 Figure I-2-1 illustrates the organizational structure of a typical large PEL Office and its relation to other CAA directorates and offices.

Note 1.— In this example, the regulatory tasks of the PEL Office mentioned in 2.2.5 are carried out by the Licensing, Training, Examinations, and Administration and Computer departments under Chief Personnel Licensing, as appropriate. The internal audit and quality control task mentioned in 2.6 should be carried out by another directorate of the CAA (e.g. quality management and internal audit).

Note 2.— A dashed line between two boxes in Figure I-2-1 indicates that close coordination is required between the functional areas represented by those boxes.

2.3.3 Medium-size PEL Office

The medium-size PEL Office may issue directly all licences¹ or, depending on the size and structure of its aviation industry, may issue some licence types by converting foreign licences. Some States have found it to be more efficient not to fully staff the various examination units but rather to rely on flight operations inspectors, airworthiness inspectors, air traffic control inspectors or delegated organizations/designated individuals to carry out some or all of the examination tasks. Medical assessments are usually outsourced to designated medical examiners, with oversight being provided by a medical assessor in the CAA. The generic functions of a medium-size PEL Office are the following:

- a) Examination functions:
 - written examinations (generated by the PEL Office or other approved source) to support directly issued licence types;
 - flight or practical tests conducted by CAA examiners or designated examiners;
 - medical assessments performed by designated medical examiners.
- b) Licensing functions:
 - detailed procedures for licence issuance, conversion or validation as required;
 - system of appointment and supervision of designated examiners (for flight or practical tests and, in coordination with the Medical Office, medical assessments).
- c) Training functions:
 - approval of limited local training programmes;
 - approval of foreign training programmes and training organizations (may be based on the approval by the State where the training is conducted);
 - initial and recurrent training of CAA personnel, with related records (this function is coordinated with other Directorates).
- d) Administrative and computer support functions:
 - proper and secure record-keeping;
 - provision of periodic examinations;
 - maintenance of a library to include applicable current national and foreign PEL regulations and ICAO documents (SARPs and guidance material).
- e) Laws and regulations required:
 - aviation law empowering the CAA to develop, implement and enforce PEL regulations (including medical assessment regulations);
 - high-level PEL regulations listing the licences, ratings, approvals, certificates and authorizations which can be issued by the State, together with their associated privileges;
 - detailed PEL regulations providing the requirements to be met for issuing a licence, rating, approval, certificate or authorization, as well as the conditions for maintaining them valid. The

1. i.e. the related examinations are organized and provided locally.

- regulations should also authorize the Director to convert to a national licence or to validate a licence issued by another Contracting State that meets ICAO Annex 1 and national requirements;
- detailed PEL regulations for conducting and issuing a medical assessment.

f) Main duties of staff:

- follow documented procedures for licence issuance;
- ensure that the foreign licences submitted for validation or for conversion are genuine, valid and meet ICAO requirements;
- understand the privileges and limitations of the foreign licences and ratings submitted for validation or conversion;
- establish the proper limitations to be attached to the validation or conversion of a foreign licence (e.g. privileges, expiry date);
- issue type ratings;
- keep proper records of all actions;
- appoint and oversee designated examiners;
- organize written and flight examinations for private pilot (aeroplane) licences and other licence types and ratings that are directly issued as well as medical assessments for all issued licences;
- renew licences and ratings (for licences of the expiring type);
- ensure compliance with laws and regulations;
- coordinate with the Chief Medical Officer for the conduct and issuance of medical assessments.

2.3.4 Small PEL Office

2.3.4.1 The small PEL Office's activities are generally limited to the validation of foreign licences. This situation is appropriate for States which have only a small air transport industry and no, or a very limited level of, general aviation activities. The main advantage of this type of organization is that the State does not have to establish any type of technically complex examination function requiring access to expertise and experience that may not be available locally. The small PEL Office does not approve training programmes or training organizations. The generic functions of a small PEL office are the following:

a) Examination functions:

- no written examinations are provided by the State other than for demonstrating knowledge of national air law.

b) Licensing functions:

- procedures are limited to those required for validating foreign licences.

c) Training functions:

- initial and recurrent training of CAA personnel, with related records.

d) Administrative support functions:

- proper and secure record-keeping.

e) Laws and regulations required:

- aviation law empowering the CAA to develop, implement and enforce PEL regulations (including medical assessment regulations);

- high-level PEL regulations listing the licences and ratings which can be validated by the State together with their associated privileges;
 - detailed PEL regulations providing the requirements to be met for issuing a validation for a licence, which can be as simple as stating that a licence issued by another Contracting State and meeting ICAO Annex 1 requirements can be validated by the Director.
- f) Main duties of staff:
- ensure that the licences submitted for validation are genuine and meet ICAO requirements;
 - understand the privileges and limitations of foreign licences and ratings provided for validation;
 - establish the proper limitations to be attached to the validation of a foreign licence (e.g. privileges, expiry date);
 - keep proper records of all actions.

2.3.5 Medical Office

2.3.5.1 All large Licensing Authorities, and some medium-size ones, have a separate Medical Office to ensure that the necessary medical tests are performed and to conduct and issue medical assessments. The Medical Office is generally independent of the PEL Office although close coordination and liaison is required between the two. The Medical Office usually forms part of the Flight Safety Directorate as illustrated in Figure I-2-1.

2.3.5.2 The Chief Medical Officer (CMO) is the head of the Medical Office and, although reporting to the Director of Flight Safety, makes final decisions concerning the medical fitness of applicants. The CMO directs the preparation and review of detailed prescriptions and conditions related to the medical assessments for these applicants. The CMO also appoints medical assessors and medical examiners. In smaller organizations, the CMO may be the sole medical assessor.

