

Confidential

# The economic significance of Alice Springs Airport

Prepared for NT Airports Pty Ltd

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**ACIL Tasman**

Economics Policy Strategy

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## Executive summary

### Introduction

Alice Springs Airport (‘ASA’) is a significant domestic airport, servicing the needs of the Central Australia region. ASA provides facilities for domestic and regional passenger airlines, and for general aviation and helicopter traffic. It operates curfew-free 24 hours per day, although not manned at night except for security. The terminal is located 14 kilometres south of Alice Springs on a site of approximately 3,550 hectares.

This study was commissioned by NT Airports P/L to describe and measure the economic impact of Alice Springs Airport on the local region and in the wider Northern Territory economy, both now and in the future. NT Airports is the lease holder of the Airport, and this study was undertaken as part of a review of the Airport master plan.

The study was undertaken by ACIL Tasman, assisted by the outcomes of a survey of businesses conducted by NT Airports and visitor information provided by the Northern Territory Tourist Commission. ACIL Tasman constructed an input output model of the NT economy, based on 2001-02 data, for the purposes of this study.

Analysis is focussed on Alice Springs Airport, and all data and assessments exclude other regional airports such as Connellan Airport at Yulara.

### Economic impact

The following table sets out summary quantitative findings in relation to estimated current and projected Alice Springs Airport impacts on the local economy:

Table 1 **Annual airport-related business impacts**

	Total 2002/03	Total 2023/24
Output (\$m)	79.2	128.0
Income (\$m)	21.2	33.2
Employment (jobs)	505	804
Value-added (\$m)	41.4	65.7

*Source:* Survey of businesses by NT Airports; analysis by ACIL Tasman. Note all financial estimates throughout this report include GST, excepting output and value-added calculations.

## Airport businesses

Many businesses owe at least some of their activity to the Airport. These include providers of airport infrastructure (the largest being NT Airports itself); aviation support services, which include operators who provide airlines with catering, as well as businesses engaged in aircraft maintenance and fuel providers; retailing, of which the biggest component is land transport and which also includes cafes and gifts franchises within the terminal; and off-Airport activities, such as bus and coach services and Town-based booking services.

Demand for such services is driven by the airlines and aircraft operators. The major scheduled airlines, Qantas and Virgin Blue, account for most of the 572,000 passengers who utilised Alice Springs Airport in the most recent full year for which data are available.

Charter services as well as regular passenger transport are provided by a number of smaller operators, and airfreight and courier companies also use Alice Springs Airport facilities.

## Airport output, income, employment and value-added

Input-output multipliers for the Northern Territory were applied to business activity data collected in the above-mentioned survey and from information provided by the Northern Territory Tourist Commission. Four types of input-output multiplier were used, being output, income, employment and value-added. Direct and flow-on effects were thus estimated. Estimates throughout may be regarded as conservative, as individual company expenditures or revenues which could not reliably be estimated were omitted, resulting in underestimates of total Airport impacts.

Alice Springs is estimated to support, directly and indirectly, more than 500 jobs. Corresponding annual output (or revenue) impact on the Territory's economy is almost \$80 million, and associated value added (or contribution to GDP) is estimated at \$41 million. Approximately half of the value added (\$21 million) relates to employees as wages and other income.

Both the amount of the value added and the employment generated were estimated to be equivalent to around half of a per cent of the corresponding totals for the Northern Territory as a whole. As such, it is clear that in its present configuration, Alice Springs Airport is a highly significant economic entity within the Northern Territory.

### The Airport and tourism

In addition to business associated directly with the Airport, there is also activity generated by visitors to the region who arrive by air. The Northern Territory Tourist Commission estimates that 170,000 tourists arrived into Alice Springs by air in 2002/03, and spent a total of \$88 million.

The \$88 million expenditure translates into a \$109 million increase in output, leading to \$67 million in value-added and a total of 837 jobs. It should be noted that some of these benefits have already been captured in the Airport's economic impact described above: in net terms, an additional \$50 million value-added and 615 jobs for the Territory are estimated.

### The effect of additional visitors and flights

The outcomes of attracting more tourists via air travel – on the basis of tourist spending alone – were estimated. It was found each additional visitor adds \$397 of value to the local economy. Furthermore, the direct and indirect effects of an additional 200 visitors create another job in the NT.

The combined economic effects can be used to estimate the likely impact of additional flights into Alice Springs Airport. The example used was an additional weekly domestic flight of a Boeing B737-800. Table 2 summarises the incremental economic effects, in terms of the value-added and employment, of between one and ten additional flights per week.

Table 2 **Economic effects of additional flights of a Boeing B737-800**

No. of extra weekly flights	Value-added (\$m)	Employment
1	2.92	36
2	5.84	72
3	8.75	108
5	14.59	180
10	29.18	360

### Other economic and social impacts

Airport activity affects social and other elements not apparent in accounts and the flow of payments. Such effects were identified during consultations with a diverse group of stakeholders, including providers of aerial medical services, representatives of the tourism, freight and construction sectors, and community representatives.

Important effects identified include :

- Amongst Australian airports, Alice Springs has the 14<sup>th</sup> highest number of small and medium aircraft movements. General aviation and club facilities means there is apron parking for over 70 aircraft;
- Aircraft-based medical services play a key role in central Australia. In 2003, the Royal Flying Doctor Service recorded 1,519 departures of its aircraft from the Airport. The Service reports previous annual growth in departures of between three and seven per cent;
- The Airport enables weekly military supply flights to be undertaken to service the Pine Gap joint Australia/USA intelligence facility; and
- Alice Springs Airport plays a vital role in sustaining remote communities in Australia's central regions.

