

**The ATSB**  
**What does it mean for Aviation Safety?**

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## Introduction

In 1999, two events occurred which have had implications for aviation safety in Australia. The first was the establishment on 1 July of the Australian Transport Safety Bureau (ATSB) which incorporates the former Bureau of Air Safety Investigation (BASI). The second was the release, in early August, of the report of the review of BASI by McGrath and Power (1999).

Although the Review report was completed after the establishment of the ATSB, the Review Team provided input to deliberations regarding the Department's safety activities which lead to the establishment of the ATSB. A number of the submissions to the Review advocated either creation or consideration of a multi-modal transport safety body.

Recommendation 17 from the Review report reflects that input:

*That an integrated multi-modal Commonwealth transport safety bureau be created. This bureau would bring together the aviation and maritime accident/investigation units in the Department, together with the safety capability in the department's rail and road units.*

A number of positive outcomes that could be expected from creation of a multi-modal transport safety unit were identified by the Review Team:

- such a unit would provide high status in the Department for accident prevention roles,
- more efficient use of resources could be achieved,
- a greater pool of resources would be available to better manage in times of unexpected heavy workloads in any of the modes,
- better career opportunities in the management stream without reducing the potential for progress of technical specialists,
- benefits of cross fertilisation and greater application of pro-active work should be more apparent and more readily achievable,
- a more interesting mix of work should result, and
- potential to make better use of common resources, such as the existing 'materials laboratory' and possibly the accident/incident data base.

While acknowledging the considerable benefits that could be derived from a multi-modal safety unit, the Review Team also commented that:

*"Particular care would be needed to ensure that there was no intention or perception that BASI's role has been downgraded."*

Aviation safety has definitely not been downgraded in the new Bureau, as demonstrated by the actions taken to address the recommendations of the Review, specifically those covering legislation, independence, human factors, pro-activity and safety promotion.

## Legislation

From a legislative perspective there has been no change to the Commonwealth's role in aviation accident/incident/safety deficiency investigation with the establishment of the ATSB.

In terms of the *Air Navigation Act 1920 (as amended 1995)* (the Act) a particular office within the Department is designated as the office whose occupant is the Director of Air Safety Investigation. The Director, Safety Investigations position within the ATSB is the office now designated as the Director of Air Safety Investigation.

Part 2A of the Act details the powers and responsibilities of the Director and these are significant in relation to investigations. The Review Team recommended that the very wide powers contained within sub-clauses (c) and (d) of section 19GB which describes the 'Functions of Director' should be defined in law.

### *Functions of Director*

*19GB. The functions of the Director are:*

- (a) to ensure the effective operation of this Part; and*
- (b) to perform, on behalf of Australia, the obligations Australia has to a Contracting State under this Part; and*
- (c) to perform such duties and exercise such powers as are imposed or conferred upon the Director under this Act or the regulations or under any other law of the Commonwealth;*
- (d) to do anything incidental or conducive to the performance of any of the functions referred to in paragraphs (a) to (c).*

Changes to the powers as defined in any 'act' require a detailed consultation process and one that is not usually embarked upon without the agreement of the relevant Minister. Spelling out the functions of the Director of Air Safety Investigation would require changes to the Act and this would require detailed consultation and consideration by the Government.

It is worth bearing in mind though, the inflexibility that is created when broad, general heads of power are turned into quite specific legislation. Currently, the Director of Air Safety Investigation is empowered to do whatever is necessary - and incidental or conducive - to meet Australia's obligations under the Chicago Convention as it applies to safety investigations. Putting that into words acceptable to all parties currently interested in aviation safety investigation will not occur quickly nor – in all probability – easily.

In the short term, however, no changes to the functions of the Director are being sought. Albeit, from an ATSB perspective there would be considerable value in the powers of investigation being similar across all modes. In fact, the proposed commonwealth rail investigation legislation is based on the concept embodied in the Air Navigation Act.

## **Independence**

An important operating principle has been the perceived independence of the aviation occurrence investigator (BASI) from the regulator, the Civil Aviation Safety Authority (CASA). Also, as the Review team identified, the independence of BASI can be viewed from two perspectives: its relationship with government as a result of ownership and its independence of the industry in which it operates.

In terms of the former, Section 19CT of the Act requires the Director of Air Safety Investigation to give the Secretary a written report of an investigation, while under Section 19CU no part of such report may be published without the written permission of the Secretary.

