



Australian Government

Department of Infrastructure, Transport,
Regional Development and Local Government



Towards a National Aviation Policy Statement

Issues Paper April 2008

Minister's foreword

Australia's aviation industry plays a crucial role overcoming the tyranny of distance. This has always been a significant task.

The distance between our great island continent and the rest of the world, and the distances between Australia's cities and towns have shaped our economy and the way we see ourselves.

Australia has almost the same land mass as the United States and Europe, with 21 million people spread over a massive country. We have responsibility for 11 per cent of the world's airspace.

Whether moving tourists, families, freight or business people, the aviation industry has been critical to the economic growth and development of Australia. While Australia has the world's 55th largest population, we are the 15th largest economy.

The aviation sector is an essential part of the efficient operation of the Australian economy. The sustainable development of our aviation industry largely depends upon private investment and the effective management of the businesses which make up the sector.

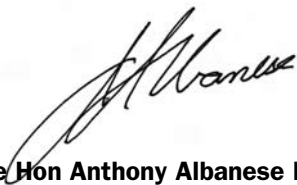
Governments play a vital role ensuring appropriate policy and regulatory frameworks are in place, with settings that support the development of the sector consistent with the broad objectives of efficiency, safety, security and environmental responsibility.

The Australian Government is committed to developing a comprehensive National Aviation Policy Statement (White Paper). This will provide greater planning and investment certainty for the industry, and provide clear commitments for users of aviation services and communities affected by aviation activity.

I am pleased to release this Issues Paper to commence the development of the National Aviation Policy Statement.

This Issues Paper has been prepared as a basis for consultation and engagement, and to encourage industry and community input to assist the Australian Government's development of a National Aviation Policy Statement.

A National Aviation Policy Green Paper will be released in the latter half of 2008, with further opportunity for stakeholder input prior to finalisation of a detailed National Aviation Policy Statement in mid-2009.



The Hon Anthony Albanese MP

Minister for Infrastructure, Transport, Regional Development and Local Government

10 April 2008



Further information and contact details

The Department of Infrastructure, Transport, Regional Development and Local Government is providing administrative support in the development of the National Aviation Policy Statement.

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Public submissions

Submissions are invited from interested parties and should be addressed to the Department of Infrastructure, Transport, Regional Development and Local Government at the address above.

To enable timely consideration of issues and allow their incorporation into a proposed National Aviation Policy Green Paper, submissions or comments should be provided to the Department no later than Friday 27 June 2008.

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Introduction

Aviation activity has grown strongly over the last twenty years, driven by broader economic growth, increased tourism, regulatory reform, and enhanced industry efficiency including investment in aviation infrastructure and technology.

In 1986-87, when Australia's domestic airline industry operated under the regulated "two airline policy", 36.7 million passengers passed through Australia's airports. In 2006-07 that figure had grown to 112.8 million passengers, an average annual growth rate of 5.8 per cent. Over the same period, Australia's economy grew by 3.4 per cent annually, while its population grew by only 1.3 per cent each year. Aviation has clearly been a high growth industry.

Patterns of air transport are changing, with the emergence of low cost carriers, larger aircraft, regional jets and a range of new point to point services driving further growth in the industry.

In the early 1990s, following domestic deregulation and the introduction of competition into Australia's international aviation industry, airlines still delivered services through traditional route structures and service models. Over the past five to 10 years that has changed quickly.

Today's airline passenger is more likely to fly on routes not envisaged twenty years ago, over-flying hubs to non-capital city destinations. Airlines offer a range of services and fares, from premium first and business class services, to affordable no-frills fares, making air travel accessible to more people than ever before.

Reliable overnight air freight services have also become increasingly important to Australia's businesses, utilising modern just-in-time inventory systems or dealing with time-critical freight.

Midnight is often a domestic peak time at Perth and Darwin airports to enable efficient business connections to key east coast and international markets.

Technological developments are providing a new generation of navigation and surveillance services. While these services have traditionally been delivered by ground-based radar services, modern, satellite-based navigation technologies offer improvements in air traffic management that may improve safety and efficiency across the industry.

Australia has a world-renowned record of aviation safety and security. Catering for the growth of the industry while furthering the safety and security of Australia's aviation industry will be a continuing challenge for industry and the Australian Government into the future.

Two decades ago, Australia's major airports were controlled and managed by the Australian Government. Today, at least in our capital cities, they are run as private, commercial entities, under long-term lease arrangements. We have seen unprecedented investment by private airport operators. Investment at airports must continue to meet the needs of a growing aviation industry, while also allowing for proper consideration of developments and appropriate recognition of the impacts on local communities.

Like many industries highly dependent on energy use, the aviation industry faces challenges in meeting its environmental responsibilities and minimising its greenhouse gas emissions. Aviation contributes approximately two per cent of global carbon dioxide emissions but the growth of the aviation industry means that contribution will probably increase.

Skilled, well trained personnel are needed to meet the current and future demands of industry. Aviation relies on skilled pilots, engineers and air traffic controllers to continue to provide services and meet the growth needs of the industry. Industry has a responsibility to ensure its workforce planning and training is capable of meeting these challenges, particularly in a tight labour market world-wide. For its part, the Australian Government is looking to ensure its skills and training policies are appropriate for the industry's needs.

Finally, the growth in Australia's aviation industry has not been uniform. With efficiency improvements and growth of major operators on our major jet routes has come rationalisation of many smaller operators and services to less populated areas of Australia. Like many other services in rural and remote parts of Australia, there are significant challenges for the industry and all levels of government in meeting the needs of those communities.

The Issues Paper is broken into five broad themes with questions focussing on some of the major issues facing the industry, governments and stakeholders in meeting current challenges and planning for a successful future.

These themes are Aviation Industry, Infrastructure, Safety, Security and Community Protection. Stakeholder submissions may find it helpful to structure input by addressing some of the focussing questions raised.

