



**Australian Government**

# **Knowledge Intensive Service Activities**

**in the**

# **Tourism Industry**

**in Australia**

**A report prepared for the OECD KISA project**

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## **ABBREVIATIONS**

ABS	Australian Bureau of Statistics
BTR	Bureau of Tourism Research
CRC	Co-operative Research Centre
DITR	Department of Industry, Tourism and Resources
GDP	Gross domestic product
ICT	Information and communications technology
KIS	Knowledge intensive service
KISA	Knowledge intensive service activity
KIBS	Knowledge intensive business service
MIP	Most important innovative product
MNC	Multinational corporation
R&D	Research and development
RTO	Research and technology organisation
SMEs	Small and medium enterprises

## Summary

Note: all currency in this paper is expressed in Australian dollars. At time of writing, AU\$1 was equal to approximately US\$0.75.

This paper explores the knowledge intensive service activities (KISA) which firms in the Australian tourism industry use in innovation. It is part of an OECD project which is studying the role of KISA in the innovation systems of different industries. It looks at tourism firms' choices among providers of innovation expertise, reports insights into the reasons for the choices made, and indicates how firms mix and match and internalise the knowledge-intensive services used.

The study consists of an overview from secondary sources of the tourism industry, an online survey, and six case studies of tourism businesses. The study has significant limitations. The small numbers surveyed mean that the data cannot be claimed as representative of the industry. Nor are the case study firms representative, as they were selected on the basis that they were innovative. Nevertheless the analysis provides valuable information for understanding the role of KISA in innovation in tourism.

Tourism contributes 4.2 per cent of Australia's GDP and is an important export industry, making up 11 per cent of exports. It is also an import component of regional economies, and is employment intensive, accounting for 5.7 per cent of total employment. The labour force is relatively unskilled. Spending on research and development in tourism is lower than in other industries, and the industry is not generally regarded as innovative. Indeed, in some cases the competitive advantage of a destination depends on its predictability.

Tourism policy measures are directed to promoting Australia as a tourism destination, improving the competitiveness and diversity of regional attractions through regional tourism programs, providing assistance to small and medium tourism operators through generic programs, and encouraging Australians to take more holidays domestically. The Australian Government's Tourism White Paper in 2003 provided a strategic framework for the sector, which includes research, marketing coordination, and identification of niche markets.

The firms in the survey described themselves as innovative, driven by fierce competition and increasingly demanding consumers. The most widely used services were research and development (probably predominantly market research), marketing and promotion, accounting and financial services and information technology services. Use of training and recruitment services was low, and so was use of external accreditation services. Expenditure on externally provided KISA was generally low, for many firms totally less than a fifth of an average wage.

Internal provision of KISA was important. Of external sources, private providers were the most used, and industry associations (including local tourism bodies, which are usually partly government funded) and informal networks were significant sources. Firms generally used more than one provider for each kind of service. In general, firms sought their services locally. About one in five firms had had access to government grants, mostly from state or local governments.

All of the case study firms demonstrated the importance of the initial innovative concept, and most were the first of their kind in Australia. There was little radical product innovation, but the firms changed their products and services subtly in response to customer demands and external influences. Two firms were innovating by branching into significantly new business areas, but these were in construction and information technology rather than tourism. There was a wide range of behaviour with regard to obtaining knowledge intensive services. Most ideas for innovation were generated within the firm. Use of external services ranged from 26 per cent of those on the list to 75 per cent of those on the list. Of those, half were specifically tailored for the firm, usually to implement strategic plans designed within the firm. In many cases, firms would have preferred to use in-house service providers but their small size meant that they could not justify recruiting a specialist. Some recognised the value of an external service provider who was at the cutting edge of their field.

Only one of the case study firms had formal links with a research institution, though scientists and others conducted research at several of the locations, for example into tropical rain forests. While most firms belonged to industry associations, they did not see them as sources of inputs to innovation. They did, however, value the marketing services provided by local tourism bodies. All were involved in informal local networks of tourism industry operators. These provided important links and information on visitor numbers, but not much in relation to innovation. Because the government's industry policies emphasise research and development and innovation, firms had not made much use of generic industry programs.

Firms were conscious of the need to build on the expertise of external service providers. In some cases the service remained in the form of a building design or a report. In others, particularly marketing, firms outsourced some work such as translation but built the capacity in-house as well. All relied heavily on customer feedback for ideas for innovation – or in some cases to be told when not to make changes. Most had developed their own standard operating procedures and recognised them as important for their competitive edge, but in general they were not very conscious of the need to protect them as intellectual property. In general, firms did not report any difficulty in finding external service providers.

In conclusion, most of the knowledge intensive service activities in the tourism industries are for routine management rather than for any conscious innovation. To a great extent they are provided in-house, although external services are used for auditing and where the business is not big enough to warrant the employment of specialists. Where radical innovations required substantial inputs of KISA, in design, building, or environmental expertise, firms looked externally. A recent review of the tourism industry resulted in the creation of a new body which will have functions largely related to knowledge intensive services. Tourism Australia will merge the skills and knowledge of the former Australian Tourism Commission (marketing overseas), See Australia (domestic marketing), the Bureau of Tourism Research and the Tourism Forecasting Council. It will provide marketing, research and accreditation, and foster partnerships and build capabilities in regions.

# 1. Innovation and the Importance of KISA <sup>1</sup>

## 1.1 Introduction

The international research literature explores many dimensions of innovation and innovative activity by firms. From an initial focus on product innovation alone, there is now an understanding that innovation involves not only product development but also new production methods and new organisational forms taken up by enterprises, and that it can be radical or incremental. It has become clear that all these aspects of change characterise innovative firms and influence competitive success.

It has also become clear that innovation, defined here as novel activities of economic value to an enterprise, is a complex mix of factors and occurs differently in different industries, in relation to different products, in firms of different ages and size and at different stages of an industry or product cycle. Many of the processes involved in innovation - the ways in which firms go about changing their products, processes, markets, organisational shape and skill levels - are still not well understood.

It appears that the knowledge intensive service activities (KISA) carried out by firms are an important input to innovation. As well as being a direct input to innovation, such activities enable firms to develop knowledge based capabilities and skills. These may be very important in the overall success of innovation. Policies designed to assist enterprises to innovate need to rest on an understanding of these processes. A better understanding of the ways in which knowledge intensive service activities contribute to innovative activities in different industries may lead to more effective policy responses.

The present report is an element of a broader project which aims to improve understanding of how firms in different industries use knowledge intensive services in their innovation processes. It is part of a 10 country OECD research project that will ultimately provide policy makers with analytical and empirical insights to underpin the design and implementation of more effective industrial development strategies.

## 1.2 The KISA study

KISA are the knowledge-intensive service *activities* that firms undertake, usually in conjunction with external or internal experts. They may be grouped according to their purpose and function. One group of services has to do with the internal management of the firm, for example accounting services, management consultancy, training, and employment services. Another has to do with product development, and includes research and development, technical consultancies, industry strategy advice, and marketing. A third has to do with the firm's behaviour as a legal entity, including legal advice, compliance advice, and intellectual property consultancies.

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<sup>1</sup> For a fuller introduction to Knowledge Intensive Service Activities in the innovation system, see the accompanying report on the software industry in Australia.

The Knowledge Intensive Service Activities (KISA) project, of which this report is a part, is an attempt to shed light on the role of knowledge intensive service activities through examining how they operate in a series of industries. Each study in the series comprises statistical a description of the size and 'shape' of the industrial sector selected, description of government policies and the programs available for firms in the sector, and an empirical study of innovation at firm level.

Among the important questions to be addressed are: where the firm gets its knowledge intensive services; which ones it chooses to develop in house and why; and how the firm uses these services to build its own capability for continuing innovation.

The results of this analysis for the tourism industry in Australia are presented in this report. It is intended to show tourism firms' choices among providers of innovation expertise, to report insights into the reasons for the choices made, and to indicate how firms mix and match and internalise the knowledge-intensive services used.

## **2. Methodology for the Tourism Study**

### **2.1 Introduction**

This chapter summarises the evidence used in the study of KISA in innovation in the Australian tourism industry.

The first element of the study of the tourism industry is an overview from secondary sources. General data on the industry are presented in Chapter 3 of this report. A description of government programs and policies directed to the sector makes up Chapter 4.

An online survey is presented with simple statistical analysis and tabulation of the results. These are reported in Chapter 5.

Case studies of six tourism firms were used to explore the issues in more depth. They are reported in a separate chapter (Chapter 6).

Finally, in Chapter 7 some conclusions are drawn about the role of KISA in innovation in the tourism industry.

Tourism was chosen for study partly for its importance in the Australian economy, but also because its innovation system, unlike others which have been studied, does not focus on technology; and as an industry it has some particularly interesting features.

Other studies of innovation, including the companions to this one – studies of the software industry and the mining technology services industry – have tended to focus on high technology firms, either its development in new industries or its application in more established industries. There has also been a tendency to focus on businesses which supply inputs to other businesses. This study of tourism is a departure, in that it is focused on a long established industry which deals directly with its retail customers, and which, although it uses new technology extensively, in general does not focus directly on technology.

Tourism is interesting also because of the importance of the destination in the industry. With the growth of new information technology, location might be expected to be less important for access to knowledge intensive services. In tourism, success is determined by providing an experience for the tourist that meets or exceeds their expectations. To achieve this, the focus has to be on the destination and the activity.

### **2.2 The survey**

The on-line survey was conducted using the Australian Tourism Data Warehouse, a public website<sup>2</sup> joint initiative of all states and territories that provides details of 13,000 companies. The small sample of firms surveyed was extracted from the categories ‘accommodation’, ‘transport’ and ‘tour operators’, as these categories form the bulk of the industry. Companies were randomly contacted by phone from a sample of 137

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<sup>2</sup> <http://www.atdw.com.au/home.asp>

companies across all Australian states. The survey of firms also included the 2003 Australian Tourism Award winners. The survey was open for responses for three weeks. There were 44 responses of which 46 per cent were returned by fax, 25 per cent by email, and 18 per cent by mail; 11 per cent were collected over the phone. The survey instrument is at Appendix A.

The survey questionnaire included questions concerning:

- Background data on firms such as size, turnover, business life-cycle;
- Information on innovation and the use of KISA related services;
- Importance of service providers for inputs to KISA;
- Use of government grants for KISA-related services.

The 44 firms comprised:

- 24 tour firms (55 per cent)
- 15 accommodation firms (34 per cent)
- 3 transport firms (7 per cent), and
- 2 retail firms (4 per cent).

Seven firms (16 per cent) had received national tourism awards in 2003. Surveyed firms were located in every state of Australia.

Twenty-five of the 44 firms (57 per cent) had between 1 and 6 employee, while one firm had 1,200 employees.

