

## APPROACHES TO MONITORING CHANGE IN THE BUSINESS ENVIRONMENT OF TOURIST ATTRACTIONS

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### ABSTRACT

All businesses require information about the environment in order to make operational and strategic decisions. As suppliers at the end of the distribution line, attractions need information about their customers, competitors and other tourism industry sectors to inform decision-making. To compound this need for information, many attractions are small businesses, often lacking the personnel or resources to conduct elaborate environmental scanning and evaluation projects. This paper explores the environmental scanning approaches used by tourist attraction managers when gathering information for strategic purposes. A mixed-methods approach is used to explore the type and number of sources used by attraction managers, as well as the impact of organisational characteristics and environmental complexity on the information sources consulted. The results suggest that primary research is the major source of information for attraction managers. It also appears that organisational characteristics such as size, growth and employee numbers may be linked with higher levels of environmental scanning. The paper has both practical and theoretical implications. It proposes a model of environmental scanning in tourism businesses and at a practical level provides some evidence that managers who spend more time collecting information about the environment may reap the benefits of a more robust business.

**Key words:** environmental scanning, information sources, attractions, strategy, planning

### INTRODUCTION

Information is frequently described as the ‘lifeblood’ of the tourism industry. One system of information involves the flow of marketing information that operationalises the tourism distribution chain. However there is a second system of information flows in the tourism industry. This system revolves around the collection and management of information about the business environment. In some ways these two systems reflect the ‘frontstage’ and ‘backstage’ of information flows in the tourism industry. While a great deal of literature is available on the information distribution systems of the tourism industry, fewer tourism researchers have examined the collection and management of information dealing with the business environment. This paper seeks to address this gap by exploring the environmental scanning approaches used by tourist attraction managers when gathering information for strategic purposes.

### TOURIST ATTRACTIONS

Tourist attractions are regarded by many as the core components of the tourism industry. They serve two key functions in the tourism system: they stimulate interest in travel to a destination and they provide visitor satisfaction (Gunn, 1994). While attractions have received increasing attention from researchers, they continue to be poorly understood, with research lacking conceptual sophistication and depth (Richards, 2002).

This may be due to the disparate nature of the attraction sector, with its plethora of business sizes, forms, themes and styles. A decisive definition of the phrase “tourist attraction” also remains elusively out of reach. Notwithstanding these shortcomings, recent research efforts have resulted in a diverse range of new approaches to understanding tourist attractions.

This paper will add not only to the tourism literature on environmental scanning, but also to the existing literature dealing with tourist attraction management. According to Watson and McCracken (2002) the environment in which attractions operate is complex and changing, requiring managers to be more externally aware, less insular and more adaptable. As suppliers at the end of the distribution line, attractions need information about the customers, competitors and other tourism industry sectors in order to optimise their performance. To compound this need for information, many attractions are small businesses, often lacking the personnel or resources to conduct elaborate environmental scanning and evaluation projects.

## **ENVIRONMENTAL SCANNING AND STRATEGIC PLANNING**

Both the broader strategic planning literature and the tourism literature stresses that planning and decision making need to be supported by a reliable and extensive information search to provide accurate information about the changes occurring in the business environment (Brouthers, Andriessen, and Nicolaes, 1998; Jurowski and Olsen, 1995; Harrison, 2003). Information gleaned from environmental scanning and used to identify important trends can reduce risk and improve strategic decision-making. In the hospitality literature, Olsen and Zhao (2004) note that the tourism industry needs to adopt a more proactive stance toward environmental change. They argue that it is very important for management to “perceive correctly, monitor systematically, scan consistently, interpret accurately and predict the forces driving change” (p. 13). These authors also suggest that a failure to understand the relationship between the environment and the organisation can lead a business to lose opportunities and competitive advantages and may hinder growth and development.

Smeltzer, Fann and Nikolaisen (1988) define environmental scanning as the gathering and interpreting of information pertinent to the business. The concept of environmental scanning is commonly discussed in the context of a broader strategic planning system. Strategic planning can benefit tourist attractions by allowing operators to make better management decisions based on sound knowledge of future developments (Chon and Olsen, 1990). Unfortunately, strategic planning research in the attraction sector and in the tourism industry as a whole is frequently described as meagre (Soteriou and Roberts, 1998; Athiyaman, 1995; Chon and Olsen, 1990). Gilbert and Kapur (1990) observe that strategic planning is rarely discussed in journals applied to the tourism industry. Some exceptions to this general observation are summarised in Table 1. The table indicates that the small number of planning-related studies are diverse, both in terms of sample and study focus. The subject has received some attention in the broader tourism and hospitality literature (for comprehensive reviews see Evans, Campbell and Stonehouse, 2003; Hall, 2000; Moutinho, 2000; Olsen, West, and Tse (1998); Tribe, 1997; Poon, 1993; Teare and Boer, 1991).

