A Triple Bottom Line Evaluation of the Impact of Special Events: The Development of Indicators

By

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This thesis is presented in fulfilment of the requirements of the Degree of Doctor of Philosophy

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Centre for Hospitality and Tourism Research

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Declaration

'I, Peter Mark Sherwood, declare that the PhD thesis entitled "A Triple Bottom Line Evaluation of the Impact of Special Events: The Development of Indicators" is no more than 100,000 words exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work'.

Signature: Date:

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List of Publications from Thesis

Refereed Conference Papers

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Sherwood, P., Jago, L. & Deery, M. 2005, 'Triple Bottom Line Evaluation of Special Events: Does the Rhetoric Reflect Reporting?' P. Tremblay & A. Boyle (eds), paper presented to *Annual Council of Australian Tourism and Hospitality Educators' Conference*, Alice Springs.

Sherwood, P., Jago, L. & Deery, M. 2005, 'Unlocking the Triple Bottom Line of Special Event Evaluations: What are the Key Impacts?' J. Allen (ed.), paper presented to *Third International Event Management Research Conference*, Sydney.

Jago, L. & Sherwood, P. 2005, 'The Economic Contribution of Special Events: A Framework for Comparison', J. Allen (ed.), paper presented to *Third International Event Management Research Conference*, Sydney.

Sherwood, P., Jago, L. & Deery, M. 2004, 'Sustainability Reporting: An Application for the Evaluation of Special Events', C. Cooper, C. Arcodia, D. Solnet & M. Whitford (eds), paper presented to *Annual Council of Australian Tourism and Hospitality Educators' Conference*, Brisbane.

Abstract

The sustainable development agenda is underpinned by the recognition that there are limits to the capacity of the earth to cope with unimpeded economic growth. Businesses, due to their power and reach, are seen as major users of natural, human and financial capital resources. Granted a societal licence to operate, businesses are under increasing pressure from a diverse range of internal and external stakeholders, who expect a higher level of accountability and transparency in regard to economic, social and environmental performance measurement. In response, businesses have incorporated practices such as eco-efficiency and corporate social responsibility, and an increasing number are now moving towards a more holistic evaluation of their triple bottom line (TBL) performance. In contrast, the special events industry has continued to rely on traditional economic measures of performance.

There has been tremendous growth in the number of special events being staged in tourism destinations. Events have been used strategically to bring 'new' money into regions, promote economic development and to showcase destinations to potential visitors. As a result of these economic imperatives, the evaluation of events has predominantly been undertaken from a narrow economic perspective. This approach, however, fails to account for the impact of the event on the host community as well as the impact on the natural environment such as water and energy use and waste generation.

Since the 1980's, event researchers have called for a broad-based evaluation model that incorporates economic, social and environmental measures. Recently, a number of these researchers have suggested that a TBL approach has merit as a potential framework. What has been lacking, however, is a set of standardised measures that would underpin a broad-based evaluation model. Therefore, the aim of this research is to develop a set of standardised TBL indicators, which would enable a parsimonious TBL evaluation model to be established.

A seven-step indicator development process was used to underpin this research, based on a number of collaborative projects that developed indicators to measure sustainable

development. Within this framework, there were a number of research stages. Initially, a comprehensive analysis of 224 academic event evaluation publications and 85 actual event impact assessments was undertaken. The aim was to understand what impacts have been used in event evaluations from academic and practical perspectives. From these 309 sources, a list of the 20 key impacts was derived. The second stage of the research was a three-round, modified Web-based Delphi survey of event experts. The aim was to use the opinions of the event experts to develop a pool of indicators to measure the key impacts. A total of 24 indicators was proposed by the experts to measure the impacts.

A conceptual model was developed, which detailed the event drivers, the event inputs, the event outcomes, and the TBL indicators. The model also included a TBL evaluation, which included overall measures for the economic, social and environmental impacts. A number of possible models were discussed, which enable a number of TBL indicators to be integrated to allow an overall event 'score' to be achieved.

After a subset of the indicators was selected, the third stage of the study involved the conduct of two special event case studies. The objective of this stage was to operationalise the indicators in order to test their appropriateness for inclusion in a TBL evaluation model. The case studies used intercept surveys of event attendees, competitors and exhibitors to gather economic data, mail-out surveys of local residents to gauge the social impacts and the collection of a range of environmental data from event venues and attendees. Whilst the economic and social data were readily captured via the surveys, not all environmental data were available, mainly due to the regional setting of one of the events, where there was limited capacity for capturing data. Following this, the fourth major stage of the research involved consultations with a small number of project stakeholders in order to obtain feedback on the indicators used and the results of one of the case studies. In general, the stakeholders were supportive of both the direction of the research and the use of the TBL indicators to evaluate the impact of events.

A TBL evaluation will broaden the evaluation criteria for events and bring the events industry in line with the wider business community. There is a growing recognition in the tourism literature that, particularly with transportation, the tourism industry is a major contributor to greenhouse gas emissions. Therefore, inclusion of environmental measures will provide a clearer picture of the environmental footprint of an event. Moreover, inclusion of the measures of the impact of events on the quality of life of the host community may provide information that assists event organisers to retain the licence to stage an event, which is granted by the event stakeholders.

A further benefit of a TBL evaluation is that it will enable a comparison to be made of a range of different events, which will aid tourism organisations and event stakeholders in the decision-making process about which events merit support. As a result, it will be possible to manage events in a more sustainable manner. Whilst this study contributed to the development of a TBL evaluation, further research is required to integrate the indicators into a framework that can provide an overall 'score' for an event, which can then be compared with other events.

Table of Contents

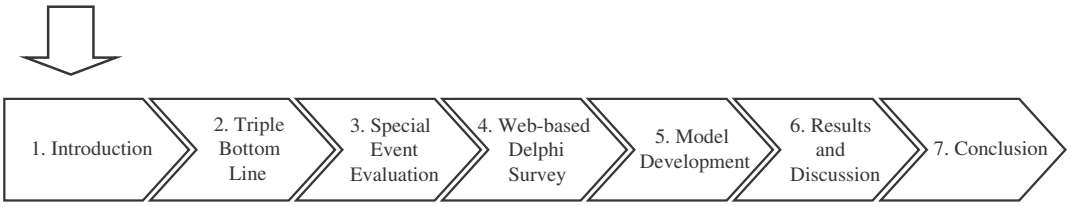
List of Tables

List of Figures

Chapter

1

Introduction



Chapter Structure

- Background
- Research Problem
- Justification of the Research
- Method
- Outline of the Thesis
- Delimitations and Key Assumption

1.1 Background

The background to this research lies in the emergence of sustainable development and how this concept has influenced the way that businesses operate and measure their performance. The realisation that there were 'limits to growth' of the world's population was prevalent in Greek philosophy 2000 years ago (Lovelock 1987), early economic discourse (Malthus 1973) and 19th Century European forestry practices (Davoudi & Layard 2001). More recently, a number of seminal books such as *Silent Spring* (Carson 1965) and *The Population Bomb* (Ehrlich 1972), highlighted the emerging global environmental concerns that there was an imbalance between the rate of population growth and the ability of the earth to cope. The rise of the mass media

also raised public awareness, which forced individuals, businesses and governments to question the direction and pace of change (McCormick 1989).

One of the major calls to action came from the publication of *Our Common Future* (also known as the Brundtland Report) (World Commission on Environment and Development 1987). This report assisted in internationalising the concept of sustainable development, which was defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (1987, p. 43). The report also suggested that a summit be held that would bring together world leaders to discuss environmental concerns, and as a consequence, the Rio Earth Summit was held in 1992. One of the major outcomes of the summit was the publication of Agenda 21, in which it was recognised that businesses should take a leading role in providing solutions to the environmental issues. One of the ways that this could be achieved was through the use of sustainable development indicators (Keating 1993).

Businesses have also been under pressure from a diverse range of internal and external stakeholders such as employees, communities, environmental groups and government to be more accountable, responsible and transparent in relation to measuring and reporting on their performance. Given an informal 'licence to operate', businesses have responded by implementing changes to practices such as eco-efficiency and corporate social responsibility. Moreover, in order to satisfy the information requirements of a diverse range of stakeholders, old styles of accounting and reporting on business performance proved to be insufficient (Elkington 1999b). As a result, businesses progressed from the traditional financial reporting to encompass measurements of their economic, social and environmental performance, which was referred to as the triple bottom line (TBL) (Elkington 1999a). TBL performance and reporting has been implemented by an increasing number of businesses, assisted by frameworks such as the Sustainability Reporting Guidelines (Global Reporting Initiative 2006b) and the establishment of organisations such as the World Business Council for Sustainable Development, which provide assistance with the process of indicator development.

Despite the emergence of terms such as sustainable business and corporate sustainability, Atkinson (2000) claimed that there was little in these concepts beyond defining a set of pragmatic guidelines whereby a corporate entity can monitor and improve its sustainability performance. Nevertheless, Andrews (2002) maintained that the core challenge of TBL reporting was defining an approach that is grounded in appropriate principles and that employs meaningful and pragmatic indicators. As the focus of this research is on special events, the next section looks at what has occurred in event evaluation.

1.2 Research Problem

Worldwide, special events have been one of the fastest growing sectors of the tourism industry. In Australia, an indicator of the growth of the events industry has been the establishment of special event divisions within the many of the State and Territory Tourism Organisations (STOs) (Jago & McArdle 1999). The role of these special event divisions is primarily to bid for and attract events to destinations, as events are seen as a way to increase the tourism appeal of destinations to potential visitors (Uysal & Gitelson 1994). Further evidence of the growth and maturation of the events industry has been the increasing number of journal articles published that are related to special events (Formica 1998; Hede, Jago & Deery 2002; Sherwood, Jago & Deery 2005b), the number of event-specific conferences held (Harris, Jago, Allen & Huyskens 2001), the number of events appearing in event calendars (Jago & McArdle 1999), and the substantial global increase in postgraduate study in event-related areas (Jago & Shaw 1998).

In Australia, many of the STOs have incorporated the staging of special events as part of their destination marketing and development strategies, as many events have the potential to attract visitors to the destination, gain media exposure, build destination branding and leverage economic benefits (Carlsen, Getz & Soutar 2001; Jago, Chalip, Brown, Mules & Ali 2002). For example, Tourism Victoria states that, in terms of events, its objectives are to 'Ensure Victoria's events leverage significant economic impact and media exposure for the state' as well as to 'further develop the considerable range of existing events to maximise the social and economic benefits as

well as individual destination profiles' (Tourism Victoria 2002, p. 138). Another indicator of the importance of events to the Victorian economy was the recent release of the 10 Year Tourism and Events Strategy, which places the events industry as a high priority in Government decision-making on economic, social and environmental issues (Department of Innovation Industry and Regional Development 2006).

As a consequence of the focus on economic imperatives, support for special events has been predominantly justified by government and tourism agencies in terms of the narrow perspective of their economic contribution to the host economy (Hede et al. 2002). Further, Carlsen et al. (2001) claimed that the event tourism sector has been placed under increased scrutiny and that government agencies are having to be more accountable for their policies and programs, and particularly as the funding often involves generous incentives (Dwyer, Forsyth & Spurr 2005b), which can amount to many millions of dollars (Burns & Mules 1986). As a result of the publicity surrounding the justification and allocation of scarce taxation dollars, the general public has become more aware of the use of public resources in the pursuit of securing and funding major events (Crompton & McKay 1994).

Despite the continued use of economic impact studies, there appears to be a degree of scepticism about the methods and results of some of the economic evaluations. For example, Compton and McKay (1994, p. 33) claimed that many of these economic impact analyses 'are undertaken not to find the true impact, but to legitimise the event's public support'. Hence, there is often criticism of the government for its support of events, with critics declaring 'that the benefits do not exist or are exaggerated, or are not really benefits' (Burgan & Mules 2000b, p. 47). Moreover, the economic impacts from events may be unevenly distributed within the host region, which has the potential to diminish ongoing public support for events (Chalip & Leyns 2002). As such, a broader method of evaluation is needed to counteract the reliance on economic evaluations.

Since the 1980's, an increasing number of researchers have called for a broader approach to evaluate the impact of special events (See, for example, Bramwell 1997; Burns & Mules 1986; Carlsen et al. 2001; Dwyer, Mellor, Mistilis & Mules 2000a;

Faulkner 1993; Fredline, Raybould, Jago & Deery 2004, 2005c; Getz 2000; Hede et al. 2002; Laesser, Stettler & Rutter 2003; Ritchie 1984; Sherwood, Jago & Deery 2004; 2005a; 2005b). Amongst these researchers, one method that has gained credence is to evaluate the impact of events from a TBL perspective, which considers the economic, social and environmental impact of events (Fredline et al. 2004, 2005c; Hede et al. 2002; Sherwood et al. 2004, 2005a, 2005b). Bramwell (1997, p. 18) stated that 'events should be assessed from the outset in relation to the concept of sustainable development, with key indicators of sustainability being identified and then monitored over a long period'.

Fredline et al. (2004) proposed a conceptual framework that illustrated how TBL measurements could be integrated to enable an overall assessment of the impact of an event. This approach has particular merit, but in order for the framework to be operationalised, a suite of event-specific indicators needs to be developed, which measure the economic, social and environmental impacts and underpin the model. Indeed, Fredline et al. (2005c) suggested that substantial future research is needed to identify the most appropriate indicators to include in the model. Moreover, the TBL measures need to be aggregated so that an overall measure of an event can be achieved and standardised to enable a comparison to be made of the performance of a range of different events.

Therefore, the following research questions have been developed for this study:

1. What are the key impacts that are currently being used to evaluate the impact of special events?
2. Which indicators could be used to measure these impacts?
3. Which indicators would enable a parsimonious TBL evaluation of the short-term impact of special events to be gained?

1.2.1 Contribution of the Research

This research makes a number of contributions. Firstly, the study provides a synthesis of a large number of event evaluation-related academic publications and industry

evaluations to identify key trends and crossovers in order to understand what impact have been used in event evaluations from an academic and industry perspective. Secondly, using a Web-based Delphi survey, the study identifies indicators that event experts see as most relevant, which can provide a platform for further studies to fine tune a TBL model for event evaluation. Thirdly, the study undertakes two full-scale TBL event evaluations, in which a subset of the indicators will be tested for their appropriateness for a parsimonious TBL evaluation model. This is one of the few examples of this type of broad-based analysis of the impact of events. The final chapters address these contributions in more detail.

1.3 Justification for the Research

1.3.1 Research Problem

Since the 1980's, researchers have acknowledged the need for a broader approach to event evaluation than merely evaluating the economic impact. For example, Ritchie (1984) maintained that there was a need for a more comprehensive approach to the evaluation of the impact of hallmark events than was being used at the time. Similarly, Faulkner (1993, p. 18) noted that 'the monitoring and evaluation of environmental and social impacts of events has generally been perfunctory or non-existent'. Getz (2000, p.21) concurred and claimed that 'there is a need for more standardised methodology for evaluating events and their impacts; more comprehensive methods and measures of value must be used'. More recently still, Carlsen et al. (2001, p. 256) stated that 'a standardised model for evaluating tourism events has never been proposed in Australia, despite the need for such a model', and that the lack of a standardised approach limits the comparability between event evaluation results. 'There is potential for the development of an agreed framework for evaluation of tourism effects that could be applied to all major events' (Carlsen et al. 2001, p. 247). 'Clearly, there is needed some framework of analysis that can be used to help determine which events should be supported' (Dwyer et al. 2000a, p. 176). Nevertheless, despite the numerous calls for a broad-based model, it has yet to be developed.

1.3.2 Importance of Special Events and event Industry

The events industry has been divided into two distinct sectors, namely, tourism events (special events and festivals) and business events (meetings, incentives, conferences and exhibitions). Moreover, this division of the events industry is reflected in the structure of Tourism Events Australia. Whilst it is widely acknowledged that there has been considerable growth in the events sector as a whole, there does not appear to be any study that has determined the size of the tourism events sector in Australia. In the State of Victoria, however, the economic impact of major events in 2002-03 was estimated to be $960m (Tourism Victoria 2005). Moreover, a recent study of the business event sector estimated the Victorian business worth to be $770m per year in terms of expenditure (Deery, Jago, Fredline & Dwyer 2005).

In terms of the importance of the events industry from an Australian national policy perspective, the Commonwealth Department of Industry Tourism and Resources released a major White Paper (DITR 2005) in which it signalled that a new unit would be established within Tourism Australia called Tourism Events Australia. This division of Tourism Australia was launched in 2005 and the general aim was to 'focus on working with industry and government partners to attract major events and business tourism' (DITR 2005, p. 7). Furthermore, from an industry perspective, one of the activities that Tourism Events Australia is to undertake is to develop a 'National base measurement for the economic, social, cultural and environmental impact of major events in Australia' (2005, p. 3). Hence, there was high-level industry recognition for a broader approach to event evaluation. Indeed, the present study formed part of a larger project that was supported by Tourism Australia to develop a TBL evaluation of special events. The support enabled the two special event evaluation case studies used in this thesis to be undertaken.

1.3.3 Justification of Method

As will be outlined in section 1.5, this study has been underpinned by an indicator development process that was proposed by Segnestam, Winograd and Farrow (2000). Within this process there are three major stages of the research, namely, an analysis of academic publications and industry impact assessments, a Web-based Delphi survey

of event experts, and case studies of two events. Whist previous studies have analysed a large number of event publications (Formica 1998; Getz 2000; Hede et al. 2002), this study differed in the depth of the analysis. For example, whereas the previous studies analysed the broad trends in the publications, the present study drilled down into the literature in order to elicit which impacts had been cited in the 224 event evaluation-related articles. Similarly, whilst a few studies had analysed a small number of events (See, for example, Gratton, Dobson & Shibli 2000), few have analysed such a large number (85) of actual impacts assessments. From these 309 sources a list of 20 key impacts was derived, which represents a list of the impacts currently used in event evaluation, and is the first contribution of the research.

Furthermore, whilst there have been a number of studies that have analysed event-related publications (See, for example, Formica 1998; Hede et al. 2002), and employed case studies of events (See, for example, Arthur & Andrew 1996; Getz 1993; Ryan & Lockyer 2001), it appears that few studies have employed the Delphi method in the special events research area. One of the few studies that has used Delphi was undertaken by Carlsen et al. (2001), which sought to determine the most suitable criteria for event evaluation. It used a combination of interviews, paper-based questionnaires and a CD-Rom over the various rounds of the survey. In contrast to the Carlsen et al. (2001) research, the present study developed a Web-based survey that was used to administer the three rounds of the Delphi survey.

More recently, particularly with the advent of the World Wide Web (Web), researchers have increasingly turned to the Web to deliver Delphi surveys as it offers advantages such as lower costs and similar response rates to traditional paper-based surveys (Cobanoglu, Warde & Moreo 2001). Whilst Web-based surveys that have used the Delphi method have been conducted in research fields such as information technology (Keil, Tiwana & Bush 2002), nursing (See, for example, Bowles, Holmes, Naylor, Liberatore & Nydick 2003), and education (See, for example, Gatchell, Linsenmeier & Harris 2004; Rockwell, Furgason & Marx 2000), few have been found that have been conducted in the tourism or special events disciplines. One exception is a study by Cunliffe (2002), which focused on forecasting the future risk in the

tourism industry. Moreover, few of these studies have used a Web-based Delphi survey to develop indicators.

1.3.4 Potential Applications of the Research's Findings

The results of this study will benefit organisations involved in the development or support of special events, such as state and territory tourism organisations and local governments, which are the main providers of funding for special events. The development of a broad-based approach to special event evaluation will provide a more holistic understanding of the impacts of events. This type of event evaluation will assist the decision-making process made by tourism agencies determine which special events merit support.

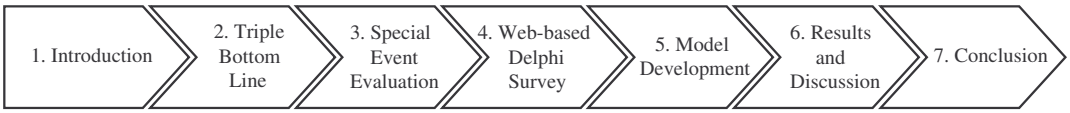
The analysis of events from a TBL perspective will bring events in line with trends in the wider business community, where the social and environmental impacts are being measured more frequently along with the traditional financial performance (Mays 2004). Although this study does not advocate that a TBL evaluation equates to a measurement of the sustainability of events, it will encourage events to be managed in a more sustainable manner. Recognition and measurement of the environmental impacts of events will better align events with broader destination tourism strategies such as the Ecological Sustainability Framework proposed by Tourism New South Wales (2003), which is being used to underpin an economically, socially and environmentally sustainable tourism industry. In addition, the development of a set of standardised measurements will enable comparisons to be made of the performance of a range of different events, which has been lacking in event evaluation (Carlsen et al. 2001).

1.4 Method

A four-stage method was used for this study. Firstly, an analysis was undertaken of 224 academic publications and a sample of 85 actual post-event impact assessments. From these 309 sources, a list of the 20 key impacts used in special event evaluations was derived. In the second stage, a Web-based Delphi survey was conducted, which used the opinions of a panel of event experts to develop a pool of possible indictors to

measure each of the key impacts. In the third stage of the research, two case studies were undertaken on special events to test a number of the TBL indicators. In the fourth stage, a summary of the results and TBL model were distributed to a number of project stakeholders, who provided feedback on the direction of the research and appropriateness of the findings of one of the case studies.

1.5 Outline of the Thesis



The thesis is structured into seven chapters, as shown above. Following the introductory chapter, Chapter 2 outlines TBL evaluation, particularly how it has influenced the way that businesses have responded to the sustainable development paradigm through incorporating economic, social and environmental performance measures. The chapter ends by suggesting that a TBL approach is an appropriate framework from which to develop a broad-based evaluation of the impact of special events. Chapter 3 presents a chronological discussion of special event evaluation and an analysis of a large number of secondary academic articles and unpublished event impact assessments. The chapter finishes by presenting a list of the 20 key impacts that were derived from the analysis. Using the list of 20 key impacts drawn from Chapter 3, Chapter 4 employs a three-stage Delphi survey of event experts to recommend indicators for each of the impacts. Both the design of the survey instruments and the results are presented in this chapter. The resulting TBL indicators are incorporated into a TBL evaluation model, which is presented in Chapter 5. Following this, the two case studies are presented in Chapter 6. Tourism Victoria and Tourism Australia assisted in the choice of the two special events that were used to test the model, as these organisations provided some financial support for the data collection and analysis. Chapter 7 also provides a discussion of the results of the two case studies, particularly the applicability of the indicators and their appropriateness for inclusion in a TBL model to evaluate the impact of events. The chapter also provides a summary of the feedback received from project stakeholders in relation to

the results of the case studies. Chapter 7 presents the research conclusions, including the TBL indicators, implications for event managers and policy makers, research limitations and suggestions for future research.

1.5.1 Thesis Structure

The thesis structure generally follows a seven-step indicator development process that was developed by Segnestam, Winograd and Farrow (2000). The process was derived from a number of collaborative projects that developed indicators to measure sustainable development, involving the International Centre for Tropical Agriculture, the World Bank, and the United Nations Environment Program. The authors maintained that the lessons that had been learnt from undertaking a range of indicator development projects have broader implications for other indicator efforts, and the benefit of the process was that it provides practical guidance to other indicator developers (Segnestam et al. 2000).