The Review Team recommended that the Secretary consider delegating to the Executive Director of the ATSB the direct responsibility for releasing investigation reports (Recommendation 18), thereby providing an independence from the Department. That proposal has been accepted and an instrument to effect this change was signed in 1999.

In terms of independence from the aviation industry, such independence must be balanced against a sound and robust relationship with the numerous parties in the industry. The current process of providing draft reports to interested parties is pursued in order to ensure natural justice and thereby achieve such a relationship. However, there was some criticism made to the Review Team that this process did not really ensure independence.

The Review Team recommended that to address the potential for capture by industry, the Secretary institute as required a review process prior to a report's release to ensure the processes are equitable in their treatment of all interested parties (Recommendation 14). New procedures to implement such a review process have been agreed. More recently a Review Panel has been introduced, with the role of clearing all outputs before release.

Another indication that independence from the Department is being maintained is that while the Department is being relocated to new premises in Canberra, the ATSB is to continue to have separate accommodation.

## **Human Factors**

Increasingly it is being recognised worldwide that the most effective safety improvements in transport can best be achieved by adopting a systems approach, with particular emphasis on human factors.

Regardless of the mode of transport – air, sea, rail or road – accidents, incidents and safety deficiencies represent failures of the transport system. The great majority of system failures involve human factors – not only at the operational end but further back in the chain of organisational and management spheres which impact on the operations. These underlying systemic factors are common to all transport modes, and to many other industries involving technology and people working together in complex systems.

This systems approach to safety, as exemplified in recent aviation, maritime and rail investigations in Australia, has shown the great benefits of the cross fertilisation of ideas between transport modes.

Two aspects of BASI work that have been acknowledged widely are the international interfaces and the approaches to systemic investigation involving the “Reason” model which, *inter alia*, emphasises the human factors contributing to accidents/incidents. The Review Team identified both these functions as needing to continue to be afforded relatively high profile and that responsibility for them should be given to a senior office in the new safety unit.

In acknowledging the importance of these two aspects, not just in aviation but across all transport modes, one of the three Director positions within the ATSB is designated as the Director, Human Factors, Systems Safety and Communications.

## **Pro-activity**

The BASI Review report indicates there were a significant number of submissions to the Review, in which the suggestion was put that BASI should be more pro-active in its role. Specifically, the nature of BASI’s operations saw a focus on reacting to accidents/incidents and the Review team suggested a structured approach to the total task would be necessary to make available the resources needed for a greater pro-active orientation.

This concept is reflected in the recommendations to develop

- (i) an enhanced categorisation methodology which provides for much better differentiation of occurrences with the intention of using this system to determine more accurately, and so control, the associated workload and associated resources and skill (Recommendation 31),
- (ii) a strategic approach to workload management based on a broad policy of applying resources to ‘likely best safety outcomes’ (Recommendation 32), and
- (iii) a workload management policy which makes due provision for the involvement in increased pro-active activities, including the investigation of accidents/incidents in other than the fare paying passenger segment of the industry (Recommendation 35).

There are two interlinked components to progressing these recommendations:

- a. reviewing the way investigations are managed, and
- b. examining the policy of what is investigated and why.

The result of these two activities is that from 1 April, the Aviation Group within the Safety Investigations Branch is trialing new arrangements in which managers have functional responsibilities of Notifications and Data Analysis, Allocations, Investigations, Safety Actions and Materials Failure Analysis, providing an output and outcome focus to the Group’s activities.

In addition, the investigators are trialing a policy that involves undertaking investigations only where there is a clear safety value that is likely to lead to improvements in aviation safety. Further, in cases where the initial assessment of significant safety value turns out to be incorrect after preliminary examination, the investigation will be terminated with the investigation report notated with the reasons.

The factors to be considered in determining whether an occurrence is to be investigated, including on-site attendance are:

- anticipated safety value of an investigation;
- extent of public interest;
- fatal or not;
- timeliness of notification;
- availability of evidence;
- scope or impact of any system failures; and
- meets requirements for special investigation based on trends, safety analysis, identified targeted program, or training benefits.

Assessing these factors requires judgement and guidelines cannot take into account all eventualities. ATSB management will decide whether any particular occurrence should be investigated.

Targeted programs of investigation will specifically be carried out in the general aviation (GA) sector. While many GA accidents simply repeat previous experience, a small number of these will be investigated to train members of the relevant associations in accident investigation. Targeted investigations will also form part of a broader monitoring trend analysis in GA sub-sectors.

Under the new arrangements, investigation resources will not be wasted on hundreds of office investigations which involved little more than clerical follow up - these occurrences will not be classified as category 5.

