Annex B

Proposed Civil Aviation Advisory Publication – CAAP 208-1(0) – Cabin Crew Ratios
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This is an advisory publication. It describes some options for complying with the Civil Aviation Regulations 1988 (CAR 1988).
Always read this advice in conjunction with the appropriate regulations and any Civil Aviation Orders (CAOs).

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The relevant regulations and other references
- International Civil Aviation Organization (ICAO) Annex 6 (Operation of Aircraft), Part I (12.1).
- Civil Aviation Act 1988, Section 28 (1) (b).
- Civil Aviation Regulations 1988 (CAR) 208.
- Civil Aviation Order (CAO) 20.16.3 (6) – Air Service Operations – Carriage of Persons.
- CAO Section 20.11 (15).
- Civil Aviation Advisory Publication (CAAP) SMS-1.

This CAAP will be of interest to

The information in this CAAP is intended for aircraft operators proposing to transition from the 1:36 provisions of CAO 20.16.3 (6) regarding the minimum number of required cabin crew to be carried on charter or regular public transport aircraft.

Why this publication was written

This CAAP has been written to provide guidance to operators on the safety risk management processes considered necessary by Civil Aviation Safety Authority (CASA) for a transition to operations utilising a ratio of 1 cabin crew member to 50 seats installed (or part thereof).

Status of this CAAP

This is the first CAAP written for the assignment of cabin crew.

For further information

For application and policy advice contact CASA Operations Group on 131 757.

Draft only: February 2010
1. Acronyms

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2. Definitions

Safety risk management plan (SRMP) is a formal risk management review conducted by an operator which encompasses the identification, treatment and monitoring of the risks associated with an operator’s proposal to operate with a revised minimum cabin crew complement.

Minimum cabin crew is the minimum number of cabin crew members required, for each type of aeroplane based on seating configuration, in order to effect a safe and expeditious evacuation of the aeroplane and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. For all practical purposes, ICAO recognises the term cabin attendant as synonymous with the terms cabin crew and flight attendant, which are commonly used in the industry to identify personnel carried on board an aircraft in accordance with the requirements of Chapter 12 of Annex 6 to the Convention on International Civil Aviation.

1:50 refers to the ratio of 1 cabin crew member for every 50 passenger seats installed on an aircraft (or part thereof).

1:50 operating environment refers to a degree of operational safety and system assurance practices required by National Airworthiness Authorities (NAAs) such as United States of America’s Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA).
3. Who should read this CAAP?

3.1 This CAAP is intended for operators and industry participants who may be affected by the provision to allow a minimum cabin crew number based on the aircraft manufacturer’s approved number of cabin crew members up to a maximum ratio of 1 cabin crew member to 50 passenger seats installed (or part thereof).

3.2 The CAAP provides information and guidance on the scope of operational support and safety risk management processes that may be used in order to satisfy CASA that operations, involving a revised minimum cabin crew complement, can be safely conducted.

4. Background

4.1 What is the purpose of this CAAP?

4.1.1 This CAAP provides a background to CASA approvals previously issued to some large aircraft operators to conduct operations with a required cabin crew based on the aircraft’s demonstrated minimum number of cabin crew. It also outlines the scope of the safety risk management processes that should be used in the planning, transition and implementation phases for minimum cabin crew operations for aircraft of all sizes.

4.2 What is the regulatory basis for the change from 1 cabin attendant to 36 passengers carried?

4.2.1 ICAO Annex 6 (Operation of Aircraft), Part I (12.1) requires an operator to establish, to the satisfaction of the State of the operator, the minimum number of cabin crew members required for each type of aeroplane, based on:

- seating capacity; or
- the number of passengers carried

in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation. The air operator shall assign the necessary functions for each type of aeroplane.

4.2.2 Australian requirements under CAO Section 20.11 (15) require the type and model of an aircraft, having a seating capacity of more than 44 seats, to have satisfied the relevant airworthiness requirements at the time it was granted its type certificate.
4.2.3 These requirements include a provision for CASA acceptance of aircraft evacuation capability which involves an evacuation demonstration of the aircraft or in some cases analysis of a similar model’s evacuation capability. The number of cabin crew used in this manufacturer’s demonstration becomes the basis for acceptance of the aircraft type’s internationally accepted evacuation capability.