Given that this model was developed specifically for indicators, it is highly relevant for this research. The three most relevant aspects of the process to this research are that firstly, it suggests underpinning indicator development with an appropriate conceptual framework, secondly, it advocates consultations with stakeholders, and thirdly, it uses case studies as a means of testing the indicators. In contrast, the last step was not part of other indicator development frameworks (See, for example, Searcy, McCartney & Karapetrovic In press). As discussed below, the indicator development process corresponds with the general direction of this study.

Table 1.1 shows the seven steps of the process, the corresponding phases of the research and the thesis chapter to which each step aligns. By and large, the process was followed, however, in terms of the thesis chapters, not all steps were presented in a linear fashion. For example, although Step 4 is 'search data and develop databases', this was discussed in Chapter Three of the thesis. Nevertheless, the seven-step process provides an appropriate roadmap for the structure of the thesis.

Table 1.1 Indicator Development Process and Thesis Structure

	Step	Research Phase	Thesis Chapter
1	Develop a conceptual framework	TBL evaluation	Chapter Two
2	Select indicators and explore means for analysis	List of key impacts established through an analysis of 224 event-related publications	Chapter Three
3	Establish a consultative network	Web-based Delphi survey of event experts	Chapter Four
4	Search data and develop databases	Analysis of 85 event impact assessments	Chapter Three
5	Develop tools for casual link analyses and visualisations	Proposed model based on TBL framework by Fredline et al. (2004)	Chapter Five
6	Apply the approach in case studies	Two case studies of special events	Chapter Six
7	Dissemination, tools, information, and results	Feedback sought from stakeholders on TBL evaluations and indicators	Chapter Six

Adapted from Segnestam et al. (2000)

1.6 Limitations

It is acknowledged that there are a wide variety of events and festivals, which can be staged in a range of locations. In addition, events have a broad range of tangible and intangible pre event and post-event impacts, which can occur in the short term or long-term time frames. As a result of the need to develop a parsimonious event framework, the indicators used for this study focused on a small number of short-term post-event impacts.

This study used a Web-based Delphi survey to consult with a range of event experts. The experts were chosen from the existing networks of the researcher and supervisors. Although panel members included academics, representatives from State and Local Government and event practitioners, the majority of the panel members were academics, however, the academics provided a high-level of expertise in the area of event evaluation.

A case study approach was used for the evaluation of the two special events to help assess the range of indicators selected. An intrinsic element of case studies is that

there are limitations to the ability to generalise the results to the broader population and this is often considered to be a limitation of such research (Zikmund 1999). It was considered that the results gained from this study would provide a foundation upon which to undertake further research into the evaluation of the impacts of special events on host destinations.

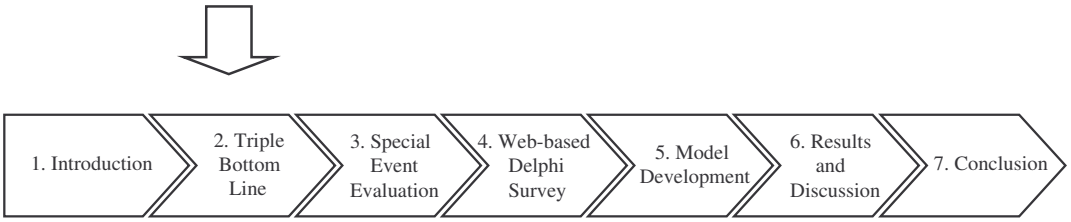
1.7 Conclusion

This chapter has laid the foundations for the study. It introduced the research problem and research issues. A justification for the research was provided, the method was briefly described and justified, the report was outlined, and the limitations were identified. The next chapter discusses the emergence of sustainable development, with particular reference to how this has impacted on business performance reporting.

Chapter

2

Triple Bottom Line Evaluation



Chapter Structure

- Evaluation
- Sustainable Development
- Business Response to Sustainable Development
- Sustainability Indicators
- TBL Evaluation and the Implications for Special Events

2.1 Introduction

This chapter commences with a discussion of evaluation, which is followed by an overview of the TBL assessment in terms of its emergence from the broader concept of sustainable development. In addition, the chapter reveals how organisations have operationalised the TBL by responding to stakeholders needs through economic sustainability, environmental initiatives, corporate social responsibility and TBL reporting. Sustainability indicators are discussed, which have been used to measure progress towards TBL goals. The chapter closes with the implications of TBL evaluation for an assessment of the impact of special events.

2.2 Evaluation

According to Scriven (1991), evaluation is the systematic determination of the quality, value, or importance of something. The 'something' can refer to a whole entity, or it can refer to aspects or components of an entity (Davidson 2005). The types of things that can be evaluated are broad and may include projects, programs or organisations, personnel or performance, policies or strategies and products or services (Davidson 2005). Evaluations are typically undertaken for one or two major reasons, namely, to find areas for improvement and/or to produce an assessment of overall quality or value, which is generally conducted for reporting or decision-making purposes (Davidson 2005). Furthermore, in a review of evaluation literature, Christiansen (2004) found that one of the reasons for conducting evaluations was for accountability, and that the purpose is to use the evaluation to underpin support for continued investment.

Robson (2000) claimed that there was a range of purposes for conducting an evaluation, and likely questions that would be asked in relation to each purpose (see Table 2.). In regard to the present study, the most pertinent purpose would be to assess the outcomes of a program. Correspondingly, a likely question that could be asked in regard to event evaluation is: What is the social impact of an event on the host community? Further, from the perspective of an STO that provides support for the event, a question might be: Is it worth continuing to support the event?

Table 2.1 Purpose of Evaluations and Likely Questions Posed

Purpose	Likely Questions
To find out if the needs are met	What should be the focus of a new program? Are we reaching the target group? Is what we provide actually what they need?
To improve the program	How can we make the program better (for example, in meeting needs; or in its effectiveness; or in its efficiency)?
To assess the outcomes of a program	Is the program effective (for example, in reaching planned goals)? What happens to clients as a result of following the program? Is it worth continuing (or expanding)?
To find out how a program is operating	What actually occurred during the program? Is the program operating as planned?
To assess the efficiency of a program	How do the costs or running the program compare with the benefits it provides? Is it more (or less) efficient than other programs?
To understand why a program works (or doesn't work)	They are unlikely to seek answers to this – but such understanding may assist in improving the program and its effectiveness

Source: Robson (2000, p. 10)

In terms of how an evaluation is undertaken, Davidson (2005) described two steps that are involved in conducting an evaluation. The first step is to establish a clear understanding of what is being evaluated and what types of questions need to be answered. Following this, the second step is to identify the relevant values, collect appropriate data, and then systematically combine the values with the descriptive data to convey answers to the key evaluation questions that were asked (Davidson 2005). Similarly, Robson (2000) maintained that a high-quality evaluation required a well thought-through design phase as well as the collection, analysis and interpretation of data.

2.2.1 Evaluation Theory

Evaluation theory has, over time, progressed through four distinct phases (Davidson 2005; Robson 2000; Shadish, Cook & Leviton 1991), with each successive generation of evaluation representing a step forward in terms of the content and level of sophistication of evaluation (Guba & Lincoln 1989). Robson (2000) maintained that the early focus of evaluation was on experimental or quasi-experimental types of evaluation, and that the second generation was where evaluations were used in the actual process or decision-making contexts. Robson (2000) suggested that this change represented a shift from a knowledge-driven approach to a user-led approach. In addition, Robson (2000) referred to the third generation as a paradigm war between a number of evaluation authors, whilst the fourth generation has been labelled as naturalistic and constructivism, or responsive constructivist evaluation (Guba & Lincoln 1989). It was suggested that fourth generation evaluation outcomes do not represent the way things are, rather, they are constructs, which are formed by multiple actors in order to make sense of the world around them (Guba & Lincoln 1989). As such, evaluation findings are literally created through a process that includes the evaluator and other persons involved in the evaluation. The outcomes of this process may be regarded as the 'realities' of the case (Guba & Lincoln 1989).

2.2.1.1 Outcome Evaluations

An evaluation of the outcomes of an entity is a more open and exploratory style of assessment compared to an evaluation of the achievement of prespecified goals, and is a frequently requested evaluation task (Robson 2000). In outcome evaluations, the task is largely the selection of appropriate outcome measures, rather than the use of a particular research method. Moreover, the measures will be specific to the particular entity being evaluated (Robson 2000).

One of the emerging streams in the evaluation literature has focused on assessing the outcomes of organisations such as businesses. Love (2001) claimed that the driver for change in evaluation was the need for increased accountability, effectiveness and efficiency, and that this had sparked a measurement revolution for many organisations. Similarly, Robson (2000) suggested that in the current age there is an

increasing need for accountability and concern for value for money. Moreover, there seems to be a requirement to monitor, review or appraise virtually all aspects of the functioning of organisations in both public and private sectors. Love (2001, p. 438) concurred and stated that 'the bottom line for organisations in all sectors is the clear demand to measure outcomes and use both quantitative and qualitative data to tell compelling "performance stories" about how well their strategies have worked'. In addition, Love (2001, p. 438) maintained that the trend towards evidence-based practice and the guideline movement were specific facets of the measurement revolution, and that this was 'the cornerstone of the strategy being used in many sectors to reduce variability of services, improve quality, measure outcomes and reduce costs'. Finally, from an international perspective, there is potential for evaluation to contribute to solving problems such as improvements in the health of the environment and sustainable economic development (Mertens & Russon 2000).

In short, evaluation is the determination of the quality, value or importance of an entity and this evaluation can relate to the measurement of the outcomes of the entity. In the context of this research, the 'something' that will be evaluated is a special event. More specifically, the aim is to develop a set of indicators to evaluate the outcome of a special event in regard to its TBL impact. As such, the next step is to explore the concept of the TBL, which is the focus of the main section of this chapter.

2.3 Sustainable Development

Although the term sustainable development first came to prominence in the World Conservation Strategy (International Union for Conservation of Nature 1980), the concept appears to be considerably older. Mebratu (1998) claimed that it has its origins in many indigenous traditions and beliefs, the core of which was the importance of living in harmony with nature and society. Similarly, Lovelock (1987) suggested that 2000 years ago, the Greeks believed that there was a Mother Earth (a living entity called Gaia), which was capable of keeping a steady-state chemical equilibrium. One of the earliest academic contributions to the development of the concept of sustainable development was made by Thomas Malthus (1766-1834), who maintained that the earth's population could not exceed resources without famine or

disease providing natural checks on growth (Malthus 1973). A different perspective was suggested by Davoudi and Layard (2001) who claimed that the language of sustainable development emerged from 18th and 19th century European forestry practices, where it was recognised that there were limits to the supply of trees.

The idea that there were 'limits to growth' was also a common thread in a number of seminal books that were published in the 1950's, 1960's and 1970's (see, for example, 'Silent Spring' Carson 1965; 'The Population Bomb' Ehrlich 1972; 'The Limits to Growth' Meadows, Meadows, Randers & Behrens 1974; 'Fundamentals of Ecology' Odum 1959; 'Small is Beautiful' Schumacher 1976; 'A Blueprint for Survival' The Ecologist 1972) which all highlighted emerging global environmental concerns. These issues subsequently filtered through to people involved in the Civil Rights and anti-Vietnam War protests in the 1970's, from which sprang the beginning of the environmental movement (McCormick 1989). Assisted by the rise of mass media and global communications, the environmental movement raised public awareness about the impending global crises, which forced many ordinary citizens, businesses and governments to take notice and to question the direction and pace of change (McCormick 1989). Thus, it appears that the relationship between the environment and development had changed from a steady-state equilibrium described by Lovelock's Gaia (1987) to one that exists in a state of conflict.

2.3.1 Sustainable Development Policies

The response from the world community was the staging of a number of high-level conferences and meetings and the publication of a range of significant reports. The 1972 UN Conference on Human Environment in Stockholm represented a major step forward in the acceptance of the concept of sustainable development, and there were indications that the form of economic development would have to be changed (Mebratu 1998). In addition, The Club of Rome (an informal think tank) produced a comprehensive report on the state of the natural environment, which surmised that the industrial society was going to exceed most of the ecological limits within a matter of decades if current growth rates continued (Club of Rome & Meadows 1972).

In response to the groundswell of environmental concerns, the Brundtland Commission was established in 1984. In 1987, the organisation published its seminal report called *Our Common Future*, which represented a global agenda for change. Importantly, it produced a definition of sustainable development that was 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED1987, p. 43). Sustainable development went on to become one of the catchphrases of the 1990's (Reid 1995) and although discussion continues about the deeper meanings of the above definition, it has become the most widely accepted interpretation (Basiago 1995; Giddings, Hopwood & O'Brien 2002; Khan 1995; Palmer, Cooper & van der Vorst 1997; Slocombe & Van Bers 1991).

Another major meeting of global leaders was the United Nations Conference on Environment and Development (Earth Summit) held in Rio de Janeiro in 1992. It brought together the heads and senior officials of 179 governments as well as business leaders. The conference issued a statement on the sustainable use of forests and the Rio Declaration, which contained 27 principles that defined the rights and responsibilities of nations as they pursue human development and well being. The meeting also saw many governments sign the United Nations Framework Convention on Climate Change, which aimed to stabilise greenhouse gases in the atmosphere at levels that would not dangerously upset the global climate system. As a result of the 1992 Earth Summit, politicians, NGOs and business leaders came to accept that neither of the three sustainable development dimensions (economic, social and environmental) could be addressed without consideration of the other two (Keating 1993).

Another important document that was signed at the 1992 Earth Summit was Agenda 21. Agenda 21 defined the responsibilities that businesses and governments faced in the implementation of sustainable development, and detailed some of the actions that needed to be taken such as improving the efficiency of resource use, minimising waste and protecting human health and environmental quality (Keating 1993). Agenda 21 also outlined the role of businesses in sustainable development, suggesting that the strategy for businesses should be to focus on environmental management, and

that one of the ways to address the issues of sustainable development was to report annually on their environmental records. Hence, one of the major outcomes from the 1992 Earth Summit was the recognition that part of the responsibility for the environmental problems rested with businesses. The idea was that businesses needed to modify the way that they conducted their operations so as to be part of the solution rather than part of the problem. Hart (1997, cited in Adams, Frost & Webber 2004) argued that while the origin of the world's sustainability crisis are social and political, only corporations have the resources, global reach and motivation so achieve sustainability. This was also reflected in the idea that the private sector is the dominant engine of growth (Jamali 2006).

Despite the direction given to businesses by Agenda 21, there remained criticisms and confusion concerning the lack of precision in the role assigned to businesses. For example, Atkinson (2000) suggested that although, most governments adopted sustainable development as a national goal following the 1992 Earth Summit, there was some debate concerning how businesses could contribute to the objective. Similarly, Elkington (1999a) claimed that even though the 1992 Earth Summit enlightened many businesses as to what their roles and responsibilities were in regard to sustainable development, there appeared to be a lack of understanding about what had to be done.

In order to seek clarity and direction on these issues, the World Business Council for Sustainable Development was created in 1995 through a merger between the Business Council for Sustainable Development in Geneva and the World Industry Council for the Environment in Paris. The mission of the organisation was 'to provide business leadership as a catalyst for change toward sustainable development, and to promote the role of eco-efficiency, innovation and corporate social responsibility' (World Business Council for Sustainable Development 2005). The establishment of the organisation reflected the fact that businesses were being viewed as major actors in the pursuit of sustainable development, and as a result, were expected to adopt more sustainable business practices (Dyllick & Hockerts 2002). That corporations were viewed in this way is not surprising, given that the corporation has become the world's dominant economic institution due to the capacity to combine the capital of a

large numbers of people into an institution with a legal status of a single person (Bakan 2004).

More recently, the issue of climate change and greenhouse gas emissions has prompted international response. In 1994, the United Nations Framework Convention on Climate Change was established. The Convention was one of three conventions that came about as a result of the 1992 Earth Summit (the other two were the Convention on Biological Diversity and the Convention to Combat Desertification) (United Nations Framework Convention on Climate Change 2006). The goal of the Convention was to prevent dangerous human interference with the climate system. Following this, in 1997, the Kyoto Protocol was adopted, which entered into force on 16 February 2005.

The major feature of the Kyoto Protocol is that it contains mandatory targets on greenhouse-gas emissions, however, these are only relevant to those countries that have accepted the Protocol. In addition, the Protocol established a mechanism for emissions trading whereby countries may buy and sell greenhouse-gas emissions units and credits. Cutajar (2004, p. 66) highlighted the importance of this mechanism and stated that 'the limitations of emissions is the key action needed to change the patterns of production and consumption that are increasing atmospheric concentrations of greenhouse gases at an accelerating rate'. According to Kolk and Pinkse (2005), the Kyoto Protocol also provides direction for businesses as it allows companies to explore different strategies to address global warming and reduce greenhouse gas emissions. For example, the emissions trading enables companies to buy or sell certified emission reductions in the market, and it has been suggested that trading the certified emission reductions may be more cost-effective than implementing changes to the production processes or products (Kolk & Pinkse 2005). In short, Kolk and Pinkse (2005) maintained that climate change policies are likely to affect most companies in one way or another, as will the cost of responding to climate change, according to the recently released Stern Review (Stern 2006). In addition, the Al Gore book (Gore & Melcher Media. 2006) and documentary, 'An Inconvenient Truth', has also brought the environmental challenges facing society into the minds of an increasing number of individuals, governments and organisations.

2.3.2 Stakeholder Concerns

Apart from the top down changes resulting from regulatory policy and frameworks, stakeholder concerns appear to be the other main driver of change for business and business practice. The Global Reporting Initiative (2006b) claimed that businesses were now required to be responsive to an increasingly diverse range of stakeholders, who had become increasingly aware of the activities of businesses as well as the impact of the activities on the environment and society in general. Moreover, Cramer (2002, p. 105) stated that 'we are moving towards a network society in which regulation by civil society plays an important role alongside regulation by government'.

The globalisation of trade has placed enormous pressure on businesses, which have to respond to an increasingly diverse group of stakeholders. Kuhndt, von Geibler and Eckermann (2002) claimed that 'the accelerating pace of globalisation has created corporations whose power often seems greater that the governments of many countries in which they operate', and that as a result, there are now increasingly higher expectations of companies in regard to their environmental and social performance. Businesses now find themselves dealing with stakeholders from the local community and employee expectations, government and regulators, industry associations, shareholders and scrutiny from socially responsible investors (Global Reporting Initiative 2006b; The Allen Consulting Group 2002). Low and Davenport (2001) claimed that the most prominent development in the 1990's was the addition of the environment to the list of stakeholders, represented by a number of high profile environmental interest groups such as Greenpeace. Indeed, Stead and Stead (1994) maintained that the earth was the ultimate stakeholder. As well as environmental lobby groups, many people began to see threats to fresh water, clean air and natural resources as global issues and looked to business to provide equitable solutions to the problems (Soerensen 2002). As a result, businesses began to see the need to measure and report on their wider performance, signifying a shift from a narrow focus on their shareholders to a broader stakeholder orientation (Robson & Robson 1996).

There also appeared to be an increased awareness amongst stakeholders about issues of corporate behaviour. A number of high profile corporate collapses (for example, Enron in the US and HIH in Australia) have shown what can result from inappropriate corporate behaviour, which has raised concerns about disclosure and accountability. Pressure has also come to bear on businesses because of practices that have been perceived as creating social injustices, particularly those that manufacture goods in developing countries. For example, Nike was seen as operating outside of acceptable societal values after revelations that the company was using children from Pakistan to hand stitch soccer balls. The resulting worldwide protests outside Nike shops caused further damage to the organisation's reputation (Elias 2003). Moreover, according to Cramer (2002, p. 101) 'public opinion may even turn out to be the most important determinant of corporate behaviour'.

Welford (2002) maintained that globalisation has caused global conditions of inequality and discrimination to worsen and that the loop of globalisation has left out the vast majority of the world's citizenry. He claimed that organisations must refrain from putting the economic arguments surrounding globalisation above the human rights arguments and that there was now an opportunity, helped by globalisation trends, to more fully embed human rights into the new economic order (Welford 2002). In Australia, it is suggested that the community has a low opinion of big business, which is seen as anonymous, detached from the community, self-interested and greedy (Group of 100 2003).

Practical initiatives such as The Good Reputation Index and the RepuTex Rating Index have been developed to attempt to counteract community scepticism by increasing the reputation of big businesses as good corporate citizens. The Good Reputation Index measures the ability of the top 100 corporations in Australia to manage the activities that contribute to their reputations as socially responsible organisations (Gettler 2002). The methodology uses the categories of management of employees, environmental performance, social impact, ethics and corporate governance, financial performance and management and market focus. The results are achieved by examining the perceptions of a range of community stakeholders and experts (Gettler 2002). Similarly, the Dow Jones Sustainability Index is a response to

the call for greater corporate responsibility and accountability. Therefore, by incorporating a broader approach to the evaluation of their performance, businesses have the potential to enhance and maintain the reputation and brand of businesses (Department of Industry Tourism and Resources 2002; KPMG 2002a; The Allen Consulting Group 2002). In short, organisations must attempt to build trust through positive relationship building policies via multi stakeholder consultations, which include internal (for example, employees) and external stakeholders (Global Reporting Initiative 2006b).

Grafé-Buckens and Beloe (1998) noted that the terms sustainability and sustainable development are often interpreted as being two different but related concepts. The approach taken in this research is to distinguish the two concepts in terms of the conceptual and the practical. Therefore, where possible, the aim is to use sustainable development in reference to the concept and sustainability in reference to the practical application, for example, sustainability reporting or sustainability indicators (For a further discussion on this see, for example, Palmer et al. 1997; Redclift 2005).

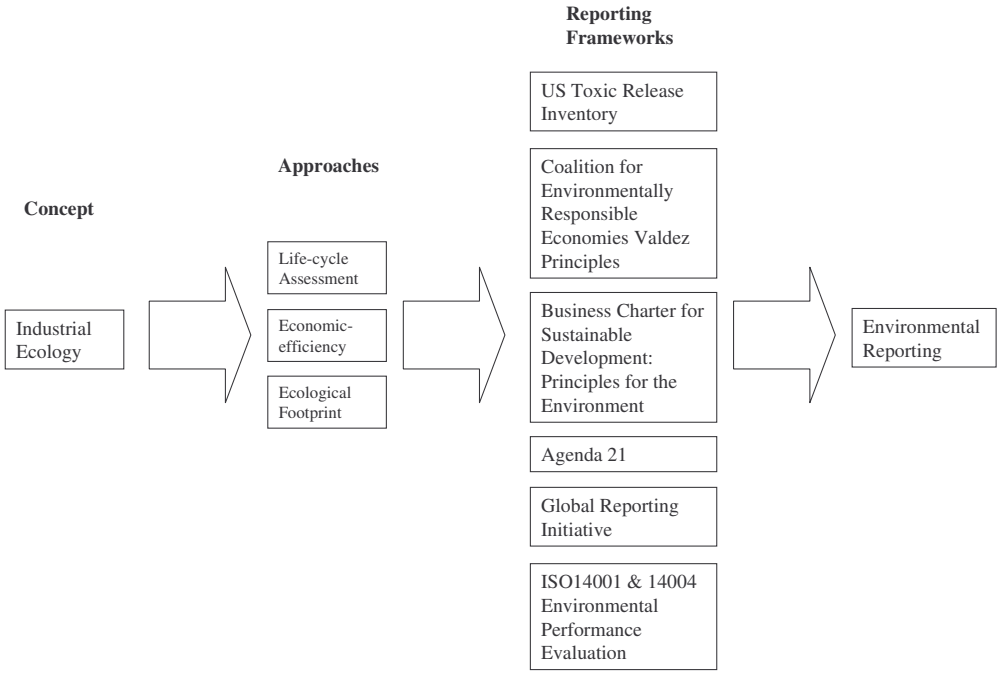
2.4 Business Response to Sustainable Development

As stated earlier, Agenda 21 shifted the focus towards business as a major actor in the pursuit of sustainability (Dyllick & Hockerts 2002). In the developed world, businesses create the basis for much of our economic activity (Bebbington 2001). In response, business practice and performance measurement changed in a number of ways to the pressure from internal and external stakeholders. . The first response was to implement practices of environmental management based around the concept of industrial ecology, the second was to include corporate social responsibility. The third response was the introduction of economic performance measures, and the last response was to account for and integrate the three 'silos' of economic, social and environmental performance into a TBL or sustainability reporting framework. These developments will be addressed in the next sections.