Most employees across all firms had secondary education (82 per cent) with only 6 firms having employees with a higher degree such as a Masters or a Doctorate (see Table ). This result is consistent with our statistical analysis of the industry.

**Table 1: Educational qualifications (survey sample)**

Education	% Employees
Higher Degree	0.6
Degree	12.7
Secondary	<b>82</b>
Primary	4.3

*Source: AEGIS Tourism survey (2004)*

Sixty-four per cent of the surveyed companies had a mature business structure with more than two years of operation. One firm was a starting business.

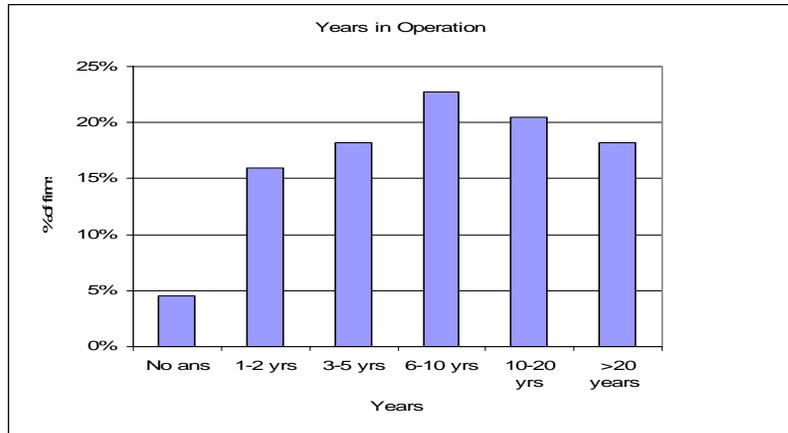
**Table 2: Business structure**

Structure	No. of Firms	% Firms
Starting business	1	2
New business	9	20
Mature business	<b>28</b>	<b>64</b>
Business in expansion	6	14

*Source: AEGIS Tourism survey (2004)*

The average years of operation of firms was 12.6 years, with 18 per cent of firms having been in operation for over 20 years (see Figure 1).

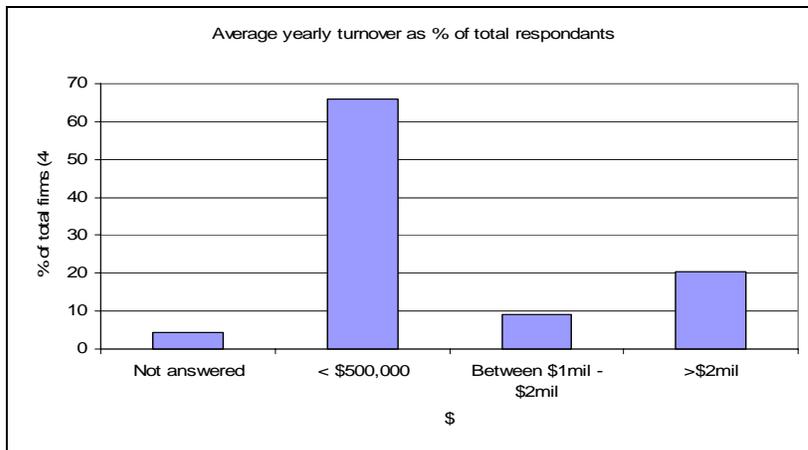
**Figure 1: Years in operation**



Source: AEGIS Tourism survey (2004)

Twenty-nine firms (66 per cent) identified their average yearly turnover as less than \$500,000. Nine firms (20 per cent) identified average yearly turnover greater than \$2 million (Figure 2).

**Figure 2: Average turnover**



Source: AEGIS Tourism survey (2004)

The survey was analysed with simple statistics and tabulation of responses.

### **2.3 Case studies: the innovators**

Names of potential tourism firms for in-depth study were provided by the Tourism Division of the Department of Industry, Tourism and Resources and obtained from internet searches of firms which had won awards for tourism innovation. Some names were also supplied by Green Globe 21, an industry group which accredits tourism firms

against criteria related to sustainability and ecological impact. Six firms were chosen to provide a broad representation of the following characteristics:

- type of tourism business (accommodation, tourism attraction or travel management);
- type of innovation (new product or service, management innovation, training and staff innovation or use of equipment), following a typology developed by Koberg et al, discussed below, which gives a broader dimension to the concept of innovation as it applies to firms;
- size (small, medium, large); and
- age (range).

The tourism firms selected are listed in Table 3. Location was not used as a selection factor.

**Table 3: Characteristics of case study firms**

Name	Location	Type of Firm(a)	Size(b)	Age (Yrs)
Australian Outback Travel Group	Victoria	Tour operator	Large	17
Banrock Station	South Australia	Cafes and restaurants	Small	10
Binna Burra Mountain Lodge	Queensland	Accommodation	Medium	71
Goana Air Safaris	Queensland	Tour operator	Small	10
Skyrail	Queensland	Other transport	Medium	9
Tjapukai Aboriginal Cultural Park	Queensland	Entertainment Services	Medium	17

(a) Following classification in Table 3.1 in Bureau of Tourism Research (1998): *Tourism Business in Australia* – Occasional Paper 34

(b) In keeping with definitions used by the Bureau of Tourism Resources, micro businesses have four or fewer employees, small businesses have between 5 and 19 employees and medium to large businesses have 20 or more employees.

Source: Thorburn, L.J., Sectoral Case Studies in Innovation

An interview guide was developed following a review of the methodologies and issues covered by studies in partner countries. It uses some questions common to these studies. It was framed to gather data about innovative activity within the business, focusing on the generation and utilisation of knowledge, collecting a range of information about the firms. The Australian interview guide was also structured to allow for the particular circumstances of Australian firms and the Australian R&D support system.

## **2.5 Limitations of the study**

There are limitations to the analysis presented in this report. First, the number of respondents to the survey was not a statistically representative sample of the Australian tourism industry. Second, the number of case studies was very small, and they were chosen because of their innovativeness and are not representative of the whole industry;

so it is not possible to draw conclusions about innovation across the tourism industry as a whole. Nevertheless the analysis of the firms participating in the study provides useful information for understanding the role of KISA in Australian tourism firms.

### 3. The Tourism Industry in Australia: Statistical Overview

#### 3.1 Definitions

The international system for defining and classifying industries and the local equivalent, the Australian and New Zealand Standard Industrial Classification (ANZSIC) does not recognise tourism as a discrete ‘industry’ because ‘industries are classified according to the goods and services they produce, whereas tourism depends on the status of the consumer’ (ABS 2004: 3). For the purpose of separating the consumption of tourists from non-tourists, tourism is defined as ‘*activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited*’ (ABS 2004: 48). This is adapted from the World Tourism Organisation (WTO) definition of Tourism<sup>3</sup>.

To provide data on the economic contribution of tourist activity to the economy the Australian Bureau of Statistics applies a classification system to identify the industries supplying inputs to tourist activities and how these inputs are consumed (OECD 2000). Each year from 1997-98 to 2002-03 data on the tourism industry has been presented in ‘satellite accounts’ to the standard national accounts. In the ABS Australian National Accounts, tourism is defined according to these international standards to include visitors ‘whose primary purpose is private or government businesses, as well as more familiar tourism for leisure purposes’ (ABS, 2003). It is therefore not only restricted to leisure activity, but also includes travel for business and other reasons, for example education. If the person stays longer than one year at a place, they are no longer regarded as a tourist.

#### 3.2 Composition of the industry

Table and Table 5 depict the types of businesses in the tourism industry in Australia.

**Table 4: Number of businesses in the tourism industry in Australia**

ANZSIC Industry	No of businesses	Total businesses
<b>Tourism characteristic industries</b>		
Travel agency and tour operator services	5 346	
Taxi transport	2 472	
Air and Water transport	2 168	
Motor vehicle hiring	990	
Accommodation	9 158	
Cafes and restaurants	21 493	
Takeaway food retailing	18 427	
Total		60 054
ANZSIC Industry	No of businesses	Total businesses

<sup>3</sup> Extracted from Organisation for Economic Development (OECD), Commission of the European Communities, United Nations and World Tourism Organisation, (2001) *Tourism Satellite Account: Recommended Methodological Framework*, OECD, United Nations Publications and World Tourism Organizations, p. 1.

<b>Tourism connected industries</b>		
Clubs, pubs, taverns and bars	10 018	
Other road transport	27 883	
Rail transport	1 806	
Food and beverage manufacturing	5 061	
Transport equipment and other manufacturing	58 312	
Automotive fuel retailing	8 010	
Other retail trade	132 156	
Casinos and other gambling services	2 709	
Libraries, museums and arts	5 715	
Other entertainment services	15 474	
Education	22 410	
Ownership of dwellings	3 865	
Total		293 419
<b>Total tourism related businesses</b>		<b>353 473</b>

Source: Australian Bureau of Statistics, 1998, ABS Business Register (unpublished data)

**Table 5: Number of management units by employment size for tourism**

ANZSIC industry	Micro businesses(a)	Small businesses(b)	Medium to large businesses(c)	Total businesses
Travel agency and tour operator services	3 100	848	123	4 071
Taxi transport	1 946	397	55	2 398
Air and water transport	1 183	393	123	1 699
Motor vehicle hiring	516	175	19	707
Accommodation	4 429	2 610	701	7 740
Cafes and restaurants	9 475	8 678	1 272	19 425
Takeaway food retailing	10 877	4 608	733	16 218
<b>Total tourism characteristic</b>	<b>31 523</b>	<b>17 709</b>	<b>3 026</b>	<b>52 258</b>
Clubs, pubs, taverns and bars	3 113	4 462	1 884	9 459
Other road transport	21 376	3 841	688	25 905
Rail transport	20	8	14	42
Food and beverage manufacturing	1 636	1 617	1 001	4 254
Transport equipment and other manufacturing	29 033	17 561	6 199	52 793
Automotive fuel retailing	3 402	3 147	294	6 843
Other retail trade	85 113	34 894	3 999	124 006
Casinos and other gambling services	1 662	699	50	2 411
Libraries, museums and arts	3 032	616	206	3 854
Other entertainment services	9 056	3 079	1 037	13 172
Education	5 776	3 070	1 469	10 315
Ownership of dwellings	3 131	243	53	3 427
<b>Total tourism connected</b>	<b>166 350</b>	<b>73 237</b>	<b>16 894</b>	<b>256 481</b>
<b>Total tourism related</b>	<b>197 873</b>	<b>90 946</b>	<b>19 920</b>	<b>308 739</b>

(a)Businesses employing four or less persons

(b)Businesses employing between 5 and 19 persons

(c)Businesses employing 20 or more persons

Source: Australian Bureau of Statistics 1999, ABS Business Register (unpublished data)

Table 5 shows the number of management units according to business size. More than half of the firms in tourism related businesses were micro businesses employing four or less employees. About thirty per cent of firms were small businesses employing between five and nineteen employees.