4.2.4 CAO Section 20.11 (15.1.3) requires an operator to satisfy CASA that, on an aircraft’s introduction, crew members are able to achieve an evacuation capability equivalent to that achieved when the type and model satisfied emergency evacuation requirements during type certification.

4.2.5 CAO Section 20.16.3 (6) prescribing the ‘1 cabin attendant to 36 passengers onboard’ has been a requirement since 1960 following its application to a 36 seat aircraft entering service at the time. The 1:36 ratio has been applied as a multiple for single aisle aircraft of all sizes since that time.

4.2.6 Since 2006, a number of Australian large aircraft operators have satisfied CASA that an acceptable level of safety can be maintained as a result of implementing a minimum cabin crew number aligned to the manufacturer’s recommended cabin crew number. During CASA assessment for cabin crew permissions under CAR 208, these operators, in effect, satisfied CASA that they had adopted system safety practices of leading aviation States utilising a maximum ratio of 1 cabin crew member to 50 passenger seats.

4.2.7 CASA continues to encourage all aircraft operators to propose and manage safety outcomes by going beyond the regulations in looking for more innovative ways to manage their risks. These safety improvements have been achieved outside the current regulatory framework and in advance of the introduction of the proposed new air transport operating rules. The proposed CASR Part 121, Subpart O introduces more comprehensive training and checking requirements for cabin crew in particular, also for flight crew and ground support personnel. This rule set will also introduce other changes to reduce the number of current differences between ICAO Annex 6, Part I and Australia’s CARs and CAOs.
4.3 What is the background to the 1:50 model of assigning cabin crew?

4.3.1 This method, based on the aircraft manufacturer’s certificated evacuation capability is widely used in most ICAO States including those of North America and Europe. Transport Canada uses a 1 cabin crew member to 40 passengers onboard ratio as a basis however a number of exemptions permitting 1:50 operations have been issued. There are comprehensive operational standards and safety oversight resources to support aircraft certification and operating standards using a 1:50 method of assigning cabin crew. Australian operators who have applied for and obtained the CAR 208 Direction to operate with a 1:50 model have satisfied CASA that operational policy, procedures and system maturity enable them to operate safely in a 1:50 operating environment.

5. Drivers for change

5.1 One of the guiding principles in CASA’s standards setting function is the recognition that, where appropriate, CASA will align its regulations with the standards and practices of the leading aviation countries, unless differences are required to address the Australian aviation environment and these differences can be justified on safety risk grounds.

5.2 The 1:50 method of assigning cabin crew on charter or regular public transport aircraft is supported by ICAO and will provide aircraft operators with an alternative method of assigning cabin crew based on the minimum required number ascertained during type certification.

5.3 Efficiency benefits must not compromise safety benefits and it is necessary to demonstrate that there are no safety significant differences between the current regime and the one proposed by the operator. Outcomes must involve a demonstrated equivalent level of safety or better.

5.4 Transition to the 1:50 method of assigning cabin crew involves an application to CASA where the operator is required to submit, for approval, an SRMP that supports the transition and provides assurance that operations can be conducted with an equivalent level of safety.
6. Application for CASA approval to operate with the minimum required cabin crew

6.1 Any change to operations can result in the creation of hazards, which if not controlled, can impact on safety. While it is accepted that organisations need the flexibility to meet business improvement initiatives, the focus must remain on implementing changes safely. A change to the number of minimum required cabin crew is a significant change to the operating environment. In addition, the risks involved in such change can become more significant when a smaller overall cabin crew complement is involved.

6.2 In order to be satisfied that an operator’s system is capable of supporting operations with a revised minimum cabin crew number, CASA is required to approve an operator’s SRMP prior to a change to the minimum cabin crew number documented in the Operations Manual. The process of assessing the SRMP will involve a similar process to that of the previous CAR 208 Directions. This is necessary to ensure that proposed operations can continue to be conducted safely and in accordance with the requirements of Section 28 of the Civil Aviation Act 1988.

6.3 An operator’s SRMP will form the basis of the application to CASA for approval to operate with a revised minimum cabin crew complement.