2.4.1 Environmental Response

This section outlines the environmental response by businesses to the sustainable development agenda. Figure 2.1 shows the approach taken in this section to discuss the development of environmental reporting. Figure 2.1 reveals that the development is underpinned with the concept of industrial ecology, and that there are a number of approaches to operationalise this concept. In addition, it is shown that there are a range of reporting frameworks that are used to inform environmental reporting by businesses. These issues will be addressed in more details in the following section.

Figure 2.1 Development of Environmental Reporting



2.4.1.1 Industrial Ecology

According to Barnes (1998), the overarching concept behind most of the approaches to environmental performance evaluation is industrial ecology. In short, industrial ecology has been used to describe how an industrial system can be modelled after a natural ecosystem (Barnes 1998), in which the aim is 'to balance the development of industrial systems with the constraints of natural ecosystems, analogous to an industrial symbiosis' (Isenmann 2003, p. 143). Moreover, industrial ecology is a total

systems approach, which takes into account product design and processes, as well as the implementation of sustainable manufacturing processes. Similarly, Ehrenfeld (2004, p. 827) claimed that 'understanding the industrial systems of modern societies is held to be crucial to designing new forms of production that are more sustainable'.

Ruth (2006, p. 336) maintained that ecological economics sat along side industrial ecology, and claimed that ecological economics 'is based on the tenet that all economic activity must be regarded as a subset of the ecosystem in which the economy is embedded and on which it depends'. The approach is to quantify the value of the contribution that ecosystems make to the economy through the provision of goods (for example, timber and fish) and services (for example, waste absorption and pollination). It is argued that pricing ecosystem goods and services would more appropriately reflect their contribution to the economy, however, there are issues involved with this approach including the complexity of ecosystem processes, and lack of knowledge about ecosystem thresholds (Ruth 2006).

As explained by Barnes (1998), a natural ecosystem is a closed system as waste from one species is used by another, thus an ecosystem produces a continuous recycling of nutrients. In contrast, the industrial system is open and therefore unsustainable, due to the continuous use of raw materials and discarding of waste. As a consequence, there is no regard for the abundance or scarcity of the raw materials used as inputs, nor as to how the waste from any process or production can be reused or recycled. Over time, however, an idealised industrial ecosystem would develop its own material cycles and energy cascades through cooperation and networking between firms and other organisations, and eventually be able to rely on the sustainable use of renewable natural resources (Korhonen, von Malmborg, Strachan & Ehrenfeld 2004).

Barnes (1998) outlined several approaches that businesses could take in regard to implementing industrial ecology into their business practices, namely, Materials Analysis, Pollution Prevention, Eco-efficiency, Life-Cycle Assessment, Design for the Environment and Industrial Ecology Park. Similarly, Gauthier (2005) claimed that the three most common business responses to calls for a sustainable development

approach were the incorporation of the ecological footprint, industrial ecology and life-cycle assessments. A number of these concepts will be discussed in this section.

2.4.1.1.1 Eco-efficiency

The concept of eco-efficiency came out of the World Business Council for Sustainable Development (WBCSD) in a 'search for a phrase that would pull together sustainable development into the business agenda and make it more immediate and practical' (Holliday, Schmidheiny, Watts & World Business Council for Sustainable Development. 2002, p. 18). In short, the concept means producing more (goods, services and value-added) with less (resources, waste, and pollution), with *Eco* referring to both economy and ecology. Holliday et al. (2002) maintained that although the concept does not set limits in terms of resource use, it does offer businesses direction by encouraging them to use fewer resources, which would result in the resources being made available for other present and future uses. Moreover, the adoption of efficient practices may lead to a potential increase in the competitiveness of a business (Holliday et al. 2002).

As was stated in Agenda 21, one of the avenues for achieving sustainable development goals, and therefore eco-efficiency, is through innovation (UNCED 1994). Holliday et al. (2002, p. 87) maintained that this translated into three broad objectives. The first was to reduce the consumption of resources, which included minimising the use of energy, materials, water, and land, enhancing recyclability and product durability and closing material loops. The second was to reduce the impact on nature, which included minimising air emissions, water discharges, waste disposal, and the dispersion of toxic substances as well as fostering the sustainable use of renewable resources. The third objective was to increase the product or service value, which means providing more benefits to customers and consumers through improvements in the functionality and flexibility of products as well as providing additional services (for example, maintenance, upgrading, and exchange services).

Elkington (1999a), who first coined the term triple bottom line, suggested that many businesses thought that the basic challenge was simply one of 'greening', that is, making business more efficient and trimming costs. Hence, most firms have opted for

eco-efficiency as their guiding principle for environmental management, and it is usually calculated as the economic value added by a firm in relation to its aggregated ecological impact (Dyllick & Hockerts 2002). Current indicators used include energy, water and resource efficiency, as well as waste or pollution intensity (Dyllick & Hockerts 2002). An alternative is a measure of socio-efficiency, which implies minimising negative social impacts (for example, accidents per value added) or maximising positive social impacts (for example, donations) in relation to the value added (Dyllick & Hockerts 2002). However, both of these are concerned with increasing economic sustainability.

2.4.1.1.2 Ecological Footprint

One of the ways in which the environmental impacts and indicators can be operationalised is through the use of the ecological footprint. The ecological footprint was developed by Wackernagel and Rees (1996), and is a tool that is currently being promoted and used to assess the global environmental impact of various entities. It is a measurement of the anthropogenic demand placed on global ecological resources. The ecological footprint tool aims to track global sustainability through ecological accounting of the 'land area necessary to sustain current levels of resource consumption and waste discharge by that population' (1996, p. 5). The underlying argument is that the global economy is consuming and degrading resources faster than they can regenerate, which has led to what is being called an ecological overshoot (Wackernagel, Onisto, Bello, Callejas, Susana, Mendez, Isabel & Guadalupe 1999).

Underpinning the ecological footprint is a premise that each person has an annual allowance of 1.8 global hectares, which represents the amount of land available for each person living on Earth, and consists of a combination of land for energy, built land, food land, forest land and sea area (Wackernagel, Monfreda, Moran, Wermer, Goldfinger, Deumling & Murray 2005). Peeters and Schouten (2006) referred to this as the 'fair earth share' and suggested that a per day, per person allowance could be used as a way of comparing the daily share with the footprint calculation result to enable a comparative measurement to be made. The daily fair earth share was calculated to be 49.3m^2 global hectares per person, per day.

As the use of fossil energy and the associated greenhouse gas emissions is one of the key environmental problems associated with travel and tourism (Gossling, Peeters, Ceron, Dubois, Patterson & Richardson 2005, p. 417), the ecological footprint has recently been promoted as an analytical tool in the pursuit of sustainable tourism at a range of levels including policy-making (Gossling et al. 2005), tourism product (Byrnes & Warnken 2006; Hunter & Shaw 2007), tourism destination (Gossling, Hansson, Horstmeier & Saggel 2002; Peeters & Schouten 2006) as well as special events and conventions (Rickard 2004). Despite the use of the ecological footprint at a number of levels, it has only recently been embraced at the business level (Holland 2003).

2.4.1.1.3 Life-cycle Assessment

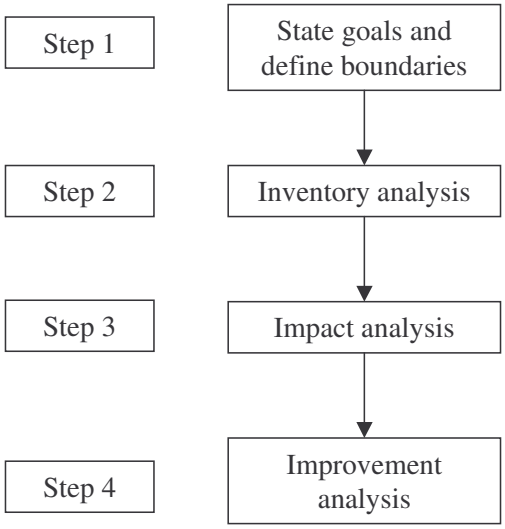
Another environmental performance management tool is the life-cycle assessment, which has become a widely used tool for environmental policy and environmental management (Gauthier 2005). Life-cycle assessment is a holistic approach to environmental evaluation (Matthews, Lave & MacLean 2002), which allows an assessment to be made of the environmental impact and resource use of a specific product or service 'from cradle to grave' (Gauthier 2005) or alternatively from design to disposition (Matthews et al. 2002). More specifically, life-cycle assessment equates to 'the evaluation of the environmental impact of a product, process or service, from its initial natural resources to the elimination of its wastes and including its full period of use' (Gauthier 2005, p. 200).

A detailed explanation of life-cycle assessment was provided by Gauthier (2005) who described the analysis as a decision-making tool that is governed by a number of international standards organisations, for example, the environmental management standards ISO 14040-14043. Gauthier (2005) suggested that the various stages of a traditional assessment of a product's life-cycle were extraction of raw materials, manufacture, packaging, storage, distribution, use, and recycling-destruction. In addition, in order to evaluate the assessment, environmental criteria are calculated at each stage of the life of a product, which includes the consumption of the following: energy, raw materials, water, and the production of polluting agents, toxic products, and waste.

An alternative way of using a life-cycle assessment is to make comparisons between two similar, yet different products, for example, paper versus plastic drinking cups or cloth versus disposable nappies (Matthews et al. 2002). According to Fava, Brady, Young and Saur (2000), life-cycle assessment can also be used successfully for a range of applications such as material selection for different applications, product optimisation, decision support for investment decisions, strategic planning, marketing and benchmarking for product alternatives.

Matthews et al. (2002) proposed a four-step process for undertaking a life-cycle assessment (see Figure 2.2). Step one is to state the goals and define the boundaries, which is a critical step (Curran 2000) as it determines what will be considered in the analysis. The second step is inventory analysis, which quantifies the energy and raw material requirements and environmental discharges. The third step is the impact analysis, which summarises the impact on the environment and human health of the resource requirements and environmental loadings identified in step two. Matthews et al. (2002) claimed that this step was usually the most complex and controversial and is not usually attempted. The fourth step in the process is the improvement analysis, which evaluates the needs and opportunities to reduce the environment and human health impacts that were associated with the product. These four steps have been alternatively described as goal definition, inventory, impact assessment and interpretation (Curran 2000).

Figure 2.2 Process for Undertaking a Life-cycle Assessment



Source: Matthews et al. (2002)

Due to the complexities of undertaking a life-cycle assessment, there are a number of major difficulties (Matthews et al. 2002). Firstly, although a tight boundary was necessary to make the analysis tractable, the result was that many of the processes and environmental discharges were excluded. Secondly, a life-cycle analysis is expensive and time consuming to undertake, which is a view that is supported by Curran (2000). Thirdly, much of the data needed to conduct a life-cycle assessment are confidential and unavailable to researchers. In addition, to these factors, Curran (2000) noted that there were a number of barriers that were inhibiting a more widespread use of life-cycle assessment, namely, lack of awareness of the importance of the assessment, inaccessibility of data and lack of understanding of impact assessment methodology. Further, the inter-regional, international and global product and capital flows make the life-cycles of products difficult to trace, monitor and control (Korhonen 2002). Despite this, it would appear that the use of life-cycle analysis appears to be aligned with Agenda 21, which stated that one of the ways for businesses to cope with the environmental pressure was through innovation (Keating 1993).

Whilst there are benefits for businesses that incorporate some form of industrial ecology into business practices such as economic gain in the form of reduced material and waste disposal costs, and fewer fines and penalties associated with excessive pollution or improper waste disposal, the most important benefit is the cultural change that occurs within the organisation (Barnes 1998). Similarly, Saur (2003) maintained that organisations that integrate approaches such as life-cycle assessment into their sustainable practices can benefit in that a system that identifies and tracks releases can reduce liabilities and fines associated with failure to comply with regulations and identity opportunities for cost savings and resource efficiency. According to Korhonen et al. (2004), however, the changes towards a vision of a more sustainable situation will not happen without understanding and influencing human behaviour.

2.4.1.2 Environmental Reporting

In response to the pressure from stakeholders for businesses to measure and report on their environmental performance, a number of organisations have produced environmental reporting guidelines. Earlier drivers of environmental reporting were the US Toxic Release Inventory (1987), the Chemical Manufacturers' Association Responsibility Care (1988), Coalition for Environmentally Responsible Economies Valdez Principles (1989), the International Chamber of Commerce Business Charter for Sustainable Development (1991) and the UN Earth Summit Agenda 21 (1992) (Robinson, Dudok van Heel & SustainAbility Limited. 2002). Following this, the International Chamber of Commerce wrote the Business Charter for Sustainable Development: Principles for the Environment (1991), the Public Environmental Reporting Initiative released its Guidelines for Environmental Reporting (1993), and the International Organisation for Standardisation released the ISO 14001 and 14004 Environmental Performance Evaluation guidelines (1996) (Davis-Walling & Batterman 1997).

Whilst there are a number of international guidelines and principles for environmental reporting, there are also a range of country-specific regulations that govern environmental performance and reporting for businesses. For example, in Australia,

there are a number of mandatory environmental and social reporting requirements (KPMG 2002a, p. 29), namely:

- **Corporations Law section 299 (1) (f)** – which was introduced in 1999 and requires companies that prepare a directors' report to provide details of the entity's performance in relation to environmental regulations;
- **Financial Services Reform Act** - was introduced in March 2002 and requires fund managers and financial product providers to state 'the extent to which labour standards of environmental, social and ethical considerations are taken into account in the selection, retention or realisation of the investment'; and
- **National Pollutant Inventory** – requires industrial companies to report emissions and inventories for specific substances and fuel to regulatory authorities for inclusion in a public database (www.npi.gov.au).

In summary, increasing environmental concerns have resulted in businesses being seen as major actors and required to be more responsible for their actions. The response has been the measuring, monitoring and reporting of their environmental performance using tools such as eco-efficiency, guided by an increasing number of environmental performance frameworks. Increasingly, businesses are producing environmental reports as well as producing combined financial and environmental reports, which inform environmentally concerned stakeholders about the impact of the business on the environment. To date, however, the focus has been on environmental sustainability, rather that interweaving the economic, social and environmental elements of sustainable development (Bebbington 2001). The next section addresses some of the underlying theories and approaches to corporate social responsibility and social reporting.

2.4.2 Social Response

2.4.2.1 Corporate Social Responsibility

In its earliest manifestation, sustainable development was largely a green agenda, but from the mid-1990's, many businesses began to realise that they were ignoring the social side of the concept (Holliday et al. 2002). As a result, the second wave of

response by businesses to the sustainable development agenda was to adopt practices of corporate social responsibility (CSR). According to Conley and Williams (2005), one of the most significant developments in the corporate world over the last 10 years has been the emergence of a coherent and energetic CSR movement. The authors stated that in contrast to the traditional profit objectives, 'the legitimate concerns of a corporation should include such broader objectives as sustainable growth, equitable employment practices, and long term social and environmental well-being' (2005, pp. 1-2). Schaltegger and Wagner (2006, p. 2) suggested that CSR 'covers corporate responsibilities that address a firm's voluntary or discretionary relationships with its societal and community stakeholders'.

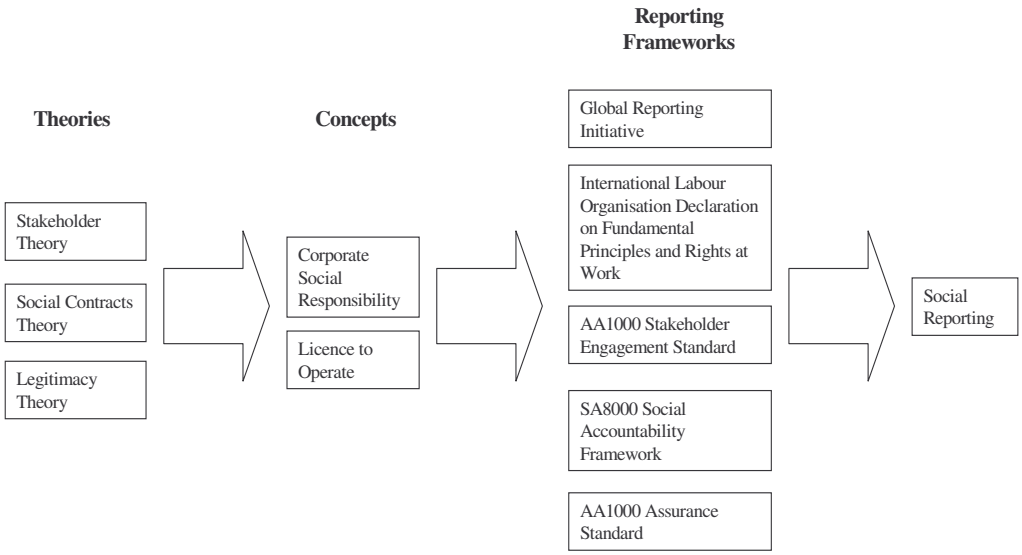
As with other concepts discussed in this chapter, there has been debate about what is CSR. Lantos (2001) maintained that the concept of CSR was a fuzzy one with unclear boundaries and legitimacy. From a review of the CSR literature, Lantos (2001) concluded that there were three distinct types of CSR, namely, ethical, altruistic and strategic. Specifically, ethical CSR referred to the practice of avoiding societal harms and was obligatory for any organisation. Moreover, for a publicly-held business, altruistic CSR (doing good work at the possible expense of stakeholders), was not legitimate, and the organisations should limit their philanthropy to strategic CSR, which was referred to as doing good work that is also good for business (Lantos 2001).

Moir (2001) noted that, in general, a contemporary analysis of CSR would involve meeting the needs of all stakeholders and not just shareholders. The extent to which organisations undertook CSR activities depended on the economic perspective that the firm took. The traditional perspective of a business is referred to as the neo-classical view, in which the only social responsibility is to maximise profits for shareholders, a view proposed by Friedman (1970). An alternative view is that a firm has a moral or ethical responsibility, which exists because an organisation has resources (human, capital and environmental), therefore, part of the role of the organisation is to assist in solving social problems arising from the use of the resources (Moir 2001). In other words, because the business has resources and skills, there is an obligation for them to be used to gain positive social outcomes. The other suggestion from Moir (2001) was

that various forms of CSR are undertaken as a result of the enlightened self-interest of either businesses or individuals within the business. The potential benefits of this approach are enhanced reputation of the business and the creation of greater employee loyalty. Moir (2001) presented a theoretical perspective of CSR, which outlined three main theories that underpinned the development of CSR, namely, stakeholder theory which explained how CSR was being used and social contract and legitimacy theory, which together explained why CSR was being used.

This perspective of Moir (2001) is presented in Figure 2.3. Figure 2.3 also shows another concept that emerged from the social literature, namely, the licence to operate. In addition, the range of reporting frameworks is shown, which inform the content and direction of social reporting. In short, Figure 2.3 illustrates the direction taken in this section of the chapter. The first section will address the three theories outlined by Moir (2001).

Figure 2.3 Development of Social Reporting



2.4.2.1.1 Stakeholder Theory

The stakeholder theory of the firm is used as the basis for understanding those groups or individuals to whom the firm should be responsible (Moir 2001). Stakeholders are usually classified as either primary or secondary. According to Clarkson (1995, p.

106), the primary stakeholder group is 'one without whose continuing participation the corporation cannot survive as a going concern'. This includes shareholders and investors, employees, customers and suppliers, and public stakeholder groups such as governments and communities. In contrast, secondary stakeholders are defined as 'those who influence or affect, or are influenced or affected by the corporation, but they are not engaged in transactions with the corporation and are not essential for its survival' (1995, p. 106). As such, it would be expected that an organisation would pay more attention to primary stakeholders, who have more of a stake and power and who demand more urgency from an organisation in response to important issues that directly affect them (Moir 2001).

More recently, however, it has been recognised that businesses are beholden to a wider variety of stakeholders. According to Lucas (2004), shareholders now expect companies to adopt a more responsible strategic approach that returns financial gains and ensures the long-term viability of these firms with a concern for all stakeholders including the environment. Furthermore, Andriof and Marsden (1999), suggested that business can, and should, play a role beyond just making money. Other discussions have sought to understand the changing relationship between business and society, mostly analysed through stakeholder theory (See, for example, Clarkson 1995; Donaldson & Preston 1995; Freeman 1984). In short, stakeholder theory suggests that the traditional approach was for a business to be represented as an input-output model where investors, suppliers and employees contributed the inputs, and customers were recipients of the output (Donaldson & Preston 1995). In regard to the stakeholder perspective, all persons or groups that have a legitimate interest participate in an enterprise to obtain benefits, and there is no obvious priority of one set of interests and benefits over another (Donaldson & Preston 1995).

Lucas (2004), outlined some of the changes that led to the introduction of corporate social responsibility in Australia. The author maintained that one of the major drivers for businesses to be more socially responsible in their activities has been the transfer in burden of social responsibility away from the Federal Government. Thus, corporate Australia has had to embed social responsibility in part of organisations' strategic values, which in turn, would then guide the organisations' interactions with

the range of stakeholders and stakeholder groups. Part of this strategy, at least on a micro level, was to develop constructive relationships with wider stakeholders in order to responsibly manage the risks associated with their business activities (Lucas 2004). Thus, it has become clearer that the social dimension should be incorporated into rather than added onto economic performance, which would result in a redefinition of the corporation as a reflection of societal changes (Batten & Birch 2005).

2.4.2.1.2 Social Contracts Theory

Society is described as a set of social contracts that exist between members of society and society itself (Gray, Owen & Adams 1996). Social contracts theory suggests that one of these contracts is between a business and the society in which it operates. Implicit in the contract are that a business has responsibilities and behaviours, for example, there is an expectation that businesses provide some level of support to the local community (Moir 2001). As a result of this, explained Moir (2001), businesses act in a responsible manner for commercial reasons, rather than because it represents how society expects businesses to operate. Therefore, as Brown and Fraser (2006) observed, corporations exist because society allows them to.