### 3.3 The economic contribution of the Industry

The Australian tourism industry has experienced strong growth over the past 20 years. In 2002-2003, the tourism industry contributed 4.2 per cent to Australia's gross domestic product.<sup>4</sup> The demand for tourism goods and services comes predominantly from domestic sources. In 2002-03 demand from Australian residents consumed 77 per cent of tourism output, with international visitors consuming 23 per cent of output<sup>5</sup>.

**Table 6: Tourism share of consumption (per cent)**

	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
Households	67.9	67.7	66.9	65.0	65.9	67.2
Business/Govt.	10.8	11.0	10.9	10.8	10.2	10.2
Domestic	78.7	78.7	77.8	75.8	76.2	77.4
International	21.3	21.3	22.2	24.2	23.8	22.6

Source: ABS 2004 (Table 2)

In 2002-03 Australia ran a small positive tourism services trade balance of \$75 million as measured by the difference between tourism consumption by Australian residents on outbound trips and tourism consumption by non-residents on inbound trips.

The backbone of Australian tourism is domestic tourism, and it is a significant contributor to regional Australia.

### 3.4 Employment

The tourism industry employed 540,700 persons in 2002-03, that is 5.7 per cent of total employment.<sup>6</sup> The majority of the jobs in the tourism industry are in retail trade, the accommodation sector and cafés and restaurants. There are over 350,000 tourism related businesses in Australia. Most businesses consist of small to medium sized businesses, and 90 percent of the businesses employ less than 20 staff.<sup>7</sup> In 2001-2002 the tourism industry stake of total employment decreased slightly to 5.9 per cent after remaining at 6 per cent since 1997-98.<sup>8</sup>

Estimates of employment in tourism are derived by the ABS by assuming that employment in each of the supplying industries is in proportion to the value added supplied to the tourism industry (ABS 2004: 39). Tourism's share of total employment (5.7 per cent) is 50 per cent larger than the industry's share of national gross value added

<sup>4</sup> Extracted from ABS Cat. No. 5249.0, 'Australian Tourism Satellite Account', Fact Sheet, 2002-2003.

<sup>5</sup> Extracted from ABS Cat. No. 5249.0, 'Australian Tourism Satellite Account', Fact Sheet, 2002-2003.

<sup>6</sup> Extracted from ABS Cat. No. 5249.0, 'Australian Tourism Satellite Account', Fact Sheet, 2002-2003.

<sup>7</sup> Australian Government Tourism White Paper, Department of Industry Tourism and Resources, 2003 p 12.

<sup>8</sup> ABS (2003) Australian National Accounts: Tourism Satellite Account 2001-2002, 5249.0, p. 6.

(3.8 per cent) (Table 7). This implies that labour productivity, as measured by gross value added per employee in the tourism industry, is lower than for the economy in general.

**Table 7: Employed persons in tourism, 2002-03**

Industry	'000	Per cent of Total Employment in Tourism
Transport and storage	84.6	15.6
Accommodation, cafes & restaurants	175.3	32.4
Manufacturing	45.8	8.5
Retail trade	140.4	26.0
Cultural and recreational services	28.5	5.3
Education	24.6	4.5
<i>Total identified industries</i>	<i>499.3</i>	<i>92.3</i>
Other	41.5	7.7
<b>Total tourist employment</b>	<b>540.7</b>	<b>100</b>
<b>Total employment</b>	<b>9441.4</b>	
Tourism share of total employment		5.7

Source: ABS 2004 (derived from Table 16 by aggregating disaggregated industry data)

The occupational structure of tourism is quite different from the occupational structure of total employment in the economy. Tourism has less than half the proportion of Professionals (9.1 per cent compared to 18.8 per cent) and over 40 per cent fewer Managers and Administrators (7.2 per cent compared to 4.2 per cent). The higher proportion of Associate Professionals in tourism largely reflects the fact that chefs are classified to this occupational category and they work in tourism related industries. Tourism's share of Elementary Clerical, Sales & Service Workers is some 61 per cent larger than for the economy as a whole.

**Table 8: Occupational structure of total employment and tourist industry**

ASCO Major Group	Employed Total ('000)	Occupation as a Share of Total Employment (%)	Employed in Tourism ('000)	Occupation as a Share of Total Tourism Employment
1	680.9	7.2	21.4	4.2
2	1762.7	18.8	46.5	9.1
3	1146.4	12.2	86.4	16.9
4	1204.4	12.8	47.1	9.2
5	377.1	4.0	11.7	2.3
6	1623.7	17.3	107.9	21.2
7	794.8	8.5	53.6	10.5
8	944.3	10.0	83.8	16.4
9	862.4	9.2	52.0	10.2
Total	9396.7	100	510.4	100

Source: ABS 2004 (derived from Table 6) and ABS (2003)

Overall, tourism employs a smaller proportion of skilled workers than the economy as a whole and a higher proportion of lesser skilled workers.

### 3.5 Tourism exports

Tourism contributes significantly to Australia's export earnings. Through the direct sale of goods and services to international visitors, tourism export earnings in 2002-2003 totalled more than \$16.6 billion. While tourism exports grew quite strongly between 1997-98 and 2000-01, so did exports of other goods and services. However both tourism exports and total exports declined in 2001-02 (see Table 9).<sup>9</sup> International visitors consumption was \$16.7 billion in 2002-03. This is 11.2 per cent of total exports. This is the same share as in 1997-98, down from its peak share of 12.0 per cent in 1998-99.<sup>10</sup>

**Table 9: Exports of tourism goods and services**

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
International visitor consumption (\$m)	12 792	13 446	14 611	17 140	17 080	16 700
Total Export (\$m)	113 744	112 025	126 034	153 511	152 357	NA
Tourism Share of Exports (%)	11.2	12.0	11.6	11.2	11.2	11.2
Growth in international visitor consumption (%)		5.1	8.7	17.3	-0.3	NA
Growth in total exports (%)		-1.5	12.5	21.8	-0.8	NA

Source: ABS (2003) Australian National Accounts: Tourism Satellite Account 2001-2002, 5249.0, p. 8

### 3.6 Tourism research and development

In 2000-01, R&D expenditure with tourism as an objective totalled \$19.5 million, of which business supplied \$9.7 million; \$8.7 million was supplied by universities and \$1.1 million by government (DITR 2004: 30). This represented only 0.2 per cent of total R&D expenditure in Australia (ABS 2002: Table 1). This is significantly less than tourism's share of GDP, which was 4.1 per cent in 2000-01.

This result reflects the low R&D intensity (ratio of R&D to value added) in the industries which supply the bulk of tourism's value added. For example, the innovation intensity of Retail trade, Accommodation, cafes & restaurants and Transport and storage (as measured on a composite index which includes among other variables expenditure on R&D, training, and propensity to innovate) is quite low, and these industries supply nearly two-thirds of tourism's value added (Toner, Marceau, Hall and Considine, 2004).

As the survey and case studies confirm, innovation in tourism tends to be incremental, based on customer feedback rather than formal R&D. It also tends to rely on the existing skills of staff.

<sup>9</sup> Extracted from ABS (2003) Australian National Accounts: Tourism Satellite Account 2001-2002, 5249.0, p. 8.

<sup>10</sup> Extracted from ABS catalogue No. 5249.0, 'Australian Tourism Satellite Account', Fact Sheet, 2002-2003.

## 4. Government Policies and Programs for the Industry

Tourism industry policy is directed at the development of a sustainable, internationally competitive and innovative tourism sector. Tourism provides a solid base for employment and wealth creation, especially in regional Australia. Successive governments have developed initiatives to support tourism including:

- the overseas promotion of Australia as a tourist destination by Tourism Australia (formerly know as the Australian Tourist Commission);
- improving the competitiveness and diversity of regional attractions through regional tourism programs;
- providing assistance to small and medium tourism exporters through the Export Market Development Grants Scheme; and
- programs to encourage Australians to take more holidays domestically.

Direct public tourism related expenditure accounted for \$148 million in 2002-03 (see Table 10).

**Table 10: Direct tourism related spending by Australian Government 2002-03**

Activity	\$ million	Agency
Australian Tourist Commission	100	Industry, Tourism and Resources
Export Market Development Grants <sup>11</sup>	17	Austrade
Regional tourism projects	9	Industry, Tourism and Resources
See Australia	2	Industry, Tourism and Resources
Bureau of Tourism Research	2	Industry, Tourism and Resources
Cooperative Research Centre for Sustainable Tourism	3	Education, Science and Training
Australian Bureau of Statistics	2	Australian Bureau of Statistics
Conservation of Rural and Historic Hotels	4	Environment and Heritage
Tourism Policy	9	Industry, Tourism and Resources
Total (direct assistance to tourism)	148	

Source: Tourism White Paper, p. 16.

The Australian Government recently allocated \$235 million to boost the growth of the tourism industry. The Tourism White Paper (DITR, 2003) provides the strategic framework for the sector. The Tourism White Paper was prepared against the backdrop of a difficult period brought about by international travel uncertainty following a series of shocks.

As part of the Tourism White Paper, a new body has been created, *Tourism Australia*, a merger of four earlier tourism organisations:

- the Australian Tourist Commission;
- See Australia;

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<sup>11</sup> The scheme supports a wide range of industry sectors and products, including inbound tourism and the export of intellectual property and know-how outside Australia. In the 2002-03 financial year, \$143.9 million was paid to 3843 businesses. For grants relating to the 2001-02 grant year, the average grant was \$36,280. Over two-thirds of businesses receiving EMDG reported annual income of \$5 million or less. Footnote extracted from <http://www.austrade.gov.au> [19.05.04]

- the Bureau of Tourism Research; and
- the Tourism Forecasting Council.

Tourism Australia aims to connect all the skills and knowledge of these organisations under one umbrella to market a revitalised Brand Australia in key global markets and leverage international and domestic promotion of Australia through strategic partnerships with State and Territory marketing bodies and industry.

Tourism Australia will have a marketing coordination role to promote Brand Australia, both globally and within Australia. Tourism Events Australia will provide assistance and infrastructure to businesses and governments aiming to attract events to Australia. Tourism Research Australia is to provide research services including industry wide data – particularly at the regional level, assistance in identifying key niche markets, tourism forecasting and yield maximisation strategies, etc.

At a sectoral level the strategic focus is on identifying those tourism markets that will lift capacity. Part of capacity lifting involves benchmarking sound management practices that are successful in meeting customer expectations and assisting other business to take up similar practices. Here, a National Tourism Accreditation Framework is being developed to improve professionalism and standards.