Improved targeting and more efficient management of investigations will enable resources to be released for activities such as pro-active safety studies and investigations.

## **Safety Promotion**

The Review Team concluded that while BASI has “a legitimate role in safety promotion, the Bureau should seek to negotiate a complementary role” to the safety promotion role of the Civil Aviation Safety Authority (CASA) (Recommendation 7).

Section 9(2) of the *Civil Aviation Act 1988* provides that:

*'CASA also has the following safety-related functions:*

- (a) *encouraging a greater acceptance by the aviation industry of its obligations to maintain high standards of aviation safety, through:*
  - (i) *comprehensive safety education and training programs; and*
  - (ii) *accurate and timely advice; and*
  - (iii) *fostering an awareness in industry management, and within the community generally, of the importance of aviation safety compliance with relevant legislation;*
- (b) *promoting full and effective consultation and communication with all interested parties on aviation safety issues.'*

The Review Team's interpretation of section 9(2) is that CASA is under a legal obligation to perform these functions, although there is no formal indication that CASA has exclusive responsibilities in this regard.

Also, that unlike CASA, BASI (now ATSB) does not have a legal obligation in respect to any role in aviation safety promotion. This conclusion derives from Part 2A of the *Air Navigation Act*, which confers a discretionary role on the Director of Air Safety Investigation in respect of aviation safety education and promotion.

Section 19HA(1) of the *Air Navigation Act* provides:

*'The Director may, if the Director thinks it is necessary for the purposes of aviation safety, disclose information acquired by the Director or an air safety officer in the performance of his or her functions or duties or in the exercise of his or her powers under this Part to any other person.'*

Also section 19HA(2) provides:

*'The Director may, if the Director thinks it is desirable in the interests of the promotion of aviation safety, publish any information except a report or document that is given to the Secretary under section 19CT.'*

The Review report provides comment on legal interpretation of these two extracts, the second reading speech for the *Transport Legislation Amendment Act (No. 3)* (this Act incorporated the Part 2A provisions into the *Air Navigation Act*), as well as the Administrative Arrangements Order of 21 October 1998. The conclusion is drawn that while CASA should have the principal Commonwealth role in safety promotion, BASI, now the ATSB, also has a contribution to make in safety promotion, especially safety education.

The ATSB has discussed with CASA the development of complementary safety promotion activities, including the production of a single Commonwealth safety promotion magazine (as proposed in McGrath Recommendation 8). The most recent *Flight Safety* magazine produced by CASA contains an ATSB supplement over which the ATSB has editorial control, which meets this aim. This arrangement is a trial for 12 months or six editions of *Flight Safety*.

In addition, the ATSB is extending the concept, embodied in the *Regional Airlines Safety Bulletin*, to the development of specific safety bulletins for other industry sectors. One of the concerns raised about the discontinuation of *Asian Pacific Air Safety* (APAS) was the inclusion in APAS of the Confidential Aviation Incident Reports (CAIR) together with the CAIR reporting form. The CAIR report is now available on the ATSB website, was included in the last edition of the *Regional Airlines Safety Bulletin* and will be included in each edition of the sector bulletins.

## **Summary**

The formation of the ATSB establishes a basis for strengthening the investigative power and safety effectiveness across all transport modes, as well as providing a greater resource base and enabling substantial improvements in support systems, particularly information and analysis.

At the same time, each of the 58 recommendations from the BASI Review, both individually and collectively, is aimed at enhancing the efficiency and effectiveness of aviation safety in Australia. Having identified these enhancements in the aviation arena, it is important that they not be lost in the process of forming a multi-modal transport safety bureau.

The selection of recommendations from the Review considered here, dealing with legislation, independence, the role of human factors, pro-activity and safety promotion, have all been shown to be at least as important for aviation in the ATSB as they were previously and in most cases their importance has increased.

Clearly there are many aspects of aviation safety operations and processes that will continue on in the ATSB, while also being implemented for the other modes because they are already proven as efficient and effective. Further, the note of caution, contained in the report of the recent review of BASI, that there should be no lessening of BASI's role in the establishment of a new multi-modal safety unit has been heeded by the ATSB Executive.

On this basis, aviation safety, as now being addressed by the Commonwealth through the Australian Transport Safety Bureau, will be further enhanced.

## **Reference**

McGrath, P and Power, L 'BASI Review 1999 – A review of the efficiency and role of the Bureau of Air Safety Investigation (BASI)' (30 July 1999)