Suggestions are also invited on further issues not covered in this paper that may be considered for inclusion in subsequent consultation papers.



1. The Australian aviation industry

1.1 International services

Key challenges

International services to and from Australia continue to grow strongly, reflecting Australia's attractiveness as a destination, our strong and growing trade links and the Australian Government's strong support for competition in the international market.

The Government's aviation policies will promote the expansion of Australia's international aviation market and retain a strong Australian-based aviation industry. This facilitates growth in trade, tourism and employment opportunities for Australians in the aviation and tourism industries.

Strong growth in international services has resulted in a greater diversity of airlines serving Australia and the introduction of new, previously unserved, destinations.

- Do Australia's international air services policies serve Australia's national interest and balance the need to have an Australian based industry with robust competition from international competitors? What should our negotiating priorities and approach be in the future?
- How might the Australian Government continue to develop improved competition and access to services while maintaining appropriate levels of aviation safety and security?

Australia continues to expand its international air services relationships

The negotiation of air services agreements with other countries provides Australian airlines and airlines from those countries with access to routes and destinations ahead of passenger demand. In most instances this allows airlines to decide the routes they serve based on commercial considerations. However, as route access is subject to negotiations with bilateral partners, it is not always possible to secure the desired level of access sought by airlines.

In recent years, expanded access for Australian airlines to key aviation markets has been secured, including agreements removing limits on the number of services that can be served between Australia and our four largest individual markets: New Zealand, the United Kingdom, the United States, and Singapore.

While access between Australia and our bilateral partners has been able to be increased in many cases, this is not always possible when seeking to fly beyond a second, partner country to other markets. Due to our geographical position, these rights are essential for Australian airlines to fly beyond hubs in Asia and the Middle East to key markets in Europe and North America. In these circumstances, and to enable the establishment of new Australian airlines on the Australia-US route, Australia has not traded access for foreign airlines beyond Australia to the US in recent years. However, the Australian Government may seek to trade such access in the future, if it is judged to be in the national interest to do so.

New aircraft types will also increase the potential for more point-to-point services rather than via intermediate hubs, and will see the continued expansion of services by low cost carriers.

An increase in services by foreign airlines means placing increasing reliance on the safety surveillance of these airlines by foreign safety authorities.

A further complication is the increasing use by airlines of leased aircraft from countries that may not maintain regular oversight of that aircraft.

- How will new routes, technology and business structures change the profile of Australia's aviation market? Given Australia's evolving aviation sector, to which markets should the Australian Government seek improved access?
- How might the Australian Government best ensure all international airlines flying into Australia maintain the highest of safety standards? How might the Australian Government most effectively monitor and enforce safety standards of airlines that lease aircraft rather than operating their own aircraft?

Growing the regions and cargo

To encourage international airlines to fly to regional Australian centres, unlimited access to any Australian destination outside the four major gateways of Sydney, Brisbane, Melbourne or Perth continues to be offered during bilateral air services negotiations for foreign and Australian airlines. However, the success of this policy to date has been mixed.

Unrestricted access for dedicated cargo services to all points in Australia has also been sought. However, there are seasonal constraints in the transport of air freight that is transferred in the belly-hold of passenger aircraft, particularly during high-peak passenger movements.

- How might access to Australian destinations outside the four major gateways of Sydney, Brisbane, Melbourne or Perth be increased? What role could State governments and communities have in attracting foreign and Australian airlines to Australia's smaller international airports?
- Should Australia continue to pursue an "open-cargo" policy for dedicated cargo services? What cost-effective strategies could be employed to avoid delays in the transport of time-sensitive air freight?

Access to Australian markets

To date, Australia's air services agreements with other countries have not granted foreign airlines the right to conduct services wholly within Australia (cabotage) or for operations to/from Australia that do not return the aircraft to the state of registry (seventh freedom rights).

- Are the current restrictions on foreign airlines accessing the domestic market appropriate? Should we be encouraging more international airlines to operate from Australia to third markets?

Facilitation and border control

New generation aircraft such as the Airbus A380 and Boeing 787 will change the profile of Australia's aviation market. In particular, the Airbus A380 will result in large numbers of passengers arriving at one time at an Australian airport. A future challenge is how Australian airport infrastructure might adapt to manage such large influxes of passenger arrivals and departures.

A feature of the new type of aircraft is their increased range and ability to fly directly between secondary airports. This creates the possibility of new destinations becoming attractive to airline operators, particularly low-cost carriers. Some Australian regional centres see opportunities to become international tourist destinations and may consider significant investment in facilities to cater for international services. While expanding the number of direct international gateways may provide additional tourism opportunities, there are significant start-up and operational costs and issues to be considered.

- How might existing Australian airport infrastructure best adapt to the challenge of processing large influxes of passengers?
- What are the implications of expanded international operations at secondary airports, including for border security? Should Australia seek to limit international airline and charter operations to a defined set of international airports to ensure affordable border security?

1.2 Domestic services

Key challenges

The Australian domestic aviation industry was deregulated in 1990 to encourage:

- increased responsiveness by airlines to consumer needs;
- a wider range of fares and types of services to provide enhanced travel opportunities;
- increased competition and pricing flexibility, leading to greater economic efficiency in the industry; and
- a continuation of Australia's world-renowned safety record.

The objectives of deregulation have been largely met, with a more efficient industry providing greater responsiveness to most consumer needs, a greater range of services, lower fares and a high record of safety. In 2006-07, there were 45.3 million passenger movements on Australia's domestic airlines, compared to 15.3 million in 1986-87.

There is a significant level of competition in the Australian domestic airline industry, with services on major trunk routes now offered by four airlines offering a range of services and fare structures.

Australia already offers the opportunity for up to 100 per cent foreign owned domestic airlines to operate in Australia, which has seen significantly increased competition and investment in domestic markets, particularly in low cost carriers and regional airlines.