Tourism firms are eligible for assistance under a range of generic industry programs offered by governments. However, the major theme of those programs is promoting innovation as a source of competitive advantage and commercialising Australian research. Most tourism firms do not meet the criteria for those programs.

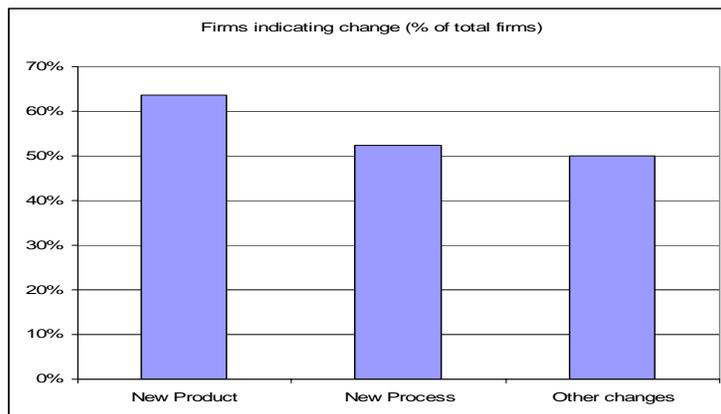
While the responsibility for the implementation of the majority of the medium to long term strategy for tourism rests with the Australian Government, all levels of government and industry are responsible for repositioning the sector towards sustainable growth, including by assuming joint responsibilities for the implementation of initiatives.

## 5. Findings from the Survey

### 5.1 Innovation and the use of KISA

Firms in the tourism industry survey reported that they are quite innovative in terms of implementing product, process and organisational changes. Thirty-nine of the 44 firms (89 per cent) had made significant changes: twenty-eight (64 per cent) had introduced a new product, twenty-three (52 per cent) had implemented a new process and twenty-two (50 per cent) had introduced a new way of doing something, for example, a new or substantially changed accounting system or human resource management system.

**Figure 3: Changes to products/services**



Source: AEGIS Tourism survey (2004)

The innovation in the firms surveyed was mostly incremental (a series of small or gradual changes over time): twenty-nine of the 44 firms (66 per cent) described these innovations as incremental while 27 percent of respondents (12 of 44) identified the change as radical. Seven firms in the sample have received a 2003 Australian Tourism Award, and a higher proportion of these seven firms regard their innovations as radical than non-award winners (see Table 12).

**Table 11: Firms with tourism awards and radical innovation**

Companies	Radical innovation (no. of companies)	% companies
Tourism awards	4 out of 7	57.1
No award	8 out of 37	21.6

Source: AEGIS Tourism survey (2004)

Tourism firms face a twofold challenge that forces continuous innovation. On the one hand fierce competition and a small product/service cycle force the introduction of changes and the marketing of new products and services (Hollick 2003; Braun and

Hollick 2004). On the other hand an increasingly savvy consumer is forcing the industry to rapidly adopt new technologies (Beeton and Graetz 2001; Bloch and Segev 1996).

In relation to the use of KISA for the development and introduction of innovations, the most commonly used services were research and development (including market research) (35), marketing and promotion (34), accounting and financial services (34) and IT services (33). This is shown in Table 1.

**Table 12: Use of KISA**

<b>KISA –related services</b>	<b>Number of firms using KISA</b>	<b>As a % of total firms</b>
1. Industry development advice	29	66
2. Business planning advice	25	57
3. Marketing and promotion	<b>34</b>	<b>77</b>
4. Research and product development <sup>12</sup>	<b>35</b>	<b>80</b>
5. Accounting and finance services	<b>34</b>	<b>77</b>
6. IT services	<b>33</b>	<b>75</b>
7. E-commerce services	23	52
8. Training services (e.g. TAFE )	23	52
9. Recruitment	18	41
10. Accreditation	28	64
11. Customisation of wholesale packages	14	39
12. Other	2	5

*Source: AEGIS Tourism survey (2004)*

The survey provides no information about the type of R&D that these firms use but it is likely that market research predominates, especially as the statistics on R&D show that spending in the industry on formal R&D is low.

The use of information technology services was mentioned by 75 per cent of the firms, and 52 per cent use in-house e-commerce services, suggesting that firms place a high priority on competing in what is now an ICT driven sector (Braun & Hollick 2004). This is surprising in the light of findings that tourism firms are slow to integrate ICT into their business management systems or to use ICT that is any more sophisticated than email and a basic website (Buhalis 2003; Braun 2004; Danielle and Mistilis 1999; Hollick 2003; Jameson 2000).

Use of KISA varied with the stage in the life cycle of the firm. Starting businesses did not use any knowledge intensive services very often. Mature businesses used knowledge intensive services regularly, especially ICT services. Businesses in the expansion phase used all the services listed in the survey but especially marketing and ICT. This propensity of the firm to use more KISA as it matures is shown in Table 13.

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<sup>12</sup> Includes market research

**Table 13: Frequent use of KISA by firm business cycle**

KISA	Starting business	New business	Mature business	Expansion business
1. Industry development advice				
2. Business planning advice				
3. Marketing and promotion				
4. Research (incl market research) and product development				
5. Accounting and finance services				
6. IT services				
7. E-commerce services				
8. Training services (e.g. TAFE )				
9. Recruitment				
10. Accreditation				
11. Customisation of wholesale packages				

Source: AEGIS Tourism survey (2004)

Note: Only frequent use is mapped

Table 13 supports previous findings on the lack of access to specialised services by micro-firms due to resource constraints (Jameson, 2000), and on time and financial constraints on small tourism firms' engagement in training activities (Collins, Buhalis and Peters, 2003). In the survey, only businesses in the expansion phase regularly participated in training activities although intermittent activity is reported by 52 percent of all participant firms (see Table 13 and Table 14).

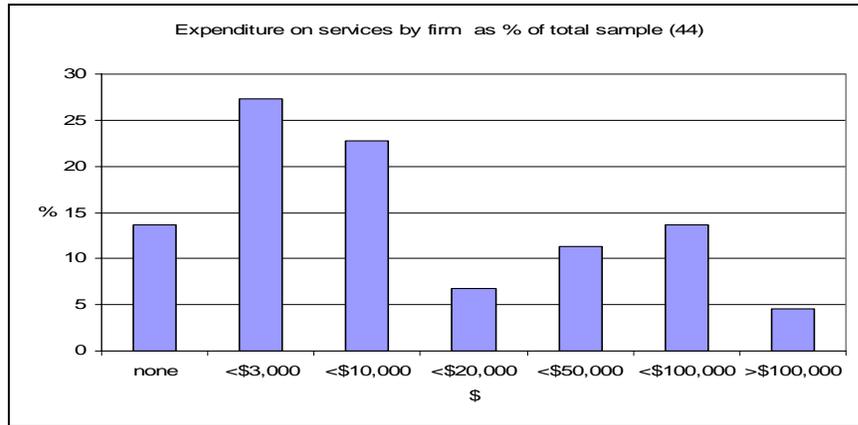
**Table14: Use of KISA-related services**

	Daily	Weekly	Monthly	Once or twice	Total number of uses
1. Industry development advice	2	7	7	13	29
2. Business planning advice	2	6	4	13	25
3. Marketing and promotion	7	8	13	6	34
4. Research (including market research) and product development	6	6	9	14	35
5. Accounting and finance services	3	5	14	12	34
6. IT services	3	8	10	12	33
7. E-commerce services	2	4	4	13	23
8. Training services (e.g. TAFE, industry courses)	0	2	3	18	23
9. Recruitment	0	2	5	11	18
10. Accreditation	0	1	4	23	28
11. Customisation of wholesale packages	3	3	5	6	17
12. Other	0	0	1	1	2
	28	52	79	142	301
	9%	17%	26%	47%	

Source: AEGIS Tourism survey (2004)

Twenty-eight of the 44 respondents (64 per cent) indicated that they spent less than \$10,000 on externally purchased KISA. Six firms spent between \$50,000 and \$100,000 on such activities, and two firms spent over \$100,000. Six firms did not spend any money on KISA.

**Figure 4: Firm expenditure on KISA-related services**



Source: AEGIS Tourism survey (2004)

The low expenditure on KISA-related services may indicate that tourism firms engage in ‘little formal skills and intelligence gathering’ as suggested by Braun and Hollick (2004:4); or that most KISA are managed in-house or through informal non-commercial networks. This latter pattern is similar to AEGIS research on KISA in the software sector (Martinez-Fernandez et al, 2004), and would repay further investigation.

Companies which have won tourism awards have a higher frequency of expenditure on services than non-award winners. Again, it would be useful to investigate the reasons.

**Table 15: Expenditure on KIS by Tourism Award winners**

Companies	> AU\$50,000 (no. of companies)	% companies
Tourism awards	4 out of 7	57
No award	3 out of 37	8.1

Source: AEGIS Tourism survey (2004)

The size of the firm was not a significant factor in relation to expenditure on knowledge intensive services by the firms surveyed, with those spending more than \$50,000 on KISA varying from between under 10 employees to more than 50 (see Table 16 below).

**Table 16: >\$50,000 Expenditure on KISA and size of the firm**

No Employees	No. of companies
<10	1
10-50	3
>50	4

Source: AEGIS Tourism survey (2004)

## 5.2 Sources of KISA

In relation to the source of expert advice, Table 17 classifies the type of inputs to KISA by the source that provides the service, and attempts to determine an average number of sources for each service. The most important source of KISA was in-house delivery which accounted for 32 per cent of all KISA. The next most significant source was the private sector with 20 per cent and industry associations with 14 per cent. The least significant sources were local government (5 per cent), the Australian Government (3 per cent) and universities (2 per cent).

It is interesting to note that firms generally used more than one source for each kind of service. On average firms obtained industry development advice from 2.42 sources, but used only 1.33 providers for IT services – of which most are in-house or private sector provision. Firms sought industry association services in a broad range of areas, especially industry development advice, research and product development, marketing and promotion, accreditation, and business planning advice. This is in contrast to the findings in the KISA software survey, where industry associations were insignificant as a source of KISA (Australian Government, 2004; Martinez-Fernandez et al, 2004), and reflects the fact that industry associations here include local, government funded tourist bodies.