**Table 1**  
**Business planning-related studies in the tourism and hospitality literature**

<b>Year</b>	<b>Authors</b>	<b>Study Focus</b>	<b>Instrument</b>	<b>Sample Description</b>	<b>Sample Size (Response Rate)</b>
1990	Gilbert and Kapur	Strategic marketing planning in the hotel industry	In-depth interviews	Hotel groups / chains, United Kingdom	4
1995	Athiyaman and Robertson	Strategic planning in large tourism firms.	Mail Questionnaire	Large tourism and manufacturing firms, Australia	87 (51%)
1995	Jurowski and Olsen	Environmental scanning in tourist attractions	Content Analysis	‘Trends Database’ developed from key industry journals, 1989-1992	-
1998	Phillips and Appiah-Adu	Benchmarking and strategic planning in hotels	Mail Questionnaire	Hotel Groups, UK	63 (84%)
2000	Phillips and Moutinho	Measuring strategic planning effectiveness	Mail Questionnaire	Top 50 Hotel Groups, United Kingdom	100 (77%)
2003	Kemp and Dwyer	Mission statements of international airlines	Content analysis of airline websites	International Airlines	50

Gilbert and Kapur (1990) state that it is unclear whether tourism companies are managed strategically and whether a formalised process of developing, implementing and evaluating strategy is commonly practised. These sentiments were echoed by Athiyaman (1995) who observe that gaps exist in almost all areas of strategy research in the tourism industry.

More broadly, the strategic planning literature has recognised that the scanning practices of small businesses may differ to those in large organisations. A focus on small businesses is highly relevant to the current focus of this paper. The Australian Bureau of Statistics (1997) defines small businesses as all manufacturing businesses with less than 100 employees and all other non-agricultural businesses with less than 20 employees. Thus a small business in the tourism industry would have less than 20 employees. Smeltzer et al. (1988) propose that the sources of information used in larger organisations become more formalised as systems become more complex. Many large firms employ specialised environmental scanners to analyse the environment and to provide a database for planning. However, most managers of small firms cannot afford the luxuries of specialised environmental planning systems. These observations are supported by more recent research conducted by Jennings and Beaver (1997), which indicates that small firms are not focussed on predicting future opportunities and threats, but on adapting as quickly as possible to current threats and changes in the environment. Griggs (2002), in his analysis of disability-based organisations in Australia, found that smaller organisations devoted less attention to the analysis of government and political issues, competitive trends, supplier trends, external client and customer preferences, technological trends and market research.

Research dealing with environmental scanning in small businesses has also found that managers value informal personal information more than formal impersonal information. Smeltzer, et al. (1988) found that small business managers tend not to consider traditional sources of business information or advice from outsiders as being particularly valuable and appear to seek social and psychological support rather than objective information.

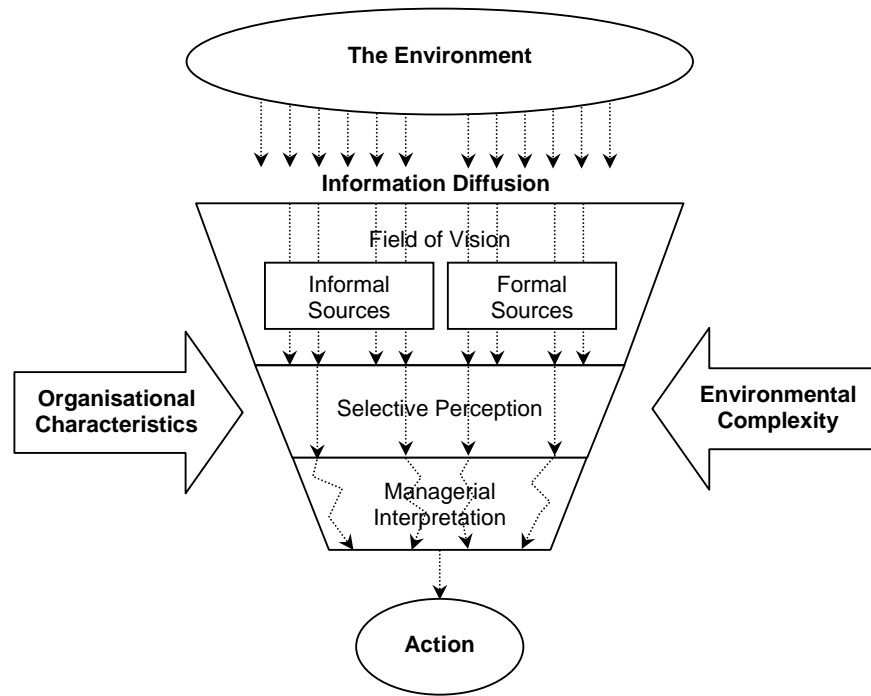
This finding can be linked with the work of Faulkner (1994), who notes that strategic thinking in the Australian tourism industry is exemplified by an inclination to rely on anecdotal evidence as a basis for making decisions rather than drawing on readily available research. Similarly, Brouthers et al. (1998) found that small firm managers in the Netherlands used non-quantitative analytical techniques and relied in their intuition when gathering information about the environment.