### Alice Springs Airport in the future

BAA, the world's largest airport operator and a shareholder of NT Airports, prepared 20-year passenger and aircraft movement forecasts for the Airport. These estimates of the number of international passengers, international aircraft movements, domestic passengers, domestic aircraft movements, general aviation movements and freight tonnage were used to scale up current levels of business activity to identify possible activity levels in 2023/24.

Judgements were made regarding those factors which were likely to most strongly influence the revenue of each business. The scaled-up revenues were then combined with the Input-Output Table to estimate the economic activity likely to be generated by the Airport in the year 2023/24.

On this basis, it is expected that Alice Springs could generate 800 jobs in the NT economy in 2023. Associated annual output (or revenue) is estimated at \$128 million, with associated value added (or contribution to GDP) of the order of \$66 million per year. Approximately half of the value added (\$33 million) is estimated to relate to employee wages and other income.

For each impact indicator, "most likely", "low" and "high" estimates were derived, revealing significant variation between "low" and "high" outcomes. Taking the example of jobs, there could be a difference of as much as 250 jobs depending on the how airport activity develops over the next 20 years. To the extent that activity is encouraged towards the "high" scenario, there are clearly significant potential gains to the NT economy.

The effects of tourism expenditure in 2023/24 were also estimated. It was estimated that a total of 1,100 jobs and \$100 million of value-added could result from tourists arriving by air (under the "most likely" scenario).

## Conclusion

This report provides an indication of the extent to which the Alice Springs Airport contributes to the NT economy. Through a comprehensive survey and consultation process, and by developing an updated input-output table for the Territory, ACIL Tasman has been able to describe the impacts of the Airport directly and indirectly upon on the NT economy's value added and employment.

Through the activities of directly related businesses, and their interactions with the wider economy, the Airport accounts for approximately half of one per cent of the NT economy. The heavy reliance of the tourist industry on the Airport is reflected in the estimate that more than another half of one per cent results from air-related visitation.

The significance of the Airport to the Territory is more than just economic. It forms a critical means of connecting communities in remote areas, and provides a conduit for medical assistance. It provides a base upon which to build Alice Springs' position as a regional transport hub, and makes Alice Springs an attractive place to do business.

As Alice Springs seeks to build upon its national and international position, the Airport will take on increased significance as a key part of the Territory's infrastructure. Initiatives to increase air activity and tourism numbers will increase its vibrancy, and complement the development of the NT economy.

## 1 Introduction

This study was commissioned by NT Airports Pty Ltd, lease holders of the Alice Springs Airport, to describe and measure the economic impact of the Airport now and also its likely impact in twenty years time.

In 1999, NT Airports prepared a Draft Master Plan and Draft Environment Strategy for Alice Springs Airport in accordance with the *Airports Act 1996*. These were approved by the Commonwealth Minister for Transport and Regional Services in September 1999. The Master Plan remains in force for five years, and a revised Draft Master Plan must be submitted to the Minister by September 2004.

The current Master Plan includes general comment about the economic significance of the Alice Springs Airport, but no specific analysis is conducted. NT Airports has determined that revising the Master Plan provides an opportunity to conduct such analysis.

The analysis follows a methodology and scope similar to economic studies of other airports. It involved describing and assessing the economic impact of:

- The operations of business and other organisations providing airport activities;
- The expenditure of air travellers utilising Alice Springs Airport;
- Other organisations and groups that make heavy use of the Airport, showing their linkages with the Airport and how this affects Alice Springs and its surrounds; and
- The airport as a whole.

Many of these impacts are assessed in terms of their effect on output, income, value added, and employment.

Many insights can flow from such analysis. An airport is a much larger economic entity than is usually realised. The direct activities conducted on or in relation to an airport are substantial and the indirect efforts pervasive. This study will hopefully improve the wider community's understanding of what happens at the Airport and its importance to their future well-being.

## 1.1 The context and conduct of the study

In conducting the study, ACIL Tasman reviewed publicly available information from NT Airports, the Northern Territory Government (including the NT Tourist Commission) and the Commonwealth Government (including AirServices Australia). Available data relevant to the measurement of the Airport's impact were assessed, utilising a new input-output table for the Northern Territory developed by ACIL Tasman for the purposes of this study.

In addition to the available information, considerable amounts of data needed to be collected. Accordingly, in consultation with ACIL Tasman, NT Airports surveyed most of the Airport-related businesses to ascertain their activities, turnover and employment. Also, ACIL Tasman interviewed representatives of airport-related sectors.

Additionally, ACIL Tasman drew extensively on the stated plans of NT Airports and of other key businesses, as well as twenty-year passenger and flight projections. Where gaps existed, estimates were made based on relationships with available data, judgement, and our experience elsewhere; we have described our methods so that refinements may be made later if new information comes to hand. This material formed the basis of the assumptions made for the projections.

## 2 Airport overview

Alice Springs Airport, located 14 kilometres south of Alice Springs, is a significant domestic airport servicing central Australia. It provides facilities used by tourists and other visitors to central Australia, air services for remote communities (for which Alice Springs serves as the regional capital), the joint Australia/USA intelligence facility at Pine Gap, general aviation and helicopter traffic, and by participants in ballooning and other recreational activities.