2.3.5.3 Certain qualified and experienced physicians outside the Licensing Authority may be appointed as "designated medical examiners" (or similar term) to help meet the demand for medical assessments. Generally, the term "medical examiner" refers in this manual to either a CAA-employed medical examiner or to a designated medical examiner. A State that cannot justify the establishment of a Medical Office may delegate its medical functions to other States by accepting medical assessments issued by specified States. Guidance on procedures for small medical offices is contained in Part II, Chapter 8. The generic functions of a Medical Office are the following:

- a) Examination functions:
- medical examinations conducted by medical examiners.
- b) Certification functions:
- assessments issued by the medical examiners or medical assessor(s).
- c) Training functions:
- competence of medical examiners to be demonstrated prior to their designation;
 - initial and periodic refresher training to be provided to the medical examiners.
- d) Administrative support functions:
- confidential medical records stored separately from other PEL records.

- e) Laws and regulations required:
 - detailed medical regulations implementing Annex 1 medical Standards, using the guidance contained in Doc 8984.
- f) Main duties of staff:
 - follow documented procedures for issuing a medical assessment;
 - ensure all decisions are fully and properly documented and filed;
 - appoint and oversee CAA-employed medical examiners and designated medical examiners;
 - conduct audits of the medical assessments provided by medical examiners (e.g. based on sampling).

2.4 STAFFING AND QUALIFICATIONS OF KEY PERSONNEL

2.4.1 The granting of licence privileges to participants in the civil aviation system cannot be done satisfactorily if the qualifications of the person making the judgements are not at least equal to those required of the licence applicant. Some States may delegate some PEL activities to different approved personnel and/or organizations for assistance in certain specialties in order to fulfil those requirements which cannot be satisfactorily carried out by the PEL Office. In some States functions of some sections in the structure illustrated at Figure I-2-1 are achieved independently of the PEL Office. In small States, functions of the different sections illustrated in the structure may be combined together or contracted out. However, the minimum qualification of the key personnel in all PEL Offices should be:

- a) The *Chief of Personnel Licensing* should have at least technical qualifications and expertise as a flight crew member or an airworthiness engineer or an air traffic control officer and a good understanding of the other areas of licensing concern. This individual should have a thorough knowledge of the licensing regulations, licensing practices and procedures, together with administrative ability and leadership qualities.
- b) The *Head of the Examination Section* and the *Chief Examiners* should have extensive experience as an authorized examiner in a particular specialty as well as a thorough knowledge of licensing regulations, licensing practices and procedures, together with administrative ability and leadership qualities.
- c) The *Head of the Licensing Section* should have extensive experience as an authorized person and/or licence holder in a particular specialty as well as a thorough knowledge of the licensing regulations, licensing practices and procedures, together with administrative ability and leadership qualities.
- d) The *Head of the Training Section* should have extensive training experience as an authorized instructor in a particular specialty, as well as a thorough knowledge of the licensing regulations, licensing practices and procedures, together with administrative ability and leadership qualities.
- e) The *Chief Medical Officer* should have extensive experience in regulatory civil aviation medicine as well as a thorough knowledge of medical requirements and medical best practice. This individual should have leadership qualities, administrative skills and the ability to make autonomous decisions concerning the medical fitness of applicants.
- f) The *Head of the Administrative Section* should have extensive experience in business administration, as well as a thorough knowledge of the licensing regulations, licensing practices and procedures, together with leadership qualities.

2.4.2 Appendix A to this Part contains examples of the responsibilities of the Chief of Personnel Licensing, the Chief Examiner, the examiners, the training organization inspectors and various other personnel, as well as qualifications for some of those positions.

2.5 ADMINISTRATIVE SUPPORT PERSONNEL

Many of the tasks associated with personnel licensing are of an administrative nature. The qualifications required for administrative support personnel are similar to those of other administrative functions. Personnel should be familiar with office equipment and procedures. Administrative support personnel play an important role in the efficiency and integrity of a State's personnel licensing system. Therefore, it is essential to ensure that administrative support personnel have the personal integrity and required knowledge to discharge their responsibilities. Ideally, each new staff member should be trained on the specific tools and procedures of the PEL Office and be familiarized with the concept and rules governing personnel licensing. It is recognized that it is not always practical to provide formal training on the subject so that most of the administrative support staff receive their training on the job. Nevertheless, it is important to ensure that initial training is actually taking place, which could easily be verified by using a training checklist identifying all of the required training items. Upon satisfactory completion of each element of training, the checklist should be initialled by both the supervisor and the trainee.

2.6 STAFF TRAINING AND QUALITY CONTROL

2.6.1 In order to ensure the proficiency of the personnel licensing staff, States should establish training programmes to provide staff members with the initial, specific and recurrent training required in their specialties, along with special training on related standards and internal procedures, and special applications.

2.6.2 An internal quality audit and quality control system should be established to ensure that personnel licensing staff performance is at acceptable levels and that adherence to the State's standards and procedures is maintained.

2.6.3 A study of the average time required to perform each type of work should be made and should be reflected on the annual and monthly work plans to prevent overloading of individual staff members.

2.7 FACILITIES AND EQUIPMENT

2.7.1 The facilities and equipment of a PEL Office depend largely on the level of activity of the office. Notwithstanding the size, the facilities should meet the following requirements:

- a) *Easy access by the public:* Whenever possible a section of the PEL Office should be totally segregated from the other offices of the CAA with an independent entry that permits access to the public with the minimum level of security possible. The public area should also include a sitting area where customers can fill in documents and forms, wait their turn or for their documents to be processed.
- b) *Provision of a good working environment for the staff:* The PEL Office should also provide reasonably quiet surroundings for executing technical or other work demanding high concentration, such as preparing examination questions, etc. Ready access to documents should also be possible.

- c) *Maintenance of confidential records in a secure way:* Most of the documents held in a PEL Office are of a confidential nature and appropriate measures should be taken to ensure the security of the documents and control access to them. This requires that the paper records be kept in lockable cabinets that should be located in a secure area. The right of access to the various documents, in electronic or paper format, should be defined for each staff member and appropriate supporting procedures put in place. This is especially true for examination material unless it is legally required to be in the public domain, and its confidentiality must be preserved at all stages from development, through production and distribution, to delivery.