6.4 An operator’s SRMP will encompass a claim of capability to operate in a 1:50 operating environment. This should include evidence that the operator’s system performance meets or is capable of meeting (or exceeding) operational safety standards of leading aviation regulators such as the FAA and EASA. It is important that claims are supportable with clear assumptions and judgements that support the arguments.

6.5 As part of any such application, an operator must detail what oversight will be conducted in the post-implementation phase to determine any inadvertent detriment to operational safety. Operators should be aware CASA can include the change processes in routine or special surveillance activity. An operator’s internal oversight of the change management process will also form part of the scope of surveillance.

6.6 CASA considers the following areas crucial to the scope of an operator’s SRMP, when reviewing policy and procedures in determining a minimum cabin crew complement.

6.6.1 The effect of a reduction in the cabin crew on the accomplishment of standard operating procedures, emergency procedures together with any system enhancements and training needs associated with the mitigation of identified risks.
6.6.2 The aircraft manufacturer’s recommended procedures for evacuation and the operator’s capability in meeting or exceeding evacuation performance considering the:

- number of exits;
- type of exits and their associated slides;
- location of exits in relation to cabin crew seats and the cabin layout; and
- management of unattended exits.

6.6.3 The location of cabin crew seats taking into account cabin crew duties in an emergency evacuation including:

- opening floor level exits and initiating stair or slide deployment;
- assisting passengers to pass through exits; and
- directing passengers away from inoperative exits, crowd control and passenger flow management.

6.6.4 Additional actions required to be performed by cabin crew members when responsible for a pair of exits, in support of aircraft manufacturer’s recommended practices.

6.6.5 Actions required to be performed by cabin crew in a ditching, including the deployment of slide-rafts and the launching of life-rafts.

6.6.6 It has been recognised internationally and by practical demonstrations in Australia that increased passenger capability at emergency exits will provide an increased level of safety assurance in an evacuation. It is strongly recommended that an operator designs and validates procedures for the following:

- designation of emergency exit rows;
- pre-qualification of passengers (fit and able to undertake emergency tasks);
- self-help exit rows to be occupied by a minimum number of passengers;
- delivery of exit row safety briefings; and
- passenger acknowledgement of safety responsibilities associated with occupying an emergency exit row.

6.6.7 The type and duration of the flight(s) to be operated with particular consideration of those whole of duty factors which may give rise to hazards or contribute to a compromise of the safety environment for both normal and emergency situations. Such factors include, but are not limited to, the following:

- cabin crew rostering, planned and actual duty periods and a system approach for management of disruptions including the recognition and mitigation of fatigue inducing factors;
- in flight workload, distribution and management of operational and service responsibilities; and
a risk analysis of the effect of a new minimum cabin crew complement in the context of:
° pre-departure duties;
° in-flight duties; and
° post-flight duties.

6.7 The scope of the SRMP should also pay particular attention to contemporary training needs for assuring proficient cabin crew which may include, but not be limited to, the following:

- Initial training:
  ° Fire and smoke training;
  ° Water survival training;
  ° Survival training;
  ° Medical aspects and first aid;
  ° Passenger handling;
  ° Communication between cabin crew and flight crew;
  ° Discipline and responsibilities.

- Conversion and differences training:
  ° Fire and smoke training – type specific;
  ° Operation of doors and exits;
  ° Evacuation slide training;
  ° Evacuation procedures and other emergency situations;
  ° Crowd control;
  ° Pilot incapacitation;
  ° Safety equipment;
  ° Passenger briefing and safety demonstrations.

- Human factors training.
- Crew resource management training.

6.8 In determining an operator’s capability to conduct operations safely, CASA may also consider the operator’s procedures and demonstrated capability against international safety practices promulgated for a 1:50 operating environment by agencies such as the FAA and EASA together with provisions of proposed CASR Part 121, Subpart O.

6.9 Operators exercising existing CAR 208 Directions will have the opportunity to transition to a new Operations Manual-based approval prior to expiry of their current permissions. These operators will be expected to address the more mature considerations identified in this CAAP. An operator’s recent safety case combined with a post implementation review may be sufficient for an SRMP. However, CASA will consider each individual operator's SRMP and decide whether to approve it on an operator-by-operator basis.