The terminal is located on a site encompassing around 3,500 hectares, some of which could play an important future role in meeting the needs for serviced industrial land in Alice Springs and within the broader regional economy. The core infrastructure at the Airport includes:

- A main runway extending over 2,438 metres;
- A 10,000 square metre terminal building, which was completed in 1991 and is operated by NT Airports;
- Ten aircraft parking stands on the main apron;
- Apron parking capacity for 70 aircraft, plus a number of maintenance hangars and associated support infrastructure; and
- Refuelling and other service facilities.

Alice Springs Airport is managed and operated by NT Airports Pty Ltd, which in turn is managed by Airport Development Group Pty Ltd. In 1998, NT Airports obtained a 50-year lease plus a 49 year option from the Commonwealth Government to manage and develop the civil area of Alice Springs Airport.

Since the beginning of the lease, NT Airports has embarked upon a capital expenditure and airport development program which includes general terminal refurbishment as well as:

- Relocation of Australian Protective Services personnel and facilities into the refurbished airport management building outside the main terminal in April 2003, facilitating provision of security services at the Airport for a further 10 years;
- Renegotiation of retail facility tenders to provide for enhanced retail arrangements. This includes a 10-year contract with Spotless Services Catering, completion of a combined new bar and cafe facility incorporating Todd River Ale House and Cafe Alice, and establishment of a precious stones and metals retail outlet;
- Leasing 71 square metres of terminal administration space to Virgin Blue on a 5 year plus 5 year basis from June 2003;

### The economic significance of Alice Springs Airport

- The development of new routes, including Virgin Blue's direct services from Sydney in June 2003;
- Relocation of Alice Springs Airport management into the former Ansett offices following refurbishment in January 2003; and
- Commencement of transportable home construction by "Murray River North", a W.A. based company which has entered into a long term lease for a site at the Seven Mile area of the airport.

The general layout and main features of Alice Springs Airport are shown in Figure 1.

Figure 1 **Photograph of Alice Springs Airport**



*Data source: NT Airports*

The Airport can accommodate aircraft of all sizes, including Boeing 747s. Airlines using the Airport include AirNorth, Qantas, Qantaslink and Virgin Blue. Direct flights from Alice Springs are available to Adelaide, Brisbane, Perth, Melbourne, Sydney, Cairns, Broome, and other Territory destinations including Darwin, Ayers Rock and Tennant Creek.

## 2.1 The Greater Alice Springs region

The Northern Territory has a population of around 200,000 people, with approximately 25,000 residents located in Alice Springs. There also approximately 12,000 more persons located in other areas of central Australia (within the NT).

A key sector of the local economy is community support services which, including government services, account for almost one third of employment in Alice Springs. Alice Springs also functions more generally as a service centre, and retail trade and hospitality together account for over 20 per cent of the local workforce. In terms of the broader regional economy, key drivers of economic activity include:

- Major tourism activity, mainly concentrated at Uluru National Park/Yulara, with other attractions and facilities at Kings Canyon and Glen Helen;
- Mining, particularly in the Tanami region; and
- Indigenous communities located in central Australia.

Future growth is expected at a modest rate, although major opportunities may develop from the extension of the passenger railway service to Darwin, sealing of the Mereenie loop road (to the West McDonnell ranges; this is a major initiative recently announced by the NT Government), and substantial boosts to the NT Government's tourism promotion budgeted for the next 3 years.

## 3 Measuring economic and social impacts

The input-output analysis carried out on Alice Springs Airport captures the direct and indirect (or flow-on) effects of the Airport on the Northern Territory economy. A third category of economic impact is also considered in this report: the economic facilitation effects. It is important to understand the links between the three concepts and how they can be measured.

### 3.1 Direct economic impacts

Some activities are directly related to the operation of an airport. Tasks carried out by airport management, airlines and air freight companies are obvious examples, while airport-based retailers and taxi services are other important examples of direct activity. Most of the direct effects are generated on site.

ACIL Tasman has measured the direct effects of Airport activities in terms of their employment levels, gross turnover and value added. These data were derived “from the ground up” by surveying the relevant businesses. The value added is the contribution to the total value of output made by a particular business – it is the revenue it makes less cost of goods sold. Essentially value added comprises wages and salaries, depreciation, interest and profit and, when aggregated for Australia as a whole, equals Gross Domestic Product (GDP).

The most challenging task in this study has been to apply a comprehensive and consistent framework for measuring the business sector of the Airport.

As an economic sector, “an airport” can be more than the activities physically located there. For instance, the city booking offices of the airlines can legitimately be considered part of an airport sector, as can off-site firms supplying in-flight catering. Equally, some activities on an airport are quite incidental to its functions (weather recording equipment or non-Airport business car parking, for example); they should not be included in an economic definition of the airport sector.

In addition to on-Airport activities, NT Airports and ACIL Tasman considered a wide range of off-Airport operations prior to deciding what should be included. A formal survey was then conducted by NT Airports, with some follow-up by ACIL Tasman. This was undertaken during February and March

2004. There were approximately 85 businesses surveyed, of whom 46 responded.<sup>1</sup>

### 3.2 Indirect economic effects: input-output analysis

To understand indirect (or flow-on) effects, consider the example of a catering business based at the airport. That business purchases goods and services from other on and off airport businesses, which in turn make further purchases. This process continues – in ever-decreasing amounts – and means that the initial impact “multiplies” through the economy.