Research in large firms indicates that when the environment is complex managers tend to increase the sophistication of their planning efforts (Lindsay and Rue, 1980). Gilbert and Kapur (1990) provide some indication of the environmental conditions experienced by tourism and hospitality firms when they propose that these organisations compete in a volatile, fragmented market place characterised by low market share and many operators. This is further reinforced by Jurowski and Olsen (1995), who suggest that travel and tourism organisations operate in an unstable environment. However, Matthews and Scott (1995) report that small firms do not respond in the same way as large organisations to uncertainty because they are constrained by their resources and their range of responses. Consequently, these authors argue that the sophistication of environmental scanning in small firms declines in response to increasing environmental complexity.

There is also some evidence to suggest that environmental scanning and strategic planning differ between service and manufacturing firms. Brouthers et al. (1998), in their study of small firms in Amsterdam, report that service firms tend to engage in more extensive search activities when compared with manufacturing firms. Early research by Rovelstad and Blazer (1983) indicated that tourism businesses lagged behind manufacturing firms in strategic planning and research. In contrast, later research by Athiyaman and Robertson (1995) found that the strategic planning processes adopted by large Australian tourism firms were of equal sophistication to those employed by manufacturing firms. One of the few studies related to environmental scanning in tourist attractions investigated the general information needs of British tourist attractions (Martin and Mason, 1990). The authors found that operators were looking for a range of data including visitor trends and characteristics, visitor spending, promotional budgets and effectiveness, staffing levels and costs and the profitability of different activities.

All of the factors discussed above impact on the environmental scanning conducted by managers. Hambrick and Mason (1984) have developed a model to describe how information flow influences and restricts strategic choice in organisations. Figure 1 presents a new theoretical model of environmental scanning in tourism businesses based on the work of Hambrick and Mason as well as the more recent literature summarised above.

**Figure 1**  
**A model of environmental scanning in tourism businesses**



The model proposes that environmental stimuli are diffused through a series of filters which act to influence the flow and quantity of information. The manager’s field of vision, those areas to which attention is directed, is restricted and some information from the environment may be eliminated. The field of vision may consist of formal and informal information sources and the balance of these broad categories may vary from one organisation to another. Information is further constricted due to the process of selective perception, which creates an inability or unwillingness to interpret or accept information. The information that is eventually selected for processing is interpreted through a filter woven by the manager’s cognitive base and values. The complexity of the environment may impact on the formality, quality and type of information collected. Equally, organisational characteristics such as size, life cycle stage, structure and so forth may also impact on the flow of information.

This paper focuses on the information sources (field of vision) used by attraction managers and the impact of organisational characteristics and environmental complexity on the choice and number of sources. It therefore has three specific aims:

1. To determine the type and number of information sources used by attraction managers in environmental scanning;
2. To examine the influence of tourist attraction size and growth on the type and number of information sources used; and
3. To examine the influence of environmental complexity variables on the type and number of information sources used.

## METHODS

### *Mixed-Method Approach*

This research uses a mixed-method approach to explore the environmental scanning approaches of tourist attraction managers. In the first instance, the paper reports the findings of a quantitative survey completed by attraction managers. These findings are supported by a more detailed set of qualitative comments gathered by conducting in-depth interviews with managers.

### *Quantitative Phase*

The first phase of the research utilised a self-administered mail questionnaire to collect information about individual attractions. The sample was selected on a non-random, convenience basis. Databases of tourist attraction contact details for each Australian state and territory were obtained from both government and private promotional sources. The operational definition of attractions for this study was effectively those businesses and locations designated as tourist attractions by dominant tourist information sources and State government tourist bodies. The complete database resulted in over 2000 attractions. This database was subjected to a filtering process to eliminate businesses that were not considered to be mainstream attractions. Attractions such as non-managed sites and landscape features, national parks, wineries, churches, arts and crafts shops, retail sites and tearooms were removed from the database because their classification as attractions was incidental to their primary function as sites of commerce, conservation, consumption or worship. This filtering process was also necessary because individual state databases varied in detail and classification of attractions.