2.7.2 A practical way to meet these conflicting requirements is to have the public and private areas of the PEL Office clearly segregated.

2.7.3 The licensing process requires extensive communication with applicants, operators, training organizations, service providers and Civil Aviation Authorities of other States. It is therefore essential that the PEL Office have easy access to phone (both national and international), facsimile and email facilities. An Internet connection is also necessary because it provides not only email capability but access to up-to-date information, such as foreign regulations and procedures, which is often needed during the licensing process. The development of a website providing all the relevant information (rules, procedures, fees, working hours, forms, addresses) can greatly improve the quality of service while reducing the workload for the staff.

2.8 RECORD-KEEPING

Note.— An example of procedures for implementing a record-keeping system in accordance with 2.8 is contained in Part II, Chapter 4, Attachment A.

2.8.1 Content and integrity of records

Each Licensing Authority should maintain records that support every licensing action taken by the Authority for each applicant or licence holder. The main characteristics of a good record-keeping system are:

- a) *Completeness:* The records kept by the Licensing Authority should be sufficient to provide documentary evidence of each licensing action and allow the history of each licence issued to be traced.
- b) *Integrity:* It is important to maintain the integrity of records by ensuring that they are not removed or altered without authorization. This usually requires that each record entered in the file is properly logged and that proper procedures exist to control access to the files. This applies to both paper and computerized records.
- c) *Ready access for authorized personnel:* The information contained in the licensing records should be readily accessible to authorized staff of the entire Licensing Authority. This requirement may be difficult to reconcile with the requirement to maintain the integrity of the records so appropriate access procedures must be carefully designed and implemented.

2.8.2 Organization of records

2.8.2.1 Traditionally, the records held by a Licensing Authority included a written registry of personnel licences, complemented by individual files which contained a summary of all licensing actions taken and all the personal records

of the applicant, such as the medical assessment (excluding personal medical details), flight and written test results or correspondence in chronological order. Such a purely manual system may be adequate for States with a limited number of licences. However, when the number of active licences grows beyond a few hundred, a computerized system becomes necessary, either to complement or replace the paper-based records.

2.8.2.2 It is also important to maintain a backup system of records to ensure continuity in case of a major disaster. When the records are fully computerized, it is easy to back up the data on a regular basis (such as incremental backup on a daily basis and full backup on a weekly basis) and to securely store backup data offsite. If the record system is fully or partially paper-based, it may be very difficult to maintain a complete backup system and to keep it up to date. Nevertheless, a backup of essential information, such as the registry of personnel licences, including essential details of all licences and ratings issued, is still required.

2.8.3 Archiving of records

Each Licensing Authority must establish rules for archiving personal records that are non-active. It is recommended that inactive records be kept for at least five years before they are destroyed. The rule on archiving should also be consistent with the general archiving requirement of the State.

2.9 LIBRARY AND REFERENCE DOCUMENTATION

Examiners will require a set of the State's regulatory documents and access to a library of appropriate, current technical information. The Chief of Personnel Licensing and the Chief Examiners, instructors and inspectors of the PEL Office will require access to sets of ICAO documents and, as required, other States' regulatory material and other necessary technical documentation. It would be useful for appropriate aviation magazines to be circulated among technical officers.

Chapter 3

REGULATORY SYSTEM GOVERNING PERSONNEL LICENSING

3.1 RESPONSIBILITIES OF STATES

By becoming party to the Chicago Convention, each Contracting State accepts certain obligations and responsibilities. In the area of personnel licensing, the major responsibilities are derived from Articles 32, 33, 37, 38 and 39 of the Convention and can be summarized as follows:

- a) the obligation to issue or validate the licence of flight crew operating aircraft on the State's Registry (Article 32);
- b) the obligation to accept in its territory the licences issued or validated by other Contracting States when they are in full compliance with Annex 1 and when they are used on an aircraft registered in the issuing or validating State (Article 33);¹
- c) undertaking to follow to the highest practical degree the international standards, recommended practices and procedures (Article 37);
- d) the obligation to notify ICAO of any difference between ICAO Standards and its own regulations and practices (Article 38); and
- e) the obligation to endorse any licence which does not satisfy in full the applicable ICAO Standards with the list of particulars in which the conditions are not satisfied (Article 39).

3.2 ORGANIZATION AND CONTENT OF A STATE'S REGULATIONS

3.2.1 States are responsible for promulgating laws and regulations and for articulating rules (specific operating regulations) and procedures. The organization and hierarchy of the regulatory system depends on the legal system of the State, but is generally based on the following model used in this manual:

- a) *laws* are at the highest or primary level of legislation. They are generally proposed by the government and adopted by the parliament;
- b) *regulations* are at the second level of legislation and are generally promulgated at the ministerial level;
- c) *rules* (specific operating regulations) are at the third level and are generally promulgated by the Director; and

1. Each Contracting State reserves the right to refuse to recognize, for the purpose of flight above its own territory, certificates of competency and licences granted to any of its nationals by another Contracting State (Article 32 b)).

- d) *procedures* (also referred to as orders, instructions or acceptable means of compliance) are generally promulgated at the directorate level, under delegation by the Director.

Note.— The primary aviation legislation, which provides the basis for Critical Element CE-1 of a safety oversight system, includes the PEL laws and regulations in 3.2.1 a) and b) above. The specific operating regulations, which provide the basis for Critical Element CE-2 of a safety oversight system, include the PEL rules in 3.2.1 c) above. The technical guidance, tools and the provision of safety-critical information, which provide the basis for Critical Element CE-5 of a safety oversight system, include the PEL procedures in 3.2.1 d) above. Guidance on safety oversight systems is contained in Doc 9734.