Input-output tables set out the purchases and sales of the various sectors of a State, Territory or regional economy. They show flows between industries and imports and exports across the region’s borders. Sales to and purchases from government sectors are also shown. By capturing all the linkages in the economy, the input-output tables (through the multipliers derived from them) provide a means of estimating the direct and indirect effects of a given economic stimulus. In this report, that stimulus is provided by Alice Springs Airport.

There are several limitations to input-output analysis that should be noted. The input-output process can lead to some double counting of economic activity and to understatement of some costs (because resources are assumed to have no alternative use in the NT). This means that I-O results should be regarded an upper bound estimate of the flow-on effects. Despite these limitations, input-output analysis provides a good estimation of the flow-on effects. This is particularly the case in the Northern Territory, where its relatively isolated nature means many resources will have a low opportunity cost within the Territory.

At the commencement of this study, the most recent input-output table for the Northern Territory pertained to the base year 1997-98.<sup>2</sup> To improve the quality of the analysis, a new, more recent table was developed by ACIL Tasman. This new table, with a base year of 2001-02, has the added advantage of incorporating the Goods and Services Tax, whereas the previous table assumed the previous wholesale sales tax system still applied.

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<sup>1</sup> Thirty-seven businesses were included in the economic impact analysis. Some of those who responded were found to not relate directly to the “airport industry”, while information from some respondents was found to be replicated in other data which was used in its place.

<sup>2</sup> Murti, S. *Input-Output Multipliers for the Northern Territory 1997-98*. Office of Resource Development, October 2001.

The new input-output table contains 101 sectors. Output, income, employment and value-added multipliers have been derived for each of these sectors and selected multipliers used in the analysis in this report.

### 3.3 Economic facilitation effects

There are other activities which, even though they are not solely reliant on the airport, would be affected if the airport was not there. For example, important economic effects are generated by the spending of visitors who come into the Northern Territory through Alice Springs Airport. Air-freighted goods and services that are used in local production generate additional impacts.

Many of these effects are difficult to measure. In this exercise, we have concentrated on quantifying visitor expenditure and the economic activity which results. Other effects are assessed qualitatively.

The Northern Territory Tourist Commission collects data on visitors and a range of their characteristics, including method of travel, length of stay and amount spent. This information can be used to understand the economic impact of visitors who arrive and leave via Alice Springs Airport.

### 3.4 Other impacts

Unsurprisingly, there are impacts that fall outside of the above categories. There could well be costs or benefits which remain “external” to the economic system, which will not be accurately measured just by examining company accounts (for example, the external cost of noise pollution and the external benefit of enhanced national intelligence capabilities). Unquestionably, the development of a large facility such as an airport creates external effects, though these can be both positive and negative, and their net practical significance is often overstated.

Another aspect is the value to travellers above and beyond costs. ACIL Tasman recognises that residents of Alice Springs and its surrounds, when they travel elsewhere (whether for business or pleasure), derive benefits over and above the costs they incur – as otherwise they would not travel. A portion of these extra benefits (the consumer surplus) should accrue to the Airport as the transport facilitator, though they are not quantified in this study.

### 3.5 Social impacts

In addition to the quantitative assessment of the impacts of the airports, it is important to comment upon the social aspects of the Airport. These are elements not apparent in accounts and the flow of payments. It is often to

difficult to distinguish between economic and social impacts; however, it is useful to consider certain social aspects separately as they are not easily measured in the current situation.

The primary method of understanding the effects the Airport has on social outcomes is consulting people who have a stake in these outcomes. After discussion with NT Airports P/L, it was decided that the social impacts could be identified through high-level interviews with:

- Tourism sector representatives;
- Freight companies;
- Aircraft operator and pilot representatives;
- Construction sector representatives;
- Providers of aerial medical services; and
- Community representatives.

## 4 Alice Springs Airport today

### 4.1 Air activity

The volume of air traffic – including the number of flights and passengers, and the amount of freight – is an important way of assessing the activity level of an airport.

#### Flights

AirServices Australia record aircraft movements at the larger Australian airports (where they provide terminal services). In 2003 there were 26,012 movements at Alice Springs Airport, making it the 24<sup>th</sup> busiest airport in Australia. These movements comprise a significant number of larger aircraft, and the Airport ranks 13<sup>th</sup> in terms of the movements of aircraft heavier than 7,000kg.

#### Passengers

An appreciation of the level of activity at Alice Springs Airport can also be gained by reference to the number of passengers passing through the airport on an annual basis. In 2002/03 there were 572,000 passengers who flew into or out of Alice Springs.

### 4.2 Business activity

It is important to understand how this air activity translates into economic activity. This section outlines the approach taken here.

#### 4.2.1 Defining the airport sector

A number of possible criteria were considered when deciding the definition of “the Airport sector”. It was decided that Airport sector activities would be defined as meeting the following conditions:

- Having a physical presence on-Airport in the form of employees; and/or
- Owning, or paying fees for, locations at the Airport; and/or
- Representing inputs, the costs of which form part of charges to Airport users.

This implies an “accrual” or functional view of the airport, rather than a strict locational view. Any activity not attributable to Alice Springs Airport has not been included in the on-Airport figure.