The current foreign ownership policy for Australian international airlines is designed to promote a strong Australian-based aviation industry and is also driven by the requirements of Australia's numerous bilateral international air services agreements. Foreign ownership in Australian international airlines is capped (for airlines other than Qantas) at 49 per cent individually or in aggregate, provided the proposal is not contrary to the national interest. In the case of Qantas, total foreign ownership is restricted to a maximum of 49 per cent in aggregate, with individual holdings limited to 25 per cent and aggregate ownership by foreign airlines limited to 35 per cent. In addition, a number of national interest criteria must be satisfied, relating to the nationality of Board members and the operational location of the airline.

- Does the deregulated domestic airline market remain the best model for delivery of Australia's interstate air services? Are there any constraints on the ability of Australian-owned airlines to remain competitive with foreign-owned airlines in the Australian market?
- Do the existing criteria strike the right balance between allowing Australian airlines to access global investment markets and promoting an Australian-based aviation industry?

1.3 Regional and general aviation

Key challenges – regional air services

Passenger traffic has grown strongly on major trunk routes, with passengers enjoying increased frequencies of service, modern aircraft and access to low fares. However, services to less populated areas have in many cases declined over recent decades. Air travel in remote areas is comparatively expensive and at a lower level of service. While regional air services have long been recognised as primarily a state and territory government responsibility, successive Australian Governments have played a role in maintaining some regional air services.

- What should be the basis of government and industry policy towards air services to regional and remote communities?
- Are security and safety measures adopted for major capital city trunk routes appropriate for regional and remote services? If not, what alternative measures could be adopted?

Key challenges – general aviation

The term General Aviation commonly refers to that part of the aviation industry that engages in activity other than scheduled commercial airline activity.

This may include charter operators, aeromedical operators, agricultural aviation businesses, aviation-based fire-fighting services, training and aerial work such as aerial photography and surveying. It also includes private, business, recreational and sports aviation activity and supporting businesses such as maintenance providers.

The Australian General Aviation industry is in transition, with some sections of general aviation growing while others are in decline with some individual businesses struggling to remain viable.

In particular, the recreational sector of the industry is growing strongly, which is a positive development in its own right but also a challenge for the traditional general aviation environment. The rapid growth of commercial airline activity worldwide, and the consequent demand for airline pilots, has created export opportunities for pilot training services. Australia's flight training industry needs to be able to meet this growth potential.

Microeconomic reform, and in particular the privatisation of secondary airports, has resulted in general aviation operators being exposed to a commercial charging regime not experienced under the previous system of government ownership.


The overall strength of the Australian economy, coupled with worldwide growth in aviation has also created increased demand for general aviation and regional airline pilots, flying instructors and engineers. There are many small businesses involved in general aviation and pilots have traditionally worked in the industry for low wages, sometimes under difficult conditions, as a means of accumulating flying hours towards their commercial or air transport pilot licences. These pilots are now being offered lucrative positions in other sectors and some general aviation operators are struggling to attract skilled staff in the current employment market.

Access to airport infrastructure outside the major capital cities is an increasing concern for general aviation. Most general aviation airports are owned by local councils and fall under state and local government planning and regulatory requirements. Ensuring those airports continue to invest to support the industry is critical.

The majority of Australians' experience of flying is in modern jet aircraft with the associated comfort and levels of safety offered by contemporary aircraft design. It may surprise many people to know that the average age of aircraft in the general aviation fleet is over 30 years and rising.

The issue of ageing aircraft in Australia is complex and multi-faceted. A range of economic factors affect decisions by operators to replace aircraft or to extend the life of existing aircraft. These include purchase price of new aircraft, exchange rates, aircraft production rates and profitability of operators.

The marginal nature of many small general aviation businesses has placed pressure on general aviation operators' ability to plan and invest for the longer term and they now face a difficult short-term challenge in upgrading their aircraft fleet.

- 
- How has micro-economic reform impacted on general aviation businesses and what strategies need to be put in place to ensure that access to airport infrastructure does not impede industry viability and growth? Do the needs of general aviation operators warrant any changes to airport regulatory and planning arrangements?
 - How can general aviation operators, particularly small businesses, establish viable business models that allow them to take advantage of current buoyant conditions in the aviation market? In particular, how do these businesses meet the increased cost of skilled labour and improve recruitment and retention of their skilled workforce?
 - What role should all levels of government have in protecting secondary airport infrastructure and in providing for new infrastructure?
 - How can the general aviation industry provide the necessary investment to renew the ageing aircraft fleet? Is there a role for governments?
 - Are additional measures required to ensure the continued safe operation of ageing aircraft?

1.4 Addressing skills needs in the aviation industry

Key challenges

The Australian aviation industry is currently experiencing a shortage of experienced pilots, aircraft maintenance engineers and air traffic controllers. The Australian industry is not alone in experiencing shortages of skilled labour. The aviation industry worldwide is experiencing shortages of pilots and instructors, engineers and air traffic controllers. The broader Australian labour market is tight, with vacancy rates low across many industries.

The skills shortage in aviation has not occurred overnight, and the shortage of a skilled workforce has the potential to cause economic, safety and planning problems for the aviation industry and the communities they serve.

Industry is responding to the short-term problems through expanded pilot cadet programs and targeted recruitment. However, there is a risk that the industry may respond to immediate problems without improving long-term workforce planning. The cyclical nature of the industry and its highly competitive nature has not promoted proper workforce planning.

The Australian Government has established Skills Australia as an early priority to help lift the productive capacity of the Australian economy and fight inflation.

- What strategies should the industry adopt to attract, retain and plan for their future skills needs to remain competitive in a tight labour market, and how can these be improved?
- What are the long-term training needs for the Australian aviation industry? Where will the future pressures lie? How do we ensure the industry remains internationally competitive in retaining key staff and in attracting new entrants to the workforce?
- How should the Australian Government and industry work together to ensure the needs of the aviation industry are taken into account in its broader skills framework?
- Are proposals such as a national industry run flying school to train flying instructors worth investigating and, if so, how might such a school operate?