**Table 17: Sources of KISA**

KISA-related Services	In-house	Local Government	State Government	Federal Government	Universities /CSIRO	Private Sector	Industry Association	Informal networks	Total	% type of total	Number of firms using services	Avg Number of sources per firm
1. Industry development advice	13	7	10	1	2	10	15	12	70	13%	29	2.42
2. Business planning advice	19	0	6	1	1	7	10	5	49	9%	25	1.96
3. Marketing and promotion	22	4	7	3	0	13	13	11	73	13%	34	2.15
4. Research (including market research) and product development	18	9	11	6	1	6	14	16	81	15%	35	2.31
5. Accounting and finance services	18	1	0	0	0	23	1	4	47	9%	34	1.38
6. IT services	15	0	1	1	0	22	0	5	44	8%	33	1.33
7. E-commerce services	12	0	2	0	1	13	1	5	34	6%	23	1.48
8. Training services (e.g. TAFE, industry courses)	7	3	13	0	4	4	5	1	37	7%	23	1.61
9. Recruitment	23	0	0	1	1	4	2	3	34	6%	18	1.89
10. Accreditation	6	4	11	2	1	2	12	2	40	7%	28	1.43
11. Customisation of wholesale packages	19	1	3	1	0	4	5	3	36	7%	17	2.12
12. Other	4	0	0	0	0	0	0	0	4	1%	2	2.00
									549	100%		
Total	176	29	64	16	11	108	78	67	549			
% source of total	32%	5%	12%	3%	2%	20%	14%	12%				

Source: AEGIS Tourism survey (2004)

The knowledge intensive service activity from the highest number of different sources was research and product development (81 of 549 instances – 15 per cent), followed by marketing and promotion and industry development advice (13 per cent each). This is highlighted in Table 17.

**Table 18: KISA: mix of sources**

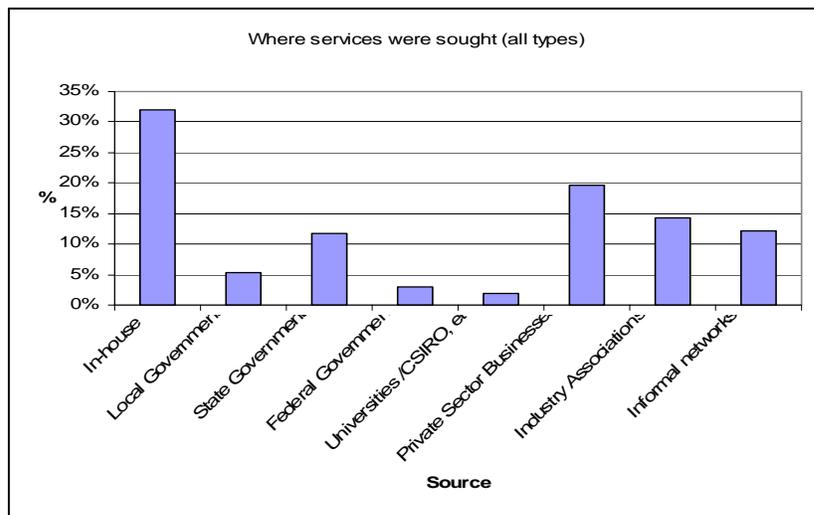
KISA –related services	In-house	Federal, State, or local Government	Knowledge Intensive Business Service	Industry Association	Networks
1. Industry development advice					
2. Business planning advice					
3. Marketing and promotion					
4. Research and product development					
5. Accounting and finance services					
6. IT services					
7. E-commerce services					
8. Training services (e.g. TAFE )					
9. Recruitment					
10. Accreditation					
11. Customisation of wholesale packages					

Source: AEGIS Tourism survey (2004)

Note: Only the most frequent sources are shown.

Figure 5 shows that the most significant sources of expertise for KISA were in-house, KIBS, industry associations and networks. This is similar to the pattern found in previous KISA studies in the software sector pointing out the important role played by informal networks in the co-production of knowledge (Australian Government, 2004; Martinez-Fernandez et al 2004; Forssén et al, 2004; Broch and Isaksen, 2004), except that (compared with the Australian software study) industry associations appear to replace informal networks to some extent.

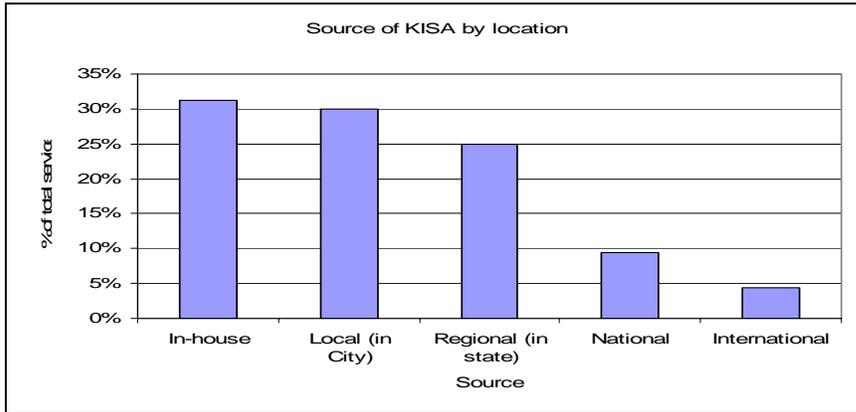
**Figure 5: Provision of services**



Source: AEGIS Tourism survey (2004)

Apart from the 31 per cent which were provided in-house, 30 per cent were found locally, and 25 per cent were within the State. Few were provided on a national basis. This is illustrated in Figure 6.

**Figure 6: Location of KISA-related providers**



Source: AEGIS Tourism survey (2004)

This evidence of local sourcing, which was even stronger in the Australian software study, may support the importance of geographical proximity and the generation of clusters and networks in strengthening the innovative system in which the firm operates (Acs, 2002). Table 19 shows the most frequent location for provision of inputs to KISA. For the surveyed firms, only R&D was sourced nationally.

**Table 19: Preferred location for provision of KISA-related services**

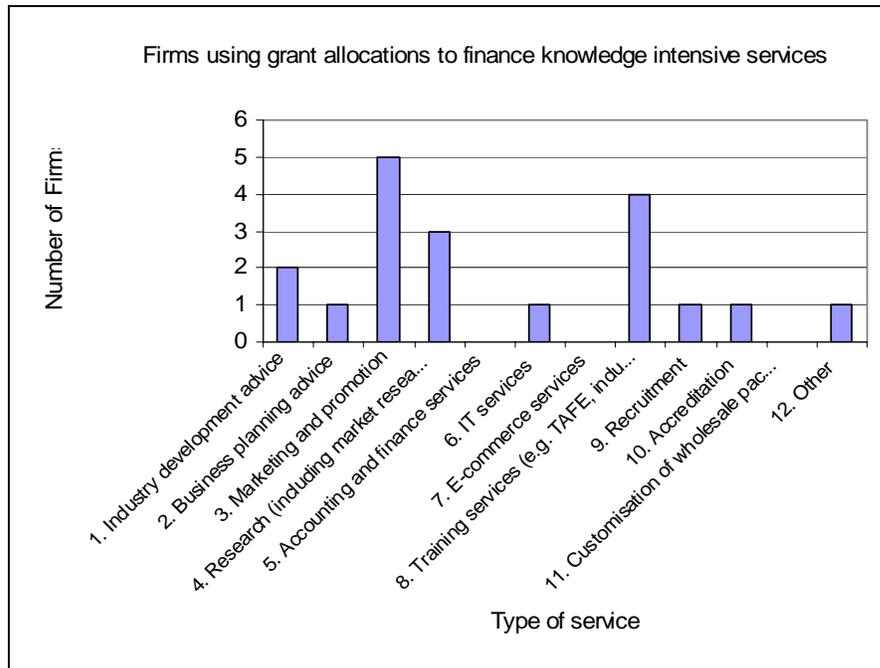
KISA –related services	In-house	Local	Regional (State)	National	International
1. Industry development advice					
2. Business planning advice					
3. Marketing and promotion					
4. Research and product development					
5. Accounting and finance services					
6. IT services					
7. E-commerce services					
8. Training services (e.g. TAFE )					
9. Recruitment					
10. Accreditation					
11. Customisation of wholesale packages					

Source: AEGIS Tourism survey (2004)

### 5.3 Access to government grants

Eight of the 44 firms (18 per cent) had received government grants (seven from State governments, four from the Australian Government and two from local government). As can be seen in the following table these funds were used in five cases for marketing and promotion, in four for training services and in three for research purposes – noting that some grants were used for more than one purpose.

**Figure 7: Inputs to KISA financed by Government grants**



Source: AEGIS Tourism survey (2004)

Firms using public funding do not appear to have used them for e-commerce services. This could be because Australian tourism firms are like those studied in other countries. Research has found that tourism firms have limited access to expertise for extending their distribution channels to the internet, which is the major transformer of the industry (Bloch and Sebev 1996, Braun 2004, OECD, 2004).

A higher proportion of companies with tourism awards received government grants than of those without, as is shown in Table 20.

**Table 20: Tourism awards and government grants**

Companies	Awarded grants (no. of companies)	% companies
Tourism Awards	3 out of 7	43
No Award	5 out of 37	13.5

Source: AEGIS Tourism survey (2004)

The size of the firm appeared not to be relevant in obtaining government grants. Three firms have less than 10 employees, three firms have between 10 and 50 and two firms have more than 50 employees.

#### **5.4 Summary of findings**

The firms in the survey were mostly engaged in incremental innovation. They did not use many external KISA, although this varied with the stage in the firm's life cycle: mature firms in an expansion phase used KISA regularly, whereas early stage businesses used them very little. Cash outlays on services were low, partly reflecting the fact that in-house services were the most commonly used.

When external KISA were obtained, they were mostly from the private sector, industry associations, and informal networks. Frequently firms used more than one external provider for a particular kind of service, and often used both internal and external services for a single function.

There was little reliance on formal R&D; nor was there much use of government provided services, but some firms had access to government grants.

There was a strong preference for locally provided services.

## 6. Key Findings from the Case Studies: The Innovators

### 6.1 Types of innovation

Measuring innovation by the introduction of new products and services onto the market can produce useful inter-firm comparisons. But it does little to explain how firms manage themselves internally to achieve change and ensure that it is sustainable.

The case studies presented here sought an understanding of what happens inside the firm – in particular, how the firm organises itself to obtain knowledge and ideas, and put these into practice in a way that adds to outcomes and productivity.

Where tourism businesses gain their initial competitive advantage from the location in which they are found or the idea on which they are based, the initial idea is the ‘radical’ innovation that forms the basis of the business (Table 22).

**Table 21: Radical innovations of tourism case studies**

Case Study	Key Idea
Australian Outback Travel Group	Tour packaging and online bookings
Banrock Station	Mixing wine tourism and ecotourism
Binna Burra Mountain Lodge	Accommodation in national park
Goana Air Safaris	Self-fly air tours
Skyrail	Cable car over World Heritage rainforest
Tjapukai Aboriginal Cultural Park	Cultural experience based on Aboriginal culture

*Source:* Thorburn, L.J., Sectoral Case Studies in Innovation

These six case studies all demonstrated the importance of the initial concept and most were the first business of their kind in Australia (Binna Burra, for example, commenced in 1933, and was one of the first eco-accommodation tourism businesses in Australia). Tjapukai has changed the most over time – its original concept was an Aboriginal dance troupe and it has since expanded into an Aboriginal cultural park offering a range of experiences with the dance troupe still being the central attraction.