The difficulty in identifying relevant businesses, measuring the necessary costs and filling in the gaps for non-respondents means several decisions about the treatment of certain businesses had to be made. The most important of these were:

- Only businesses whose relationship to the Airport was clear and whose activity could be measured or estimated were included;
- For air transport services, revenue relates not only to the Airport but also to the other airport serving as the departure point or destination as well as the aircraft movement itself. Therefore the costs associated with using the Airport were used instead of the total revenue; and
- Most government services do not have a revenue stream – instead, their airport-related costs were estimated.

These approaches are likely to lead to understatements of economic activity, thus the overall figures are conservative estimates of the business activity at the Airport.

#### 4.2.2 Airport businesses and organisations

Before moving to the aggregate estimates of economic activity, it is worth understanding the composition of the airport sector. It can be divided into five components: airport infrastructure, air transport, aviation support services, retailing and directly related off-airport services. These categories and their general make-up are briefly outlined below.

##### **Airport infrastructure**

The largest organisation in the infrastructure category is NT Airports P/L itself, which operates the airport. Also significant is AirServices Australia, the supplier of air traffic control and fire fighting services.

##### **Air transport**

The major scheduled airlines, Qantas and Virgin Blue, dominate passenger traffic at Alice Springs Airport. AirNorth, which operates services to many locations in northern Australia, is also a major presence. Charter services as well as regular passenger transport is also provided by Northern Air Charter and Pearl Aviation, among others. Finally, airfreight and courier companies use Alice Springs Airport facilities.

### Aviation support services

These include the operators who provide the airlines with catering, both in-flight and at the airline lounges. Aviation support services also include aircraft maintenance, operators of aircraft hangars, and fuel providers.

### Retailing

Land transport is the biggest component of the retailing category. The other retail operations include the various franchises within the terminal – cafes, the newsagency, and souvenir shops.

### Directly airport-related activities off-airport.

The airport businesses of the bus and coach services, some of which do not have access to rented space at the Airport, plus taxis, are the most important off-airport activities included in the Airport definition.

#### 4.2.3 Business activity

The survey of airport-related businesses enabled their activity to be estimated. In order to avoid double-counting once tourism expenditure was considered in the next section, the businesses were divided into two categories – those involved in the operations of the airport, and those providing services for visitors using the airport.

Input-output multipliers for the Northern Territory were applied to the data collected in the survey (and from information provided by NT Airports). Four types of input-output multiplier were used: output, income, employment and value-added. Table 3 provides the results of the analysis and quantifies the total (direct plus indirect) impact of the Airport's operation. The estimates in Table 3 are conservative; where doubts existed, they were resolved on the low side.

Table 3 **Annual airport-related business impacts**

	Airport operations	Visitor-related airport businesses	Total
Output (\$m)	45.1	34.1	79.2
Income (\$m)	12.8	8.5	21.2
Employment (jobs)	283	222	505
Value-added (\$m)	24.1	17.2	41.4

Source: Survey of businesses by NT Airports; analysis by ACIL Tasman

Alice Springs currently supports more than 500 jobs, the great majority of them full-time. The annual output (or revenue) generated is nearly \$80 million,

and its value added (or contribution to GDP) is \$41 million per year. Approximately half of the value added (\$21 million) goes to employees as wages and other income.

#### Box 1 What do the different numbers mean?

Several different economic concepts appear in the assessment of economic activity.

**Output** is equivalent to revenue. It provides an overall measurement of the effect of economic activity. However, it does not necessarily provide clear insight into how a community benefits from such activity, as growth in gross turnover may not be reflected in additional net local economic value adding—although it is reasonable to assume a correlation between the two measures.

**Value-added** in a given economy is output less the costs of tangible inputs, and quantifies ‘local content’ generated by the process which leads to output. It includes income, profits and indirect tax revenue generated (including GST and payroll tax).

**Income** is the component of value-added that goes to wage earners.

**Employment** measures jobs generated by economic activity.

Relative to the NT economy, this is equivalent to about a half of 0.5 per cent of employment, and 0.4 per cent in value added terms.

The results in Table 3 suggest that:

- The Airport’s value added is approximately \$1,600 per resident in Alice Springs (ie \$41.4 million for a total resident population of around 25,000); and
- The value added per passenger is \$72 (ie \$41.4 million for estimated passenger traffic totalling 572,000).

From these data, it is clear that in its present configuration, Alice Springs Airport is a highly significant economic entity within the Northern Territory.

### 4.3 Tourism and the Alice Springs Airport

In addition to business activity associated directly with the Airport, it has numerous other effects. The most important of these is the activity generated by the visitors to the region who arrive by air. Using information supplied by the Northern Territory Tourist Commission, the NT Airports P/L survey, information from a previous study on the composition of tourism spending<sup>3</sup>

<sup>3</sup> O’Dea, D. 1997, *Tourism’s Direct Economic Contribution, 1995-96, Research Paper no. 3*, Bureau of Tourism Research, Canberra

and ACIL Tasman's NT Input-Output Table, the magnitude of this effect is able to be assessed.

#### 4.3.1 Visitor numbers and expenditure

The Northern Territory Tourist Commission estimated that in 2002/03 there were 170,000 visitors who arrived into the Alice Springs region by air. On average, they stayed approximately two and a half nights each, resulting in a total of 417,000 nights. They spent a total of \$88 million.

In assessing the effect of the Alice Springs Airport, the key statistic is the extra visitors it brings to the Northern Territory – visitors who would not travel to the NT but for the Airport. For many airports, few extra visitors result from their existence, as passengers would otherwise arrive by road. In the case of Alice Springs, the remoteness of the location means that relatively few visitors arriving by air would otherwise come to the NT. The proportion that would arrive by other means has been assumed to be negligible.