2. Aviation infrastructure

2.1 Airport planning and development

Key challenges

The network of airports which handle domestic and international passengers and freight is a key element in the national economic infrastructure. Since privatisation of the major airports, investment in Australia's major airports has accelerated, with further major investments planned to meet anticipated growth and developments, such as new-generation aircraft. But airports are not islands, and the growth of the airports can impact on the communities surrounding the airports, particularly through increased noise and traffic. Equally, development outside the airport site can impact on the safety and efficiency of operations at the airport. A key challenge at major airports is to integrate planning for the development of the airport site with consideration of the impacts outside the airport.

Consistent with the experience in other countries, the recent developments at major Australian airport sites include substantial commercial development not directly connected with aeronautical uses. This non-aeronautical development can be important to diversify the revenue base of the airport operators and strengthen the capacity to invest in improved terminal, runway or other aeronautical facilities. However, there is a challenge to ensure the nature or extent of non-aeronautical investment does not prejudice either the safety of the airport and its operations or the long-term development of aeronautical uses on the site. The Australian Government's objective remains to ensure the leased federal airports continue to develop as airports.

While the continued operation and development of the leased federal airports are provided for under the Airports Act, other airports operate outside that regime. Changing demographics and developments in the industry such as the growth of point-to-point services by low cost carriers will continue to drive changes in the network of airports. No co-ordinated strategy has been developed to address the long-term requirements for airport infrastructure and the provision of security, facilitation or other services required at airports as services increase.

Land use planning and development approvals at major airports

Under the Airports Act, the key mechanisms to control planning and development are the Airport Master Plans (renewed every five years) and Major Development Plans. Approvals of plans can have significant implications for planning around the airport and for the provision of transport and other infrastructure. State and local government authorities are consulted, as are the local communities, in consideration of those plans but the final decision rests with the Minister for Infrastructure in the Australian Government. In some cases, conditions are imposed on an approval to address issues raised by authorities, such as a requirement for the airport to contribute to the cost of off-airport roadworks, but the approval of both on and off airport development is often an area of dissatisfaction between the different spheres of government.

Some airports work closely with local communities and local Councils, and the owners of Bankstown Airport in Sydney have a Memorandum of Understanding (MOU) with Bankstown Council. The MOU provides a useful framework for consultation and planning about Bankstown Airport issues as they affect the local community.

- Are the planning and development mechanisms under the Airports Act working effectively?
- How can we improve consultation with State and local authorities and with the community?
- Could the regulatory regime better facilitate genuine long-term co-operation between airport operator companies and state and local governments on land use planning?
- How can we better integrate investment on airports with the funding and construction of improved road and rail links to and from our airports?
- What mechanisms might be used to ensure an effective ongoing dialogue between airport operators and their local communities?

Non-aeronautical development on airport sites

The increasing scale of non aeronautical development proposed at airports is testing the appropriate balance between non-aeronautical developments and the operator's primary obligation to operate and develop the airport as an airport. At general aviation airports close to major cities, pressures arise where the return from non-aeronautical uses of land on the airport site may be greater than the return from aeronautical uses.

At airports such as Brisbane and Hobart, arguments have been raised that the scale of proposed retail developments on airport land adversely affecting other retail centres in the vicinity of the airport and the communities they support.

In February 2007, plans by Sydney Airport Corporation to develop a retail business complex near the end of the third runway were rejected primarily because insufficient consideration had been given to third party risk to public shopping at this location which was not otherwise connected to aviation activity. However, there is as yet no specific regulation on this issue and no nationally-defined standard of what constitutes an acceptable risk.

- How can the regulatory regime better ensure non-aeronautical developments do not compromise the aeronautical requirements of airlines and airports?
- How should the potential commercial impact for off-airport competition be taken into account in planning on-airport non-aeronautical development?

"Safeguarding" Australia's key airport infrastructure

There are a growing number of proposals for very tall buildings in the vicinity of flight-paths, just outside major airports. These developments are being promoted with little regard to their possible impact on safe aircraft operations. When challenged on such issues, developers are often unaware of the problem or the existence of Commonwealth regulations. To compound this problem, local planning provisions to protect the flight-paths and aircraft operations are rare.

Residential development in noise-affected areas around airports can lead to a high level of subsequent complaints and pressure for action such as insulation programs or restrictions on airport operations, including through curfews. While the Australian Standard AS2021 sets indicative noise standards for residential development, based on the ANEF system (Australian Noise Exposure Forecast), experience has shown that the ANEF system is not a completely reliable measure of noise and its impact. More informative measures are available to analyse and explain aircraft noise around airports. More conservative standards than those set in AS2021 might be appropriate in some cases, particularly in relation to the development of greenfields sites.

- How should guidance be formulated for airport operators and others about public safety zones for locations at significant risk of on-the-ground fatalities from aircraft operations?
- How can the mechanisms for guiding development around airports be improved to ensure potential issues from aircraft noise are fully addressed in planning?
- How can we better ensure off-airport developments subject to state and local government planning regimes, such as tall buildings, do not compromise the safe and effective use of aviation infrastructure?

Future airport needs

While the existing network of airports is coping with current levels of operations, continued growth will test the capacity of airport infrastructure.

New patterns of operation will add to emerging pressures for new airports or airport expansion. Passenger carriers will continue to develop point to point services away from the main hub airports. In line with overseas experience, low cost operators will look for alternatives to the main airports around capital cities. Continued growth of services at secondary airports such as Avalon or Williamtown (Newcastle) raises issues about provision of additional air traffic services and regulation of safety and security. Where future international operations are proposed, an additional range of issues arise in relation to passenger facilitation – immigration, customs and quarantine inspection.