3.2.2 A typical distribution of the various elements of a State's personnel licensing regulatory system among the different levels of legislation is illustrated in Table I-3-1. Actual distribution depends on the State's legal system. However, the following elements should be taken into consideration when preparing regulations and deciding the level at which they should be set:

- a) The amendment procedure for the highest level (primary) legislation (laws) and second level (secondary) legislation (regulations) is often complex and lengthy. As a result, primary and secondary legislation and similar legal instruments are not appropriate for detailed regulations that have to be amended regularly to keep pace with the dynamic nature of civil aviation.
- b) As a general principle, it is advisable to choose the lowest level of legislation appropriate to achieve the purpose of the requirement.
- c) The authority to issue any level of legislation should be established by a higher level of legislation. For example, if the Director is empowered to make rules, this authority should be clearly stated in a regulation or a law.
- d) The main elements of the regulatory system (i.e. at least the ICAO Standards) should be fully enforceable. Non-compliance with an enforceable regulation should be subject to criminal or administrative action. In many States, the lower level(s) of regulation (procedures, advisory and explanatory material) are established as guidance or to describe acceptable means of compliance to meet the requirements of a higher level of legislation. As a result, they are not necessarily enforceable as a means to achieve the objectives set out in primary legislation and regulations.

3.3 DEVELOPMENT AND MAINTENANCE OF REGULATIONS

3.3.1 Development and maintenance of the regulations required by a State's personnel licensing system is a complex and demanding process. This can be a challenge for smaller States or for those with limited technical and/or financial resources. States have three options for the development and maintenance of national regulations. The first option is to develop a complete set of regulations; the second option is to adopt ICAO Annex 1 as the national regulation governing Personnel Licensing; and the third option is to adopt regulations from another Contracting State. Each option has its own advantages and disadvantages, which are summarized in Table I-3-2.

Table I-3-1. Distribution of the various elements of a State's personnel licensing regulatory system among the different levels of legislation

<i>Level of State regulation</i>	<i>Corresponding ICAO documents</i>	<i>Basic content</i>
Laws or highest level of primary aviation legislation	Chicago Convention	A requirement that each flight crew member hold a licence issued or rendered valid by the State of Registry (or by the State of the Operator if an agreement exists under Article 83 <i>bis</i> of the Chicago Convention) to operate in the national airspace. Provisions for the adoption of licensing regulations consistent with the provisions of the Annexes to the Chicago Convention.
Aviation regulations or other primary aviation legislation	Annexes 1 and 6	Privileges attached to each licence, and authority for the Director to establish the requirements for the issuance of the licence. Authority given to the Director to: • develop, issue and amend rules (specific operating regulations), orders, procedures, bulletins, etc., consistent with the State's regulations; • grant exemptions from some requirements, as specified in the regulations, if the Director finds such actions would be in the public interest; • enforce the licensing regulations; • issue, amend, renew, cancel, suspend or validate personnel licences, ratings, authorizations or approvals; • make provision for authorized personnel to have access, as necessary, to such places and/or documents, at any time and without restriction, to carry out personnel licensing functions as provided for in the State's regulations; • delegate authority for licensing functions to CAA staff and to other personnel, operators, maintenance organizations and training organizations; • take any necessary steps to stop authorized or licensed personnel and organizations (e.g. operators, maintenance organizations, training organizations) from conducting unsafe civil aviation activities; and • make agreements with other Civil Aviation Authorities or service providers to delegate some of the Licensing Authority functions whenever necessary.
Rules or specific operating regulations	Annex 1 and guidance material	Detailed requirements for the issuance of licences and ratings. Requirements for approval of training organizations and training programmes.
Procedures	Guidance material	Flight test guides. Personnel licensing procedures manuals. Advisory circulars.

Table I-3-2. Advantages/disadvantages of three options for the development and maintenance of national regulations by States

<i>Options</i>	<i>Advantages</i>	<i>Disadvantages</i>
Nationally developed regulations	- Regulations are tailored to the national requirements and to the national legal system. - Changes can be initiated if and when required. - ICAO Annexes, model regulations and/or foreign regulations can be used as the basis for national regulations.	- Development of national regulations requires significant technical expertise. - The regulatory system needs to be kept up to date and aligned with ICAO Annexes.
Adoption of ICAO Annexes	- National regulations can be limited to a short text enabling ICAO Annex 1, supported by complementary regulations (see next column). - National regulations are updated automatically by changes made to the Annexes, though the changes must be monitored to ensure that no additional complementary regulations are required.	- It is necessary to develop and maintain complementary regulations because Annex 1 does not cover all aspects of Personnel Licensing or provide options for the State to define (see Table I-3-3). - The regulations have to explicitly state each Annex 1 Recommended Practice that is adopted by the State and each Recommended Practice that is not. - There is a need to promulgate enforcement regulations (not included in Annex 1), duly considering that the ICAO Annexes, because they are written as Standards, may be difficult or even impossible to enforce as regulations. - There is a need to ensure that the CAA and the users are familiar with and have access to the current version of Annex 1. - The ICAO Annexes represent minimum requirements that are not tailored to specific national requirements, which then have to be identified and promulgated in complementary regulations. - The ICAO Annexes may need to be translated into the national language(s) to ensure understanding by all parties.
Adoption of regulations of another State	- National regulations can be limited to a short text enabling the regulations of another State. - National regulations are updated automatically by changes made to the supporting regulations.	- The foreign regulations may need to be translated into the national language(s) to ensure understanding by all parties. - The foreign regulations are not tailored to specific national requirements, which have to be identified and promulgated in complementary regulations. - The foreign regulations may be overly complex for the needs of the State. - Some of the provisions may not be able to be implemented due to local conditions. - There is a need to ensure that the CAA and the users are familiar with and have access to the current version of the supporting regulations.