Clearly, tourism expenditure has a significant effect on the economy. The \$88 million expenditure translates into a \$109 million increase in output, leading to \$67 million in value-added and 837 jobs. In net terms, this is an additional \$50 million value-added and 615 jobs for the Territory to that identified in the previous section.

Table 4 **Annual airport-related tourist impacts**

	Visitation effects	Already counted	Net visitation effects
Number of visitors by air	170,000		
Total nights stayed	417,000		
Amount spent (\$m)	88		
<b>Economic effects</b>			
Output (\$m)	109.3	34.1	75.3
Income (\$m)	29.7	8.5	21.2
Employment (jobs)	837	222	615
Value-added (\$m)	67.4	17.2	50.1

Source: Survey of businesses by NT Airports

Tourist expenditure adds significantly to the direct impacts of Alice Springs Airport: the value added of air-travellers' tourist expenditure is more than the direct value-added and the additional 615 jobs more than doubles the employment effects of the direct airport activity.

### 4.3.2 The tourism multiplier

The importance of encouraging more tourists via air travel can be seen by understanding the marginal effects. In Table 5, the tourism multipliers used to derive the overall numbers in Table 4 are provided. Dividing the total tourism expenditure in the Alice Springs region by the number of visitors shows that each tourist spends an average of \$518.

Table 5 **Tourist multipliers and the marginal effects of tourism**

	Tourism multipliers (per extra \$)	Effect of an additional visitor (an extra \$518)
Output (\$)	1.2425	644
Income (\$)	0.3371	175
Employment (jobs)	$9.5 \times 10^{-6}$	0.005
Value-added (\$)	0.7655	397

Source: ACIL Tasman analysis

Each additional visitor adds \$397 of value to the local economy. The direct and indirect effects of an additional two hundred visitors creates another job in the Territory. Clearly, additional visitors provide important boosts to the economy.

## 4.4 The effect of additional flights

The combined economic effects can be used to estimate the likely impact of additional flights into Alice Springs Airport.

Take an additional weekly domestic flight of a Boeing B737-800. This aircraft can carry 170 passengers. If the weekly flight was, on average, 75 per cent full, then an additional 6,656 passengers would come to Alice Springs. The likely economic effects of that additional activity can be estimated.<sup>4</sup>

Table 6 **Economic effects of a weekly Boeing B 737-800**

	Airport operations	Visitor-related airport businesses	Additional tourism	Total
Aircraft capacity	170			
Load factor	75%			
Additional people per annum	6,656			
<b>Economic effects</b>				

<sup>4</sup> There are two important assumptions. First, it is assumed that the economic activity at the airport is proportional to passenger numbers at the Airport. Second, it is assumed that 100 per cent of the passengers are tourists entering the Alice Springs region.

### The economic significance of Alice Springs Airport

Output (\$m)	0.52	0.40	3.88	4.81
Income (\$m)	0.15	0.10	1.06	1.31
Employment (jobs)	3	3	30	36
Value-added (\$m)	0.28	0.20	2.44	2.92

Source: Survey of businesses by NT Airports

The most important figures are employment and value-added. An additional flight of this size would lead to an additional 36 jobs in the NT economy. There would be a further \$2.9 million of value added to the NT.

This exercise allows some understanding to be gained about what the development of additional routes may deliver. Table 7 summarises the incremental effects of between one and ten additional flights of this type of aircraft.

**Table 7 Economic effects of additional flights of a Boeing B737-800**

No. of extra weekly flights	Value-added (\$m)	Employment
1	2.92	36
2	5.84	72
3	8.75	108
5	14.59	180
10	29.18	360

This shows that the measurement of economic activity should not be viewed only as a static assessment of the present. It allows estimations to be made about what the outcomes of initiatives and developments may be.

## 4.5 Related activities

The above figures do not take account of the more complex economic relationships involving Alice Springs Airport. It is worth discussing some of the key areas in order to gain a deeper understanding of the role of the Airport.

### 4.5.1 General air services

The Airport houses and supports a number of aircraft used for recreational and private business purposes. There is a General Aviation area with parking for approximately 70 aircraft, adjoined by light aircraft hangars. A helicopter landing area and associated apron, hangars and refuelling facilities are all located at the Airport.

There were 15,478 movements by aircraft under 7,000 kg, and 1,218 movements by helicopters at Alice Springs Airport in 2003 (source: AirServices Australia, 2004). Amongst Australian airports, Alice Springs has the 14<sup>th</sup> highest number of small aircraft movements.

#### 4.5.2 Freight

Air freight is considered to be highly significant. In many respects, the small population means that relatively fewer goods and services are produced in the local economy, making air and other forms of freight particularly significant.

Compared to the late 1990s, however, there is reportedly a lower level of air freight activity at present, with subsequent declines in airport freight-related employment; this is suggested as partly reflecting a slight downturn in the Alice Springs population, as well as improvements in alternatives such as rail.

#### 4.5.3 Medical services

Aircraft-based medical services play a key role in central Australia. Prior to the introduction of such services, the needs of many emergency or critical cases simply could not be met, as land based transportation often meant impossible time delays in accessing medical attention.