The need for additional airport capacity for Sydney in the future has been acknowledged for many years, but the challenge remains to identify a suitable site. The Australian Government does not support building an airport at Badgerys Creek. The 2009 review of the Sydney Airport Master Plan provides an opportunity to consider current and future capacity issues.

For quick and efficient movement of air freight, a network of airports suitable for overnight operation is essential. Night-time operations at Sydney, Adelaide, Essendon and the Gold Coast airports are strictly limited by curfews.

As development around airports proceeds and as aviation operations continue to grow, there will inevitably be calls for new curfews or other limitations on night-time operations. Alternatives to curfews could be considered, such as tighter restrictions on the operation of noisier, marginally compliant aircraft types to certain airports.

- How can future airport needs best be addressed, recognising the importance of airports as an element of the national economic infrastructure?
- What are the current and future pressure points in relation to airport capacity?
- Can the growing use by civil aviation of joint user or Defence owned airports be safely and effectively accommodated?
- How can the protection of the communities around airports from undue aircraft noise best be addressed as demand for services continues to grow?

Pricing of airport services

The consumers of airport services vary significantly depending upon, for example, whether the airport is a city or regional airport, tourist destination or freight hub. The major users of airport services are the airlines, freight companies, retail and tourism businesses and, of course, passengers. A regulatory framework for the pricing of airport services has been in place since the privatisation of Australia's major airports and this has evolved over time.

There continues to be some debate about whether the right balance is struck between airports and airlines when they settle commercial arrangements for access to services. There remains some criticism from the public about the price of some services, such as car parking. The challenge for governments is to get the balance right between ensuring airports have regulatory certainty to undertake significant infrastructure investment while also ensuring the prices they charge to users remain fair.

The regulatory framework for airport pricing is largely focussed on those airports that fall under the Airports Act. However, there are regionally significant airports that are not subject to the Airports Act and, as a result, are not subject to any price or quality of service monitoring.

- As the aviation industry grows and changes with the advent of low cost carriers and other innovative service providers, should changes be made to the regulatory framework for the pricing of airport services and monitoring of service quality?
- Is there sufficient transparency in the setting of charges for services at those airports that are not subject to price or quality of service monitoring?

2.2 Air traffic management

Key challenges

Australia has responsibility for eleven per cent of the world's airspace. We need continued investment in modern air navigation infrastructure, including satellite technology, to enable further improvements in aviation safety while meeting the air traffic capacity demands of the 21st century aviation industry.

Future communication, navigation and surveillance systems will be driven both by better air traffic control management on the ground and by better equipment on board aircraft. This will allow more flexible and efficient routes to be flown and provide greater awareness of other air traffic and other potential airspace conflicts in-flight.

Systems under consideration include technology and options such as Automatic Dependence Surveillance – Broadcast (ADS-B), Global Navigation Satellite Systems (GNSS), Airborne Collision Avoidance Systems (ACAS), and Approach with Vertical Guidance (APV).

In setting the direction and priorities for future air traffic management policy, Australia needs to take account of developments in Australia and internationally, and actively engage in International Civil Aviation Organization's (ICAO) consideration of key issues. We must also consider how we will adopt the ICAO Global Air Traffic Management Operational concept.

Investment in a skilled workforce is essential to ensure Australia has an air traffic management system capable of meeting current and future demands. This will involve targeted strategies to attract, retain and train air traffic controllers and other critical staff performing key roles in our air traffic management system.

Changes in the way in which future air traffic management is delivered and the associated infrastructure requirements will impact on the aviation industry. Effective consultation with industry is essential to ensure that changes are practical, that the investment required is reasonable and that funding mechanisms are put in place where appropriate to assist the transition.

Australia has taken tentative steps towards greater coordination between civil and military operations at airports and air traffic control towers around Australia. However more work needs to be done as these arrangements have thrown up a number of challenges. Responsibility for and the availability of air traffic control systems and other services at these locations, and better, more flexible use of airspace, are just some of the issues that need to be addressed.

Increasingly, regulatory decisions in airspace and air traffic management should be based on transparent, accountable, risk management-based processes, always having regard to the principle that safety is paramount.

Australia lacks a clear Government endorsed national plan for the development of our future air traffic management system. A plan which focuses not just on the immediate challenges, but also our medium to long term objectives and strategies for how they can be met, would provide a basis for informed decisions on investments in the system and in aircraft equipment. Safety, security, productivity, cost-effectiveness and environmental issues could all be considered in developing the plan.

- How can Australia's air traffic management system best take advantage of new and emerging satellite navigation technologies? What is the role of government in the take up of the new technologies? Are there any regulatory impediments to maximising the use of new and emerging surveillance and navigation technology?
- How do we enhance both air traffic management safety and capacity and efficiency?
- How effective have Australian regulatory agencies been in pro-actively assessing the Australian air traffic management system and setting clear risk-based safety and efficiency outcomes requirements, having regard to international developments?
- Are we effectively aligning airspace classifications and the level of services and facilities provided to reduce risk to passenger transport operations? Can we better identify risk factors?
- How do we ensure the development of Australia's air traffic control systems is compatible with global and regional systems?
- How can Australia's air traffic management development be aligned with broader policy considerations such as national security and the environment?
- What steps need to be taken to ensure the retention, training and future supply of skilled air traffic controllers and associated professionals?
- What should a national air traffic management plan cover and who should be responsible for its development and implementation?



3. Aviation safety

3.1 Safety regulation and regulatory reform

Key challenges

A safe aviation system is essential for community confidence and the future development of the industry. To maintain Australian aviation's excellent safety record the Australian Government and all aviation operators need to be equipped to meet the challenges of a growing and rapidly changing aviation market.

Responsibility for aviation safety does not rest solely with the Civil Aviation Safety Authority (CASA), the safety regulator. In the first instance, the responsibility for safe operations rests with operators. Maintaining an appropriate safety culture is vital, and needs to be driven from the top of an organisation. The modern approach to regulation includes an emphasis on accountability, risk management and Safety Management Systems (SMS), which requires operators to examine all aspects of their business to build safety in. Subject to minimum standards, it allows some flexibility for the business to design safety systems to meet their particular context.