An adaptation of Dillman's (1978) Total Design Method was used in an attempt to maximise the response rate. This procedure involved the use of follow-up postcards to remind managers to complete the questionnaire. One follow-up mailing of postcards was initiated to act as a reminder and to encourage further response. The postcard thanked operators for their participation and encouraged managers to complete the survey if they had not already done so. The postcard also asked operators to contact the researcher if they had not received the initial questionnaire.

The instrument included questions about the characteristics of the attraction (i.e. visitor numbers, growth, number of paid employees), the sources of information used and the characteristics of the environment in which the attraction was operating. Environmental characteristics were measured using ten statements anchored by five-point Likert scales (1 = strongly agree to 5 = strongly disagree) that addressed the complexity and nature of the environment in which the attraction was operating.

A sample of 407 valid responses were received from the final population of 1610 attractions, providing a response rate of 26.7%. This was within the expected response range of 20% to 30%. The sample included museums and science centres, culture and heritage attractions, galleries, agricultural attractions, nature-based attractions, wildlife parks and aquaria, gardens, theme parks, action and adventure attractions, industrial attractions, military attractions and casinos. Table 2 provides a brief profile of attractions included in the quantitative study.

**Table 2**  
**Profile of attractions responding to the questionnaire**

	<b>n</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
Visitor numbers (annual)	328	55,117	149,045	100	2,000,000
No. of paid employees	404	11	30	0	460
Gross revenue (AU\$)	223	597,239	1,922,162	0	18,066,181
Total profit (AU\$)	178	71,377	404,784	-867,000	4,640,000
Asset value (AU\$)	159	2,860,713	6,209,884	2,621	35,000,000
Age (years)	384	21	25	1	200
Adult admission price (AU\$)	285	6	5	1	35
Estimated visitor length of stay (min)	387	87	61	1	360

A variety of statistical measures have been used to analyse the results of the quantitative study using the SPSS software package. This paper also utilises an adaptation of the growth-share matrix approach developed by the Boston Consulting Group. Kotler, Brown, Adam and Armstrong (2004) describe the growth-share matrix as a portfolio-planning method that evaluates a company's strategic business units (SBUs) in terms of their growth rate and relative market share. SBUs are classified as stars, cash cows, question marks or dogs. Stars are high growth/high share businesses or products that often require many resources to maintain their high growth. Question marks are low share/high growth business units that require a lot of resources to maintain their share or to grow into stars. Cash-cows are low-growth, high-share businesses or products that generate revenue. Dogs are low growth/low share businesses or products that may generate enough cash to maintain themselves but do not promise to be a large generator of revenue. The matrix is adapted in this paper to divide attractions into these four categories based on their visitor numbers (market share) and growth relative to the sample averages. Further statistical comparisons are then conducted for the four groups of attractions.

### ***Qualitative Phase***

The second phase of the research consisted of twelve semi-structured interviews conducted with managers across a subset of attractions in the quantitative study. The qualitative interviews offer the ability to explore some of the themes emerging from the broader sector-wide study. The main purpose of in-depth interviews is to gain understanding and meaning rather than generalising findings to a specific population (Kvale, 1996). The focus is therefore on identifying respondents who match a predetermined set of characteristics. The sampling approach for this study was designed to maintain diversity in the sample in terms of: size (visitor numbers); location (regional or metropolitan) and attraction type.

Of the 28 managers approached with an invitation twelve agreed to participate. The final sample size of twelve is consistent with McCracken's (1988) prescription that most studies achieve theoretical saturation with between 8 to 24 interviews. All of the managers were either owners, CEOs or senior managers of attractions. Table 3 summarises the characteristics of the attractions taking part in the qualitative study. To maintain confidentiality, attraction names have been substituted with alphanumeric respondent codes that are used throughout the remainder of this paper. These codes are structured so that the reader can readily ascertain the size and location of the attraction. The first letter represents attraction size (Small, Medium, Large) while the second represents locality (Regional or Metropolitan). For example, SR1 is a small attraction in regional Australia. An attraction was regarded as small if it received less than 100,000 visitors annually.

Medium attractions were defined as those receiving between 100,000 and 500,000 visitors, while large attractions were identified as having more than 500,000 visitors.