Another way of expressing this social contract is as a 'licence to operate', which is informally granted by society and played out through the fulfilment or not of the social contracts. Downing (2001) and Robson and Robson (1996) suggested that each business has a 'licence to operate' and by operating as a good corporate citizen, this license can be retained. Moreover, as this right to operate is granted by society, it is therefore important for organisations to demonstrate their economic, social and environmental performance to stakeholders (World Business Council for Sustainable Development 2003; Yongvanich & Guthrie 2006). Taking this argument further, Warhurst (2002) claimed that there is a need for businesses to acquire a 'sustainability licence' to operate, alongside the customary regulatory licence. Sustainability licences are granted by stakeholders such as local communities, special interest groups and governments, and require businesses to demonstrate that they are contributing towards the sustainable development goals of enhanced human health,

wellbeing, quality of life and ecosystem health. Moreover, Jennings (2004) maintained that the licence to operate is justified by the ability of an organisation to contribute to social welfare and quality of life, whilst Cramer (2002) suggested that the licence represented the degree to which an organisation conduct is accepted by society, which depends on the degree of openness practiced by the organisation and is manifest in its social commitment.

These 'licences' exist on an informal basis (Warhurst 2002) and can be revoked, mainly as a result of discrepancies between the values of the stakeholders and the values of the business (Soerensen 2002). As discussed earlier, the notion of values aligns with the initial concept of the TBL, which referred to corporations and their capacity to create or destroy value or values within the economic, social and environmental dimensions (Elkington 1999a). Similarly, Zadek (2001) claimed that success for businesses that operate in the new economy was as much about shared values with key stakeholders as it was about the quality of products and services.

Therefore, it would appear that there is need to strike a balance between the values of an organisation and the values of the stakeholders. In a sense, this balance may symbolise a microcosm of the steady-state equilibrium model of the Earth, which was proposed by Lovelock (1987). By implementing a broader reporting framework into business practices, a greater understanding of the values of stakeholders can be gained, which can enhance the future viability of the organisation (Soerensen 2002). For example, there is a growing recognition that an organisation that produces goods for public consumption needs to consider the various stakeholders that contribute to the life cycle of the product from 'field to plate' (discussed earlier as life-cycle assessment). Moreover, by addressing the risks associated with the suppliers (upstream) and the consumers (downstream), an organisation can take a more holistic approach to production and process impacts, so that the organisation can perform well whilst not harming its operating environment (Spiller 2000). Hence, there are also ethical undertones driving the implementation of sustainable principles into business strategy.

2.4.2.1.3 Legitimacy Theory

Suchman (1995, p. 574) defined legitimacy as 'a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions'. Moir (2001) contended that there were two views of legitimacy. One view held that legitimacy could be seen as a major reason for undertaking CSR activities, the results of which were then used for publicity or influence. The other view was that society grants power to businesses, which it expects to be used responsibly. On the other hand, Brown and Fraser (2006) claimed that corporations were accountable for the use of the range of financial, human and community resources that are entrusted to them. In summary, Moir (2001, p. 20) stated that 'we may begin, therefore, to examine the practice of CSR within business as potentially motivated by some form of principle as described in social contracts theory, analysed in particular by some form of stakeholder analysis in order to provide enhanced reputation or legitimacy to the firm'.

Outside of the theoretical debates, there are also discussions about the meaning and application of corporate social responsibility and its alternatives. For example, CSR has also come to be known as corporate citizenship, which, according to Matten and Crane (2005), is a prominent term in management literature that deals with the social role of business. The authors defined corporate citizenship as 'the role of the corporation in administering the rights for individuals', which includes 'traditional stakeholders, such as employees, customers, or shareholders, but also include wider constituencies with no direct transactional relationship to the company' (2005, p. 173). Further, corporate citizenship embraces an understanding that everything a company does has some flow on effect either inside the company, for example, employees, or outside the company, for example, customers, communities and the natural environment (Andriof & Marsden 1999). Therefore, companies are able to make a difference by conducting specific programmes and implementing relevant polices and becoming actively involved in monitoring and changing the effects of their operations in regard to the impact on their stakeholders (Andriof & Marsden 1999). In addition, Moir (2001) maintained that the issues covered by corporate

social responsibility may include plant closures, employee relations, human rights, corporate ethics, community relations and the environment.

Nevertheless, according to Batten and Birch (2005), there remains considerable confusion about what exactly constitutes corporate citizenship. For example, in Australia, corporate citizenship can also be used in reference to corporate philanthropy, which is a means of a corporation earning its licence to operate in a community by virtue of its good deeds (Batten & Birch 2005). Other interpretations include corporate governance, ethics, sponsorship, stakeholders, partnerships, product stewardship, environmental responsibility and social responsibility (Batten & Birch 2005). Krizov and Allenby (2004) claimed that the meaning and the governance structure within which corporate social responsibility occurs are unclear. Moreover, the social responsibility of business could be conceptualised as a matter of a set of values as well as performance measurements, which may impact on how social responsibility can be measured (Krizov & Allenby 2004).

2.4.2.2 Social Reporting

To date, there has been no such thing as a standard social report (Elkington & van Dijk 1999). This is because the type of report produced is dependent on a number of issues, for example, the range of stakeholders for whom the report is intended, the objectives of the reporting organisation and the variety of issues that need to be covered. Researchers and practitioners have struggled to develop ways to assess corporate social performance, and although there are a number of emerging methods, these are not established and are subject to considerable debate (Moir 2001). Similarly, Wagner and Schaltegger (2003) suggested that in regard to social performance, the measurement debate is still at an early conceptual stage and this has not yet reached the level of sophistication of environmental measures such as the Life-cycle assessment. Nevertheless, for businesses adopting or integrating the concept of corporate social responsibility into their business strategy, there are a number of guidelines and principles that can assist in the process. One that is gaining widespread use is the Global Reporting Initiative (Global Reporting Initiative 2006b),

which includes indicators relating to labour practices, health and safety and community.

Elkington and van Dijk (1999) considered there to be five major stakeholder groups that should be considered in social reports, namely, employees, communities, suppliers, clients/customers and investors. Table 2.2 shows some examples of the types of indicators proposed by the Sustainability Reporting Guidelines (Global Reporting Initiative 2006b). Whilst there are social indicators for employees, communities and clients/customers, the indicators for suppliers and investors are economic rather than social. The indicators for communities and clients/customers require descriptions of policies rather than percentages or ratios. This is typical of many of the indicators developed for the Sustainability Reporting Guidelines (Global Reporting Initiative 2006b).

Table 2.2 Examples of Social Indicators

Stakeholder Group	Category	Indicators
Employees	Labour Practices and Decent Work	Breakdown of workforce
	Labour/Management Relations	Percentage of employees represented by independent trade union organisations
	Health and Safety	Standard injury, lost day, and absentee rates and number of work-related fatalities
Communities	Community	Description of policies to manage impacts on communities in areas affected by activities
Suppliers	Suppliers	Treated as economic
Clients/customers	Customer Health and Safety	Description of policy for preserving customer health and safety during use of products and services
Investors		Treated as economic

Adapted from Elkington and van Dijk (1999) and Global Reporting Initiative (2006b)

Stakeholder engagement provides the bedrock for much of the social reporting guidelines, which include the AA1000 Assurance Standard (AccountAbility 2003), the accountability framework SA8000 (Social Accountability International 2001) as well as the more recent AA1000 Stakeholder Engagement Standard (AccountAbility 2005). Labour standards have been developed by the International Labour Organisation (ILO), such as the ILO Declaration on Fundamental Principles and

Rights at Work, which has also informed businesses on developing and implementing social performance measures. It appears that an increasing number of organisations include social measures in their reporting frameworks (Department of the Environment and Heritage 2004) and that these include reporting on aspects such as corporate citizenship, corporate responsibility, social impacts, health and safety and community impacts. In an analysis of 114 sustainability reports, KPMG (2002a) found that the key stakeholders were employees, customers, shareholders and society/communities and that the top five social performance indicators were accident/injury frequency (76%), community spending (48%), women in staff/management (42%), staff diversity (27%) and supplier diversity (12%).

An indicator of the importance of social reporting is that an increasing number of private and institutional investors are basing decisions on socially responsible investing. In Australia, the socially responsible investing sector was estimated to include AUD$13.9 billion of funds invested in 2001 (KPMG 2002b). Further evidence is the establishment of the Sustainable Investment Research Institute, which is a dedicated research group that provides social investment research to wholesale and retail investors, lenders as well as other users of financial analytical data. Investment decisions are made based on available public TBL reports, which provide a mechanism for businesses to demonstrate to shareholders and potential investors how they are managing their environmental and social risks and thereby managing their reputations (KPMG 2002b).

In Australia, the importance of corporate social responsibility was recognised with the establishment in June 2005 of the Parliamentary Joint Committee on Corporations and Financial Services Corporate Responsibility and TBL reporting, for incorporated entities in Australia (Parliamentary Joint Committee on Corporations and Financial Services 2006). The terms of reference for the Senate committee were to investigate the role of company directors in taking into consideration stakeholder as well as shareholders, corporate social responsibility and sustainability reporting and whether reporting needed to be mandated rather than voluntary. In short, the report noted that although there was evidence of increasing engagement by Australian companies with sustainable practices and sustainability reporting by international standards, Australia

lagged behind in implementing and reporting on corporate responsibility. In addition, the Senate report recommended that there was no need to change the existing legislative framework, that reporting should remain voluntary rather than being mandated, and that it was not necessary to mandate the consideration of stakeholder interests in directors' duties.

2.4.3 Economic Response

The academic literature in the area of economic sustainability appears to cover two streams. Firstly, there is a conceptual stream that focuses on defining and distinguishing the economic dimension of sustainability from the traditional financial performance and secondly, there is a stream that focuses on ways to measure the economic performance of businesses. This section discusses these two streams and also briefly discusses the Balanced Scorecard, which is widely cited tool that has been used to measure business performance.

2.4.3.1 Economic Sustainability

Businesses engagement with the sustainability agenda is firmly rooted in a history of practices of corporate reporting, specifically with the reporting of an organisations traditional financial transactions (Milne, Ball & Gray 2005). According to Jennings (2004), the economic component of the TBL is often assumed to be synonymous with financial performance, however, there are significant differences between the two. Finance is about the provision of money when required for consumption or for investment in commerce, whereas economics is the means by which society uses human and natural resources in the pursuit of human welfare. As such, the economic performance of an organisation extends beyond financial and is linked to both the social and environmental dimensions of sustainable development (Jennings 2004), moreover, it concerns an organisation's impacts on the economic circumstances of its stakeholders and on the economic system in terms of direct impacts and indirect impacts (Global Reporting Initiative 2006b). In short, the challenge has been to understand the economic bottom line as opposed to the purely financial bottom line (Jennings 2004).

A broader economic discussion has emerged in regard to economic sustainability and the use of capital and resources. For example, O'Hara (1998, p. 43) maintained that the economic dimension of sustainability 'refers to the recognition that economic activity cannot be sustained independent of the functions and services provided by the biophysical world'. In other words, the economic pillar of sustainability is concerned with a more holistic view in comparison to financial performance, and includes the systems of production, consumption and management of resources, specifically human capital and knowledge capital (Auditor General Victoria 2004). Likewise, Bartelmus (1999) claimed that the focus of economic sustainability is the long-term preservation of produced and natural capital, income or consumption. Bartelmus (1999) suggested that this focus has its roots in neoclassical economics, which assumes that capital maintenance can be largely achieved by replacing depleted or degraded natural capital with human or produced production factors. This narrow view on capital and resources was also highlighted by Ruth (2006) who stated that modern economics concentrates more on the efficient use of resources and labour rather than on effectiveness, and therefore only addresses a subset of issues that are relevant to achieving sustainability. This was evidenced by the fact that few economic texts explain that materials and energy are essential inputs into any production process, rather, most explanations deal only with labour and capital (Ruth 2006).

Nevertheless, businesses appear to be broadening their approach and engagement with the economic dimension of the sustainability agenda. For example, Milne et al. (2005) examined a range of businesses and found that they were moving away from a more traditional view of the firm where the emphasis was on growing the business, making increased profits and securing the financial viability of the business, which may come at the expense of the environment or social equity. Instead, the prevailing view was one where the aim is making profits and securing the long-term viability of the business, which is seen as absolutely essential to achieving sustainable development. The movement from financial to economic performance was also linked to the pursuit of business excellence by Searcy, Karapetrovic and McCartney (2005) who maintained that the concept of business performance has broadened from a more direct focus on customers and economic results, to addressing the issues that

affect all stakeholders. Stead and Stead (1994) suggested that these changes represented a paradigm shift, in which organisations need to rethink their relationship with stakeholders and that this would be reflected in a change of organisational values. In addition, part of this change would be recognition of how much is enough growth (Stead & Stead 1994), which echoes the earlier discussion on limits to growth. One of the problems, however, is that the desirability and nature of economic growth has remained almost totally unquestioned in business circles (Bebbington 2001).

2.4.3.2 Measuring Economic Sustainability

There has also been discussion on the changes to the measurement of business performance in regard to values. Drawing upon the original meaning concept of the TBL proposed by Elkington (1999a), Castro and Chousa (2006) discussed the concept of value creation and proposed a measure called sustainable shareholder value, which represents 'a measure of sustainable shareholder value that takes into account the value that sustainability can add to traditional shareholder value' (2006, p. 331). Moreover, Slater and Gilbert (2004) suggested that sustainable development directly drives (or limits) value creation. Similarly, Bennett and James (1998) maintained that the focus has been on measuring the economic value that has been created from activities that minimise the environmental impacts.

The pursuit of value-related measures was also supported by Arnold and Day (1998) who suggested that companies should move away from commodity products towards a search for ways to differentiate products through such things as product functions or additional services. Arnold and Day (1998) claimed that old measures of resource productivity such as volume intensity and volume output, could be replaced by new measures such as knowledge intensity and value per volume output, respectively. A more radical approach to measuring economic sustainability is to place a financial value on an organisation's consumption or enhancement of natural and/or social capital (Bennett & James 1998). The benefit of this approach is that the results can be compared with traditional financial measurements such as economic value added (Bennett & James 1998).

Similarly, Taplin, Bent and Aeron-Thomas (2006) proposed a measure called financial value added, and claimed that a financially sustainable organisation adds financial value to resource flows in producing goods and services, which is calculated as the sum of revenue minus payments to suppliers. The way that this value added is then allocated to other stakeholders (for example, employees, shareholders and government) gives and indication of the value that the business is adding to its key stakeholders, their relative bargaining power and how its resources are allocated (Taplin et al. 2006).

Measures of economic performance include the traditional measures used in financial accounting as well as intangible assets. The Sustainability Reporting Guidelines (Global Reporting Initiative 2006b) suggested that the economic impacts of businesses should cover customers (for example, geographic breakdown of markets), suppliers (cost of all goods, materials and services purchased), employees, providers of capital and the public sector. As such, this represents a more holistic approach to generating shareholder value and that sustainability is another useful indicator of corporate performance, which is no different to traditional financial performance (Mays 2004). The economic dimension encompasses profitability, wages and benefits, resource use, labour productivity, job and market creation, expenditures on outsourcing and human capital (Jamali 2006; WBCSD 2003). In short, economic sustainability is increasingly understood to refer to generating added value in a wider sense, rather than conventional financial accounting (Jamali 2006).

There appears to be a contrast between the traditional reporting and exploratory economic reporting in regard to content and measures. For example, although a company's economic impact may be seen as either positive or negative, neither of these are measured in traditional accounting methods (Jennings 2004). The traditional format of reporting is the corporate annual report, which primarily address the immediate needs of shareholders and financial analysts, but it fails to account for what is considered important to stakeholders in economic terms (Jennings 2004). Financial stakeholders include rating agencies, socially responsible investors, sustainability funds and mainstream banking and investment (WBCSD 2003), whereas economic stakeholders can include employees, suppliers, customers and regulators.

According to the Global Reporting Initiative (2006b) most organisations publish separate financial and sustainability reports. In support for this claim, Gray (1994, p. 30) stated that 'there is no evidence to suggest that the financial community has any interest in environmental data except insofar as the data reflects a potential financial gain or loss that the corporation might suffer in the future'. Traditionally, companies have produced annual financial reports, however, there has been little change in the content of these reports (Broadbent 1999). Whilst the reports reflected a greater need for compliance with accounting standards, corporate governance and legislative requirements, essentially, the report provide a financial view of company performance. Broadbent (1999) suggested that there were three main considerations for measuring corporate performance, namely, stakeholders, performance measurement and internal business process. Measures can be financial such as financial ratios, profitability/returns, return on owner's capital employed, return on equity, return on sales, market position or stock market valuations (Wagner & Schaltegger 2003). According to Bhimani and Soonawalla (2005, p. 167), financial reporting has traditionally been the domain of national standard setting agencies, however, 'corporate responsibility in terms of compliance with external financial reporting standards represent only one part of the spectrum of broader organisational reporting concerns'. Financial reporting standards are a requirement for publicly traded companies and compliance is achieved via standards that are directly or indirectly legally enforceable (Bhimani & Soonawalla 2005).

Castro and Chousa (2006, p. 323), stated that there 'has been an absence of an adequate approach that links both financial and sustainability objectives'. Moreover, although an increasing number of companies produce sustainability reports, few are combining these disclosures with their financial data and therefore what is required is a new approach that maintains the traditional financial information that is primarily driven by accounting standards and is augmented with information from sustainability reporting (Slater & Gilbert 2004). In short, Slater and Gilbert (2004, p. 46) claimed that 'a clear business case has emerged that sustainability performance is relevant to creating or destroying shareholder value, but traditional financial reporting structures are ill equipped to deal with it'. Exploring what may happen in the future of reporting, Slater and Gilbert (2004, p. 48) proposed that eventually, annual reports

'may evolve into total performance reports that capture all the material factors that affect the prospects of the company and its ability to execute its corporate strategy'.

In regard to quantity, there appears to be more emphasis on the social and environmental dimensions of the TBL, which is reflected in the discussions in the next two sections of this chapter. This may be a result of the long-standing traditions of financial performance reporting, compared to the more recent and exploratory nature of the social and environmental reporting. Moreover, historically, methods to measure economic performance of businesses are much older than social or environmental measures of performance and have developed over time a well-established body of theory and practice of measurement (Wagner & Schaltegger 2003). For example, Environmental Impact Assessment was established circa 1970 and Social Impact Assessment was established circa 1973 (Vanclay 2004). In addition, Kuhndt et al. (2002) noted that there is less consensus about economic issues compared to environmental issues, particularly as environmental information has been around in both public discussions and academic literature for over 20 years.

2.4.3.3 The Balanced Scorecard

One approach in which the financial performance measurement of a business has been expanded is through the use of the Balanced Scorecard. The Balanced Scorecard, which was developed by Kaplan and Norton (1996) is 'a strategic management system that links performance measurement to strategy using a multidimensional set of financial and non-financial performance metrics' (Epstein & Wisner, 2001, p 2). The framework of the Balanced Scorecard contains four perspectives, with each perspective consisting of the relevant goals, indicators and measures to achieve them. The Balanced Scorecard provides 'enablers' that focus on the achievement of strategic goals in the future (leading indicators) as well as results (lagging indicators) to show the effectiveness and efficiency of measure of the past. The Balanced Scorecard is a tool to put strategy into action, incorporating the corporations vision and strategies (Bieker 2002).

Kaplan & Norton (1996) suggested that, although financial measures were important, they were backward looking indicators as they only reported on past events, however, these financial measures were inadequate for businesses that wanted to create future value through investment in customers, suppliers, employees, technology and innovation. Thus, the Balanced Scorecard 'complements financial measures of past performance with measures of the drivers of future performance', which are derived from an organisation's vision and strategy (1996, p. 8). The Balanced Scorecard brings together measures from across different departments within a business and that these measurements must be part of the information system for employees at all levels of the organisation. Figge, Hahn, Schaltegger and Wagner, (2002) suggested that the logic of the Balanced Scorecard remains mostly in the economic sphere. Therefore, the authors claimed that a fifth perspective (*non-market*) should be added to the conventional Balanced Scorecard. Indeed, such a modification is justified by Kaplan and Norton (1996), who maintained that it may be necessary for firm-specific renaming or additions to the Balanced Scorecard. In addition, as discussed later in this chapter, a Sustainability Balanced Scorecard has also been developed, which incorporates economic, social and environmental performance measures.

2.4.4 TBL Performance and Reporting

This chapter suggested that the first response by businesses to the sustainable development agenda was the adoption and reporting of environmental performance measurements. This was a result of the acknowledgement of the responsibility that businesses had in being major actors in the quest for environmental solutions. The second response, influenced by pressure from a range of internal and external stakeholders, was the recognition that an organisation's social performance also needed to be considered. In the third response was the consideration of economic performance measures, which were broader than the traditional financial reporting measures. In the fourth wave, businesses began to account for each of the three TBL dimensions by integrating their financial, environmental and social performance measures into a TBL reporting framework. This section discusses TBL reporting along with other concurrent developments for a broader evaluation approach such as the sustainability scorecard.

Similar to other concepts discussed in this chapter, such as sustainable development, there appears to be uncertainty as to what is required of organisations that seek to undertake TBL reporting. George (2003) stated that implementing TBL reporting is not an easy process and should not be undertaken lightly. Indeed, Elkington (1999a) stated that driving businesses towards sustainability will require dramatic changes if businesses are to report on their performance against the triple bottom line. Moreover, in order to satisfy the information requirements of the diverse range of stakeholders, old styles of accounting and reporting on business performance were no longer proving to be sufficient (Elkington 1999b; Slater & Gilbert 2004). For example, traditional financial accounting and reporting is unable to account for and present the complexities associated with various issues of concern to the public, such as environmental and social information, which may not always be measured in dollar terms (Yongvanich & Guthrie 2006). According to Higgins (2001), measuring and reporting on an organisation's TBL has emerged as the most significant organisational process for organisations to demonstrate that they are contributing to society in an appropriate manner. In addition, Elkington (1999a) stated that reporting against economic, social and environmental performance is directly linked to the concept and goal of sustainable development. The World Business Council for Sustainable Development suggested that it was important for businesses to 'strike a balance between what stakeholders want to know and what is practical and feasible to report' (WBCSD 2003, p. 4).

During the period 2000-2003, in particular, there was a dramatic increase in the number of businesses producing TBL reports (Kolk 2003; KPMG 2002a). In addition, more of the reports included TBL issues rather than focusing on the environmental performances, and there was more of an emphasis on social issues (Kolk 2003). There was also an increasing number of reports that were based on the GRI guidelines, along with the ISO 14031 standards (Mordhardt, Baird & Freeman 2002). Mordhardt et al. (2002, p. 229) maintained that by following a combination of these guidelines, businesses 'would go a long way towards creating the transparency that most readers would like'.

Despite the increase in TBL reporting, Cerin (2002) cautioned that the traditional environmental, social and sustainability reports are defined more as public relations products than as effective methodologies to control and manage corporate performance. Nevertheless, TBL reporting offers a method of demonstrating a commitment to the community. Merely reporting on sustainability achievements, however, is not enough, as organisations must also include the principles of sustainability into their overall business strategy (Group of 100 2003). In short, a sustainability-orientated business is one that develops over time by taking into consideration the economic, social and environmental dimensions of its processes and performance (Perrini & Tencati 2006). Likewise, Gray (1994, p. 32) stated that 'reporting for sustainability must consist of statements about the extent to which corporations are reducing (or increasing) the options available to future generations'.