Overall the tourism firms were generally not changing their product and service mix significantly and were focussing more on the softer side of innovation. They were generally unaware of intellectual property (apart from trade marks) and the value of some of their internal processes and operating procedures. While there were some examples of firms branching into significantly new business areas, these business areas were not tourism ventures but were in construction (Skyrail) and ICT (AOTG). This finding illustrates the value of case study research, as a shift of focus of this nature is unlikely to emerge in a survey.

Because tourism firms are constrained by the fact that their attractiveness to customers is tied to a particular location, it may be difficult for them to identify more radical business opportunities.

In a sense the absence of continuing radical change in their core product is also the cornerstone of the firm's success. Tjapukai is in the Guinness Book of Records for the longest running (unchanged) theatrical performance in Australia; and Binna Burra's basic concept has been unchanged since its first set of wooden cabins was built (and indeed, the site is World Heritage listed and these cabins cannot be altered architecturally under the World Heritage guidelines). Even in the younger firms, the basic tenet has remained the same.

Nevertheless these firms are still innovators in the way that they have changed their products and services, sometimes subtly, in response to changing customer demands and other external influences. A deeper understanding of how and why these changes occur in innovative firms in relation to knowledge intensive service activities provides a better understanding of the basis of innovation and how governments can encourage and support it.

A useful framework for this analysis has been developed by Koberg:

‘... procedural (management-determined innovations in rules and procedures); personnel-related (innovations in selection and training policies, and in human resource management practices); process (new methods of production or manufacturing); and structural (modifications to equipment and facilities and new ways in which work units are structured) (Koberg *et al.* 2003: 24).

This definition breaks away from the usual focus of the innovation literature on minor changes in outputs (products or services). It provides a framework for categorising those internal processes within firms that lead to the changed products or services as perceived by the consumer.

These concepts were used to structure the interview guide and focus the discussion during the case study interviews.

Most of the firms provide a mix of products and services that exemplify the value-added nature of many tourism offerings:

- Banrock, Binna Burra and Skyrail provide ranger-guided walks and other ways to experience nature to visitors to their facilities.
- Goana tour guides accompany guests on their trips around Australia.
- Tjapukai opens its facilities at night as well as during the day.
- AOT Group offers tourists package tours as well as the ability to mix and match individual accommodation purchases and has moved into sports and entertainment packages.

The case studies highlight incremental change in the four areas identified by Koberg *et al* (Table 22).

**Table 22: Incremental Innovation in Tourism Case Studies**

<b>Name</b>	<b>Product/ service</b>	<b>Procedural</b>	<b>Personnel related</b>	<b>Structural</b>
Australian Outback Travel Group	Sports and entertainment packages, sale of online content	Pilot testing of paperless office	Staff suggestion system linked with management meetings	Use of XML for online content; IT division in company
Banrock Station	Feral proof fence and mammal reintroduction	Expectation of input from professional staff	Build capacity of all staff including casuals	Restructuring management as company grows; wetlands construction
Binna Burra Mountain Lodge	Playground and games design; CD of virtual walks	Role of Board	Success kit, induction program and environment awareness	Eco-friendly water and asset management
Goana Air Safaris	Revised tour book and on-ground itineraries	Role of tour directors in customer feedback	Appointment of IT staff member	Upgrading GPS in aircraft
Skyrail Cable Car	New guided interpretative walks	New firm specialising in attraction management	Structured training for all staff	Retrofitting of cableway
Tjapukai Aboriginal Cultural Park	Tjapukai at Night	Quality circle for managing response to customer feedback	Mystery shopper for quality feedback	Departments formed as company has grown

*Source:* Thorburn, L.J., Sectoral Case Studies in Innovation

## **6.2 Use of external KISA**

Although the services that firms were asked about were all ‘knowledge intensive’, during interviews differences in the type of service delivery were identified. The rest of this section uses the following definitions for the three types of service level:

- Compliance, where firms use external service providers to ensure that they comply with regulatory or taxation regimes – in Australia, this usually relates to:
  - completion by accountants of annual company tax returns and monthly or quarterly Business Activity Statements related to the Goods and Services Tax;
  - advice from lawyers regarding corporate governance and the corporations law; and
  - auditing and accreditation of quality management systems by quality consultants.

- Routine, where standardised services are purchased for routine matters – these included some types of market research (for example, purchase of reports on markets), legal services (review of standard contracts), sales (relationships with ITOs or resellers), IT (maintenance of computer systems and networks) and accreditation (quality assessors for ISO accreditation).
- Tailored, where the service was modified to suit the needs of the client. For example, tailored surveys of customers, design of new equipment or installations that are one-off in nature and legal advice on specialised contracts.

Use of external knowledge intensive services varied widely among the case study firms (**Table 23**). Firms outsourced from 26 to 75 per cent of the knowledge intensive services on the list. There was a large range of percentages of external services considered of high importance (meaning that there was no equivalent skill inside the firm), ranging from none to 57 per cent of the external services. Of the services outsourced, the range of services that were tailored for the firm varied from nil to 85 per cent.

In many cases, firms would have preferred to use in-house service providers but their small size meant that they could not justify recruiting a specialist. Some recognised the value of an external service provider who was at the cutting edge of their field and could provide high level one-off project support when required – the view was that if such people were employed full time within a firm they would lose their leadership in a field and would find day to day work within a single tourism firm insufficiently challenging.

Nevertheless, in all but two firms, ‘tailored’ knowledge-intensive services were reported in at least half the outsourced services. In many cases, these services were brought in to implement particular strategic plans developed by the company but not able to be implemented by employees. Examples of such practices include:

- Banrock’s external engineering works and interpretive signage for nature trails.
- Tjapukai’s IT system and translation of brochures into 8 other languages.
- Skyrail’s construction works and interpretive material for interpretive stations.
- Binna Burra’s playground and games design.

In these cases the client may not need to acquire the skills (tacit knowledge) used by the service provider because the consultant is either providing the skill to create a physical installation that remains behind, or leaves a report or text which embodies their knowledge in a way that the client can use.

In other cases, however, there is a need for the tacit knowledge to be transferred. This is most evident in training where the service provider aims to transfer enough information for the staff to use the skills gained in-house. This is achieved by both verbal transfer of information (during training courses) and written transfer (through course notes and manuals). Some firms, such as Goana, had formed close relationships with selected service providers and these people contributed to the firm in the same manner as someone on staff.

**Table 23: Use of external services by tourism case studies**

	<b>AOTG</b>	<b>Banrock</b>	<b>Binna Burra</b>	<b>Goana</b>	<b>Skyrail</b>	<b>Tjapukai</b>
Planning						
Legal	routine		routine	TAILORED	TAILORED	COMPLIANCE
Acctg/Financial	routine		compliance	TAILORED	COMPLIANCE	compliance
Capital Raising			N/A	N/A	N/A	
Tech awareness		tailored			tailored	tailored
Tech trends					tailored	
Formal R&D	routine	N/A	N/A	N/A	tailored	N/A
Market research		TAILORED			tailored	routine
Product dev't			tailored		tailored	
Project manag't						
Operations						
Marketing		tailored	routine	TAILORED	tailored	tailored
Sales	routine		routine		ROUTINE	tailored
Export strategy			N/A	N/A	tailored	routine
Establishing o/s offices	tailored	N/A	N/A	N/A	TAILORED	N/A
Benchmarking					TAILORED	
IT/Networking			routine	TAILORED	ROUTINE	TAILORED
Recruitment				Routine		
Accreditation	routine	routine	tailored		compliance	routine
Standards				Tailored		
Training	routine	tailored	tailored	Tailored	tailored	tailored
Total Outsourced	7	5	8	7	15	10
% Outsourced	33%	26%	47%	41%	75%	52%
Of these:						
% High	0%	20%	0%	57%	40%	20%
% tailored	14%	80%	0%	85%	73%	50%

Notes: Words in CAPITALS indicate outsourcing was of high importance; words in lower case indicate outsourcing of medium importance; blanks indicate no outsourcing. N/A indicates not relevant to that firm

Source: Thorburn, L.J., Sectoral Case Studies in Innovation

There are cases where knowledge could be transferred from service providers to client firms, but is not. This might be because the skill offered by the service provider cannot be transferred without a great deal of cost or effort (for example, Tjapukai's use of a specialist Japanese marketing firm).

## **6.3 Sources of KISA**

### **6.3.1 Role of R&D institutions**

The survey suggested that tourism firms do not engage much in formal R&D, and that was confirmed in the case studies. Only one firm had formal links with R&D institutions – Skyrail was working with both the Co-operative Research Centre for Tourism and the Commonwealth Scientific and Industrial Research Organisation to help develop interpretive signage and deal with longer term issues relating to ecotourism. Banrock had commissioned a private sector naturalist for its interpretative signage.

Tourism firms saw themselves largely as locations where other people came to perform R&D and there were few mechanisms in place to develop those relationships beyond providing access to natural sites (for example, rainforest) which provided an opportunity for ecology and other students to work. Binna Burra had the most extensive set of relationships of this type, but still played a passive role, being happy with an informal association whose payoff was occasional talks to guests by visiting researchers.

### **6.3.2 Role of industry associations**

Most of the case study firms belong to associations that will help them lobby government on regulatory issues and also belong to associations that will bring them closer to customers. Broadly speaking the role of industry associations in innovation is minor in the case study firms. The services they get from them do not contribute significantly to innovation, but they do contribute to marketing to free and independent travellers as they are heavily linked into the tourism industry itself. Some are operated by governments – for example Tropical Tourism North Queensland is run by the Queensland State Government, and the Riverland Tourism Association is run by the South Australian Government.

### **6.3.3 Role of informal networks**

All tourism case study firms were involved in local networks of tourism industry operators. While these provided important links through to customers and alerted them of trends in visitor numbers, they provided little in relation to innovation.

The important innovation networks reached outside the local area in which the firm operated. These networks were national or international, rather than local, and were often of like-minded business people running companies within the industry. Companies such as Tjapukai and AOT Group had networks at a national level. Entering (and winning) national award competitions often provided access to new networks and raised the status of the firm so that others paid attention.

The companies' boards of management sometimes offered access to these networks. For example Binna Burra's Board has links to non-tourism organisations which are a source of ideas. The same is true for Skyrail (a group of companies involved in a range of ventures) and Banrock (owned by Hardy Wines). Goana has developed similar networks by attending annual trade shows in the US.