**Table 3**  
**Characteristics of tourist attractions participating in the study**

	<b>Size (Visitor No.)</b>	<b>Type</b>	<b>Ownership</b>	<b>Location</b>	<b>Est.</b>	<b>Interviewee Background</b>
SR1	10 000	Museum	Private	Regional	1970	Alternative Medicine; Farming, Archaeology
SR2	35 000	Nature-based	Private	Regional	1989	Tertiary Education
SR3	32 000	Nature-based	Private	Regional	1990	Farming
MR3	125 000	Agricultural	Private	Regional	1983	Engineering, Horticulture
MR1	400 000	Manufacturing	Private	Regional	1985	Hospitality
MR2	124 000	Aquarium	Statutory Authority	Regional	1987	Chemistry, Marine Biology
LR1	560 000	Australian Culture	Not For Profit Company	Regional	1970	Public Sector Management
MM1	346 000	Museum	Statutory Authority	Metropolitan	1991	Design; Museum Administration
MM2	143 000	Science and Technology	Govt	Metropolitan	1989	Chemistry, education, public service
LM1	1 000 000	Gallery	Govt	Metropolitan	c1880	Sculpture, education
LM2	600 000	Museum	Govt	Metropolitan	1988	Art history
LM3	1 200 000	Aquarium	Private	Metropolitan	1988	Chemistry, education

A number of steps were taken to ensure data accuracy, validity and reliability. The researcher performed a partial transcription of all interviews to ensure consistency. This process resulted in summaries of 3 to 5 pages for each attraction. These summaries were sent by mail to each participant to ensure that details of the dialogue had been interpreted accurately. An independent researcher was also employed to complete a partial transcription of three interviews. These independent summaries were compared with the researcher's summaries by a panel of three tourism researchers in order to establish internal validity. The three researchers were asked to read two versions of the three interviews before indicating how similar each set was by assigning a percentage. This procedure was designed to reduce the effect of researcher bias in the transcription process. The average ratings for the three sets of transcripts fell well within the 70% level of agreement for qualitative research suggested by Miles and Huberman (1994).

The transcripts were analysed using a grounded theory approach that involves identifying theoretical categories that are derived from the data through the use of a continuous comparative method (Glaser and Strauss, 1967). The comparative method requires the researcher to interact continually with the data at various stages during coding. The underlying philosophy of this qualitative approach was to allow the central themes to emerge from the data through an inductive process, rather than being forced to fit a preconceived theoretical framework (Glaser and Strauss, 1967). The process involved scanning for similar issues, ideas and concepts by reading the interview summaries numerous times. These were then labelled to establish an index of themes for each interview question.



## RESULTS AND DISCUSSION

### *Information Sources in the Field of Vision*

The types of information sources used by attraction managers were assessed in order to determine the field of vision. Table 4 presents the results of the quantitative research. The qualitative research revealed a complimentary, but smaller set of information sources which included (in order of prevalence) own research, tourism industry organisations, industry networks, education and scientific institutions, competitors, consultants, governments and industry leaders. It is reassuring to note that this inductive list of sources closely mirrors the items initially identified in the empirical research.

**Table 4**  
**Information sources used by tourist attraction managers**

Information Sources	N	%
Own Research	175	82.5
Industry Intelligence	156	73.6
Competition	144	67.9
Mass Media	128	60.4
Government	107	50.5
Educational Institutions	65	30.7
Consultants	57	26.9
Other	20	9.5

### *Multiple Response Format*

Both sets of results highlight the importance of primary research, with a majority of attractions conducting their own research. Primary research undertaken by attraction managers has the benefit of being relatively cost effective as well as providing a greater degree of control and customisation. However, the interviews indicated that the extent of primary research varied amongst different attractions. At a basic level, most attractions collected visitor statistics and information such as complaints and comments from visitors. Visitor statistics typically included visitor numbers, coach numbers, food and merchandise sales, visitor satisfaction and simple demographics, such as the visitor’s postcode. A more sophisticated approach adopted by some attractions (SR2, MR1, MR3) involved the calculation of conversion rates or yield. Some attractions also collected information through the use of focus groups.

Examples of both formal and informal environmental scanning approaches were detected by the research. A formal approach was adopted by MM1 and LM2, both of which used ‘evaluation divisions’ specifically tasked with “evaluating visitor responses, markets and opportunities”. Other attractions adopted an approach that can best be described as informal. In most instances managers in these attractions collect information about competitors and the external environment on an ad hoc basis. This type of analysis is typically sporadic, with short bursts of activity such as competitor analysis, consultancy projects and periodic visitor studies. Some information appeared to be gleaned from the mass media.

The quantitative results also indicate a heavy reliance on tourism industry intelligence and networking. Ten attraction managers in the qualitative study indicated that tourism industry intelligence, from organisations such as Tourism Australia and state marketing organisations, were an important source of information. While this information was seen as valuable, a number of respondents indicated that it was often dated and inaccurate. SR2 observed that businesses needed to be cautious about using information from tourism organisations because it was often too generic and created the potential for distorted expectations.