A number of sustainability accounting concepts were proposed by Gray (1994). Gray (1994, p. 33) stated that 'a sustainable organisation is one which leaves the biosphere at the end of the accounting period no worse off than it was at the beginning of the accounting period', which the author noted the vast majority, if not all, organisations do not comply with. Although Gray (1994, p. 33) called this a 'failure', he suggested that it can be quantified by calculating 'the amount of money an organisation *would* have to spend at the end of an accounting period in order to place the biosphere back into the position it was at the start of the accounting period. As such, this method is based on costs rather than values. An alternative approach was the Resource Flow/Input-Output Approach, which involves cataloguing of the resources flowing into an organisation, those flowing out of the organisation and the losses or leakages (for example, wastes and emissions) from the process.

A critique of the concept of the TBL was presented by Norman and MacDonald (2004) who suggested that there were limitations with the concept in regard to comparing the social and environmental bottom line, where as it was easier to compare the traditional bottom line, given the established methods for accounting for the economic bottom line. Norman and MacDonald (2004) variously described the concept of the TBL as misleading and inherently empty and vague.

2.4.4.1 TBL

2.4.4.1.1 TBL Reporting Frameworks

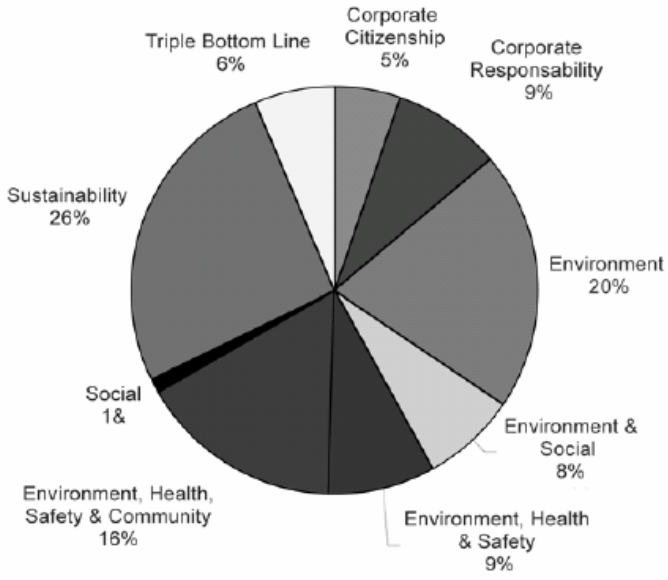
To assist in the process of developing TBL reports, several frameworks have been developed such as the Sustainability Guidelines (Global Reporting Initiative 2006b), which provides guidance for organisations that seek to develop sets of sustainability indicators to use in TBL reporting. The Guidelines represented the first global framework for broad reporting (Coalition for Environmentally Responsible Economies 2003; Global Reporting Initiative 2006b). The Global Reporting Initiative guidelines are generic and can be used by any organisation regardless of size, industry or sector. The Global Reporting Initiative framework is based on two areas, namely, how to report and what to report. How to report includes the principles and guidelines and a range of technical protocols that provide the means to calculate aspects such as water and energy use. What to report includes standard disclosures as well as a number of sector-specific supplements such as Financial Services, Mining and Metals, Public Agency and Telecommunications (Global Reporting Initiative 2006a, 2006b). Wallage (2000) discussed a range of different TBL-style guidelines and stated that, from the range of existing standards that could be considered, the Global Reporting Initiative guidelines were the most comprehensive. In addition, a comparison of a range of different indicator development frameworks was presented by Veleva and Ellenbecker (2000) and the authors concluded that the GRI Guidelines were the only ones that covered all three TBL dimensions.

A pertinent example for event evaluation is the Tour Operators' Sector Supplement (Tour Operators Initiative 2002), which was developed based on extensive consultations with a number of European tourism operators and practitioners (Tour Operators Initiative 2002). The aim of the initiative was to address the range of tourism-specific aspects of sustainable development within the sector. These included environmental (materials and waste), social (labour practices and training and education), economic (benefits to destination) and cultural aspects. Whilst there are strong links between tourism and special events, however, this framework offers only a general guide, and a suite of event-specific TBL indicators is needed.

The Sustainability Reporting Guidelines (Global Reporting Initiative 2006b) proposed that organisations should slowly build their capacity for TBL reporting, beginning with an informal approach that would be consistent with their current capacity. The guidelines suggested that many organisations find that they are already collecting much of the data as a matter of course, and it is a process of collating this information in the form of a report. In addition, the existing data are readily adaptable into the TBL reporting requirements (Andrews 2002). Accordingly, an incremental approach is usually taken, whereby existing measures and indicators such as key performance indicators are combined with other data. Unfortunately, this can result in a myriad of reporting formats, from environmental, health and safety and sustainability reports (Sustainable Investment Research Institute 2002). This lack of consistency can limit the degree to which comparisons can be made of TBL reporting across a range of businesses and/or business sectors.

There is evidence that a growing number of organisations are publishing TBL-style reports, although these are also referred to as Sustainability reports and Sustainable Development reports (Brown & Fraser 2006). Figure 2.4 reveals the range of different types of reports published in Australia in 2003. The most common report was a Sustainability report (26%), followed by Environment report (20%) and Environment, Health, Safety and Community report (16%). It is also interesting to note the interchange of terms that was alluded to earlier, namely Corporate Citizenship and Corporate Responsibility. Figure 2.4 also shows that only 6% of the reports were called TBL. As evidenced by the range of reports shown in Figure 2.4, researchers in the area of TBL reporting are confronted by the need to compare the reports in order to determine the quality and the extent to which businesses are addressing sustainability reporting.

Figure 2.4 Categories of Sustainability Reports in Australian in 2003



Source: Department of the Environment and Heritage (2004), cited in Foran, Lenzen and Dey (2005, p. 16)

2.4.5 Sustainability Reporting Scorecards

To counter the confusion surrounding the range of reports, sustainability reporting scorecards emerged as a way to compensate for the inconsistencies of TBL reporting. The scorecards have been used both as a tool to evaluate the TBL reporting of individual businesses against the Global Reporting Initiative Guidelines and to enable a comparison of TBL reporting across a range of businesses, notwithstanding the variety of reports (Dias-Sardinha, Reijnders & Antunes 2002; Epstein & Wisner 2001; Hepworth 1998; Hussey, Kirsop & Meissen 2001; Mordhardt et al. 2002; Spiller 2000; SIRIS, 2002).

One of the first of these scorecards was developed by UNEP/SustainAbility, which initially produced a set of 50 environmental criteria (SustainAbility 1996). Because of the changing nature and scope of TBL reporting, however, the scorecard was modified to include social and economic perspectives. The result was a Sustainability

Scorecard, which was used for the Global Reporters Benchmark Survey (1997) and the subsequent surveys in 2000 (SustainAbility 2000) and 2002 (Robinson et al. 2002). Similarly, both Kolk (Kolk 2003; Kolk, Walhain & van de Wateringen 2001) and KPMG (2002a; KPMG/WIMM 1999) extended their reporting analyses from environmental to sustainability assessment to reflect the changes in reporting.

As a result, the scoring systems and scorecards became more conventional, notwithstanding their limitations (See, for example, Deloitte Touche Tohmatsu 2002; Sustainable Investment Research Institute 2002). For example, the scoring system used by Sustainable Investment Research Institute (2002) used a quantitative approach and scored the reports from 0 (No coverage) to 4 (Issue fully discussed) and was based on the UNEP/SustainAbility Revised 50 Environmental Criteria (SustainAbility 1997) and the Global Reporters scorecard (SustainAbility 2000). The aim was to analyse the reports and assign a score according to the degree to which each of the Sustainability Reporting Guidelines indicators was addressed. The dimensions that were covered in the analysis were management policies and systems, input/output inventory, finance, stakeholder relations and sustainable development. The report noted that there were limitations to this approach such as not all indicators being relevant to each business assessed.

There were other limitations to this approach, which were noted by Mordhardt (2001) and Mordhardt et al. (2002). For example, Morhardt (2001) compared three different scoring systems and found that the three systems significantly correlated, but one had higher averages and a shorter list of topics. Morhardt also claimed that despite the acceptance of these scoring systems by practitioners and businesses there were inherent problems. For example, because the scoring systems that were used measured the number of topics covered and the depth of discussion rather than the quality of performance, maximum scores could be obtained despite poor performances in the first instance (2001). In addition, Mordhardt et al. (2002) claimed that by aligning scores to the content of the report rather than the actual performance, companies have the potential to manipulate scores by adding a topis and discussing it. As one of the drivers of corporate sustainability is the maintenance of reputation, a favourable score from a reputable organisation could be a public

relations boon. Consequently, Jones and Alabaster (1999, p. 57) cautioned that businesses 'must be aware of and understand the issues associated with the use of scoring systems and be cautious of reaping rewards or be ready to dispel bad publicity'. This view was also supported by Cerin (2002) who claimed that many of the reports were defined more as public relations products than as effective methodologies to control and manage the corporate performance, or more company conformance that company performance (Bhimani & Soonawalla 2005). Therefore, despite the advances in this type of analysis, the limitations are such that it would not be an appropriate framework for the TBL evaluation of special events.

2.4.6 Sustainability Balanced Scorecards

Another method of that was developed in response to the need for a broader approach to business performance evaluation was the sustainability balanced scorecard. Sustainability balanced scorecards were based on the Balanced Scorecard, which was developed by Kaplan and Norton (1996), and represented 'a strategic management system that links performance measurement to strategy using a multidimensional set of financial and non-financial performance metrics' (Epstein & Wisner 2001, p 2). The aim was to merge TBL reporting with a type of balanced scorecard, to develop a tool which can assist internal management and decision-making in order to help organisations to understand key risks, raise awareness and identify opportunities to improve environmental and social performance (Andrews 2002). It was further argued that this approach assists with overcoming 'the shortcomings of conventional approaches to environmental and social management by integrating the three pillars of sustainability into a single and overarching management tool' (Figge et al. 2002).

Bieker et al. (2001) suggested that managers face a large number of management systems on a range of topics such as quality (ISO 9000), environmental management (ISO 14000) and corporate social responsibility (SA 8000, AA 1000), however, these lack a grounding in traditional management systems. As a result, environmental sustainability remains largely separated from the traditional core business strategies and management systems, which are focused on financial performance indicators (Bieker et al. 2001).

Bieker (2002) suggested that Balanced Scorecards had limitations in three areas. Firstly, they were focused on financial aspects, secondly, they were limited to 20 indicators and thirdly, that often there was too narrow an integration of stakeholders, which resulted in some important stakeholders being excluded. A further limitation was noted by Figge et al. (2002) that balanced scorecards were firm-specific and were not readily transferable to other businesses. In short, the scorecard is a tool which can assist internal management and decision-making, thus, helping organisations to understand key risks, raise awareness and identify opportunities to improve environmental and social performance, however, the effectiveness of the tool is reliant on the development of suitable indicators (Andrews 2002).

2.4.7 Ethical Scorecard

An alternative to the sustainability scorecard is the ethical scorecard. Spiller (2000, p. 149) outlined the ethical reasons for businesses to be' doing well while doing good'. The author developed an Ethical Scorecard based on the Balanced Scorecards developed by Kaplan and Norton (1996) and suggested that there were four P's of ethical business which were purpose, principles, practice and performance measurements. The purpose of the ethical business is to create environmental, social and financial wealth thereby making a positive contribution to the environment and society in a financially responsible manner (Spiller 2000). The author identified ten key business practices for each of the six main stakeholder groups: community; environment; employees; customers; suppliers and shareholders. Within the framework represented by these ten groups, 60 practices were identified, which formed the Ethical Scorecard. Spiller (2000) noted that although there was a growing demand from stakeholders for businesses to report on their performance in relation to issues that affected the stakeholder, businesses were reluctant to publish such reports. The Ethical Scorecard sought to address this problem.

In summary, Elkington (1999a) stated that driving businesses towards sustainability will require dramatic changes in their performance against the triple bottom line. However, even though the 1992 Earth Summit enlightened many businesses as to what their role and responsibilities were in regards to sustainable development, there

appeared to be a lack of understanding about what had to be done. Atkinson (2000) suggested that after the 1992 Earth Summit, most governments adopted sustainable development as a notional goal, however, there was some debate concerning how businesses could contribute to this objective. Concepts such as the 'sustainable business' and 'corporate sustainability' emerged, as did a number of proposals to monitor progress towards corporate sustainability (Atkinson 2000). Atkinson (2000, p. 235) claimed that a response to this measurement problem was 'the proposition that there is little in the notion of a 'sustainable business' or 'corporate sustainability' beyond defining a set of pragmatic guidelines whereby a corporate entity can monitor and improve its sustainability performance. The measurement issue here is to find meaningful indicators that capture the flavour of the broader sustainability debate'. Similarly, Bartelmus (1999) claimed that the more contentious debate is the assessment side of the coin. Andrews (2002) maintained that the core challenge of TBL reporting is defining an approach that is grounded in appropriate principles and that employs meaningful, pragmatic indicators.

2.5 Sustainability Indicators

2.5.1 Indicator Background

As discussed earlier, Agenda 21 concluded that one of the barriers to a more sustainable future was the lack of relevant and accessible information upon which to base decisions and measure progress (Lawrence 1997). As a result, there was a call for activities to develop relevant information and that this information should be in the form of indicators, which would be an important tool for assisting individuals, communities, institutions, corporations and society to make different and better choices about their futures (Lawrence 1997).

As such, sustainability indicators have emerged as the most common method of measuring progress towards sustainable development goals (Moffatt, Hanley & Gill 1994). Consequently, the demand for indicators has been high (Moffatt et al. 1994) and they have been developed in a range of geographical contexts including communities, towns, cities, states, regions, nations and globally (Hecht, 2003).

Despite the growing recognition that the concept of sustainable development has received, however it is a relatively new idea for many businesses (World Business Council for Sustainable Development 2001). Nevertheless, sustainability indicators are used by an increasing number of public and private organisations as tools to track their social, environmental and economic performance (Coelho & Moy 2003; Hecht 2003; Morse, McNamara, Acholo & Okwoli 2001).

With increasing pressure to act and report on sustainability strategies, an overwhelming number of principles, tools, results indicators and reporting formats have emerged to measure and communicate a corporation's TBL performance (Beloff, Lines & Pojasek 2003). Sustainability indicators are usually combined sets of economic, social and environmental performance indicators rather than indicators that are in any way capable of describing the extent to which a business entity is contributing of detracting from sustainable development goals (Warhurst 2002). Sustainable development goals are related to developments over time and from an inter-generational perspective, as per the accepted definition from Our Common Future (Warhurst 2002). While the specific sets of measurements vary among companies that have adopted sustainability indicators, it is increasingly accepted that they should incorporate both the TBL thinking and the idea of eco-efficiency, that is, generating more value with less impact (Beloff et al. 2003).

Lawrence (Lawrence 1997) provided a rationale for indicators and suggested that the concept behind sustainability indicators is very simple. The intention is to provide an answer to the question: How might I know objectively whether things are getting better or getting worse? The idea is that as this information is provided to relevant parties, there will be a reduction in the reliance on intuitive decisions and an increase on the reliance on objective information. The result will be better and more informed decisions about sustainability (Lawrence 1997). Indicators are usually designed to transform complex phenomena or conditions in order to make them quantifiable, perceptible and understandable measures (Corson 1996). For example, environmental and social indicators can provide measures of the health and viability of ecological and social systems. The challenge, however, is to present the data in a form that is easily understandable and accessible by those who need to make the changes.

2.5.2 Technical Issues

In general, there appear to be three main types of indicators, which are detailed in Table 2.3. Lawrence (1997) claimed that indicators are meant to provide the qualitative and quantitative measures from which deductions can be made concerning the current state, direction and rate of change for specific attributes. Specifically, Lawrence (1997) proposed a general approach to indicator development in which there were three types of indicators, namely, distinct, comparative and directional. Of the three types, it could be argued that comparative indicators were the most relevant to the current research, given that the aim is to develop indicators that can used to compare a range of different events. On the other hand, Bell and Morse (1999) and Meadows (1998) discussed indicators from a system's perspective, and suggested that there were two types of indicators, namely, state, such as the state of a variable and control, for example, the rate at which a pollutant passes into the environment.

Using an environmental perspective, Corson (1996, p. 327) maintained that among environmental indicators, three types have been distinguished: pressure or stress indicators that measure the causes of environmental problems (such as pollutant emissions); state or impact indicators that gauge environmental quality (such as regulations to reduce pollution). In addition, there are policy performance indicators, which are normative measures that compare existing conditions with an explicit standard or target (such as the allowable or desired level of pollution) (Corson 1996).

In terms of indicator scales, Corson (1996) suggested that numerical indicators can be direct measures of a variable (such as the concentration of a pollutant) or indexed or scaled values, for example, 0-100. The scale can also be used to judge the least sustainable and the most sustainable according to the relationship to any upper and lower limits that were established (For a further discussion of this approach, see Ko 2005). In addition, index numbers for a range of sectors (for example, environmental or economic) or for a given issue can then be combined or averaged to create sectoral or issue indexes, which can be further aggregated into overall sustainability indexes for individual communities, regions or nations (Corson 1996).

Table 2.3 Summary of Different Types of Indicators

Author	Type of Indicator	Description of Indicator
Lawrence (1997)	Distinct	Numerical representations of a condition For example, unemployment rate
	Comparative	Comparison with similar indicator For example, unemployment in two countries
	Directional	Measures change towards a benchmark and change against standard For example, change in unemployment against a standard i.e. average, highest or lowest
Bell and Morse (1999; 2003) and Meadows (1998)	State	The state of a variable For example, concentration of a pollutant in water, human population density, life expectancy at birth
	Control (pressure, process or driving force)	Gauge a process that in turn will influence a State level indicator For example, rate at which a pollutant passes into the environment
Corson (1996)	Pressure	Measures the cause of the problem For example, pollutant emission
	State	Gauges the quality For example, pollution concentration
	Response	Reflect efforts to improve the problem For example, policies and regulations to reduce pollution
	Policy performance	Normative measure that compares an existing condition with a standard or target

In short, Anderson (1991) suggested that whichever indicators were being used, the information for the indicators must be available; the indicator should be easily understood; the indicator must be about something that can be measured; the indicator should measure something which is believed to be important or significant in its own right; the indicator should be able to compare different geographical areas; and be internationally comparable. When combined with numerical targets, indicators can be used to compare current environmental, economic and social conditions with desired performance levels, to reveal trends over time and to allow comparisons between different regions, communities and states (Corson 1996).

In regard to developing sets of indicators for businesses, Veleva and Ellenbecker (2000) claimed that the trend was to move towards using a manageable number of

indicators, which are simple, easy to understand and implement. Indeed, Searcy et al. (2005) suggested that three to ten indicators would be sufficient at the business unit level. Likewise, Bennett and James (1998) maintained that it is better to begin with simple, readily understandable measures and then develop more sophisticated ones over time. Some of the principles for indicator development are that indicators should be used as part of the decision-making process, be acceptable to those who will use them and those who will collect that data and be comparable with other organisations (Searcy et al. 2005). Moreover, indicators should complement rather than replace existing management systems and practicality must be the overriding objective (Searcy et al. 2005).

Veleva and Ellenbecker (2000, p. 117) also suggested that there was a clear trend towards developing standardised indicators, and that, 'it is important to break the current paradigm and use more qualitative indicators in order to measure 'quality of life' opposed to 'economic growth'. This view is supported by Cramer (2002), who suggested that many people are beginning to place more value on the immaterial aspects of life such as social well-being and the quality of life. In terms of indicators for each of the TBL dimensions, Cramer (2002) claimed that most progress had been made in environmental indicators and the least progress has been on the development of social indicators. In regard to economic, Cramer (2002) maintained that, although there are a range of financial indicators, it has not yet been possible to factor into businesses operating costs the adverse impact that economic activities have on sustainable development.

2.6 TBL Evaluation and the Implication for Special Events

Most of the literature on the operationalisation of the TBL has focused on measuring business performance against economic, social and environmental indicators. This study argues, however, that a special event has characteristics that are distinct from other business entities. For example, special events are, by nature, short-term, and in some instances are only staged once in a particular destination. In contrast, businesses operate with an underlying assumption that the business entity will continue to operate, that is, as an on-going concern. The implication of this

distinction is that the short-term and/or once-off nature of events may preclude the option of a sustainability assessment. This view is supported by Bramwell (1997) who suggested that the short duration of special events may diminish any assessment of whether or not they are sustainable.

A number of researchers have recognised the oxymoronic nature of the concept of a sustainable business. For example, Milne et al. (2005) suggested that, in the context of sustainability the TBL is a deeply problematic concept. Moreover, according to Taplin et al. (2006, p. 355), 'determining what constitutes a sustainable level of performance is frequently difficult in a society that is only just becoming aware of the range and magnitude of external costs that exist'. Grafé-Buckens and Beloe (1998) also noted that as a result of the systemic nature of sustainability, it is difficult to define any individual business as being sustainable, and that one could 'only speak of companies contributing to or moving towards sustainability. Similarly, Gray and Bebbington (1996, p. 3, cited in Bebbington 2001) claimed that 'few, if any, businesses, especially in the developed economies, come anywhere near to anything that looks remotely like sustainability'. Finally, Atkinson (2000) claimed, there is little in the notion of a sustainable business beyond a set of sustainability indicators. As such, Andrews (2002) maintained that the issue was to develop meaningful indicators that capture the flavour of the broader sustainability debate.

Furthermore, it was claimed that businesses operate with the permission of society, which is manifest as a licence to operate. In order for this licence to be retained a business needs to be more accountable for its actions and more responsible with the resources at its disposal. Therefore, it is important for businesses to recognise that there is an inherent value in the relationship between a business and society, and that this value can be both created and destroyed (Elkington 1999a) as a result of behaviours that are outside societal norms. The implementation of environmental and socially responsible business practices and the measurement of performance and reporting to stakeholders represent a way to maintain the 'licence to operate'. Similarly, it could be argued that special events are also granted a 'licence to stage' by society, which carries with it responsibilities beyond the economic sphere.

As outlined in the introductory chapter, the aim of this research is to develop a comprehensive broad-based assessment of events. Rather than being in the form of a sustainability assessment, however, a TBL approach is proposed, which allows for the development of a framework that incorporates the economic, social and environmental impacts of events. In order for this to be achieved, a set of event-specific indicators needs to be developed, which can be integrated into an holistic framework so that an overall measure of the impact of an event can be established. This will facilitate the development of standardised measures for the evaluation of events, and, additionally, allow comparisons to be made on the performance of a range of different special events. In addition, it will encourage events to be managed in a more sustainable manner and bring event evaluation in line with current business practice.