### **6.3.4 Role of government**

These firms do not do formal R&D and hence cannot access the majority of government programs. Firms have not used COMET, one of the Federal Government's important programs for early stage businesses, because, while it provides support for business planning, market research and training, it is perceived as focusing on commercialisation of technologies rather than services.

Many tourism firms have obtained support from State Departments of Tourism, which are keen to support firms that are growing or exporting. Some of these firms have also accessed Austrade services. In the main, however, Austrade services are aimed at identifying customers rather than supporting innovation.

There is some use of government-produced tourism statistics but those that use them often find that they are not either timely enough or specific enough to support business decision-making.

This supports feedback received during consultations with industry through the Tourism White Paper process that revealed both a lack of awareness of the data available and a low level of understanding as to how the data may be used to further business objectives. To address this issue, Tourism Research Australia will develop an information dissemination strategy and also establish a Tourism Statistics Regional Advisory Service to assist businesses and regions with the use of data and research.

Various Government regulations can have a major impact on innovation. Goana made a commercial decision not to introduce a new product into the market because of the expected time required for government approval and the resulting impact on costs. The environment protection regulations operating in all jurisdictions also must be complied with but most firms accept this and several (for example Banrock, Skyrail and Binna Burra) have extra standing in the sector for exceeding the minimum requirements.

## **6.4 Firm capabilities**

### **6.4.1 Learning by firms**

#### **6.4.1.1 Marketing**

A number of companies put a large amount of effort into marketing to Inbound Tour Operators (ITOs). This was particularly the case for Tjapukai and Skyrail, both of which attracted more than three quarters of their customers from overseas. These medium to large companies used their own staff to visit ITOs in Australia and the outbound tourism operators in key markets (who compile packages for tourists intending to visit Australia) and provide them with promotional material. Binna Burra, a smaller company which still has a significant overseas-based international clientele, relies on the annual Inbound Tourism Operators conferences, organised by Tourism Australia, to meet the ITOs and provide them with information (and perhaps encourage them to visit to see for themselves). ATO Group relies largely on its website and its dominant position in content development to ensure that it reaches potential customers.

Goana Air Safaris also has a large proportion of its clients from overseas. It, however, is targeting people who already have pilots' licences and this means that ITOs are not an

effective mechanism for marketing. Instead, it markets direct through newsletters relevant to its clients (aircraft owners magazines and nature magazines) in key countries.

These marketing strategies have been developed over time and are largely supported in-house. Firms will outsource the production of marketing and interpretive material in languages other than English (Tjapukai) or containing technical information (Banrock and Skyrail re nature interpretation). Tjapukai has also decided to retain a specialist Japanese marketing company to promote its offering to inbound Japanese tourists, as this market is highly specialised and the company does not have the resources to recruit its own Japanese market specialist. AOT Group has made a strategic decision not to target the Japanese market because of the level of specialisation required.

#### **6.4.1.2 Customer Feedback**

All case study firms had processes in place to obtain feedback from customers. In some cases this was formal (for example visitors' books and information on registration forms) but most firms also had ways to capture informal comments – often through staff having casual conversations with guests. All firms also had processes in place to use this feedback to make incremental changes to their product and service offerings. This feedback also told firms when not to make changes (this was particularly notable at Binna Burra whose clientele values the consistency of service and experience delivered over many years).

#### **6.4.1.3 Quality Systems, Customer Service and Intellectual Property**

All firms had quality systems or standard procedures in place for example:

- Skyrail is ISO9001 certified.
- Skyrail and Binna Burra are Green Globe 21 certified.
- Tjapukai runs a quality circle system.
- Banrock complies with HACCP.
- Goana complies with CASA risk and quality management systems.
- AOT Group has standard operating systems that have evolved over time.

Most firms had developed their own standard operating procedures, drawing on past experience and the requirements of the various standards with which they want to comply. These systems were recognised as a valuable part of firms' capacity to service clients, manage risk and ensure that customers received an experience of a high standard.

Some, notably Tjapukai and Skyrail, also recognised that these standard operating procedures formed a component of the firm's intellectual property. AOT Group had also recognised that its content database (lists of accommodation and details of features and prices) was valuable and had diversified its business by providing this content to other tourism companies. These three firms recognised that they could sell their expertise to others and were actively expanding their business by capitalising on this body of knowledge. Skyrail in particular has a strategy to prevent loss of knowhow by only bidding for projects where it can also enter into a long term contract for operations so that the knowledge remains in house.

While tourism firms were aware of the value of their trademark, few also recognised the value of their standard operating procedures. There is potential for firms to use this tacit

knowledge to deliver consulting or operational services to others – of particular interest when it is difficult to replicate the other key component of attractiveness, location. Some case study firms were aware that they might give away their tacit knowledge by giving presentations to visiting delegations (often to people from overseas). This needs to be managed to ensure Australian companies benefit from the opportunity to meet with delegations.

#### **6.4.1.4 Staff**

Many tourism firms rely on staff employed as casuals. These people may have relatively low educational qualifications and may not stay with a company for very long. In several case study firms it was only the management staff who had specified roles in obtaining feedback from customers and suggesting change. Two firms, Tjapukai and Banrock, had made changes to their internal systems to try to encourage lower level staff to participate more actively in contributing to change and incremental improvements.

#### **6.4.2 Knowledge management**

The reasons for outsourcing knowledge intensive service activities varied and included:

- The need to access particular skills not available in-house on a one-off basis (for example Binna Burra commissioned a playground designer to develop a children's play area and activities).
- The need to access complementary skills on a longer term basis (for example in awareness of new technologies).
- The need to obtain greater objectivity (for example customer service assessment and accreditation/quality auditing).
- The need to ensure staff viewed the service provider as an expert (for example, training services).

In most cases the case study firms retained the knowledge imparted by the service provider in the form of a design or construction (for example, Banrock's wetland engineering works) or a report or record (for example, Tjapukai's foreign-language brochures). Where it was important for staff to absorb the learning then external service providers provided notes or trained staff direct, or there were feedback systems in place (for example, the quality circles in Tjapukai).

Most firms said that they would prefer to employ expert staff in some of these jobs but they could not justify the expenditure in a small firm when the need for the service fluctuated and they wanted to obtain people who had a knowledge of the wider industry and best practice (which might be difficult to maintain once someone was working full time for a single company).

### **6.5 Conclusion**

The total amount spent on external knowledge intensive services by the case study firms was a small part of their turnover but the value obtained from them was often significant in the development of the company. Overall, the reasons cited by the case study firms for using external KISA centred on the need to obtain special expertise or to have someone

‘at arm’s length’ for reasons of compliance (auditing) or for objectivity (training, customer service assessment).

By grouping the firms and plotting various characteristics of service usage against age and size it was found that the main correlation with use of outsourced services was the number of staff in the firm. Younger firms were smaller, and have a higher use of tailored services.

The tourism firms appear to be using knowledge intensive services to implement capital expenditure decisions and to develop facilities. These did not affect their innovation capability long-term and were more in the role of implementation of ideas that had been generated from within the organisation. Change management in this context related more to the need to train staff after the new facility or equipment was in place.

In general the tourism firms did not report any difficulty in finding external providers of KISA once they had made the decision to use them. These providers were available locally or in the nearest large city (for example, trainers, lawyers).

## **7. Conclusion**

### **7.1 Awareness of KISA**

Tourism firms are not consciously innovative, in the way that, say, firms in the information and communications technology industry are. The firms in this study – especially the case studies – have a low level of R&D, especially when it is noted that much of the R&D that is reported is market research.

Many tourist operations are, however, based on a major innovation, and in general the firms are conscious of the need for continuous improvements to their operations – that is, they are incremental innovators. To a great extent they monitor their customer feedback for ideas for change, and for quality control. In some cases their appeal rests on their staying – or giving the illusion of staying – the same; in others, there is strong pressure to keep up with the latest fashions. In any case, marketing is a very important service input for an industry which is defined by its customers.

Tourism is itself a service industry, and the tourism firms understand their needs for KISA and the need to build capabilities through them better, perhaps, than in other industries. Most of the knowledge intensive service activities used in the tourism industry are for routine management: accounting, personnel management, and IT services. To a great extent these are provided in-house, although external services are used for auditing and where the business is not big enough to warrant the employment of specialists.

Many of the radical innovations required substantial inputs of KISA, in design, building, or environmental expertise. Most firms looked externally for these services, because the frequency of use did not warrant employing specialists, or because they found that an outsider with a fresh eye would contribute something different.

### **7.2 Sources and Availability of KISA**

In some cases the decision to produce in-house or look externally was driven by costs: sometimes the expense of recruiting an expert meant the service was outsourced, but sometimes the expense of hiring a consultant meant that the firm made do with in-house expertise. Generally firms had no trouble finding the services they need.

Local tourism authorities often played a key role in supplying services. These bodies were often funded by State and local governments, and performed the functions of a network co-ordinator as well as marketing and providing business advice. Often the industry associations were active in these authorities, or co-operated with them. KIBS were correspondingly less important than in other industries.

The relationships between tourism firms and universities were much weaker than in technologically innovative industries, although they had a role in eco-tourism and there was often co-operation which allowed students to do field work in tourist areas.

### **7.3 Policy Implications**

A review of the tourism industry in Australia was undertaken as part of the development of the Tourism White Paper. Extensive consultation with industry sectors and interest groups fed into this process. The White Paper was subsequently released in November 2003 with an additional \$235 million being put towards the tourism industry. A significant change was the creation of a new body - Tourism Australia – that brings together the Australian Tourism Commission, *See Australia*, the Bureau of Tourism Research and the Tourism Forecasting Council.

Through the White Paper a range of actions will be undertaken to ensure the continued development of a sustainable and robust Australian tourism industry.

- Building Australia's Reputation – both internationally and domestically through Tourism Australia;
- Enhancing Research and Statistics – that are robust, timely, targeted and disseminated to industry and governments;
- Encouraging Sustainability – of Australia's unique natural and cultural environment;
- Lifting Capability – of tourism businesses, including the development of a National Tourism Accreditation System;
- Improving Access – to potential benefits from tourism for Australia's regions; and
- Increasing Collaboration – through governments at all levels working together.

All of these actions can be seen as contributions to KISA. However, they are in a context where firms report that Australian Government policies and programs are not critical. Firms turn, instead, to their local tourism authorities, which combine government subsidies with many of the functions of an industry association.

One area where the Australian Government might have a greater role is with the COMET program, which provides support for early stage business planning, market research and training. Tourism firms may perceive it to be irrelevant to them because they interpret 'technology' in a particular way. Further investigation of the low application rate by tourism firms is warranted.

A difference emerged between the survey and the case studies regarding the correlation of use of KISA and the age of the firm. It would be interesting to investigate this, and if necessary the Government could intervene to raise awareness of the need for knowledge intensive services and continuing development of capabilities at all stages.