During the interview process it was observed that large metropolitan attractions in Sydney were less perturbed by inconsistencies in visitor data. Given that Sydney is the main international gateway to Australia, one would expect that visitor demographics would be relatively undiluted, and that Tourism Australia data may more closely match the profile of visitors to these attractions. Regional attractions perhaps need to place more emphasis on their own research, which better reflects the visitor idiosyncrasies of dispersed destinations.

Competitor information, such as annual reports and promotional material was used by 67.9% of attractions. A number of attractions, most notably in metropolitan areas, and within the museum sector, have established cooperative partnerships with their 'competitors'. These cooperative arrangements allow attractions to share visitor information and research and provide opportunities for benchmarking. A formal cooperative arrangement was not observed amongst regional attractions, although it must be conceded that some attractions informally share visitor statistics, often as a result of networks formed through their regional tourism authority. Respondents at SR2 and MR1 specifically noted that they used comparable overseas attractions as a source of ideas. This form of benchmarking was facilitated by personal travel to 'best practice' industry leaders in the United States, and by monitoring Internet sites. At a local level, information about direct competitors was also accessed informally using the Internet. Phillips and Appiah-Adu (1998) found that benchmarking of competitors and customer experiences was a useful tool in the strategic planning process of hotels. Sharing attendance data and participating in joint marketing was also identified as an emerging cooperative trend by Pearce (1998), who argued that this partly offset the trend for large companies to operate a suite of attractions.

Educational institutions (30.6%) and consultants (26.9%) were less common sources of information. Information from these sources is often more difficult to access and in the case of consultants information may be too costly for smaller attractions. Both large and small attractions had commissioned consultancy firms to conduct periodic market research projects and feasibility studies. Another approach to considering the information sources used by managers is to quantify the number of sources used by each attraction. This provides a useful measure of the diversity and intensity of environmental scanning. Table 5 provides an overview of the distribution of attractions according to the number of information sources used.

**Table 5**  
**Number of information sources used by tourist attraction managers**

<b>Number of Sources Used</b>	<b>Frequency</b>	<b>Percent</b>
1 Source	20	4.9
2 Sources	24	5.9
3 Sources	47	11.5
4 Sources	46	11.3
5 Sources	35	8.6
6 Sources	16	3.9
7 Sources	24	5.9
No sources selected	195	48.0
Total	407	100.0

It is apparent from the data that a large number of attractions did not indicate any sources of information. The questionnaire did not contain an item for 'none' so it is unclear whether these attractions simply skipped this question or whether the entire 48% of attractions did not conduct any environmental scanning. Of those attractions that did collect information, most selected 2 to 4 sources.

***The Influence of Organisational Characteristics on Environmental Scanning***

The qualitative results suggest that organisational characteristics (such as size) may have an impact on the extent and type of data collected by attractions. To further explore this notion, attraction managers in the quantitative study were asked to report three measures: the number of visitors, growth in visitor numbers (on a three point scale), and the number of paid employees. These provide a basis for comparing the quantity and type of information sources used by attraction managers.

Visitor numbers and growth were combined into a single measure using an adaptation of the concept of the Boston Growth-Share Matrix. Attractions were divided into two groups, those with below average visitor numbers and those with above average visitor numbers (i.e. market share). They were also divided into two groups according to growth in visitor numbers: those with declining or steady visitor numbers and those with increasing visitor numbers. Figure 2 summarises the four groupings of attractions that resulted from this analysis.

**Figure 2**  
**Matrix of attraction types based on visitor numbers and visitor growth**

		Change in Visitor Numbers	
		Steady / Decreasing	Increasing
Visitor Numbers	Above Average	“Cash Cows” 64	“Stars” 90
	Below Average	“Dogs” 71	“Question Marks” 80

Of the 407 attractions in the sample 102 did not provide sufficient information to be categorised and the sample is therefore reduced to 305 attractions. The four categories were used as the basis for an ANOVA to explore the differences between the groups in terms of the number of sources used in environmental scanning. The results are presented in Table 6.

**Table 6**  
**One-way ANOVA result for attraction type and number of information sources used**

Type	N	Mean no. of Sources	F-Score	Sig.
Dogs	71	0.5	28.431	0.000
Question Marks	80	1.7		
Cash Cows	64	2.5		
Stars	90	3.5		

The results indicate that there is a significant difference between the four categories of attractions in terms of the average number of information sources used. It is quite clear that higher visitor numbers and/or growth are associated with the use of a higher number of sources in environmental scanning. Cash Cows require information to maintain their visitor numbers, while Stars need information to increase their visitor numbers. To further explore this finding, the same analysis was conducted for the number of paid employees supported by an attraction. The results are presented in Table 7.