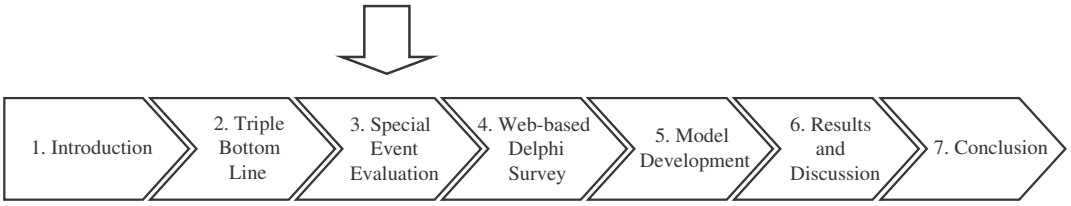
2.7 Conclusion

The aim of this chapter was to build a platform for the proceeding chapters. This was achieved firstly through an explanation of evaluation, and why evaluations are undertaken. To arrive at an understanding of a TBL evaluation, the origin of the TBL was traced through the emergence of sustainable development, and how this had impacted on the conduct of businesses. In response to this, businesses adopted environmental, social, economic and TBL reporting in an attempt to account for their broader impact on the community and the environment. Sustainability indicators were discussed, which have been developed as a way to measure progress towards sustainable development goals. The next chapter will investigate a wide range of special event evaluation literature and actual impact assessments in order to draw out the key impacts have been used. This will lay the foundations for the development of a set of event-specific indicators to measure the TBL performance of a range of events.

Chapter

3

Special Event Evaluation



Chapter Structure

- Special Event Evaluation
- Special Event Evaluation Literature Analysis
- Special Event Impact Assessment Analysis
- List of Key Impacts

3.1 Introduction

The introductory chapter revealed that there has been tremendous growth in the number of special events being staged in many regions. In terms of evaluating the impact of these events, there has been a reliance on economic assessments, mainly due to the funding requirements of government event agencies. A broader approach is needed, which includes an assessment of the social and environmental impacts as well as the economic impacts. The previous chapter discussed the emergence of the TBL evaluation and how businesses have responded to pressure from a variety of stakeholders by implementing more sustainable management practices such as eco-

efficiency and corporate social responsibility and reporting on their performance via TBL reports using sustainability indicators.

The aim of this chapter is to undertake a comprehensive analysis of what has been done in terms of event evaluation, which represents step two in the indicator development process (Segnestam et al. 2000) outlined in Chapter One. The first part of this chapter takes a chronological approach to a discussion of the development of special event evaluation from its roots in economic tourism studies through to the emergence of a broader, event-specific triple bottom line (TBL) assessment. Following this, two empirical analyses are presented, namely, a synthesis of a large number of academic special event articles and an analysis of a number of unpublished event impact evaluations, in order to derive the key impacts that have been used in event evaluations. The chapter concludes with the presentation of a list of the 20 key impacts, which were drawn from the synthesis of the literature and the impact assessments.

3.2 Special Event Evaluation

This section presents a chronological discussion of special event evaluation literature, to reveal the shift in focus from economic evaluations to the genesis of TBL evaluation. The literature is broken into four periods, namely, 1970-1979, 1980-1989, 1990-1999 and 2000-2006, to facilitate an understanding of the development of evaluation literature over time. The use of 1970 as the starting point is consistent with a previous study undertaken by Formica (1998) on academic research relating to festivals and special events. The periods are based on decades, purely for convenience.

3.2.1 1970-1979

Most of the special event evaluation literature in this period originated in North America and focused on the evaluation of hallmark events. Ritchie and Beliveau (1974) documented the evolution of the Quebec Carnival from 1962-1974, and noted not only fundamental economic impacts such as visitor expenditure, but also

international recognition of the destination, the contribution to government treasuries, and the significant contribution that events make to offsetting the effects of seasonality. More importantly, from a social perspective, the authors maintained that the events affected the attitudes and lifestyles of people within the host destination. In addition, it was suggested that there was a psychological limit to the number of visitors that the event could handle, which, if transgressed, may lead to alienation of the local population, and to an over commercialisation of the event. Underpinning the success of the event was the recognition that without local support the Quebec Carnival would not have been able to realise the long term viability and status that it had achieved (Ritchie & Beliveau 1974). This study was also important in that it was one of the first longitudinal studies, which revealed a number of long-term economic and social trends.

Similarly, most of the other studies published during this period focused on economic impacts. Although social impacts were also noted, there did not appear to be any attempt to develop methods to measure them. For example, while Della Bitta, Loudon, Booth, and Weeks (1978) investigated the economic impact of the Tall Ships visit to Rhode Island, US in 1976, they also recognised the social impact of the event, for example, home stays by some of the crew, which fostered 'greater understanding and goodwill among people of different nations' (1978, p.12). Likewise, Wall and Hutchinson (1978) studied the Oktoberfest in Canada and noted that the festival not only provided a stimulus to the local economy, but also reflected the ethnic flavour of the host city, and claimed that the festival promoted a positive spirit in the community. This view was echoed by Reichert (1978, p. 5) who stated that 'many of the festivals have non-commercial objectives designed to improve community spirit'. A cost-benefit analysis of the Olympic Games was the focus of a study by Cicarelli and Kowarsky (1973), who claimed that this type of approach to event evaluation completely ignored the intrinsic value of the event. For example, the authors suggested that 'the psychic income associated with being host to the Olympics may be so great that the benefits could conceivably exceed the costs' (1973, p. 5). In short, this period saw the genesis of special event evaluation, and demonstrated that the evaluation of special events had grown from the more general tourism evaluations of that time (See, for example, Archer & Owen 1972). Moreover, events were becoming

areas of interest that were not only studied by economists, but also by geographers such as Wall and Hutchinson (1978) and sociologists such as Doenecke (1972).

3.2.2 1980-1989

During this period, a number of important studies were published that advanced the evaluation of events beyond economic analyses. One exception to this trend was an article by Davidson and Schaffer (1980) in which the majority of the discussion was devoted to some of the methodological issues involved in an economic analysis of events, which was indicative of many future economic impact studies. Noteworthy, is that as early as 1980, Davidson and Schaffer (1980) levelled criticisms at issues such as definitions employed, survey techniques, multipliers, and appropriate sampling and statistical techniques, which have continued to be topics of discussion by economists and academics in the field of special event evaluation.

In what has become one of the seminal articles on special event evaluation, Ritchie (1984) presented a conceptual framework for the evaluation of hallmark events, which proposed a classification of the types of impacts that would need to be assessed for a broader approach to evaluation. Six types of impacts were identified, namely, economic, tourism/commercial, physical, socio-cultural, psychological and political. Ritchie (1984) also discussed the nature of the variables to be measured and the associated problems with data collection and interpretation. Considering the relative immaturity of special events research at that time, the framework appeared rather advanced, however, Ritchie (1984) maintained that it was only a beginning, and concluded that there was a need for a more comprehensive approach to the evaluation of the impact of hallmark events than was being used at the time.

According to Hall (1989, p.7), the study conducted by the Centre for South Australian Studies on the 1985 Adelaide Grand Prix (Burns, Hatch & Mules 1986) 'represented one of the first attempts to provide a thorough analysis of the impact of a special event'. Burns and Mules (1986, p.5) suggested that it would 'be useful to have a standard format by which the events may be evaluated and compared with each other'. The authors maintained that a framework was needed that established the nature of the costs and benefits involved in staging a special event. The analysis of

the Adelaide Grand Prix included social costs such as traffic congestion, time lost due to traffic detours, property damage, vehicle thefts, noise and traffic accidents. The social benefits were described as 'psychic income', which represented the 'feel good' impact that local residents felt as a result of the event being staged in their city despite some of the inconveniences such as increased traffic and noise and general disruption to normal daily routines. In terms of the development of special event evaluations, the Adelaide Grand Prix study represented one of the first attempts at a cost-benefit analysis, which considered both economic and social costs and benefits.

A number of evaluations were also published during this period that presented case studies of the America's Cup Defence, which was staged in Fremantle, Western Australia in 1987/88. The studies by Newman (1989) and Soutar and McLeod (1989) highlighted the social issues that impact on residents, particularly in regard to housing. Thus, there was an emerging recognition of the social impacts on the host community, however, few researchers proposed methods for measuring these impacts. In addition, the social impacts were usually treated in isolation to the economic impacts, with only Burns, Hatch, and Mules (1986) attempting to combine social and economic impacts in an integrated fashion through a cost-benefit analysis.

3.2.3 1990-1999

Similar to the first period, economic evaluations were the predominant focus of the special events literature during this period. Notwithstanding this, debate continued on the refinement of the methodological approaches to economic impact evaluation. For example, Getz (1991) outlined the methodological and theoretical issues related to the assessment of the economic impact of festivals and events. He argued that many economic impact methodologies were flawed by problems of reliability and validity, and concluded that a simple but more comprehensive impact evaluation process was needed. This view was supported by Crompton and McKay (1994) who maintained that one of the major methodological problems associated with economic impacts was the use of multipliers. Correspondingly, Burgan and Mules (1992) claimed that there were issues associated with the identification of the region of interest (destination boundaries) and consequently, the identification of 'new' expenditure for that region

because of the event. Burgan and Mules (1992) stated that care is needed to count only that expenditure that would not have occurred in the absence of the event. In a later attempt to broaden the evaluation framework, Mules and Faulkner (1996) suggested that an evaluation should encompass social, industrial and promotional impacts, which, they maintained, were identifiable but difficult to quantify.

The social impacts of special events continued to gain prominence, and two early studies from this period were those by Hiller (1990) and Roche (1994). Both studies focused on the transformation of an urban environment in relation to the staging of a mega-event. Considering the long lead-in time and major urban infrastructure associated with the planning and staging of events such as the Olympic Games, it is not surprising that there are concerns about the impacts on the host community such as resident displacement, increased rental and housing prices and forced evictions. Sporting events were also the theme of a study by Fredline (1998) that focused on the host community reactions to the staging of sports events. Importantly, in regard to events on a smaller scale, Delamere (1997) recognised the need for a greater standardisation of methods and measures in relation to the understanding of residents' attitudes to community run festivals.

Studies by May (1995) and Bramwell (1997) were two of the few studies that considered the environmental impacts of events during this period. May (1995) noted that there were a range of environmental concerns in regard to the staging of the Winter Olympics in fragile alpine areas such as destruction of vegetation and pollution. However, the study suggested that the issues could be ameliorated through trade-offs associated with pursuing infrastructure development, whilst at the same time ensuring the protection of the fragile alpine environment. In one of the first integrated approaches to event evaluation, Bramwell (1997) proposed an analytical framework that can be used to assess a range of event impacts. The framework included specific measures that related to the three broad policy goals of sustainable development, namely, economic efficiency, social equity and environmental integrity, which could be evaluated before, during and after the event. Of the three areas, environmental integrity was given the least consideration. Bramwell (1997), however, focused on whether or not the assessment of the event reflected local public

policy in regard to environmental impacts. Interestingly, the author noted that, particularly throughout the bidding process for hosting mega-events, sustainable development principles had been given a higher prominence. Regardless, it was also claimed that due to the short duration of special events, concern for sustainability might not be such an important issue.

3.2.4 2000-2006

Although during this period economic evaluations continued to be the predominant method for assessing the impacts of special events, there were a number of discussions that concluded that a TBL approach was an appropriate way to broaden the method of event evaluation. In line with the findings of Hede et al. (2002) and with the literature from earlier periods, the economic evaluations presented discussions on the refinement of methodologies for determining the economic impacts. Issues that were discussed included the estimation of attendance at events (See, for example, Burgan & Mules 2000a) and the determination of which expenditures should be included and excluded (See, for example, Crompton, Lee & Shuster 2001). In addition to this, a number of studies focused specifically on the methods and assumptions used to analyse the economic impacts (See, for example, Burgan & Mules 2001; Kasimati 2003; McHone & Rungeling 2000).

During this period, an increasing number of studies focused on the social impacts, for example, in the context of community festivals (Delamere 2001; Delamere, Wankel & Hinch 2001), and host community reactions to the staging of sports events (Fredline & Faulkner 2000b; Fredline, Jago & Deery 2002). The staging of the America's Cup in Auckland in 2000 and 2003, was the focus of a number of studies, which also featured social impacts (Barker, Page & Meyer 2002a; 2002b; 2003), particularly prostitution and crime. As with previous periods, there was little attempt to integrate the social impacts with either economic or environmental impacts, however, progress was made on the development of scales to measure the social impact.

One of the few studies that focused on environmental impacts was by Harris and Huyskens (2002). The authors argued that the environmental impacts of special

events should be evaluated from an ecological sustainability perspective, so that issues such as the reduction of waste and landfill could be addressed. The study also shed light on special events that were proactively engaged in reducing environmental impacts, namely, the Woodford Folk Festival and the Taste of Tasmania. Indeed, the Taste of Tasmania has been monitoring the levels of recycling and landfill for a number of years (Chrispijn 2003). Harris and Huyskens (2002) noted that there were few scholarly articles that dealt with environmental impacts of events, despite the size and impact that large-scale events such as the Olympic Games have on the environment, and the number of studies that had been undertaken on the topic in other fields**.** Once again, however, each 'silo' of social, economic or environmental impacts was considered separately, with little attempt to present an integrated framework.

Two exceptions to this trend were studies by Dwyer, Mellor, Mistilis, and Mules (2000b) and Carlsen et al. (2001). Dwyer, et al. (2000b, p.32) developed a framework for evaluating and forecasting the impacts of special events that 'enables an estimation of the contribution to a destination of different types of events/conventions in different locations'. The framework considered 'tangible' impacts such as visitor expenditure and free publicity as well as social impacts and 'intangible' economic impacts, which the authors suggested had too often been neglected in economic impact studies. A weighting system that attempted to indicate the size of impacts using 'plusses' and 'minuses' was proposed. The significance of this approach was that the evaluation moved away from using dollar figures to measure impacts, however, despite the framework encapsulating 'intangible' and 'tangible' impacts, it neglected to include any environmental impacts.

Carlsen et al. (2001, p.83) recognised that 'a standardised model for evaluating tourism events has never been proposed in Australia, despite the need for such a model'. By consulting with a range of industry experts, via a Delphi study, the authors attempted to reach a consensus about which criteria should be employed in any pre or post event impact evaluation. Even though the criteria that were proposed in this study covered each of the three 'silos', the study did not address how the impacts could be measured or operationalised into a broad-based evaluation

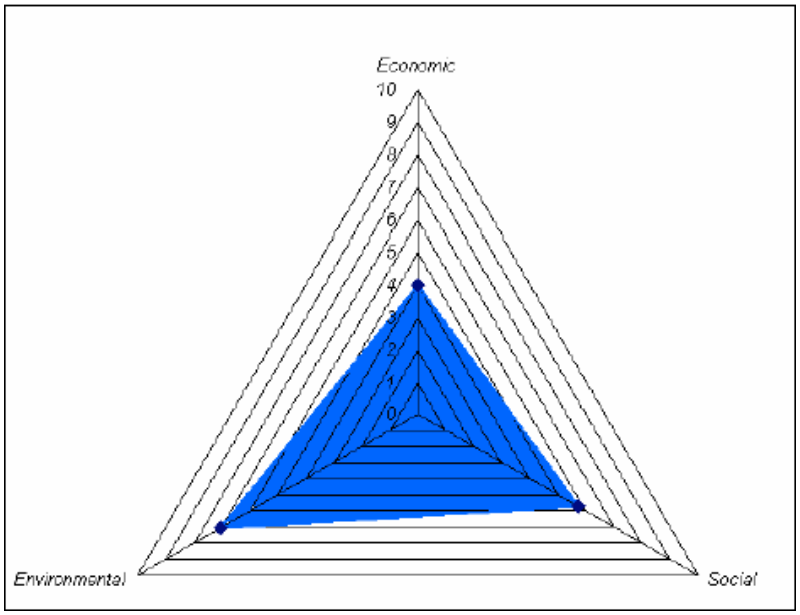
framework. The need for such a framework was advanced by Getz (2000, p.21), who claimed that 'there is a need for more standardised methodology for evaluating events and their impacts, more comprehensive methods and measures of value must be used'. The lack of a standardised approach limits the comparability between event evaluation results (Carlsen et al. 2001).

Notwithstanding the numerous calls for a broader evaluation framework, there have been few attempts to make the conceptual link between the evaluation of special events and the concept of the TBL. The first study to refer to the TBL in regard to special event evaluation was by Hede et al. (2002). The authors suggested that a TBL approach would eventually filter into special event research, and stated in a later study that the evaluation of special events 'must now be conducted from a triple bottom line perspective and research is needed to ensure that this occurs'(Hede, Jago & Deery 2003, p. 11). This perspective was supported by Sherwood, et al. (2004) who proposed a framework for operationalising TBL reporting for special events. The conceptual framework was based on the Tour Operators' Sector Supplement (Tour Operators Initiative 2002), an offshoot of the broader Global Reporting Initiative, which was established to provide organisations with direction for developing their TBL reports (Global Reporting Initiative 2006b). Sherwood et al. (2004) recommended that further research was needed to develop indicators to measure the TBL impacts of special events.

Another study that elaborated on the applicability of TBL to the evaluation of special events was presented by Fredline et al. (2004; 2005c). The authors highlighted the methodological challenges that practitioners are faced with when attempting to develop a TBL appraisal of event impacts. In addition, the authors explored some of the potential TBL indicators. Some of the social indicators proposed were, for example, percentage of locals who attended the event, crime reported associated with the event and locals who volunteer at the event. A conceptual framework was proposed that synthesised the TBL evaluation (see Figure 3.1), with scales that are used to plot each dimension, based on a zero to ten scoring system. The shaded area in Figure 3.1 represents a hypothetical assessment of an event, which can be measured as a proportion of the overall area of the grid. In addition to the TBL, two more

dimensions were proposed by the authors, namely, business leveraging and destination image, which they suggested warranted inclusion in a broader framework. Similar frameworks have been developed in the context of operationalising TBL performance (Atkisson & Hatcher 2001), tourism sustainability assessment (Ko 2005) and TBL evaluation of industry sectors (Foran et al. 2005). However, these solutions must be underpinned with a set of robust indicators, relevant to the evaluation of special events.

Figure 3.1 The Event Footprint



Source: Fredline et al. (2005c, p. 11)

3.3 Special Event Evaluation Literature Analysis

The previous section concluded that a broad-based evaluation of the impact of special events was needed and that to underpin this, a set of indicators needs to be established. The first step in the process to develop these indicators is to determine what key impacts are being used in special event evaluations. This was achieved through a comprehensive synthesis of a large number of event evaluation-related academic publications and impact assessments. This analysis will be the focus of the next section of this chapter.

3.3.1 Sourcing the Literature

A comprehensive synthesis of special event evaluation literature was undertaken that covered the period 1990-2004. The year 1990 was deemed an appropriate starting point as it was after this that a critical mass of special events research literature began to emerge (Hede et al. 2002), and the field became regarded as a serious area of study (Jago & Shaw 1998). In addition, a similar yet broader study undertaken by Hede et al. (2002), employed the starting point of 1990.

In order to obtain a large number of relevant journal articles, a range of sources were used. This included electronic databases, journals, journal publishers Web sites and conference proceedings, as detailed below. There have been a number of attempts to monitor the trends in special event research (See, for example, Formica 1998; Getz 2000; Hede et al. 2002), however, the above studies took a very broad approach to examining academic literature on special events, and, on the whole, the aim was to elicit the general trends in the literature. The approach taken in the present study differed from the previous research, as the aim was to drill down into the literature in order to draw out what impacts had been used in regard to event evaluations.

The databases were searched using the terms "events or festivals and impacts". When the number of retrieved articles was too great (for example, the words impact and event are referred to in medical contexts), the search was refined using "special events or festivals and impacts". On most occasions, searches were conducted on "All Text" which widened the search to include the Title, Abstract, Keywords and Body Text. The articles that were retrieved were checked by a manual scan of the title, abstract and key words, and any articles deemed not relevant to the topic were excluded.

3.3.1.1 Refereed Journal Articles

Refereed journal articles were gathered from a range of sources. The primary source of literature was from tourism and leisure-related journals. A starting point was the journals that were included in the study by Hede et al. (2002), as the research revealed that these journals were most likely to contain event-related articles. The journals were; *Annals of Tourism Research*, *Journal of Travel Research*, *Tourism*

Management, *Journal of Travel and Tourism Marketing*, *Tourism Analysis*, *International Journal of Tourism Research, Journal of Vacation Marketing*, *Event Management: An International Journal* (formerly *Festival Management and Event Tourism*), *Journal of Leisure Research*, *Leisure Management*, *Managing Leisure* and *Journal of Hospitality and Leisure Marketing*. The journals were sourced in electronic and hard copy formats.

In addition to the above journals, the following electronic databases were used to source articles related to event evaluation and event impacts: *ProQuest, Ingenta, Business Source Premier* and *Leisure Tourism- Cabi Abstracts*, as initial searches revealed that these databases were most likely to contain journals that were pertinent to the study. As not all journals and not all issues of journals were available in electronic form, hard copies were also accessed. In addition, as each article was read the reference lists were checked for relevant articles that may have been missed in the previous two methods. The Web sites of the publishers of the journals were also used as a means to find related publications. Only peer reviewed publications were included in the analysis.

The 50 journals where event evaluation articles were sourced are shown in Table 3.1. It can be seen that over one third of the articles were sourced from *Event Management: an International Journal*, which is not surprising as the journal focuses on event management issues. The next largest source was *Journal of Travel Research* (8.2%), which has been publishing event-related articles since its inception. Similarly, *Tourism Management* also has a history of publishing event-related articles and was the third largest source (6%). The list shows that an extensive range of journals publish articles relating to event evaluation. This includes the research areas of tourism, leisure, marketing, economics, geography, sport, urban planning, sociology, advertising and policy, which reflect the multi-disciplinary approach taken to event evaluation research. The results suggest that event evaluation research is published in a diversity of journals, many of which are not directly events-related, as was found to be the case in an analysis of tourism research in general (Zhao & Ritchie 2007).

Table 3.1 List of Source Journals

Journals	Number of articles n=182	%
Event Management: An International Journal	63	34.6
Journal of Travel Research	15	8.2
Tourism Management	11	6.0
Current Issues in Tourism	8	4.4
Pacific Tourism Review	8	4.4
Tourism Economics	8	4.4
Annals of Tourism Research	*6*	*3.3*
Journal of Sport Management	5	2.7
Journal of Sport Tourism	4	2.2
Journal of Vacation Marketing	4	2.2
Journal of Tourism Studies	3	1.6
Visions in Leisure and Business	3	1.6
International Journal of Tourism Research	2	1.1
International Journal of Urban & Regional Research	2	1.1
Journal of Applied Recreation Research	2	1.1
Journal of Cultural Economics	2	1.1
Sport Marketing Quarterly	2	1.1
Tourism Recreation Research	2	1.1
American Business Review	1	0.5
Annals of Leisure Research	1	0.5
British Journal of Sociology	1	0.5
Community Development Journal	1	0.5
European Planning Studies	1	0.5
Geoforum	1	0.5
Impact Assessment and Project Appraisal	1	0.5
International Journal of Advertising	1	0.5
Journal of Advertising Research	1	0.5
Journal of Convention & Exhibition Management	1	0.5
Journal of Hospitality & Leisure Marketing	1	0.5
Journal of Hospitality and Tourism Management	1	0.5
Journal of International Consumer Marketing	1	0.5
Journal of Park and Recreation Administration	1	0.5
Journal of Sustainable Tourism	1	0.5
Journal of Travel and Tourism Marketing	1	0.5
Leisure Information Quarterly	1	0.5
Leisure Studies	1	0.5
Managing Leisure	1	0.5
Managing Service Quality	1	0.5
Planning Perspectives	1	0.5
Service Industries Journal	1	0.5
Sociology of Sport Journal	1	0.5
South African Journal of Economics	1	0.5
Sport Management Review	1	0.5
The Australian Economic Review	1	0.5
The Journal of Development Studies	1	0.5
The Review of Policy Research	1	0.5
Tourism Analysis	1	0.5
Tourism Geographies	1	0.5
Urban Affairs Quarterly	1	0.5
Urban Studies	1	0.5

3.3.1.2 Conference Proceedings

As well as the above journals, a number of peer reviewed conference proceedings were also searched for relevant articles. The ones that were deemed most likely to contain event-related publications are shown in Table 3.2. Similar to the journal search, the paper title, abstract and keywords were searched using the terms event, festival, evaluation and impact. Table 3.2 reveals that the Annual Council for Australian University Tourism and Hospitality Educators' Conference (CAUTHE) was the most productive source of relevant papers. This was closely followed by the two event-specific conferences held in Sydney, Australia in 2000 and 2002. It is also acknowledged that the publications were predominantly sourced from conferences that were held in Australia, but Australia has tended to be most active in hosting event research conferences. The majority of the publications used in this study were journal articles, which were sourced from a range of international journals.