Table I-3-3. Complementary regulations that need to be developed and maintained in order to implement Annex 1

<i>Annex 1 reference*</i>	<i>Complementary regulations</i>
All Recommended Practices	Express in the regulations each Recommended Practice that is adopted by the State and each Recommended Practice that is not.
1.2.2.1	Establish conditions for validation of a foreign licence.
1.2.3	Limit the privileges to those granted by the licence.
1.2.4.4	Designate medical examiners who are qualified and licensed in the practice of medicine.
1.2.5.1	Establish requirements for recent experience and demonstration of continued competency.
1.2.8	Establish requirements for approval of training organizations and training programmes.
2.1.1.3.1, 3.1.1.1 and 4.1.2	Determine the manner in which the knowledge and skill requirements for the issue of licences and ratings shall be demonstrated.
2.1.3.2 c)	Establish a list of single-pilot aircraft that require a type rating.
2.1.5.2 c)	Determine the extent of ATPL knowledge required by a CPL holder seeking a type rating on a multi-crew aircraft.
2.1.6	Approve the use of a flight simulation training device for the acquisition of experience and the demonstration of competence.
2.2.1	Establish the requirement that shall be met by student pilots.
2.3.3.1.1, 2.3.4.1.1, 2.4.3.1.1, 2.4.4.1.1, 2.4.5.1.1, 2.6.3.1.1, 2.6.4.1.1, 2.6.5.1.1 and 3.3.1.3.1	Determine what credit can be given to the applicant for experience as a flight crew member under instruction in a flight simulation training device.
2.3.3.1.1.1, 2.3.4.1.1.1, 2.4.3.1.2, 2.4.4.1.2, 2.4.5.1.3, 2.6.3.1.2, 2.6.4.1.2, 2.6.5.1.3 and 2.9.1.3.1.1	Determine what credit can be given to the applicant for experience as a pilot of aircraft in other categories.
3.2.1.3.1.1 and 3.3.1.3.1.1	Determine what credit can be given to the applicant for experience as a pilot.
4.3.1	Determine appropriate measures to ensure that student air traffic controllers do not constitute a hazard to air navigation.
4.5.2.2.3 and 4.5.2.4	Determine what credit can be given to the applicant holding an air traffic controller rating in another category or seeking concurrent issuance of two ratings.
Chapter 5	No regulation required but there is a need to implement the requirements of Chapter 5.
Appendix 2**	Require, as part of the State safety programme, that an approved training organization, which is exposed to safety risks related to aircraft operations during the provision of its services, implement a safety management system acceptable to the State that, as a minimum: a) identifies safety hazards; b) ensures the implementation of remedial action necessary to maintain agreed safety performance; c) provides for continuous monitoring and regular assessment of the safety performance; and d) aims at continuous improvement of the overall performance of the safety management system.
* The references to Annex 1 are based on the eleventh edition up to and including Amendment 170. ** The safety management requirements of Appendix 2 will be transferred to new Annex 19 — <i>Safety Management</i> in November 2013.	

3.3.2 One of the options described in 3.3.1 is the incorporation of Annex 1 into the national regulations. It is an attractive option because it ensures full compliance with international standards. However, as indicated in Table I-3-3, there is a need to develop and maintain complementary regulations because Annex 1 does not cover all aspects of personnel licensing.

3.3.3 Notwithstanding the way national regulations are developed, the following points should be taken into consideration:

- a) There is a need to include the users during the development of new regulatory instruments. The advantages are many: it ensures that all aspects and consequences of a new regulation are fully taken into account before it is enacted; it alleviates implementation problems and it ensures that the users are familiar with the new regulation when it is implemented.
- b) If a State adopts a system of exemptions from its requirements, the items that could be exempted should be clearly identified in its regulations, and conditions and procedures for exemptions should be explained in its official CAA procedures manuals. Exemptions shall not be issued that permit deviation from ICAO Standards without the previous notification of a difference to ICAO and assessing the resulting impact on the international recognition of the licences and ratings. Any licence affected by an exemption that deviates from Annex 1 Standards shall be endorsed in accordance with Article 39 of the Chicago Convention.
- c) It is recommended that clear and concise explanatory material be published to explain the rationale behind the law, regulations and rules.
- d) The language used should be clear and concise.
- e) When regulations, rules and procedures are published in a language other than English, it is useful to prepare an English translation to allow for easier international communication.
- f) Mandatory clauses are denoted by the use of "shall", whereas "should" is used in the text to introduce permissive or recommended clauses.
- g) Where reference is made to a document, such reference should be taken to refer to the current issue (up to and including the latest amendment thereto).
- h) The numbering system used should be well defined to ease the search and reference process.
- i) A detailed table of contents should be provided to list the subjects covered.
- j) For original issue of a new section, each page of that section should be identified by the date of issue.
- k) Amendments to an existing section should be identified by a revision or amendment number and date on each amended page of that section.
- l) Whenever a document has sections or parts amended, a list of effective pages should be provided with the document. Each page of the document should be listed along with its revision number and date.
- m) It is preferable to mark the amendment made in any paragraph, page or section by some means in order to facilitate comparison and compliance.
- n) Any new issues or amendments promulgated should define an effective date of applicability.

3.3.4 Finally, regulations should be regularly updated to keep them relevant to developing trends and in particular to amendments to the Annexes to the Chicago Convention.

3.4 DIFFERENCES BETWEEN NATIONAL REGULATIONS AND THE REQUIREMENTS OF ICAO ANNEX 1

3.4.1 General

Article 38 of the Chicago Convention requires each State to notify ICAO of any difference between ICAO Standards or procedures and its own regulations and practices. In turn, ICAO publishes the differences in a Supplement to Annex 1 to allow other States to be aware of such differences. In the past, the Supplements were published in hard-copy format making it difficult to keep the information current. Starting in 2012, the differences to Annex 1 will be submitted electronically by States, and the Supplement will be published online (see 3.4.2 below), facilitating the publication of differences in a timely manner and ensuring that they are current and in line with the latest Annex amendment.