**Table 7**  
**One-way ANOVA result for paid employees and number of information sources used**

Type	N	Mean no. of Sources	F-Score	Sig.
No paid employees	116	1.3	7.723	0.000
1-2 employees	63	1.6		
3-4 employees	59	1.8		
5-8 employees	59	2.4		
9 or more employees	83	2.9		

The results show once again that there is a significant difference between attractions based on employee numbers. Attractions with no paid employees (i.e. volunteer organisations) exhibited the lowest average number of information sources, while attractions with more than 9 employees exhibited the highest average. The results support findings by other authors that larger organisations, with more employees, have a greater capacity to carry out formal strategic planning tasks such environmental scanning (Lyles, Baird, Orris and Kuratko, 1993; Marsden, 1998).

In addition to the diversity of sources consulted, it is also useful to consider the type of sources considered by managers of different attraction types. Table 8 provides a cross-tabulation of this data.

**Table 8**  
**Cross-tabulation of information sources and attraction type**

Information Sources	Dogs		Question Marks		Cash Cows		Stars	
	N (71)	%	N (80)	%	N (64)	%	N (90)	%
Own Research	11	15.5	29	36.3	34	53.1	62	68.9
Industry Intelligence	10	14.1	32	40.0	27	42.2	53	58.9
Competition	7	9.9	24	30.0	26	40.6	54	60.0
Mass Media	6	8.5	22	27.5	34	53.1	51	56.7
Government	1	1.4	17	21.3	24	37.5	42	46.7
Educational Institutions	3	4.2	8	10.0	14	21.9	30	33.3
Consultants	2	2.8	7	8.8	12	18.8	17	30.0
No sources listed	56	78.9	40	50.0	22	34.4	21	23.3

***Multiple Response Format***

The association between the types of sources used and the four categories is quite clear. A majority of 'Dogs' (79%) did not list any information sources and primary research was conducted by only 15.5% of attractions in this group. This compares with 68.9% of attractions in the 'Stars' group. Primary research was the main form of research for all groups except 'Question Marks' who tended slightly more towards industry intelligence. The results supports research by Brunt and Danster (2000) which found that smaller attractions were less likely to undertake research in the form of surveys due to the costs involved.

***The Influence of Environmental Characteristics on Environmental Scanning***

Attraction managers were asked to rate the complexity of the business environment by responding to a set of 10 five point rating scales. The items were tested for their reliability by using Cronbach's alpha model to test for similarity.

An alpha of 0.74 was obtained, indicating a moderate to high similarity in the content being measured. In order to simplify the data and to identify underlying patterns the ten rating scales were subjected to a principal component factor analysis. The results are summarised in Table 9.

**Table 9**  
**Rotated factor correlation matrix for business environment rating scales**

Environmental Complexity Measures	Mean <sup>a</sup>	Environmental Complexity Factors		
		Competition	Change	Pessimism
The actions of competitors are difficult to predict	3.16	0.768	0.193	0.064
There is a lot of innovation from competitors	3.38	0.705	0.030	-0.070
Unforeseen threats occur regularly	3.34	0.698	0.175	0.104
It is impossible to anticipate when and where new competitors will emerge	3.10	0.613	0.145	0.211
The business environment seems to change frequently	2.92	0.198	0.848	-0.012
The attraction is frequently faced with changing customer preferences	3.04	0.030	0.843	-0.032
It is difficult to anticipate change	3.16	0.276	0.528	0.273
The business environment is complex	2.52	0.399	0.401	-0.071
The market for the attraction is declining	3.73	-0.011	0.044	0.891
The outlook over next 12 months is poor	3.86	0.146	-0.015	0.872
Eigen Value		3.25	1.96	1.70
% of variance accounted for		23.47	19.59	16.99
Cumulative %		23.47	42.06	59.05
Aggregate Factor Mean <sup>a</sup>		3.23	2.83	3.80

a. Mean is based on the following scale: 1=Strongly Agree, 5=Strongly Disagree

Three clear environmental factors were identified after five iterations using the varimax rotation method with Kaiser normalisation. These factors were named ‘competition’; ‘change’ and ‘pessimism’ based on the item correlations presented. The only statement that was not strongly correlated with any of the three factors was ‘The business environment is complex’.

For each of the three complexity factors the aggregate mean for each attraction was recoded into one of three categories: (1=high complexity/agreement to 3=low complexity/agreement). These categories were then used as the basis for a series of Oneway ANOVA’s to explore the association between environmental complexity and environmental scanning. The results are presented in Table 10.