Table 3.2 Conference Papers Sourced for Analysis

Conference	Number	%
Annual Council for Australian University Tourism and Hospitality Educators' Conference 1993-2004	15	35.7
Events and Placemaking Conference 2002	12	28.6
Events Beyond 2000: Setting the Agenda	10	23.8
Convention and Expo Summit 2004	3	7.1
Quality management in urban tourism: Balancing business and environment 2004	1	2.4
Tourism: State of the Art II International Scientific Conference 2004	1	2.4
Total	**42**	**100.0**

3.3.2 Summary of Results of Literature Analysis

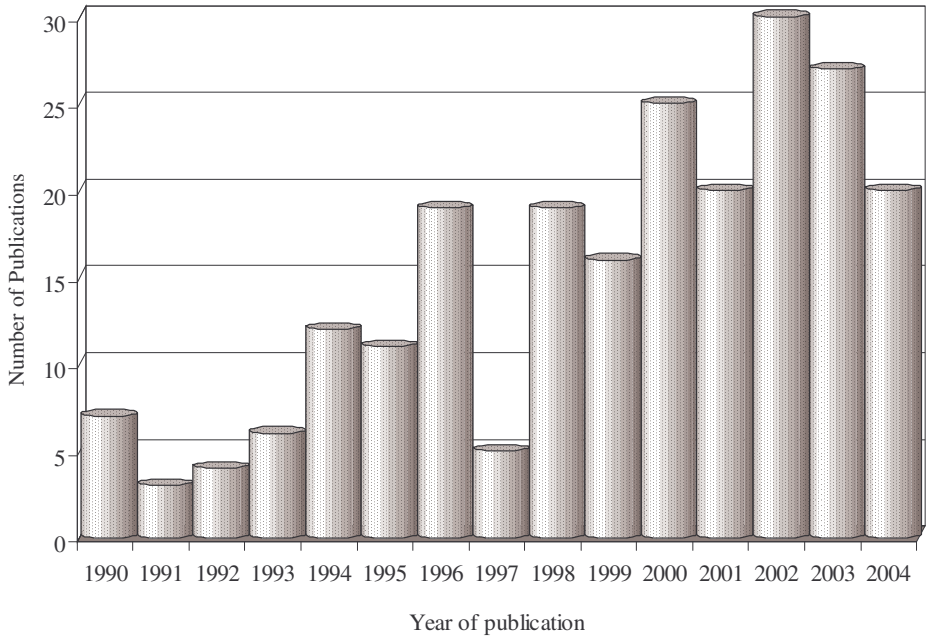
From the combined searches, a total of 224 relevant publications were gathered for the study (See Appendix One for the full reference list of these publications). These publications were analysed in three ways. Firstly, the research focus of the articles was noted, and secondly, an analysis was undertaken on the context of the events within the articles. That is, where the article presented an empirical study, the context of the event was categorised in terms of the type, location and theme of the event. Lastly, and most importantly, an analysis was undertaken to determine which impacts

were being used in the literature in regard to event evaluations. The results of these analyses are presented in the next section.

3.3.2.1 Temporal Distribution of Publications

As the results reveal in Figure 3.2, there was a general increase in the number of publications across the years included in this study. This supports the results of Hede et al. (2002), which found that the number of event publications had increased over the period 1990-2001. The three most productive years in terms of research publications on events were 2000 (25), 2002 (30) and 2003 (27). The most likely reason for the spikes of 2000 and 2003 were that in those years a dedicated event conference was held in Sydney, Australia. There were a comparatively low number of publications in 1997. An explanation for this is that during this year the journal *Festival Management and Event Tourism* changed over to *Event Management: an International Journal*, and a number of issues were held over until the following year.

Figure 3.2 Special Event Publications 1990-2004



3.3.2.2 Focus and Type, Location and Theme of Events

The breakdown of the articles in terms of their research focus is revealed in Table 3.3. It can be seen that the most frequent research focus was on economic impacts, with nearly 30% of the publications dealing with these issues. The second most common focus was social impacts, with just under 20% of articles concerned with this aspect of event evaluation. The next two most common types of research focus were event management (13.4%) and tourism impacts (12.9%). It is also clear that there was a paucity of articles that focused on the environmental aspects, as the search identified only two publications that dealt with the environmental impact of events.

Table 3.3 General Analysis of Special Event Publications

Trend Analysis	Criteria	Number	%
Research focus	Economic impacts	63	28.1
n=224	Social impacts	44	19.6
	Event management	30	13.4
	Tourism impacts	29	12.9
	Research/methodological issues	20	8.9
	Planning/Urban development	16	7.1
	Event evaluation	11	4.9
	Visitor impacts	9	4.0
	Environmental impacts	2	0.9
Type of event	Minor event	50	26.5
n=181	Festival	48	27.6
	Hallmark event	42	23.2
	Mega-event	41	22.7
Location of event	City	83	51.2
n=162	Regional	79	48.8
Theme of event	Sporting	100	59.5
n=168	Cultural	49	29.2
	Entertainment/spectacle	19	11.3

A general analysis of the publications was also undertaken in regard to the context of the event, in the cases where the publication presented an empirical study of an event. The criteria for the types of events was taken from the typology of events that was developed by Jago and Shaw (1998). As shown in Table 3.3, where the type of event was discernable in the studies (n=181), there was quite an even spread across the four criteria, although the smaller scale events appeared to be of greater interest to the

researchers. Similarly, in terms of the location of the events featured in the publications (n=162), there was an even split between those that were staged in city locations (51.2%) and those that were staged in a regional setting (48.8%). Where it was possible to determine the theme of the event (n=168), however, the differences appeared to be more pronounced. By far the most commonly researched events were sporting (59.5%), whilst the second most common analysis was of cultural events (29.2%). A number of statistical tests were undertaken on the data, such as cross tabulations and Chi-square analyses, but no statistically significant differences were found.

3.3.2.3 General Discussion of Results

There appeared to be a general increase in the number of event evaluation-related studies over the research period, particularly between 2000 and 2002. This result is in line with the findings of Hede et al. (2002). Harris et al. (2001) maintained that the number of texts, journals and academic conferences that are either wholly or partially inclusive of special events research, are evidence of the growth of the field. The results of this study support this assertion specifically in terms of the area of event evaluation. In contrast, there appeared to be a decline in the number of publications during the period 2002-2004. This may indicate a maturity of the event evaluation literature, and with this, journal editors may be looking for something different for publication.

The major research focus for the publications was on economic impacts, which supports the findings of Formica (1998) and Getz (2000). Moreover, a number of these articles were descriptive in nature, and contained a general discussion of the methodological issues associated with economic evaluations, (for example, the use of multipliers and estimation of visitor's expenditure), which, again, was similar to the findings of Formica (1998).

There were a large number of publications that focused on the social impacts of events, which could suggest that this area is becoming increasingly of interest to researchers, particularly from 2000 onwards. These publications covered a range of

issues including place identity (See, for example, De Bres & Davis 2001; Derrett 2002), impact on residents of urban redevelopment (See, for example, Atkinson & Laurier 1998; Hiller 1998; Roche 1994) and attitudes and perceptions of local residents to the staging of events (See, for example, Cegielski & Mules 2002; Fredline & Faulkner 2000a, 2002; Tiyce & Dimmock 2000; Xiao & Smith 2004). In terms of measuring the social impact of events, studies by Delamere (1997; 2001), Delamere, Wankel and Hinch (2001) and Fredline, Jago and Deery (2002; 2003) have proposed a range of scales, which measure residents' attitudes towards the social impact of events and festivals.

It was noted by Hede et al. (2002) that there was a research gap with regard to literature on both social and environmental evaluations. In contrast, the current study found this to be the case only in regard to environmental evaluations. The difference may lie in the larger variety of journals that were used for the present study and the additional two years included in the study period. Nevertheless, there is agreement that there is a paucity of publications that address the environmental impact of events, a view supported by Harris and Huyskens (2002). Even though a small number of publications recognised the environmental impact of events (for example, Bramwell 1997; Sherwood et al. 2004), the only two publications that specifically focused on this aspect were the studies by May (1995) and Harris and Huyskens (2002), both of which considered the environmental impacts arising from the staging of the Olympic Games.

3.3.3 Identifying the key impacts

The second and major part of this study focused on identifying the key impacts that were cited in the publications. The aim was to derive a list of the key impacts that were being used in special event evaluations, which essentially represent Step 2 in the indicator development process (Segnestam et al. 2000), which is outlined in Table 1.1. Initially, three broad categories were used to code the impacts, namely, the TBL dimensions of economic, social and environmental. Within each of these, a sub-category was used to indicate whether the impact was of a negative or positive nature. After an initial pilot testing of 30 articles, the schema was modified, based on the

framework proposed by Ritchie (1984), as the number of different types of impacts continued to increase. In short, the 'Category of impacts' was added to Ritchie's framework, as shown in Table 3.4, which assisted in dealing with the increasing number of impacts. After another 30 articles had been analysed, further modifications were made, and the final framework is shown below in Table 3.4. Ritchie's (1984) framework was developed for hallmark events and has been cited in a large number of event impact-related articles over the last 20 years. In addition, it was felt that the categories of impacts were relevant to other types of special events as outlined by Jago and Shaw (1998). Similar to Ritchie's (1984) framework, the schema considered that impacts could be either positive or negative.

Table 3.4 Impact Framework

Type of impact	Nature of impact	Category of impact
Economic	Positive	State/National
		Local
	Negative	
Tourism development	Positive	Tourism industry
		Tourism enterprise
	Negative	Tourism industry
		Tourism enterprise
Commercial	Positive	Industry-wide
		Enterprise-specific
		Event-related
		Sponsorship
	Negative	Industry-wide
		Enterprise-specific
		Event-related
Sociocultural	Positive	Community development
		Improvement in quality of life of residents
	Negative	Community diminishment
		Reduction in quality of life of residents
Psychological	Positive	Destination marketing
		Residents perceptions
		Visitors perceptions
	Negative	Destination de-marketing
		Residents perceptions
		Visitors perceptions
Physical		Built environment
		Natural environment
Political		

Source: Adapted from Ritchie (1984)

3.3.3.1 Collapsing of impacts

The analysis of the 224 journal articles revealed a pool of 326 possible impacts. Such a large number of impacts was cumbersome and needed to be reduced to a manageable size. It became apparent from the data that many of the impacts were similar except for subtle nuances. The first step was to identify any duplicate impacts that could be combined into a single impact, though this only reduced the number marginally (examples of the steps in the collapse are shown in Appendix Two). Thus a more comprehensive collapse was needed. The first step was to designate the most cited impacts in the publications as leading impacts, and the remaining impacts as lesser impacts. The second step was to sort the lesser impacts according to the leading impact with which they were most similar. Thirdly, with a copy and paste function, the lesser impacts were absorbed by the leading impacts. It should be noted that some of the names of the leading impacts needed to be modified to reflect the impacts that had been absorbed and on occasion, some impacts were moved from one area to another. The pool of possible impacts was reduced from 326 to 96.

An expert panel was convened to discuss the results of the first collapse. The aim was to provide an objective opinion on the direction that the analysis was taking. The results of the collapse were discussed with an expert panel who were asked to provide an objective opinion concerning the direction that the research was taking. Specifically, the panel members were presented with the details of the first collapse and asked to consider the approach that was taken in collapsing the impacts as well as the results of the collapse. In general, the panel agreed with the approach taken. This feedback was important given that there was little literature available on the procedures for undertaking the collapse.

This number of impacts was still considered too large to be used for a parsimonious TBL evaluation, consequently, a second collapse was undertaken. A similar approach was taken to the first collapse in terms of the designation of leading and lesser impacts, which was done according to the number of citations the impacts received in the literature. After this, the lesser impacts were absorbed by the leading impacts. As a result of the second collapse, the pool of possible impacts was reduced from 96 to 20. This number of impacts was deemed appropriate, especially as in the next phase

of the research, the impacts were presented to a panel of experts via a Web based survey. Therefore, the list had to be manageable as any more than 20 impacts would potentially detract from the task given to the panel members. The list of impacts was then re-sorted into its former schema of economic, social and environmental.

3.3.3.2 List of Special Event Impacts Cited in the Publications

The list of impacts (see Table 3.5) corresponded with the research focus of the publications, in that economic impacts were the impacts most frequently cited in the publications. Of the 20 impacts listed, 13 were economic, whilst six were social and there was only one environmental impact. As revealed in Table 3.5, impacts relating to destination promotion were by far the most cited impact (81.7%). This may be indicative of the important relationship that exists between an event and tourism, as often, images of events are transferred to the destination to enhance and promote the destination to potential tourists (Jago et al. 2002). The other economic impacts that were cited in over 40% of the publications were economic benefits (49.6%), visitor expenditure (45.5%) and employment opportunities and skills development (44.2%). In terms of the social dimension, impacts relating to community pride were the most frequently cited, with nearly half (47.8%) of the publications citing related impacts. Negative impacts featured highly in the publications and the two most frequently cited economic impacts were those relating to the costs of staging the event (30.4%) and damage to reputation of destination (21.4%). The negative social impacts were those that resulted from a sudden influx of tourists such as overcrowding, congestion and noise (33.5%) and crime and vandalism (25.4%). Despite only two publications focusing on the environmental impacts, a number of publications (20.5%) referred to the affect that events have on natural resources. It should be noted that this impact represents both positive and negative environmental impacts that arise from the staging of special events. The environmental impact of events is a clearly a research gap that should be pursued in future event research.

Table 3.5 Impacts Cited in Special Event Publications

Special event impacts	Number of publications citing impact	% of publications
Economic (positive)		
Destination promotion	183	81.7
Economic benefits	111	49.6
Visitor expenditure	102	45.5
Employment opportunities and skills development	99	44.2
Development of tourism industry	87	38.8
Legacy of infrastructure and facilities	80	35.7
Business development and investment opportunities	72	32.1
Capital expenditure on construction of facilities	40	17.9
Corporate sponsorship	28	12.5
Economic (negative)		
Costs of staging event	68	30.4
Damage to reputation of destination	48	21.4
Inflation	42	18.8
Under-utilisation of infrastructure	27	12.1
Social (positive)		
Community pride	107	47.8
Improvement in quality of life of host community	80	35.7
Celebration of community values	73	32.6
Social (negative)		
Overcrowding, congestion and noise	75	33.5
Crime and vandalism	57	25.4
Disruption of lifestyle of residents	49	21.9
Environmental		
Affect on natural resources	46	20.5

As highlighted in Chapter One, there appears to be a developing consensus from academic researchers that a broader approach to special event evaluation is required and that a standardised set of measurements is needed to enable comparisons to be made of the performance of a range of different events. The results from the literature analysis highlight the historical dominance of the economic paradigm in event evaluations, which in turn, reflects the emergence of event evaluation from the more general tourism evaluation literature. This has been particularly noticeable in the economic impact studies. The literature also shows that an increasing number of researchers are focusing on the social impact of events, particularly the perceived impact on the host community. In contrast, the amount of research conducted on the environmental impact of events is minimal.

Academic literature is not the only source of event evaluations, however, as there are also a large number of event impact assessments, which have been undertaken by consultants on behalf of government tourism agencies and event agencies. In addition, academic articles discussed event evaluation issues rather than actually doing an assessment although some articles were based on actual events. Therefore, in order to gain an overall understanding of the types of impacts used in event evaluations these impact studies also need to be considered. The advantage of including actual impact evaluations is that the analysis will provide a 'reality check' on the results of the academic literature. The next section details how this study gathered and analysed a large number of the event assessments in order to extract the key impacts that were used in the event evaluations.

3.4 Special Event Impact Assessment Analysis

There have been a number of previous studies that have analysed the special events literature in an attempt to derive broad conclusions about the trends and themes of event research (See, for example, Formica 1998; Getz 2000; Hede et al. 2002). One of the trends identified in these studies, as well as the present study, was that whilst many of the journal articles conducted a general discourse on the (economic) impact of events, few presented empirical evaluations or reported on actual impact assessments. Moreover, despite a number of studies that conducted an analysis of a number of different events, (See, for example, Gratton et al. 2000), there appear to have been few studies that analysed a large number of actual impact assessments. Considering the large number of reports commissioned by government tourism agencies, this is a research area that appears to have been largely neglected.

Therefore, the aim of this section of the study is to fill this research gap by examining a substantial number of actual unpublished post-event impact assessments. Similar to the analysis of the literature in the previous section, the main objective was to investigate which impacts have been used in the event evaluations. The benefit of an analysis of these reports is that they provide a broader perspective on the impacts being used in special event evaluations, moreover, they represent a 'reality check' on the academic literature, as the assessments are usually conducted by consultants.

Thus, an analysis of these reports provides a potentially rich and largely untapped source of secondary data, and is a key contribution of this research.

3.4.1 Sourcing the Impact Assessments

This study sought to capture as many reports on various types of assessments of special events as possible. According to Carlsen et al. (2001), most of these reports are unpublished and do not receive widespread circulation, and as a result, are largely unavailable to researchers. In addition, many of these consultancy reports are commissioned by government agencies and there is little consistency in relation to the methodologies that are employed (Uysal & Gitelson 1994). In order to ensure that the collection of reports used to underpin this study was as comprehensive and as broadly based as possible, support was sought from each of the State and Territory Tourism Organisation (STOs) in Australia. As so many of the events that are staged in Australia receive some level of support from the various STOs, many event evaluation reports are commissioned by the STOs and stored within their offices without being made publicly available (Carlsen et al. 2001). Whilst most STOs agreed to support the study, each made it clear that many of their event evaluations were "commercial in confidence" and could not be made available for the study. Additionally, the Web sites of the relevant STOs and special events organisations were examined for event evaluations, but relatively few reports were sourced via this medium. Some academics who had collected event evaluation reports over the years were also contacted in order to obtain access to their reports. In addition to the above, a search was conducted using *Google* for any impact assessments in the public domain.

Although there have been a number of pre-event evaluations conducted over the years, these were excluded from this study due to well-publicised concerns suggesting that pre-event evaluations are often over-stated (Crompton 1995; Getz 1991). The vast majority of reports that were included in this study were full reports that contained the background, method and results. In some instances, though, it was only possible to obtain an Executive Summary. This was mostly the case where the source of the document was from a STOs Web site. These were included, however, as long

as they contained at least some of the impacts needed for the study. As the reports included in the study were undertaken by many different consultants in different settings and for a range of client needs, the impacts contained within them varied greatly. It should be noted that the set of impact assessments gathered for this study is a convenience sample, and represents only those assessments that were made available to the researcher. In addition, the assessments that were available to the researcher were of events that were staged in Australia. Despite this, the number of impact assessments that were gathered for this study appears to be larger than other similar studies.

3.4.2 Summary of Results of Impact Assessment Analysis

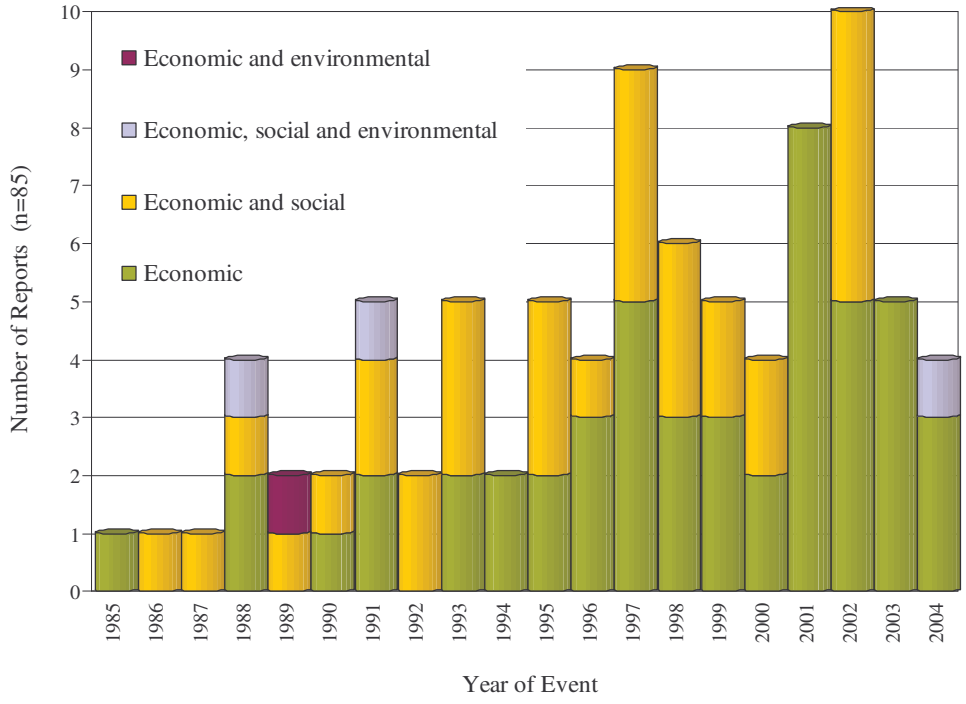
A sample of 85 reports was gathered for this study, which covered the period 1985-2004 (see Appendix Three for a full list of the impact assessments). As with the analysis of special event publications, the aim was to elicit the key impacts that were used to evaluate events as well as to determine the type, location and theme of the events that were assessed. Significantly, there appeared to be no single methodology employed in the assessments. This finding is supported by Carlsen et al. (2000) who maintained that despite the increased focus on the economic significance of special events, there were no standard and consistent criteria for economic evaluation. In the present study, the number of different agencies that conducted the studies compounded this lack of consistency. This made the process of extracting the impacts more difficult, as did other factors such as the variety of length of the reports. For example, some of the studies were full reports, whilst others were only Executive Summaries, as stated earlier. The following section outlines the findings from the analysis of the 85 impact assessments.

3.4.2.1 Temporal Distribution of Publications

The temporal distribution of the 85 special event impact assessments that were analysed for this study is shown in Figure 3.3. As outlined previously, the results were drawn from a convenience sample, and although Figure 3.3 suggests that there was a general increase in the number of assessments over the period, this may simply

be a function of the range of reports that were made available to the researcher. In reality though, the graph is intended to show that reports were obtained from across the entire period of 1985-2004, rather than to demonstrate the frequency in any given year.