As such, the Alice Springs Airport plays a critical role in enabling timely access to emergency medical care in remote areas, transport of critically ill persons to larger medical centres elsewhere in Australia, and in the provision of preventative health care services within the vastness of central Australia.

In 2003, the Royal Flying Doctor Service recorded 1,519 departures of its aircraft from the Airport. The Service reports previous annual growth in departures of between three and seven per cent.

#### 4.5.4 Construction sector

There is growing recognition within the construction sector of the importance of the Airport as a source of work.

Recent examples of projects which have generated such commissions include:

- Upgrading of security facilities;
- Refurbishment of the airport management building outside the main terminal;
- Fitout of several new or upgraded retail premises within the terminal; and
- Construction of facilities to accommodate a commercial business – unrelated to Airport operations – located at the Seven Mile area of the airport.

#### 4.5.5 Joint Defence Facility at Pine Gap

The Airport enables weekly international military supply flights to be undertaken to service Pine Gap operations. As such, the facility is regarded as

important and certainly convenient, as alternative forms of transport cannot offer similar timeliness.

#### 4.5.6 Connecting communities in the Territory

Alice Springs Airport plays a vital role in sustaining remote communities in Australia's northern regions. This important social element was recognised last year by the Commonwealth House of Representatives' Standing Committee on Transport and Regional Services, in their report titled *Regional Aviation and Island Transport Services: Making Ends Meet*.

The Northern Territory, due to its vast expanse and scattered population, arguably depends on air transport to a greater degree than other jurisdictions. Many remote communities are cut off for extended periods due to harsh weather conditions, with their air services providing the only link to the outside world... In many cases regional air services are actually an essential service.

In this regard, the maintenance and development of Alice Springs Airport plays a critical social role for many people.

## 5 Alice Springs Airport in the future

It is important to estimate future economic activity. Already-developed twenty year passenger and flight movement forecasts have been used to make these forecasts.

In developing future projections, a range of assumptions were adopted. As much transparency as possible has been provided, so the effect of changed circumstances can be assessed as the future unfolds.

### 5.1 The Airport in 2023

#### 5.1.1 Future passenger and aircraft movements

Predicting future passenger movements is a difficult exercise. In the past couple of years we have seen a number of terrorist incidents and health crises which demonstrate the large effects that external events can have on air travel. Also, the airlines using Alice Springs often have relatively few services to many destinations; therefore, changes to their schedules can have pronounced influences on passenger and flight movements.

Despite these difficulties, BAA, the world's largest airport operator and a shareholder of NT Airports, has prepared 20 year passenger and aircraft movement forecasts for Alice Springs Airport. There are three estimates for future activity – “most likely”, “low” and “high” estimates. The main estimates are included in Table 8, together with the current levels of activity and the ratio of the future and current levels.

Table 8 **Forecasts for Alice Springs Airport**

		2002/03	2023/24	Ratio (scaling)
Domestic passengers	“Low”	572,000	840,000	1.47
	“Most likely”	572,000	1,080,000	1.89
	“High”	572,000	1,250,000	2.19
Domestic movements	“Low”	7,600	9,150	1.20
	“Most likely”	7,600	11,000	1.45
	“High”	7,600	12,250	1.61
General aviation movements	“Low”	16,200	17,000	1.05
	“Most likely”	16,200	23,000	1.42
	“High”	16,200	29,000	1.79

Source: NT Airports

## 5.2 Business activity

The NT Input-Output Table and the current levels of business activity were used to estimate the future levels of business activity. There are two important assumptions attached to this approach. The first one is that the nature of the economic relationships at the airport remains constant over time – that is, that the types of businesses remain constant over time. Second, by using the same input-output table it is assumed that the structure of the NT economy also remains constant over time.

### 5.2.1 Approach

Current levels of business activity were scaled up on the basis of the information in Table 8. Individual decisions were made about what factor would most strongly influence the revenue of each business. The scaled-up revenues were then combined with the Input-Output Table to estimate the economic activity likely to be generated by the Airport in the year 2023/24.

### 5.2.2 The size of business activity

The same categories of economic activity were considered as before to avoid double-counting – those that were involved in the operations of the airport and those that provided services for the visitors using the airport.

The “most likely” estimates for direct employment, output, income and value added at Alice Springs Airport in 2023 are provided in Table 9.

Table 9 “Most likely” Annual airport-related business impacts – 2023/24

	Airport operations	Visitor-related airport businesses	Total
Output (\$m)	63.6	64.4	128.0
Income (\$m)	17.3	16.0	33.2
Employment (jobs)	385	419	804
Value-added (\$m)	33.1	32.6	65.7

Source: Survey of businesses by NT Airports; analysis by ACIL Tasman

On this basis, it is expected that Alice Springs Airport will support 800 jobs in 2023. In 2023, the annual output (or revenue) will be \$128 million, and its value added (or contribution to GDP) will be \$66 million per year. As before, approximately half of the value added (\$33 million) goes to employees as wages and other income.

Given the uncertainties involved, it is important to include the “low” and “high” estimates of economic activity in 2023. These are provided in Table 10.