3.4.2 Determination of differences and notification to ICAO

3.4.2.1 Guidance on what constitutes a difference and how it should be notified to ICAO is published by ICAO in the “Note on Notification of Differences” which is attached to the ICAO State letter advising States of the adoption of an Annex amendment. There are two methods for notifying differences to ICAO: the old method which consists of a written notification by States using a printed form (which is to be discontinued in 2012 after a transition period) and a new electronic notification method (with a written, signed confirmation) that became operational in March 2011. Both methods are described in Appendix B, which also contains a generic version of the Note on the Notification of Differences. Although the “Note” addresses the notification of differences or compliance following the adoption of an amendment to Annex 1, it applies equally to the situation where differences exist because of changes in the national regulations. In the case of an amendment to Annex 1, the notification should reach ICAO as soon as practicable but not later than 30 days before the amendment becomes applicable (usually this is 6 to 8 months after it has been adopted). In the case of differences generated by changes in the national regulations, Article 38 of the Chicago Convention specifies that the notification should be made immediately.

3.4.2.2 The Director should clearly define the responsibilities of CAA personnel tasked to analyse any amendment to ICAO SARPs or to national regulations and to identify differences between ICAO SARPs and the national regulations. The Director should implement the corresponding procedures for the review of ICAO State letters related to amendments to Annexes, for the filing of differences, as necessary, and for the eventual timely inclusion of ICAO Annex amendments in the national regulations.

3.4.3 Impact of differences on the international recognition of licences

As stated in Chapter 1, Articles 33, 39 and 40 of the Chicago Convention address the impact of differences on the international recognition of licences. The basic concept contained in these three articles is that international recognition of a licence is conditional on the licence holder meeting all applicable ICAO minimum Standards. When a State has regulations that are more demanding than ICAO Standards, this must be reported to ICAO, subject to 3.4.2 above, but such licences are recognized internationally under the Chicago Convention because they meet all the applicable minimum ICAO requirements.

3.4.4 Situations where there is a need to make an assessment of differences

The status of differences between national regulations and ICAO Annex 1 should be assessed each time:

- a) a change is made to national personnel licensing regulations. It is recommended that the assessment be made as part of the regulation process to ensure that compliance with ICAO Standards remains a high priority; and
- b) ICAO amends Annex 1. The formal notification letter from ICAO, which is sent a few months before the amendment comes into force, provides instructions on how and when to notify ICAO of any differences.

3.5 ENFORCEMENT OF REGULATIONS

3.5.1 Compliance with regulations is an essential part of the civil aviation safety system. Most users understand the need for, and the purpose of, regulations and accept them without question. However, compliance is not universal and there will be cases where enforcement action is required. An important element of any regulatory system is the knowledge that regulations will be enforced in a consistent, firm and fair manner. Therefore, there is a need for a Licensing Authority to develop an effective enforcement mechanism.

3.5.2 Distinction is generally made between administrative and criminal enforcement actions. Administrative enforcement is generally at the Licensing Authority level whereas criminal enforcement action is taken through the court or judicial system.

3.5.3 Typical offences are failure to comply with civil aviation regulations. These offences are usually dealt with by the Director, through administrative action, by employing his or her authority to impose a civil penalty, such as a fine, or to suspend, revoke or modify an aviation document, such as a licence.

3.5.4 More serious offences generally arise from breaches of the primary legislation and are usually handled by the CAA through the courts. This section deals with administrative enforcement only.

3.5.5 Any enforcement system requires the following components:

- a) *Clearly defined authority:* The authority of the person in charge of enforcing the regulation should be clearly established in the regulation itself or in a higher level legal document. Such person is usually the Director.
- b) *A clearly defined process within the CAA:* The issue, once identified, must be raised through the management chain to bring it to the attention of the Director with full details so that action can be taken.
- c) *Clearly defined enforcement measures:* The enforcement measures that can be taken should be clearly established and would normally include the authority to:
 - 1) suspend, revoke or cancel licences, ratings, authorizations or approvals;
 - 2) preclude a person from taking an examination or from applying for a licence, rating, authorization or approval for a given period of time; and

- 3) administer civil penalties. Although it may not be allowed by the legal system of some States, the authority to levy a fine is often a very useful enforcement tool because it may not always be practical or appropriate to suspend a licence, a rating, an authorization or an approval.
- d) *Consistent, fair and firm application of enforcement measures:* This would normally require that procedures be established to provide the following:
 - 1) guidelines on the type of enforcement action that is appropriate to the offence;
 - 2) a process for the individual who is being investigated to present his or her case; and
 - 3) timely action to ensure investigations are conducted without undue delay. The principle of “justice delayed is justice denied” is applicable.

3.6 ADVISORY CIRCULARS, AERONAUTICAL INFORMATION CIRCULARS AND NOTAM

From time to time, it will be necessary to publish administrative details such as examination schedules, proposed changes to orders and other licensing matters. This can be done by advisory circulars or aeronautical information circulars (AICs) or, if sufficiently important and requiring rapid promulgation, by NOTAM. Circulars on licensing matters may be a separate set of publications or may be issued within the AIC's general framework. In the latter case, it is a good practice to enumerate them in a separate sequence of numbers, or to give them some other easily recognizable indicator, such as coloured pages, to allow readers a quick reference to the circulars containing PEL matters. Information circulars may be consolidated with the State's aeronautical information publication (AIP). For example, information regarding licensing matters affecting foreign licence holders may be included in a State's AIP.

3.7 EXPLANATORY PAMPHLET

A CAA may consider publishing an explanatory pamphlet detailing the process for applying for a licence and listing all relevant documentation the applicant will need to be aware of to complete the process, with details of the publication and availability of relevant application forms. The pamphlet could be published on the CAA public website. Such a document should specify that it is for information only and may need updating whenever changes are made to the process. It should also state clearly that it is only an information guide.