Finally, it would be interesting to do further study on non-innovative firms to see if their failure to innovate is connected with difficulty getting access to the necessary KISA.

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# Attachment 1: Survey Instrument

## Questionnaire protocol for Knowledge Intensive Service Activities in the Tourism industry<sup>13</sup>

**Question 1.** How many persons are employed by your firm/organisation?

- **In house:** \_\_\_\_\_
- **Full Time:** \_\_\_\_\_
- **Part Time:** \_\_\_\_\_
- **As contractors:** \_\_\_\_\_

**Question 2.** What qualifications do your employees have? (approximate %)

- % with Masters/PhD: \_\_\_\_\_
- % with college degrees/ diploma: \_\_\_\_\_
- % with secondary education: \_\_\_\_\_
- % with primary education : \_\_\_\_\_

**Question 3.** Which of the following options would best describe your business?

- Starting business (less than 6 months)
- New business (between 6 months and 2 years)
- Mature business (more than 2 years)
- Business in expansion (More complex structure, diversified markets, decentralisation)

**Question 4.** How long has your business been in operation? \_\_\_\_\_ years

**Question 5.** What is your average yearly turnover/sales?

- Less than AU\$500, 000
- Between A\$500,000 and A\$1 mil
- Between A\$1 mil – A\$2 mil
- More than A\$2 mil

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<sup>13</sup> This survey was developed in joint collaboration with the Department of Industry, Tourism and Resources.

**Question 6.** Has your firm made changes in the last year in terms of introducing

	Yes	No
A new product/service (or a substantially changed product/service)	<input type="checkbox"/>	<input type="checkbox"/>
A new way of producing an existing product/service	<input type="checkbox"/>	<input type="checkbox"/>
Changes to the way your firm does things such as a new or substantially changed accounting system or human resource management system	<input type="checkbox"/>	<input type="checkbox"/>

**Question 7.** Would you consider these changes to be

- Incremental (series of gradual or small changes over time)   
 Radical (a one time big change)

**Question 8.** How often did you use the following services to develop and introduce these changes?

<b>KISA-related Services</b>	None	Daily	Weekly	Monthly	Once or twice
1. Industry development advice	<input type="checkbox"/>				
2. Business planning advice	<input type="checkbox"/>				
3. Marketing and promotion	<input type="checkbox"/>				
4. Research (including market research) and product development	<input type="checkbox"/>				
5. Accounting and finance services	<input type="checkbox"/>				
6. IT services	<input type="checkbox"/>				
7. E-commerce services	<input type="checkbox"/>				
8. Training services (e.g. TAFE, industry courses)	<input type="checkbox"/>				
9. Recruitment	<input type="checkbox"/>				
10. Accreditation	<input type="checkbox"/>				
11. Customisation of wholesale packages	<input type="checkbox"/>				
12. Other	<input type="checkbox"/>				

**Question 9.** What has been your expenditure on the services (see Question 8) over the last year?

- None   
 Less than A\$3,000   
 Less than A\$10,000   
 Less than A\$20,000   
 Less than A\$50,000   
 Less than A\$100,000   
 More than A\$100,000

**Question 10.** Where did you obtain these services?

<b>KISA-related Services</b>	<b>In-house</b>	<b>Local Government</b>	<b>State Government</b>	<b>Federal Government</b>	<b>Universities /CSIRO, etc</b>	<b>Private Sector Businesses</b>	<b>Industry Associations</b>	<b>Informal networks (eg customers, suppliers, competitors)</b>
1. Industry development advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Business planning advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Marketing and promotion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Research (including market research) and product development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Accounting and finance services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IT services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. E-commerce services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Training services (e.g. TAFE, industry courses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Recruitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Accreditation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Customisation of wholesale packages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Question 11.** Please indicate the importance of these different service providers

	<b>Not relevant</b>	<b>Small importance</b>	<b>Medium importance</b>	<b>High importance</b>
In-house providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Federal government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities, CSIRO, etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private sector businesses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry Associations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Informal networks (eg customers, suppliers, competitors)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Question 12.** Where were the services providers located for your innovative activities?

<b>KISA-related Services</b>	<b>In-house</b>	<b>Local (within your City)</b>	<b>Regional (within the state)</b>	<b>National</b>	<b>International</b>
1. Industry development advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Business planning advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Marketing and promotion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Research (including market research) and product development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Accounting and finance services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IT services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. E-commerce services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Training services (e.g. TAFE, industry courses)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Recruitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Accreditation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Customisation of wholesale packages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Question 13.** Has your organisation received grants from the following:

	<b>Yes</b>	<b>No</b>
Federal government	<input type="checkbox"/>	<input type="checkbox"/>
State government	<input type="checkbox"/>	<input type="checkbox"/>
Local government	<input type="checkbox"/>	<input type="checkbox"/>

**Question 14.** Have these grants been used to finance the use of the following knowledge intensive services?

	Yes	No
1. Industry development advice	<input type="checkbox"/>	<input type="checkbox"/>
2. Business planning advice	<input type="checkbox"/>	<input type="checkbox"/>
3. Marketing and promotion	<input type="checkbox"/>	<input type="checkbox"/>
4. Research (including market research) and product development	<input type="checkbox"/>	<input type="checkbox"/>
5. Accounting and finance services	<input type="checkbox"/>	<input type="checkbox"/>
6. IT services	<input type="checkbox"/>	<input type="checkbox"/>
7. E-commerce services	<input type="checkbox"/>	<input type="checkbox"/>
8. Training services (e.g. TAFE, industry courses)	<input type="checkbox"/>	<input type="checkbox"/>
9. Recruitment	<input type="checkbox"/>	<input type="checkbox"/>
10. Accreditation	<input type="checkbox"/>	<input type="checkbox"/>
11. Customisation of wholesale packages	<input type="checkbox"/>	<input type="checkbox"/>
12. Other	<input type="checkbox"/>	<input type="checkbox"/>

## **Attachment 2: Interview Guide**

### **BACKGROUND**

This is an interview guide which contains some set questions and some starting points for discussion of issues. The depth of discussion on the issues raised in the guide will depend to some extent on the company that is being surveyed. However, during the interview it is expected that the majority of factual questions will be answered. The first section of the guide seeks answers to factual questions about the company while the next section analyses use of KIBS in a range of areas within the firm.

### **BACKGROUND INFORMATION ON THE FIRM (MOSTLY OBTAINED PRE-INTERVIEW)**

1. Date firm established/registered
  2. Ownership (name of parent)
  3. Location of owner
  4. No. staff (FTE)
  6. Describe the most recent product/service launched in the past 2 years
- 
7. Describe any management-determined changes in rules/procedures or business processes intended to improve production systems or service delivery in the past 2 years?
- 
8. Describe and changes in selection and training policies or HR management practices intended to improve production systems or service delivery in the past 2 years?
- 
9. Describe any modifications to equipment/facilities or work units which have been intended to improve production/service delivery in the past 2 years
- 
- In general, what barriers were faced in implementing these changes?
- 
10. What is the firm's primary competitive strategy? (for example...)
    - a) Introduce new products/services ahead of competitors
    - b) Offer higher quality products/services than competitors
    - c) Offer customised products/services for customers
    - d) Offer quick service/turn-around
    - e) Offer lower prices on comparable products/services of competitors
    - f) Stick to a small market where there is little competition
    - g) Other

## USE OF KNOWLEDGE INTENSIVE BUSINESS SERVICES

11. From where does the firm obtain its services on each of the following items?  
(Identify High medium and low importance, or N/A)

Activity	External firm	R&D Instn	Other Extnl orgn (F/I)**	In-house (staff)	Board	Is service tailored, routine, compliance or other?
Business planning						
Legal services						
Acctg/Financial services						
Capital Raising						
Technology awareness						
Technology trends						
Formal R&D						
Market research						
Product/service development services						
Project management						
Outsourced operations						
Marketing/promotion*						
Sales & distribution						
Export strategy						
Establishing offices overseas						
Performance benchmarking						
Networking services						
Recruitment services						
Accreditation/quality management						
Standards						
Training services						

\* incl. e-commerce

\*\* incl. government organisations such as business enterprise centres, government grants

For each of those above that are outsourced (KIBS, R&D, other), why is this? Discuss

Impediments to use of outside providers

Importance of outsourced providers

Impact of external providers on learning

Types of providers

Impact on innovation capacity

Impact on innovation performance

Is the service simply outsourced or is it a collaborative arrangement?

How is the knowledge shared?

## **DRIVERS FOR INNOVATION**

12. How frequently do you need to bring out new products/services? What determines the timing?
13. What are the main drivers for innovation (for example, customers, suppliers, new regulations, competitors, staff, management...)
14. Of those listed in Q12, which is the most sophisticated innovation driver and what demands does it make on the firm?
15. If the main innovation driver is within the firm, what is the reason for this?
16. Describe the main customer base for the firm (e.g. large number of end-consumers, mix of firms and consumers, small number of government clients)
17. What proportion of your customers are
  - a) From your local region?
  - b) From other areas within your State?
  - c) From other areas of Australia?
  - d) From overseas?
18. Do customers from different regions have different needs/characteristics which require you to modify your products/services for these groups? (if yes, how to you meet this challenge)?
19. What other stakeholders do you need to work with (or at least be aware of) to ensure your business is successful? (e.g. govt for regulatory issues)
20. What is the balance of small (incremental) and step-change (radical) innovations in the firm?
21. Have small (minor) business changes led to significant competitive advantages over competitors? (if yes, expand)

## **KNOWLEDGE ACQUISITION**

22. What continuing arrangements or procedures are there for seeking new ideas or business improvement information from external sources?
23. How does the firm develop a balance between choosing to acquire new technologies to support innovation and choosing to introduce new management practices or training to support innovation?
24. How has the firm structured itself to be able to respond to external opportunities?
25. What is the balance (by value) of all services sourced from outside the firm vs internal costs? (is easily available)

## **TRANSFORMING INTERNAL PROCESSES**

26. How have the changes identified in affected the business? (e.g. productivity improvements, new markets, exports, lower costs)
27. What management practices help to support the process of innovation within the firm?

28. How important are existing vs new personal contacts in deciding to implement an innovation?
29. How does the firm establish internal procedures to ensure that knowledge brought in from external service providers is maintained within the firm?

### **IMPACTS ON STAFF OF INNOVATION**

30. Where do you look to find employees that you most rely on for business changes and improvements (vs KISA)?
31. How do you ensure employees are trained to deliver new innovations in product and services to your customers?
32. Do you maintain company practices or procedures that enable you to benefit from ideas brought forward by other employees?
33. What are the relative roles of staff skills and knowledge, and formal procedures in each of the above questions?