As aviation safety regulator, CASA has an important and sometimes complex role. CASA needs to work with the industry and encourage good safety practices. At the same time, it needs to set and enforce standards which ensure safety and protect the public. CASA needs to relate effectively to the industry while also being able to act decisively where there are significant safety concerns. The governance arrangements for CASA should recognise and support these dual roles.

For some ten years, CASA has been revising the substantial body of aviation regulations. CASA has sought to pursue a more modern outcome-based approach to regulation, reducing the level of prescription where feasible and aiming to better align regulations with areas of known risk. While significant progress has been made, concerns have been expressed within the industry about the pace and extent of reform. This has recently been the subject of a review by a taskforce headed by Dr Allan Hawke.

Concerns have also been identified about tensions in the working relationship between CASA and the ATSB. CASA and ATSB are both focussed on aviation safety, but have different, distinct roles in the system. Experience world-wide indicates that an element of tension is always likely to exist between an air safety investigation agency and the regulator, and the Australian Government is concerned to ensure its agencies work effectively together in the interests of safety. A series of recommendations for improvement were made in a report by Mr Russell Miller following a review in late 2007. The Australian Government has called for public comments on Mr Miller's recommendations.

Australia plays a key role in setting international aviation safety standards through the International Civil Aviation Organization (ICAO). Australia seeks to maximise the effectiveness of its role internationally, balancing a keener focus on our region with continuing engagement with leading aviation participants such as the European Union and the United States.

An emerging issue in global aviation is the identification of countries that are unwilling or unable to provide appropriate safety oversight of airlines and aircraft. At the same time, safety regulation must keep pace with the changing nature of the airline business (e.g. airline businesses which do not operate their own aircraft but rely on leasing aircraft registered in other states, and can therefore operate in a manner similar to what is known in maritime circles as "flag-of-convenience" shipping).

- Are there ways in which the approach to Safety Management Systems could be enhanced?
- Should the governance arrangements for CASA be strengthened to better support the role of the safety regulator?
- How can CASA strengthen the way it relates to industry while meeting the community expectations of a firm regulator?
- How can the Australian Government and industry ensure CASA completes its long-running regulatory reform process as soon as possible, to give clarity to industry and to clear the way for new approaches to meeting the regulatory challenge?
- What changes could be made to improve how Australia's aviation safety agencies work together?
- What steps can the aviation industry as a whole take to ensure it maintains safety standards as it grows and diversifies?
- What steps should be taken to ensure Australia maintains a high standard of aviation safety in the context of global developments?
- What issues should a 21st century aviation regulator be focussed on?
- Is self-administration a key factor in the growth of recreational aviation? Is there more scope for some parts of the industry to self-administer? What are the opportunities and risks for the industry, regulators and the community in greater 'self-administration'?



4. Customer and community protection – addressing the impacts of aviation

4.1 Aviation emissions and climate change

Key challenges

Greenhouse gas emissions from aircraft engines are the subject of significant public attention in response to the forecast growth in air traffic, scientific evidence about the impact of climate change and escalating community concern.

Carbon dioxide emissions from aviation account for about 2 per cent of global emissions. Aviation's contribution to climate change is considered to be greater than its carbon dioxide emissions alone because of other greenhouse gases emitted, the altitude where most aviation emissions occur and other associated effects.

New aircraft are 70 per cent more fuel efficient than 40 years ago and 20 per cent more efficient than 10 years ago. With global demand for aviation growing at about 5 per cent per year and efficiency gains from new technologies such as more efficient air traffic control and new aircraft designs running at about 1-2 per cent per year, greenhouse gases from aviation are projected to grow at around 3 per cent per year for the foreseeable future.

Historically, measures to reduce aviation emissions have primarily been driven by the commercial imperative to reduce fuel consumption and the associated cost. There are currently no legislative or regulatory requirements for the aviation industry to reduce aviation greenhouse gas emissions. However, to date, industry has taken voluntary steps to reduce greenhouse gas emissions through improved efficiency and by offering carbon offsets to airline passengers. In addition, Australia has adopted the ICAO concept of Required Navigation Performance (RNP) to reduce fuel burn and increase efficiency.

Emissions from domestic and international aviation sectors are treated separately under the United Nations Framework Convention on Climate Change processes. Also, under the Kyoto Protocol, the emissions reduction strategies and targets for developed countries are different to those for developing countries. Having ratified the Kyoto Protocol, the Australian Government is now playing a constructive role to help reduce global greenhouse emissions and tackle climate change.

For international aviation emissions, Australia is committed to working through the International Civil Aviation Organization (ICAO). Australia is one of 15 countries on the high level ICAO Group on International Aviation and Climate Change (GIACC) which is developing a Programme of Action to recommend to a special meeting of ICAO in 2009.

Technological advances are not proving sufficient to negate the ongoing growth in aviation emissions driven by increasing demand. Complementary market-based measures such as emissions trading and/or carbon offset schemes will be needed if aviation is to restrain its carbon footprint.

An Australian Emissions Trading Scheme (ETS) that is planned to be introduced by 2010 is expected to be the main policy determinant for the domestic aviation sector's response to climate change mitigation. The nature of the response will be influenced by interim emissions targets established under the ETS and the magnitude of associated costs for meeting these targets.

- What practical steps can the aviation industry take right now to reduce greenhouse gas emissions? Are carbon offset schemes enough?
- What measures should the aviation industry be taking in the short-medium term to reduce emissions, such as clean engine technology and clean aviation fuels?
- Given the international nature of aviation, what opportunities are there to minimise greenhouse emissions and trade emission permits through emission trading schemes?

