

**Department of Infrastructure, Transport, Regional
Development and Local Government
Department of Defence
Civil Aviation Safety Authority
Airservices Australia**

Common Risk Management Framework for Airspace and Air Traffic Management

1.0 Preamble

- 1.1 Australia has an excellent record in aviation safety and the government is committed to ensuring this is maintained and where possible enhanced.
- 1.2 The national air traffic management system and Australia's airspace is under constant review to ensure that it meets the demands of Australia now and into the future. Changes to current practices need to be assessed carefully to identify potential risks and the extent to which they can be countered. Changes with high levels of residual risk must be avoided, and changes must aim to maximise safety outcomes. However, in applying risk assessment processes and methodologies under this CRMF, acknowledgment will be given to the likelihood of performance levels reducing during the transition from one system state to another following change and therefore the need to consider any further risk mitigation.
- 1.3 The Department of Infrastructure and Transport (DOIT), the Department of Defence (Defence), the Civil Aviation Safety Authority (CASA) and Airservices Australia (Airservices), all play significant roles in policy development, regulation or service delivery in Australian aviation.
- 1.4 Each agency has defined areas of responsibility and accountability. For the overall system to operate well, however, it is important that the work of the agencies is complementary and based on a shared sense of understanding and purpose, and a consistent approach.
- 1.5 To this end, agencies represented on the Aviation Policy Group (APG) - DOIT, Defence, CASA, and Airservices - have reviewed and updated the Common Risk Management Framework (CRMF).
- 1.6 The CRMF provides high level guidance to aviation agencies in their risk management activities but in no way seeks to interfere with, or restrict, the performance of the respective roles.
- 1.7 It is important to note that the *Airspace Act 2007*, the *Airspace Regulations 2007* and the *Australian Airspace Policy Statement* provide the overarching legislative and governance framework under which airspace administration and regulation is carried out in Australia.

2.0 Purpose

The purpose of this document is to lay down the agreed structure and processes which form this inter-agency CRMF. The use of the CRMF will be backed by enhanced consultative processes between the APG agencies so as to promote continued improvement in risk management processes and methodologies, and to enable greater harmonisation between agencies.

3.0 Principles

The framework is premised on a number of high level principles:

- i. The safety of passenger transport services is the most important consideration while national security considerations must also be met;
- ii. Other considerations in examining airspace and air traffic management (ATM) proposals include taking into account the effects on the environment, efficiency of use, equitable access and consistency with relevant international agreements.

4.0 Definition of Terms

4.1 Definition of terms applicable to this framework can be found in Appendix 1.

5.0 Limits to the adoption of this Framework

5.1 Although Defence is a party to this common risk framework, it shall not be considered binding for certain activities where Defence must accept higher risk levels than are generally applicable in a civil environment, or when airspace is declared under special provision Defence legislation. These activities will normally be confined to Defence administered airspace and will generally be segregated from civil activity.

5.2 This framework addresses airspace and ATM related issues and applies to all Australian administered airspace with the exception of certain Defence activity as referred to at 5.1.

6.0 Framework Structure

Outline

6.1 Each agency will maintain a risk management system which is in conformance with published Australian/New Zealand Risk Management Standards as updated - currently AS/NZS ISO31000:2009 (see Appendix 2 for an outline of the risk management process).

6.2 As indicated in the standards mentioned above, all risk management systems will be premised on the concept of As Low As Reasonably Practicable (ALARP). There are however limits to the extent to which the government, industry and the community will pay, to reduce adverse risks.

6.3 The Defence Aviation Risk Management process conforms to the standards that apply to the civil risk management regimes. These civil risk management systems are to be accessible to the public.

Application of the Framework

6.4 Agencies will apply risk management at all stages of the life cycle of an activity within air traffic management, with particular emphasis being placed on:

- a. consideration of a change to an existing product, service, process or practice; and
- b. the initiation of any new product, service, process or practice.

6.5 A set of requirements for each of the process steps within AS/NZS ISO31000:2009 will be considered in the following sections.

7 Communication and Consultation

7.1 Consultation and communication between agencies, and with industry, will be an integral component of all risk management activities.

7.2 The extent of any consultation may be structured by the urgency and necessity with which safety or security related changes are required to be introduced.

8 Setting the Context

- 8.1 The aviation industry is required to work across a large number of differing performance dimensions. As government agencies who work within the aviation portfolio, the parties to this agreement will work to meet the expectations of the Government, general public and the industry within the governance frameworks each party is required to meet under their respective legislative and regulatory arrangements.
- 8.2 Airspace and ATM administration in Australia is generally aligned with International Civil Aviation Organization (ICAO) requirements, with any differences notified to ICAO.