3.8 USEFUL WEBSITES FOR STATE REGULATIONS, ORDERS AND ADVISORY CIRCULARS

Many States have their laws, regulations, rules, orders, instructions, advisory circulars and other information and safety bulletins published online. Listed below is a selection of some useful websites that were readily available at the date of publication of this Part:

- a) The European Aviation Safety Agency (EASA) site:
http://www.easa.europa.eu/ws_prod/index.html.

The document overview page is at: <http://www.easa.europa.eu/regulations/regulations-structure.php>, where the Basic Regulation EC216/2008 and various other rules and documents can be accessed. Use the menu “Legislation” at the top for other options.

The EASA Operations Evaluation Board (OEB) library of supporting documents can be accessed at:
<http://www.easa.europa.eu/certification/experts/OEB-reports.php>.

- b) The United States of America Federal Aviation Administration (FAA) site:
<http://www.faa.gov/>.

The document page is at: http://www.faa.gov/regulations_policies/. The FAA has also developed model regulations which can be found at: http://www.faa.gov/about/initiatives/iasa/model_aviation/.

- c) The Transport Canada site:
<http://www.tc.gc.ca/>.

The document page is at: <http://www.tc.gc.ca/eng/civilaviation/regserv/cars/menu.htm>.

- d) The United Kingdom Civil Aviation Authority site:
<http://www.caa.co.uk/>.

- e) The Australian Civil Aviation Safety Authority site:
<http://www.casa.gov.au/>.

The document page is at: http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_90900.

- f) The New Zealand Civil Aviation Authority website:
<http://www.caa.govt.nz>.

Legislation and rules are at: <http://www.caa.govt.nz/rules/rules.htm>.

- g) The South African Civil Aviation Authority site:
<http://www.caa.co.za/>.

3.9 ICAO PROVISIONS

3.9.1 ICAO provisions and other relevant documents are normally maintained in the PEL Office library (as described in the administrative tasks of Chapter 2, 2.2.6), using appropriate procedures.

3.9.2 Each Contracting State is provided with a minimum of two copies of each ICAO document. In addition, Contracting States have access to the website, ICAO-Net, which contains an electronic library of all ICAO current documents, with the exception of restricted documents. The website is at: <http://portal.icao.int>.

3.9.3 Individuals or organizations can purchase ICAO documents in printed or electronic version. The price and conditions are available on the ICAO public website at <http://www.icao.int>.

3.9.4 Most ICAO documents are available in the Arabic, Chinese, English, French, Russian and Spanish languages.

Chapter 4

WHICH ACTIVITIES REQUIRE A LICENCE?

4.1 ICAO LICENCES

4.1.1 What is an ICAO licence?

The aviation community often makes reference to an “ICAO licence”, which has led some people to believe that ICAO actually issues licences. This is not the case. The term “ICAO licence” is an informal but widely used way of referring to licences that are issued by Contracting States on the basis of the SARPs contained in Annex 1. In the context of this manual, this includes all the personnel licences for which provisions exist in that Annex.

4.1.2 Licences for flight crew members

4.1.2.1 Article 32 a) of the Chicago Convention requires flight crew members of every aircraft engaged in international civil aviation operations to be provided with a licence issued or rendered valid by the State of Registry. As a result, States are required to issue flight crew licences as soon as they have aircraft on their registry. That is not to say that States have to implement all the classes of licences provided for in Annex 1; they need implement only the licences that are required to support their own national aviation activities. For instance, States that do not permit glider or free balloon activities for lack of gliders or free balloons on their registry or for other reasons do not need to establish the corresponding licence.

4.1.2.2 The flight crew licences provided for in Annex 1 are:

a) licences for pilots (Annex 1, Chapter 2)

- 1) private pilot licence (aeroplane, airship, helicopter and powered-lift categories);
- 2) commercial pilot licence (aeroplane, airship, helicopter and powered-lift categories);
- 3) multi-crew pilot licence appropriate to the aeroplane category;
- 4) airline transport pilot licence (aeroplane, helicopter and powered-lift categories);
- 5) glider pilot licence; and
- 6) free balloon pilot licence.

b) licences for flight crew members other than pilots (Annex 1, Chapter 3)

- 1) flight engineer licence;
- 2) flight navigator licence; and

- 3) flight radiotelephone operator licence.

Note.— When an applicant complies with the flight radiotelephone operator licence requirements, this may be endorsed on a licence already held by the applicant or may lead to the issue of a separate licence as appropriate.

4.1.2.3 Annex 1 also provides for a series of ratings (category, class, type, instrument and instructor) that complement the flight crew licences.

4.1.3 Licences for personnel other than flight crew members

4.1.3.1 Annex 1 includes requirements for the following licences for personnel other than flight crew members:

- a) aircraft maintenance licence (technician/engineer/mechanic);
- b) air traffic controller licence and associated ratings;
- c) flight operations officer/flight dispatcher licence; and
- d) aeronautical station operator licence.¹

4.1.3.2 Ground personnel licences are of a different nature than flight crew licences because holding a ground personnel licence is not a requirement of the Chicago Convention, unlike the requirement under Article 32 for flight crew licences. The provisions for ground personnel licences were developed as part of the mandate to develop international standards under Article 37 of the Chicago Convention. The objective of such standards is to secure “the highest practicable degree of uniformity in regulations, standards, procedures, and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation”.

4.1.3.3 Because of the different nature of ground personnel licences, Annex 1 provides alternatives to licensing of ground personnel. The conditions are specific to each licence and are summarized in Table I-4-1.