4.2 Aircraft noise

Key challenges

Aircraft noise remains a sensitive issue for communities around many airports. While the aviation industry has lowered the amount of noise individual planes make with significant improvements in the design of aircraft, the increase in the number of flights has increased the impact of noise.

Land use planning around our airports is guided by the Australian Noise Exposure Forecast (ANEF) system, but questions have been raised about the reliability of the ANEF system and the reliability of long-term ANEF forecasts as a basis for predicting the impact of aircraft noise. There is no general requirement for airports other than the 22 federally leased airports to publish forecasts.

To assist with flight scheduling and aviation investment and to help local planning authorities, the aviation industry and communities need planning certainty about which airports in the future will remain curfew free. The growing importance of the overnight air freight industry also requires certainty about which airports will remain curfew free to facilitate effective international and domestic overnight freight networks. For example midnight is now often a domestic peak time at Perth and Darwin airports to enable efficient business connections to key east coast and international markets.

Australia now has four major airports with statutory curfews which preclude certain aircraft operations between 11pm and 6am. The Australian Government will not consider any relaxation of these curfew restrictions.

Airservices Australia currently has responsibility to monitor and report on aircraft movements at various airports and has a Noise Enquiry Unit to assist the community.

- Could the ANEF system be improved or be supplemented by other planning tools to better explain the impact of aircraft noise? Should State and local governments play a greater role in aircraft noise management? What should be the responsibilities of airports?
- Should emphasis be given to airport/community partnership approaches, for example, based on locally negotiated agreements rather than generic legislative approaches?
- Can techniques for sharing information on aircraft noise impact be further developed to improve the supply of information to potential property purchasers and other affected parties?
- Which airports in Australia need to remain curfew free and under what conditions? Can operations at airports be better managed to ensure the community is protected while at the same time providing for night time access?
- How effective are the current noise enquiry and noise complaint services? Are there more effective ways to deal with people's complaints and requests for information? Can the services be better provided?



4.3 Consumer protection

Key challenges

Since the deregulation of the Australian domestic aviation industry in 1990, conditions of travel for airline passengers have been subject to the *Trade Practices Act 1994* and State consumer laws.

The business models of domestic airlines have evolved over the last ten years, with a growth in low cost carriers offering lower fares and more basic levels of services. The travelling public has responded to these new products with enthusiasm. There are approximately 40 per cent more Australians flying domestically than before the collapse of Ansett in 2001.

However, the low cost airline model has created challenges for airlines in managing customer expectations and delivering the travel experience passengers expect. Customer expectations are often influenced by previous experience on full-service, higher cost airlines.

Awareness of terms and conditions on airline tickets is becoming increasingly important, as consumers are sometimes unaware of the restrictions on budget airfares, such as being unable to change flights without penalty, or having particular check-in requirements.

- Are existing consumer protections and airline procedures adequate in dealing with these challenges? Is it possible to improve passengers' travel experiences without adding unnecessary costs to airlines that would inevitably need to be passed on to all passengers?
- How can airlines ensure passengers are appropriately informed about restrictions? Furthermore, are existing airline terms and conditions reasonable?

4.4 Disability standards

Key challenges

The *Disability Standards for Accessible Public Transport 2002* (the Transport Standards) specify levels of service, measures and actions that public transport operators must undertake to meet their obligations under the *Disability Discrimination Act 1992* (DDA). The purpose of the Transport Standards is to facilitate the removal of discrimination from public transport services. However, concerns have been raised in a recent review of the Transport Standards of difficulties experienced by people with a disability while undertaking air travel, both on aircraft and within the airport.

- Are the current Transport Standards adequate to ensure the removal of discrimination from air travel?
- Are there recommendations arising from the recent Transport Standards Review that might be implemented to improve services for people with a disability?
- Are current complaint and compliance mechanisms effective?

4.5 Compensation arrangements in the event of an accident

Key challenges

The Australian Government has a primary role in setting minimum levels of liability and insurance for airlines, so that people who suffer loss in the event of an aviation accident can quickly gain access to fair compensation. The Australian Government also regulates airline liability for damage to third parties on the ground.

The Australian Government introduced legislation in March 2008 to update the compensation arrangements for passengers. The legislation will implement the Montreal Convention and update the levels of compensation for passengers travelling on most international flights.

Implementation of the Montreal Convention provides an opportune time to undertake a comprehensive and coordinated review of Australia's overall carriers' liability and insurance arrangements to ensure it reflects contemporary standards.

Some insurance companies have foreshadowed a possible contraction in the insurance market for certain risks, and airlines will need to ensure they are able to continue to meet the varying insurance requirements that are imposed by Australia and other countries.

The Australian Family Assistance Code was launched in 2002. It is a voluntary code which provides minimum standards relating to the immediate response of an airline to an aviation accident. Details of the code can be found at: <http://www.infrastructure.gov.au/aviation/legislation/policy/family.aspx>

- Are Australia's domestic arrangements for passenger and baggage/cargo liability appropriate in the context of international developments, including the Montreal Convention? Is there a better system or model for compensating people?
- Are the minimum insurance standards appropriate? Should the system be extended to require insurance for third party surface damage? Does the aviation industry face any difficulties in accessing appropriate levels of insurance to cover their potential liabilities?
- Is the voluntary Family Assistance Code an appropriate measure to ensure airlines meet their responsibilities in the event of an aviation accident and to what extent are airlines complying with the Code?



5. Aviation security

5 Aviation security

Key challenges

Aviation security is an essential component of the aviation system. This is because terrorists and other groups continue to view aviation as an attractive target. The ongoing threat from such groups has seen aviation security systems change substantially in Australia and internationally since 11 September 2001.

Our aviation security system must adapt quickly to new and emerging threats while supporting industry growth and meeting the needs of passengers. Some measures essential to security have increased industry costs and been passed on to travellers. The challenge for governments and industry is to find new ways to simultaneously address security, cost, travel time and travel comfort. This challenge is magnified by the diverse needs of an industry that varies from small general aviation aircraft operating out of remote areas through to high capacity jet aircraft servicing international destinations.