9 Risk Assessment

Identify Risks

- 9.1 The tools and techniques to identify risks must be (a) appropriate in relation to the timing of the assessment in the life cycle of an aviation system, (b) appropriate to the scope of work under review, and (c) aim to bring the most comprehensive picture of risk exposure.
- 9.2 The agencies will work together to identify sources of information which will assist in the risk assessment process. Replication of effort in the collection of core data sources relating to activity, incidents and standardised economic values for cost benefit assessments will be avoided.
- 9.3 The agencies will aim to collaborate, especially promoting a free flow of information, if this does not impinge on the independence of the regulator (CASA), in the use of resource intensive risk techniques such as quantitative airspace risk modelling.

Analyse Risks

- 9.4 To facilitate risk analysis an appropriate data exchange should take place between agencies. Most risk identification and analysis methods are dependent on data to drive underlying assumptions. The results of the analysis must then be assessed against appropriate criteria to determine if the risk levels are intolerable.
- 9.5 This agreement embraces the notion that the magnitude of the change proposal under consideration will drive the level of analysis (and reporting). Determination of magnitude will be driven by the internal protocols within each agency's risk management system. However the following principles will need to be incorporated within the individual systems:
- a. scale of the proposal, e.g. users, airframes, geographic region impacted;
 - b. complexity of proposal, e.g. interaction with other systems, services;
 - c. duration, i.e. temporary or ongoing;
 - d. originality, i.e. has it been proven anywhere else in Australia or overseas or there is already established knowledge about the topic e.g. ICAO standards or requirements.
- 9.6 Agencies will assist each other to ensure that relevant information will be exchanged in a timely and efficient manner to ensure an effective assessment of risks.

Evaluate Risks

- 9.7 The qualitative criteria used by agencies, which are usually expressed in terms of consequence and likelihood matrix, may be specific to the agency given their differing roles. However, safety criteria must be premised on the basis of the effect on aircrew, other safety critical staff, the travelling public and the community.
- 9.8 Large scale assessments will embrace formal Cost Benefit Analysis including full economic, social and environmental impacts.

Treat Risks

- 9.9 In identifying risk treatments, the agencies will identify a hierarchy of preference for treatment. The highest priority will be given to solutions which seek to eliminate the negative risk.

Monitoring and Reporting

- 9.10 Risk management systems must include the requirement for relevant managers to sign off any acceptance of risk levels that are higher than are usually tolerated by the agency, noting the ALARP requirements of Section 6.2.
- 9.11 Agencies will monitor and report on the performance of risk controls and mitigators. Depending on the scenario under consideration such reporting may be internal, or may be focused externally i.e. to CASA, the APG, or the industry.
- 9.12 Agencies will provide all agencies party to this agreement and the industry of instances where:
 - a. residual risks may impact on others operations;
 - b. risk controls and mitigators are identified as not operating as expected and what further action is being planned.

10 Review and Enhancement of the Framework

- 10.1 Each party to this agreement will inform other parties of proposals to modify their existing risk management system.
- 10.2 This framework will be reviewed at least once every three years.

11 Implementation of the Framework

- 11.1 Processes aligned to the framework will be applied in two contexts:
 - (a) A single agency undertaking risk management to consider new services or changes to services, processes or practices within its own sphere of operations; or
 - (b) A cross agency assessment in which a different agency will/may take the lead in the analysis of a proposal and management of risks at differing stages of development, design and implementation. In such instances a cross agency steering group could review outputs from each stage of the risk assessment and monitoring.