Table 10 “Low” & “high” annual airport-related business impacts – 2023/24

	Airport operations	Visitor-related airport businesses	Total
<b>Low</b>			
Output (\$m)	54.8	50.1	104.8
Income (\$m)	15.1	12.4	27.5
Employment (jobs)	336	326	662
Value-added (\$m)	28.8	25.3	54.1
<b>High</b>			
Output (\$m)	69.9	74.5	144.4
Income (\$m)	18.8	18.5	37.3
Employment (jobs)	420	485	905
Value-added (\$m)	36.1	37.7	73.8

Source: Survey of businesses by NT Airports

The results in Table 10 show the range of outcomes that can be expected is large. Taking the example of jobs, there could be a difference of as much as 250 jobs depending on the how airport activity develops over the next 20 years. As mentioned earlier, this will be influenced to some degree by events beyond the control of those associated with the Airport. However, to the extent that activity can head towards the “high” scenario, there are significant gains to the NT economy.

### 5.2.3 Tourism expenditure

The effects of tourism expenditure can also be estimated based upon predictions about total passenger numbers in 2023/24. The results in Table 11, show that over 1,100 jobs will be due to tourists arriving by air while tourism will add nearly \$100 million of value to the NT economy (under the “most likely” scenario).

Table 11 Annual business impacts of tourists by air – 2023/24

	Visitation effects	Already counted	Net visitation effects
Number of visitors by air	320,979		
Total nights stayed	787,343		
Amount spent (\$m)	166.2		
<b>Economic effects</b>			
Output (\$m)	206.5	64.4	142.1
Income (\$m)	56.0	16.0	40.0
Employment (jobs)	1581	419	1162
Value-added (\$m)	127.2	32.6	94.6

Source: Survey of businesses by NT Airports

## 5.3 Future plans and expectations

Given the limitations of quantitative analysis in describing relationships, it is useful to examine how the Airport fits with the future plans of sectors affected by Alice Springs Airport. Much of this discussion relates to aspects or occurrences that are in the five to ten year timeframe, rather than twenty years.

### 5.3.1 Tourism

The role of the Airport in facilitating tourism may become more critical in the next few years, and facilities and capacity to deal with a growing number of international charter flights are expected to become increasingly important.

Factors boosting tourism numbers arriving by air are expected to include development of the Desert Knowledge Cooperative Research Centre and Desert Peoples' Centre, to which \$18m of public funding has been committed. This is expected to bring increasing education and research visitor traffic to Alice Springs. The Alice Springs convention centre complex is similarly expected to attract increasing numbers of visitors.

### 5.3.2 General air services

ACIL Tasman's survey revealed several useful perspectives on trends expected in terms of general air services over the next few years. It is expected that air services demand will benefit from travellers increasingly purchasing shorter travel times options – that is, air travel as opposed to bus and perhaps train travel. There are also niche opportunities for special interest group travel (such as ecotourism or arid zone interest groups), which have the potential to increase demand for air services.

### 5.3.3 Medical services

There is no anticipated future reduction in the importance and level of usage of Alice Springs Airport in the context of meeting the emergency and specialist medical needs of the broader regional community. Instead, reliance on aircraft-delivered medical services is anticipated to increase commensurate with growth in community populations in the wider region, possibly augmented by any increases tourist usage of the road network.

### 5.3.4 Construction sector

No specific construction industry expectations have been identified in the context of future projects associated with Alice Springs Airport. However, the airport is surrounded by a substantial parcel of land, at least part of which may

be capable of servicing any unmet existing or future demand for industrial land in Alice Springs.

Should such developments occur, there would clearly be some spin-offs for the construction industry in building whatever facilities may be required by future businesses located in the airport precinct.

### 5.3.5 Connecting communities in the Territory

The role of the Airport in providing for the various needs of the outlying region is anticipated to grow with the populations of remote communities.

Such growth in demand is also likely to be underpinned by an increasing preference for the use of air travel and air freight – as they are the most timely means of service delivery.

## 6 Conclusion

This report provides an indication of the extent to which the Alice Springs Airport contributes to the NT economy. Through a comprehensive survey and consultation process, and by developing an updated input-output table for the Territory, ACIL Tasman has been able to describe the impacts of the Airport directly and indirectly upon on the NT economy's value added and employment.

Alice Springs Airport saw 26,012 aircraft movements with 572,000 domestic passengers passing through in the last year. Utilisation of the Airport can be expected to increase with investment in the Alice Springs convention centre, Desert Knowledge CRC along with increasing tourist numbers.

Through the activities of directly related businesses, and their interactions with the wider economy, the Airport is responsible for the creation of 500 jobs and \$41m value added to inputs and raw materials, which ultimately results in an increase in total income by that amount. This is a significant contribution – it amounts to the Airport adding over \$1600 per Alice Springs resident in terms of the value added.

The tourism industry relies heavily on the Airport. In 2002/3 around 170,000 tourist visitors arrived via the Airport, staying a total 417,000 nights and spending \$88m in the Territory. The isolated nature of the Territory makes it likely that, without the Airport, many tourists would holiday elsewhere rather than travel to the Territory by road.

Forecasts over a 20-year horizon result in a wide range of possible outcomes; under the most likely assumptions, it will see the Airport supporting 800 jobs and businesses with an output of \$128m in 2023. This will contribute \$66m annually to GDP.

The significance of the Airport to the Territory is more than just economic. It forms a critical way to connect communities in remote areas and provides a conduit for medical assistance. It provides a base upon which to build Alice Springs' position as a regional transport and freight hub, and makes Alice Springs an attractive place to holiday and to do business.

As Alice Springs seeks to build upon its national and international position the Airport will take on increased significance as a key part of the Territory's infrastructure. Initiatives to increase air activity and tourism numbers will increase the vibrancy of the Airport, and improve the development of the NT economy.