**Table 10**  
**One-way ANOVA result for environmental factors and number of information sources**

Environmental Factors	Environmental Complexity						F value	Sig.
	High		Medium		Low			
	Mean*	N	Mean*	N	Mean*	N		
Competition	2.2	25	2.3	248	2.1	64	0.217	0.805
Change	2.3	55	2.2	259	1.9	21	0.206	0.814
Pessimism	1.6	19	1.7	112	2.5	235	4.213	0.016

\* Mean indicates average number of information sources

The findings appear to suggest that increasing environmental complexity due to change or competition does not influence the mean number of information sources consulted by managers. However, the findings do suggest that when managers are pessimistic about the environment (i.e. higher complexity) they use significantly less information sources (1.6) than when they are optimistic about the environment (2.5). This finding is interesting but needs to be treated with caution due to the low number of attractions in the 'high complexity' category for this variable. Analysis of the three environmental factors according to the types of information sources used suggests that managers are much more likely to conduct primary research and to seek information about competitors when they are optimistic.

## **CONCLUSION AND IMPLICATIONS**

Five interesting points emerge from the research. Firstly, the results indicate that primary research is the major source of information for attraction managers. This raises additional research questions about the skill and capacity of attraction managers to plan and execute valid research. A more detailed study building on this research and the work of Brunt and Danster (2000) could examine the formality, type and quality of research conducted by attraction managers. An assessment of management skills in this area would provide interesting results.

Secondly, the qualitative results provide some clues about the mix of formal information sources and informal information sources used by managers. It would be useful to extend this research by exploring the amount of emphasis managers place on informal and formal sources. It is also unclear whether the informal sources preferred by smaller attractions are a suitable substitute for the more sophisticated, systematic data collection and evaluation conducted by larger attractions.

Thirdly, it appears that organisational characteristics such as size, growth and employee numbers may be linked with increased environmental scanning activity. This supports the findings of Smeltzer et al. (1988). Given these results, it is tempting to conclude that managers who conduct more research will be more successful in terms of visitor numbers and visitor growth. However, the causality between these variables cannot be ascertained. It would be equally valid to conclude that larger, growing attractions have more staff to conduct environmental scans. The causality of this research could be further explored through in-depth interviews with attraction managers. It must be conceded that the apparent link between organisational characteristics and environmental scanning is somewhat tempered by the fact that the quantitative instrument did not include an option for 'none' when questioning attractions about their use of information. This is a limitation that could be easily rectified in future studies of this nature. The qualitative findings reported in this paper also suggest that there are exceptions to the general notion that smaller attractions use less complex environmental scanning approaches. In particular, SR2 is a small regional attraction that does appear to utilise sophisticated environmental scanning methods. This attraction is somewhat unusual because both of the company directors have substantial planning experience through prior employment in large organisations. The environmental scanning effort in this attraction is supported by an electronic data collection system specifically designed for the business. This illustrates that small attractions can develop sophisticated and formal environmental scanning systems supported by innovative technology, provided that managers have the requisite skills and knowledge.

Fourthly, the research did not look at other organisational characteristics and it would be useful to explore whether environmental scanning varies according to other variables, such as attraction type, drawing power and location. The qualitative results suggested that attractions in peripheral destinations might have different information requirements to attractions in gateway destinations. It would be particularly interesting to explore this issue in more detail.

Finally, the research did not provide strong support for the notion that environmental complexity has a major impact on the type and number of information sources used by managers. The results of the factor analysis provides some anecdotal evidence that managers with a “pessimistic” outlook relied on fewer information sources. One reason for this finding may be that when managers are pessimistic about the outlook for their attraction they simply stop looking for information. Perhaps this signifies an inclination to reduce the fear of receiving bad news? Further organisational research exploring the links between these variables would make a useful contribution to the tourism management literature.

The paper has both theoretical and practical implications. This paper proposed a model of environmental scanning in tourism businesses. It then tested several aspects of the model in tourist attractions. The results suggest a strong link between the number of information sources and organisational characteristics but the association between environmental complexity and number of sources is weak. It would be useful to test these aspects using other tourism suppliers. Furthermore, the research did not explore how the information collected by businesses is managed once it enters the organisation. Research testing the ‘selective perception’ and ‘managerial interpretation’ aspects of the model would be useful. Further exploration of factors that influence the ‘field of vision’ would also provide some clues about how manager collect information.

At a practical level, the research provides some evidence that managers who do spend more time collecting information about the environment may reap the benefits of a more robust business. It also seems that formal and informal information sources are both important, and may play a complimentary role in helping managers to understand the complexity of the environment.

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