12 Conflict Resolution

12.1 The Aviation Implementation Group will oversight the application of this agreement.

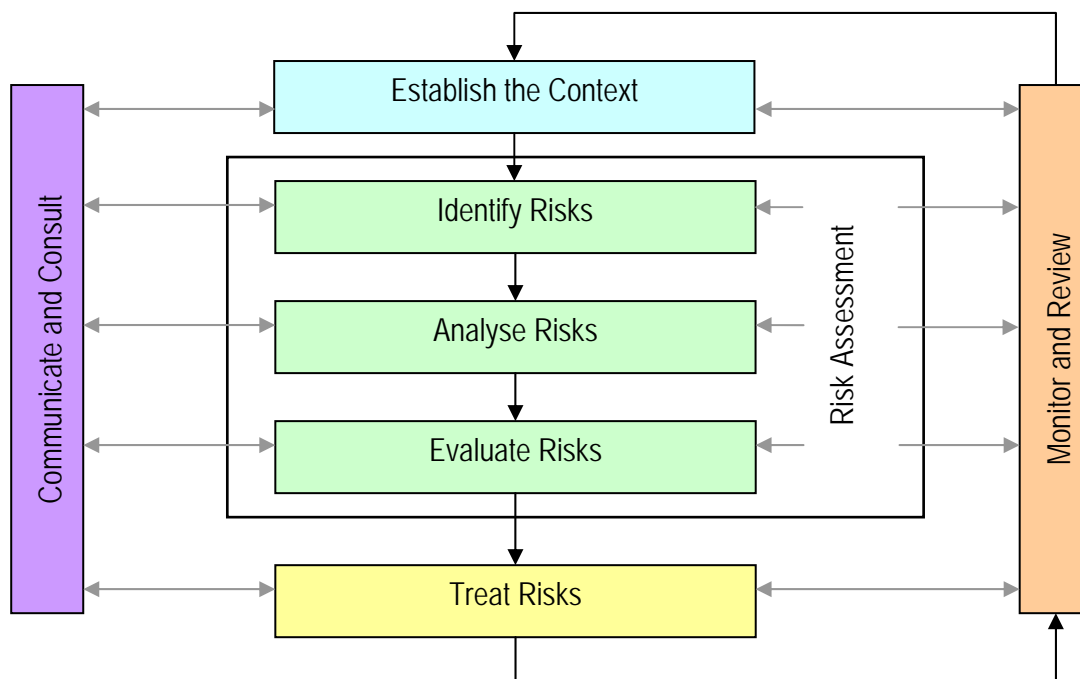
Appendix 1: Terms and Definitions

| Term | Definition |
|---------------------------------|--|
| ALARP | As low as reasonably practicable |
| Communication and Consultation# | Continual and iterative processes that an organisation/agency conducts to provide, share or obtain information and to engage in dialogue with stakeholders regarding the management of risk. |
| Monitoring* | Continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected. |
| Review* | Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve the established objectives. |
| Risk* | The effect of uncertainty on objectives. |
| Risk analysis* | The process to comprehend the nature of risk and to determine the level of risk. |
| Risk assessment* | The overall process of risk identification, risk analysis and risk evaluation. |
| Risk criteria* | Terms of reference against which the significance of a risk is evaluated. |
| Risk evaluation* | Process of comparing the results of risk analysis with risk criteria to determine whether the risk and/or its magnitude is acceptable or tolerable. |
| Risk identification* | The process of finding, recognising and describing risks. |
| Risk management# | Coordinated activities to direct and control an organisation/agency with regard to risk. |
| Risk management framework# | Set of components that provide the foundations and organisational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organisation/agency. |
| Risk management system | Comprises of a risk management policy, plan and processes to manage risk. |
| Risk Management Plan* | Scheme within the risk management framework specifying the approach, the management components and resources to be applied to the management of risk. |
| Risk Management Policy# | Statement of the overall intentions and direction of an organisation/agency related to risk management. |
| Risk management process* | The systematic application of management policies, procedures and practices to the activities of communicating, consulting, establishing the context, and identifying, analysing, evaluating, treating, monitoring and reviewing risk. |
| Risk treatment* | The process to modify risk |
| Safety | The relative risk to the well being of aircraft and persons during the period from embarkation to disembarkation of the aircraft |
| Safe | The risk to the wellbeing of aircraft and persons during the period from embarkation to disembarkation of the aircraft is sufficiently low as to conform to the ALARP principle. |
| Stakeholder# | Person or organisation/agency that can affect, be affected by, or perceive themselves to be affected by a decision or activity. |

*Definition taken from the current Australian and New Zealand standard

Definition amended slightly from the current Australian and New Zealand standard to include a reference to agency

Appendix 2: Outline of Risk Management Process



Appendix 3 Legislative Requirements for Specific Agencies

CIVIL AVIATION ACT 1988 - SECT 9A

Performance of functions

- (1) In exercising its powers and performing its functions, CASA must regard the safety of air navigation as the most important consideration.

AIRSPACE ACT 2007

An Act relating to airspace administration and regulation, and for related purposes.

AIR SERVICES ACT 1995 - SECT 9

Manner in which AA must perform its functions

- (1) In exercising its powers and performing its functions, AA must regard the safety of air navigation as the most important consideration.

Other regulatory requirements and instruments relevant to airspace and air traffic management include:

- the Airspace Regulations 2007;
- the Air Services Regulations 1995;
- the Australian Airspace Policy Statement 2010; and
- the Defence AvRM process framed under Defence Instruction DI(G) OPS 40-2.