- Could Australia improve its approach to protecting air travellers from threats while facilitating quick and efficient travel? How can we improve the system to improve both security outcomes and passenger facilitation through airports?

International developments

Specific security requirements for international flights can be set by any country to which an aircraft is flying. For example, the US has requirements that result in additional screening of passengers at international airports serving US bound airlines. In response to new threats or technical developments the International Civil Aviation Organization may also impose new security measures to which Australia must have regard.

In 2006 new requirements were introduced governing the amount of liquids, aerosols and gels that passengers can take onto aircraft. This stemmed from a new terrorist threat to international flights. However, each country and/or market has slightly different requirements. Against this background:

- Is enough information available for passengers to make well informed choices before they travel in order to comply with security requirements?
- Can more be done at our international airports to assist passengers to comply with security requirements?
- Should more be done at airports where passengers leave for Australia to make clear our own security requirements?
- What can be done by government and industry to achieve greater international harmonisation of aviation security measures?

Threat

Aviation remains a target for terrorists and this is likely to remain the case for the foreseeable future. However, the advent of tighter aviation security has seen terrorists move to attack other targets, including urban mass passenger transport systems. Taking this into account:

- Should aviation security remain the key focus for government and industry?
- Should more attention be paid elsewhere?
- Is enough being done to enhance security in the aviation sector?
- Are we thinking broadly enough about the likely threats we may face and how they may be countered?

Efficiency and costs

The Australian Government has made a \$1.2 billion commitment to aviation security since September 2001. On top of this, aviation security regulations have required industry to spend substantial sums on security.

- Could government spending on security be spent more efficiently? Could more focussed security measures provide a higher level of security?
- Could the requirements imposed on industry be changed to achieve similar security results at less cost, or greater security at the same cost?
- Is the current charging regime for provision of security screening services equitable between major metropolitan airports and regional airports? Should alternative arrangements be put in place?

Growth and industry development

There are changes occurring in both the domestic and international aviation industry. These include shifting travel patterns, the emergence of new domestic and international routes and hubs, and a wider range of aviation products (including a greater variety of aircraft). For aviation security these changes raise issues such as:

- Whether current passenger security screening requirements based around jet aircraft should be extended to non-jet aircraft of similar capacity, speed and weight?
- Is the security infrastructure at airports adequate?
- The current focus of the aviation security system is regular passenger transport services. Should it be extended to include aircraft providing, for example charter services?
- Should the cost of aviation security at particular airports be more evident to passengers?
- Could industry manage its costs more effectively?

Technology

In aviation security, new technologies are most often associated with new ways to screen passengers, luggage and cargo. New technologies also provide new ways to secure airport perimeters, to manage staff accessing airports, and to monitor people at and around airports. A wide range of new technologies exists to enhance aviation security and many of these technologies are being trialled and implemented at Australia's airports.

Technological and commercial developments do not always enhance security. Terrorists can employ technology to create new threats to aviation. New technologies may also be reflected in aircraft types which open up additional routes and present new challenges in terms of the sheer number of passengers arriving and departing airports at the one time.

Our framework for dealing with technological developments poses important challenges:

- Should we introduce new technologies for passenger screening that can improve processes even if they are more invasive or costly?
- Biometrics are an effective way to manage access arrangements at airports and an improvement on current practice. Is there value in introducing biometrics into Australia's airports for people working there?
- Should we expect the same security technology standards from all airports regardless of location, the traffic levels at the airport, and the costs?

Passenger experience

Many passengers have commented on the queue for passenger screening at airports. Yet passenger screening is a small part of the overall security effort at our airports.

- How can we improve/optimize passenger screening arrangements within Australia?
- Should special arrangements be put in place to enable frequent travellers who understand security requirements, often business travellers, to move through passenger screening more quickly? What type of special arrangements, if any, would be appropriate?
- Do we adequately address the requirements of people with special needs?
- Are we consistent enough in the delivery of services to passengers?

Legal requirements

The legal regime for aviation security has imposed a series of requirements on industry, passengers and people working in the industry. These requirements are at times seen as being excessive. This raises questions about the appropriateness of the legal framework that has developed over the past decade or so.

- Is the current regime too heavy handed? Could it provide a similar level of protection while reducing demands on passengers, industry and workers?
- Are the legislation and regulations in need of simplification?

Air cargo security

The security of air cargo is an important element of Australia's aviation security effort. Since the Wheeler Review's September 2005 recommendation to strengthen air cargo security, over \$100 million has been committed to this task.

- Has enough been done to enhance air cargo security? Are there alternative approaches to air cargo security that should be examined?
- Is the Australian approach to air cargo security consistent with the highest international standards?

Identity and background checking

Identifying individuals of concern who are seeking to work in trusted positions in the secure areas of Australian airports has been a challenge for many years.

The Aviation Security Identification Card (ASIC) regime, which started in 1998, was designed to mitigate vulnerabilities related to the use of 'trusted insiders' who may facilitate terrorism or unlawful interference against aviation.

The regime commenced with a relatively simple criminal history background check conducted once every five years. Recent years have seen a significant strengthening in the background checks now undertaken, the eligibility criteria applied, the frequency of checks, and the security features on the card itself.

Over 90,000 ASIC holders with a requirement for unsupervised access to the secure areas at our airports, have been background checked in Australia.

While the ASIC background checking regime is acknowledged as an important layer of security it can be further improved. This is reflected in the current review of the ASIC background checking regime being conducted by the Office of Transport Security in consultation with industry. Areas of policy development priority include:

- What can be done to improve the robustness and timeliness of background checks, particularly for applicants from overseas?
- Should the ASIC eligibility criteria be further strengthened?
- What should be the relationship between 'background checking' of staff and access control arrangements?
- Should background checking be extended to include managers/directors of companies with employees who hold an Aviation Security Identity Card?