Table I-4-1. List of conditions under which a ground personnel licence is not required

<i>Licence</i>	<i>Conditions</i>
Air traffic controller	State employees do not need a licence (Annex 1, 4.4.1).
Aircraft maintenance (technician/engineer/mechanic)	A licence is not required for personnel working within an approved maintenance organization (Annex 1, 4.2.2.4).
Flight operations officer/flight dispatcher	A licence is not required when the dispatch system approved by the State does not call for the use of a licensed flight dispatcher (Annex 6, Part I, 10.2, or Part III, Section II, 8.2).
Aeronautical station operator	The State may authorize individuals to operate as an aeronautical station operator without a licence (Annex 1, 4.7.1.1).

1. This licence is intended for personnel providing communication service between aircraft and ATC in areas where HF communications are used. It is not intended for personnel providing aerodrome flight information service (AFIS) for which no licensing requirements exist. ICAO has published guidance on the qualifications to be met by AFIS personnel in Circular 211.

4.1.3.4 It is important to note that in those cases where a licence is not required, Annex 1 requires that individuals exercising the licence privileges must meet the same requirements as their licensed counterparts. This is consistent with the basic licensing philosophy of ICAO where the licence is a means to provide evidence of competency but where the competency itself is the result of training.

4.2 NON-ICAO LICENCES

4.2.1 General

The Chicago Convention and Annex 1 requirements do not cover all activities and, when they do, the requirements apply only to international operations. To cover activities that are not addressed by ICAO, States may decide to establish licences on a national basis. These national licences are sometimes referred to as “non-ICAO licences”.

4.2.2 How to decide whether an activity requires a licence

4.2.2.1 A State's decision to require a licence for a specific activity depends to a large extent on cultural, industrial and social considerations specific to each State. In practice, significant variations exist between States in the number and scope of “non-ICAO licences”. Some States issue only ICAO licences while others issue licences for a number of categories of personnel not covered by Annex 1.

4.2.2.2 In addition to cultural and social aspects, there are technical considerations which must be taken into account in making the decision to establish a licence for a specific activity, as outlined below.

4.2.2.3 The ICAO definition of personnel licensing contained in Chapter 1, 1.2, stresses that the licence should cover safety-critical functions and provide evidence of competency. These are the two basic criteria used to assess whether a specific aviation activity requires licensed personnel. A personnel licence is required when the person is involved in an activity that is critical to the safety of civil aviation and when there is a need to provide evidence of competency in the form of a licence.

4.2.2.4 *Assessment of the criticality of a function to the safety of aviation:* It is generally accepted that safety-critical functions are functions covering activities where uncorrected errors have an immediate and negative effect on safety. These are generally functions undertaken by personnel who are on the last line of defence in the system such as flight crew members, air traffic controllers and aircraft maintenance personnel.

4.2.2.5 *Assessment of the need to provide evidence of competency in the form of a licence:* This is usually a more controversial issue where the cultural and social considerations previously mentioned come into play. The purpose of personnel licensing is to provide evidence that safety-critical personnel are properly trained and competent, yet alternatives to personnel licensing to provide such evidence do exist. Such is the case for personnel working in an established structure such as a commercial air transport operator, an approved maintenance organization, an aerodrome or an air traffic control service provider. These organizations are usually certified or approved by the CAA and subject to strict surveillance. The condition of certification or approval invariably requires the organization to ensure that its safety-critical personnel are properly qualified and trained. In such situations, the CAA may determine that it is unnecessary to require a licence because it has the means of ensuring that safety-critical personnel of these organizations are properly qualified through its own certification/approval and surveillance systems.

4.2.2.6 On the other hand, there are situations in which there is a need to provide evidence of competency in the form of a licence. The most common situations are:

- a) when required by the Chicago Convention (see 4.1.2 of this chapter);
- b) for personnel who may practice their activity outside an established structure and/or who may have to work in places far away from that structure (such as flight crew members or some aircraft maintenance personnel); and
- c) when the criticality of the function is such that the redundancy of having evidence of competency through a licence and through the established structure is deemed necessary. This is the case for flight crew members.

4.2.3 Typical non-ICAO licences

4.2.3.1 In spite of the differences that might exist among Contracting States regarding the issuance of non-ICAO licences, such licences can be grouped into three different categories.

Recreational flying activities

4.2.3.2 The ICAO requirements for the private pilot have been designed to ensure that the holder of such a licence is competent to undertake international flight. Several States find that the need exists for a less demanding pilot licence for people who seek flying privileges only for local recreational activities on ultralight aircraft or on simpler general aviation aeroplanes. In such cases, States generally issue licences which are based purely on national requirements and which can be used only in their national airspace.

4.2.3.3 As an alternative to issuing non-ICAO licences, some States have delegated the supervision of recreational activities to independent governing bodies such as an aerial sport federation. These governing bodies have the responsibility of ensuring that pilots are and remain competent, generally through a set of training requirements and a system of authorization. The delegation of supervision can include gliding and ballooning activities for which ICAO licensing Standards exist. The advantage of this arrangement is that it reduces the administrative burden of a complete licensing system. The disadvantage is that authorizations issued by the governing body under delegation by a State are valid only in the national airspace of that State.

Aircraft categories not included in Annex 1

4.2.3.4 In some cases, the volume and type of activities conducted by States with a specific category of aircraft are not sufficient to justify the development of international licensing Standards for their flight crews. Typical examples are the small airship² or gyroplane. In such a situation, a State may issue a national licence, but because the licence is not recognized internationally, the licence holder must obtain the authorization of each of the States whose airspace is used, before entering such airspace.

Activities not covered by ICAO licensing Standards

4.2.3.5 As indicated earlier, some States issue licences for a large number of categories of personnel. Paragraph 4.2.2 above provides some guidance on how to decide whether a specific activity requires a licence. It is also worth noting that ICAO Annexes require some categories of personnel to meet some international training standards even though a licence is not required. A good example is the safety function of cabin crew members for which training and competency requirements exist in Annex 6 but for which no licensing requirement exists.

2. An airship of a volume of 4 600 cubic metres or less.