Figure 3.3 Sample of Special Event Impact Assessments 1985-2004



3.4.2.2 General Analysis of Special Event Impact Assessments

A general analysis was undertaken of the convenience sample of assessments in terms of the impacts used, location of the event and theme of the event. It must be noted, however, that these results have limited generalisability, given that it was a convenience sample of impact assessments. As shown in Figure 3.3 and detailed in Table 3.6, the predominant impacts employed in the sample of 85 special event impact assessments, were economic, as 57.6% of the assessments included only economic impacts. Moreover, the economic impacts used in the assessments were mostly positive ones. Indeed, all but one of the assessments were called 'Economic Impact Study/Assessments', even though it was not the intention of the researcher to

source only economic studies. Assessments that used both social impacts and economic impacts were the second most prevalent types of reports (37.6%). Similar to the findings from the literature analysis, few of the reports included an evaluation of environmental impacts. In a number of cases, social costs appeared including as a counterpoint to positive economic impacts. Only one report attempted to evaluate the event from a TBL perspective (Rugby World Cup 2004), as it included an evaluation of the economic, social and environmental impacts. The report represented one of the first attempts at measuring the environmental impacts of an event, particularly in terms of the waste and energy impacts. The report also was noteworthy in that it advanced the notion of a broad-based, integrated TBL evaluation of the event.

Table 3.6 General Analysis of Special Event Impact Assessments

Analysis	Criteria	Number	%
Impact used in assessments	Economic	49	57.6
n=85	Economic and social	32	37.6
	Economic, social and environmental	3	3.5
	Economic and environmental	1	1.2
Location of event	City	53	67.9
n=78	Region	25	32.1
Theme of event	Sporting	54	63.5
n=85	Cultural	15	17.6
	Entertainment/spectacle	10	11.8
	Musical	6	7.1

Out of the convenience sample of 85 assessments, it was possible to discern the location of the event for 78 of the reports. According to the results revealed in Table 3.6, the most common location for the events was in an urban setting. Of these, 67.9% were studies of city-based events, whilst 32.1% were assessments of events that were staged in regions. This result contrasted with the special event literature, in which there was an even split between the city and region locations. It should be noted that some large-scale events, for example the 2004 Rugby World Cup, were staged in both city and regional settings. In regard to the theme of the events, the results appear to suggest that sporting events (63.5%) were by far the most common theme of event evaluated. The second most frequently assessed events in the sample were cultural events (17.6%), whilst there were a small number of assessments of

entertainment/spectacle events. In short, the results appear to suggest that the most common evaluation may be an economic impact assessment of a city-based sporting event, which was similar to the findings of the event evaluation publications.

3.4.3 Key Impacts used in Assessments

In terms of extracting the impacts, a similar approach was used to the assessment of event articles in the literature analysis whereby the assessment reports were read and the impacts noted and entered into a spreadsheet. The initial pool of impacts (112) was considered too large to manageable and a collapse of the impacts was undertaken. One collapse was all that was needed, as the majority of the impacts were economic and similar in nature, with only subtle differences, which highlighted the variety of variables used in the sample of reports. As a result of the collapse, the number of impacts was reduced to a more manageable list of 13 key impacts. Similar to the approach used for the literature analysis, a panel of event experts was convened to consider the results of this phase of the research in terms of the direction of the collapse and to review the list of key impacts.

From the analysis of the sample of special events assessments, a list of the 13 key impacts was derived. As shown in Table 3.7, positive economic impacts were by far the most common type of impact used in the sample of impact assessments. Of these, contribution to the economy (94.0%) was the most commonly used impact, followed by visitor expenditure (90.5%). Although tourism benefits (69.0%) was the third most used impact, it appeared that the impact assessments took a narrow view of the possible tourism impacts of events as, for example, the impact of legacy of infrastructure and facilities was not considered. In terms of negative economic impacts, the only impact that was used was the cost of staging the event (16.7%). With respect to social impacts, there were two positive and two negative impacts used. The sample of assessments mainly used improved quality of life for the host community (21.4%) and community pride (15.5%) for positive social impact. Similar to the results of the literature analysis, there appeared to be a paucity of environmental impacts used in the assessments as only three environmental impacts were cited in the sample of assessments.

Table 3.7 Impacts Used in Sample of Event Assessments

Special event impact	Number citing impact	% citing impact
Economic (positive)		
Contribution to economy	79	94.0
Visitor expenditure	76	90.5
Tourism benefits	58	69.0
Destination promotion	41	48.8
Employment opportunities and skills development	29	34.5
Sponsorship benefits	23	27.4
Boost to local businesses	20	23.8
Economic (negative)		
Cost of staging event	14	16.7
Social (Positive)		
Improved quality of life for host community	18	21.4
Community pride	13	15.5
Social (negative)		
Overcrowding, noise and congestion	8	9.5
Inconvenience felt by residents	7	8.3
Environmental		
Environmental impact	3	3.6

In short, the impacts used in the assessments were similar to those found in the analysis of the academic publications. However, any comparison must be couched in the understanding that the set of assessments gathered for this study was a convenience sample only. Nevertheless, both the academic publications and the impact assessments were dominated by economic evaluations, moreover the assessments were based on predominantly positive economic impacts. A smaller number of the assessment reports used social impacts, and few considered the environmental impacts of events. In addition, there appeared to be little integration of the impacts into a TBL framework, as the economic, social and environmental dimensions were, in general, treated in isolated 'silos', rather than integrated into a broad-based framework. One exception was the Rugby World Cup evaluation, which attempted an integrated approach to an evaluation. Thus, although there has been a call from researchers for a more holistic approach to the evaluation of special events, in reality, this does not appear to be the case in the majority of the sample of actual impact assessments used in this study.

3.5 Combined List of Impacts

The final stage in this section of the research was to combine the two lists in order to arrive at an overall understanding of which impacts have been used to evaluate special events. The list of 20 key impacts shown in Table 3.8 represents a comprehensive synthesis of the 311 special event publications and impact assessments. The 20 impacts were predominantly taken from the impacts found in the academic publications, as it was found that the impacts from the non-academic impact assessments were very similar. Table 3.8 reveals that economic impacts are the most numerous (13), whilst there are six social impacts and a single environmental impact. As stated previously, the environmental impact accounts for both positive and negative impacts. The economic and social impacts are listed in alphabetical order, and therefore do not reflect any ranking of importance. The task of ranking the impacts will take place in a later stage of the research.

The analysis presented in this chapter is important in two ways. Firstly, the analysis has drawn together a substantial body of literature and assessments. Although other studies looked at the broader trends in event literature (See, for example, Formica 1998; Getz 2000; Hede et al. 2002), this study drilled down into the literature to elicit the key impacts being cited in event evaluation-related literature. In addition, a large number of actual impact assessments were also analysed, which provided a 'reality check' on the academic literature. As such, the analysis presented in this chapter is one of the major contributions of this research. Secondly, this analysis provides an answer to the first research question: What are the key impacts that are currently being used to evaluate the impact of special events? A further discussion of this will be presented in Chapter Seven.

Table 3.8 Key Impacts from Special Event Literature and Assessments

Dimension	Impact
Economic (positive)	Business development and investment opportunities
	Capital expenditure on construction of facilities
	Destination promotion
	Development of tourism industry
	Economic benefits
	Employment opportunities and skills development
	Legacy of infrastructure and facilities
	Sponsorship benefits
	Visitor expenditure
Economic (negative)	Costs of staging event
	Damage to reputation of destination
	Inflation
	Under-utilisation of infrastructure
Social (positive)	Celebration of community values
	Community pride
	Improvement in quality of life of host community
Social (negative)	Crime and vandalism
	Disruption of lifestyle of residents
	Overcrowding, congestion and noise
Environmental	Affect on natural resources

3.6 Conclusion

The first section of this chapter presented an overview of the development of special event evaluation. A growing number of event researchers suggested that a broader evaluation method was needed that considered the social and environmental impacts as well as the traditional economic impact. A small number of these event researchers maintained that a TBL approach has merit as a way to broaden the evaluation of events beyond the current scope of mere economic impact assessments.

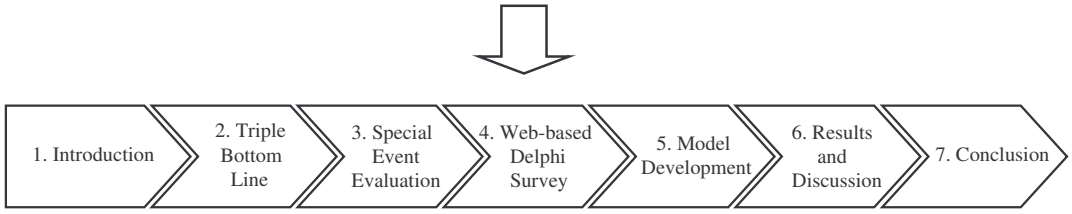
The second section of the chapter presented an analysis of 224 event evaluation-related publications and 85 actual event impact assessments with the aim of identifying which impacts have been used in event evaluations. A list of 20 key impacts was derived from the two sources. This analysis represented step two in the indicator development process and answered the first of three research questions that were outlined in Chapter One. Furthermore, this analysis is the first contribution to event research made by this study. The next stage in the research is to use the

opinions of a panel of event experts in order to develop a set of event-specific indicators to measure the key impacts. This will be the focus of the next chapter.

Chapter

4

Web-based Delphi Survey



Chapter Structure

- The Delphi Method
- Web-based Surveys
- Web-based Delphi Surveys
- Development of the Survey Instrument
- Selection of the Panel
- Administration of the Web-based Delphi Survey

4.1 Introduction

Chapter Two introduced the concept of the triple bottom line (TBL) and outlined how businesses responded to environmental issues and stakeholder concerns by introducing changes to business practices and performance reporting. In general, organisations were required to be more accountable for their actions and more transparent in their disclosure. In regard to special events, it was argued that the TBL approach would be an appropriate framework for the development of a broad-based event evaluation. Chapter Three presented a discussion of event evaluation and highlighted the need for a set of standardised measures for both evaluating the impact of events and enabling a comparison to be made of the performance of a range of

different events. A comprehensive analysis of a large body of special event literature and actual impact assessments was undertaken in order to understand what impacts have been used in event evaluations. A list of 20 key impacts was derived from the analysis.

This aim of this chapter is to consult with a panel of event experts to develop indicators to measure the key impacts. This will be achieved through a modified, three-stage Web-based Delphi survey. This phase of the research represents Step 3 in the indicator development process (Segnestam et al. 2000), which underpins this research. This step recommends that a consultative network be established as part of the development process. The first section of the chapter presents the justification for using the research approach, and discusses the Delphi method, Web-based surveys and Web-based Delphi surveys, with reference to studies conducted in tourism research. The second section outlines the development of the survey instrument and the administration of the survey. The third section presents the results of each of the three rounds of the survey, whilst the final section draws the results together in the presentation of the suite of indicators that were derived from the expert panel.

4.2 The Delphi Method

The Delphi method is a technique for structuring a group communication process in order to effectively allow a group of individuals, as a whole, to consider a complex issue (Linstone & Turoff 1975). The technique usually involves the administration of three or four rounds of questionnaires involving the same panel of experts for each round. The aim is for a consensus to be reached amongst the experts over the various rounds of the survey (Robinson 1991). The process is structured as after each successive round, feedback is provided to the group that summarises the group judgements. As such, it provides opportunity for individuals to revise their views with some degree of anonymity (Linstone & Turoff 1975).

There are a number of alternative group communication techniques, namely, conference telephone calls, committee meetings and formal conferences or seminars and the Delphi method (Linstone & Turoff 1975), however, one of the major

advantages of the Delphi method over the other group techniques is that the Delphi process is anonymous. As a result, this allows the group members the greatest degree of freedom from restrictions on their expression. The anonymity gives the Delphi method an advantage over other methods, which can be influenced by opinion leaders, or those with strong personalities or higher status (Delbecq, Van de Ven & Gustafson 1975). In addition, the method allows for 'increased attention to each idea and increased opportunity for each individual to assure that his or her ideas are part of the group's frame of reference' (Delbecq et al. 1975, p. 9). Another advantage of the Delphi method is that members of the panel can be located in widespread geographical locations, as the questionnaires can be mailed, faxed or emailed to them. As discussed below, the Delphi method has been applied to research issues in a range of fields including tourism and special events.

4.2.1 Delphi Studies in the Tourism Research

Delphi studies have been used widely in tourism research by a number of authors. These studies have fallen into three key areas, namely, forecasting future scenarios (See, for example, Lee & Kim 1998; Liu 1988; Lloyd, La Lopa & Braunlich 2000; Tideswell, Mules & Faulkner 2001), exploring tourism management issues (See, for example, Garrod & Fyall 2000; Kaynak & Macaulay 1984; Weber & Ladkin 2003) and developing sets of impacts and indicators (See, for example, Carlsen et al. 2001; Green, Hunter & Moore 1990; Miller 2001; Runyan & Wu 1979). The two studies that are most relevant to the current research are those by Miller (2001) and Carlsen, et al. (2001).

The aim of the study by Miller (2001) was to consult with a panel of tourism experts in order to identify what they believed constituted sustainable tourism, what criteria are necessary for successful indicators and which indicators can promote a more sustainable form of tourism. Miller (2001) noted that the development of a thorough list of impacts or issues prior to the first round of a Delphi study increases the efficacy of the method as well as reduces the number of rounds that need to be completed, without reducing the value of the comments received (Miller 2001). A previous study by Green, et al. (1990) had been criticised for its lack of depth in the preliminary

literature search, and Miller (2001) sought to address this by conducting an extensive pre-study development of a list of impacts. As outlined in the previous chapter, the present study also undertook an extensive pre-study review of event evaluation literature and actual impact assessments.

The study by Carlsen, et al. (2001) conducted face-to-face interviews with event professionals and consultants to establish an initial list of event evaluation criteria prior to conducting the Delphi survey. The pre-study stage involved consulting with a group of 55 event management industry experts to 'identify the benefits, limitations and barriers to implementation of industry standards for event evaluation' (p. 78) . The Delphi technique was employed to systematically combine the knowledge and opinion of the event experts, in order to arrive at an informed group consensus about which impacts should be used in the evaluation of events. One of the failings of the study was that the consultations did not include special event practitioners, which may have provided realistic judgements on the evaluation criteria in terms of the usability of the indicators/measures. This view is supported by the approach adopted by Runyan and Wu (1979) who consulted with residents to gather lay opinions on potential tourism impacts. In contrast to the study by Carlsen, et al. (2001), the present research included a number of event practitioners in the panel of experts.

In summary, the Delphi method can be applied when the consensus of experts on an uncertain and complex and often intangible issue is desired (Linstone & Turoff 1975). Moreover, it is an appropriate method to use in order to communicate with respondents who are situated in widespread geographical locations, as it would be extremely difficult and expensive to bring these people together for any other group technique. The present study undertook significant pre-study research in order to arrive at a position where the most appropriate way to move forward is by using the knowledge of event experts. Under these circumstances, it is therefore appropriate to adopt the Delphi technique for this study. In contrast to the previous studies that used a traditional paper-based survey instrument, the present Delphi study was administered via a Web-based survey. The process for achieving this is presented in the following section.

4.3 Web-based Surveys

The use of electronic means to conduct surveys has increased with the popularity of the World Wide Web (Web) as a mass communication medium. Electronic versions of surveys come in three forms, namely, fax-based, email-based and Web-based. Fax-based surveys are administered via fax, and are manually completed and faxed back to the researcher. Email-based surveys are embedded in an email sent to participants, who click on the 'reply' button, fill out the survey and then click on the 'send' button. On the other hand, Web-based surveys require the instrument to be accessible through a Web site, and respondents are solicited (either by traditional mail, email, telephone, or via other Web sites) to participate in the survey (Granello & Wheaton 2004). In addition, respondents are also required to have access to the Internet.

Web-based surveys compare favourably with other types of surveys on a number of levels and for a number of reasons. A study by Cobanoglu, Warde and Moreo (2001) compared mail, fax and Web-based surveys in terms of a range of factors (see Table 4.1), and revealed the differences between the three ways of administering the survey. Email/Web-based surveys also compared favourably in terms of lower costs. Nonetheless, there appeared to be disadvantages associated with using Web-based surveys, namely, low coverage, high chances of wrong address and the high level of expertise needed to construct the survey instruments. These are offset by the advantages such as speed and quality of response, low cost, and low labour needed. In addition, email/Web-based surveys provide a way to conduct studies where it is impractical or financially unfeasible to access certain populations.

Cobanoglu et al. (2001) also compared the results of the three survey methods. Table 4.2 reveals that the response rate for email/web-based surveys was higher (44.2%), compared with that for mail surveys (26.3%) and for fax-based surveys (17.0%). In regard to response speed, the fax-based method was the fastest (4.0 days), followed by the email/Web-method (5.97 days), particularly compared to mail (16.46 days). The authors suggested that the difference between the response rate for the fax and email/Web may be a result of people not reading their email for several days.

Table 4.1 Comparison of Mail, Fax and Email/Web-based Surveys

	Mail	Fax	Web-based
Coverage	High	Low	Low
Speed	Low	High	High
Return cost	Preaddressed/prestamped envelope	Return fax number	No cost to the respondent
Incentives	Cash/non-cash incentives can be included	Coupons may be included	Coupons may be included
Wrong addresses	Low	Low	High
Labour needed	High	Medium	Low
Expertise to construct	Low	Medium	High
Variable cost for each survey*	About $1.00	About $0.50	No cost (US)

*These are estimated costs for a four-page survey that has a population in the US.

Source: Cobanoglu, Warde and Moreo (2001, p. 444)

Table 4.2 Comparison of Mail, Fax and Email/Web-based Results

	Mail	Fax	Email/web-based (1)	Total
Sample size	100	100	100	300
Number not deliverable	1	0	5	6
Percentage not deliverable[1]	1.0	0.0	5.0	2.0
Effective sample size[2]	99	100	95	294
Surveys returned	26	17	42	85
Raw response rate (%)[3]	26.0	17.0	42.0	28.3
Adjusted response rate (%)[4]	26.27	17.0	44.21	28.91
Days to respond	16.46	4.0	5.97	8.84
Response quality (completed the whole survey)	21	13	36	70
Response quality (%)	80.7	76.4	81.4	82.3

Notes:
[1] Number not deliverable/sample size
[2] Sample size – number not deliverable
[3] Surveys returned/sample size
[4] Surveys returned/effective sample size

Source: Cobanoglu, Warde and Moreo (2001, p. 447)

4.3.1 Web-based Surveys in Tourism

Despite the increased use of the Web in terms of the distribution of travel services, there appears to be few tourism studies that have used Web-based surveys. Two examples of tourism-related Web-based studies were conducted by Weber (2000) and Jeong, Oh and Gregoire (2003). In both instances, Web sites were constructed for the survey instrument and were hosted by third parties. In the case of Weber (2000), the Web site was hosted by the affiliated University, whilst in the study by Jeong et al. (2003), there was a link to the survey on a hotel's Web site. The major difference between the two studies was in the sampling frame. Weber (2000) drew a sample of

580 meeting planners from a membership directory and had a response rate of 28.8%, or 167 respondents. In contrast, Jeong et al. (2003) used a random sample of 41,600 internet shoppers and had a response rate of 4.2%, or 1743 respondents.

4.4 Web-based Delphi Surveys

In contrast to the number of Web-based surveys and Delphi studies, there appear to be considerably fewer studies that have used a Web-based Delphi survey. This should not be that surprising given the relatively recent phenomena of the Web. Those studies that have been published are drawn from a range of research areas. The field of education research has so far appeared to be the most popular area for Web-based Delphi studies (See, for example, Gabriel, Ostridge & Doiron 2003; Gatchell et al. 2004; Pollard & Pollard 2004; Rockwell et al. 2000; Young & Ross 2000a, 2000b). In addition, researchers in the field of medicine have also used Web-based Delphi studies (See, for example, Bowles et al. 2003; Moldrup & Morgall 2001), whilst studies have also been published in the field of IT (Keil et al. 2002; Scott & Walter 2003), marketing (Richards & Curran 2002), and ethnographic research (Edwards 2003). In the tourism field, one of the few relevant studies was that by Cunliffe (2002), which examined the risks and impacts of natural and anthropogenic catastrophic events on the future of the tourism industry.

Therefore, it would appear that Web-based Delphi surveys are an emerging research method and has been used to harness expert opinion in a number of disciplines. In general, the method has been utilised in developing indicators, however, in the area of tourism special events research, the use of a Web-based survey to administer a Delphi study appears to be an under-utilised method. Accordingly, one of the important contributions of this study was to employ this method in order to utilise the opinions of event experts to suggest indicators for measuring the key impacts that were identified in the previous chapter. The next section discusses how the Web-based Delphi survey was developed and administered for this study.

4.5 Development of the Survey Instrument

4.5.1 Design of the Web-based Survey Instrument

The design of the instrument is extremely important in obtaining unbiased answers from respondents. According to Couper, Traugott and Lamias (2001), when the visual design elements complement or support the verbal features of the survey instrument, efficiency and data quality gains may be achieved. Dillman et al. (1999) proposed 10 criterion for respondent-friendly design principles for Web surveys. The main points were to limit advanced features, to include a welcome screen, make the initial question interesting, shorten line length and provide specific instructions for each set of questions. In short, Dillman et al. (1999, p. 14) claimed that 'a respondent-friendly Web questionnaire is one that interfaces effectively with a wide variety of computers and browsers possessed by respondents'. The authors concluded that the overriding challenge of Web-based survey design was to keep the questionnaires simple. Similarly, Granello and Wheaton (2004) advocated a 12 point procedure that should be followed for the development of Web-based and Email surveys. The 12 steps were used as the basis for conducting the present study, and are listed in Table 4.3, along with what was done in relation to the current research. From the 12 steps, the two most important were the pilot testing and the selection of the panel, which will be considered in more detail in the next section.

Table 4.3 Steps for Conducting Web-based and Email Surveys

12 Steps for conducting surveys	Steps taken in current study
Determine the population to be measured	Panel of event experts was recruited
Determine whether an e-mail or Web-based survey will be used	Web-based survey chosen as most appropriate
Develop the layout of the survey and the type of format for the questions	Preliminary designs were done on Front Page
Write the questions	Questions were written
Keep the layout simple, with easy-to-read fonts and a consistent layout throughout	Design and layout were kept simple
Be sure to address informed consent issues, including the name and contact information of the researcher	These issues were addressed in the email that was sent out to the respondents
Determine how data will be entered into the computer	Data will be emailed to the researcher from the collecting company
Practice putting in data	Pseudo data were entered e.g. all 5's in the scale to test response
Include "error detection" variables in anonymous Web-based surveys	Not applicable to this research
Pilot the study using a subset of the target population	Instrument was piloted twice using two different design programs for Round One Round Two and Round Three instruments were also tested
Determine the schedule for initial mailing, including e-mail posting and reminders	Time lines set for each round of survey
Download the data frequently	Data were downloaded regularly

Source: Adapted from Granello and Wheaton (2004)

4.5.2 Pilot Testing

A number of researchers (See, for example, Wyatt 2000) suggested that piloting the survey using a subset of the population is a vital step in the design process. In particular, the pilot testing should include the following: have participants submit the survey from a number of different computers and Internet connections, using different browsers; employ persons with a variety of levels of technical knowledge; make sure the directions are clear; and encourage users to make mistakes. Finally, it is advisable for the researcher to be present with members of the pilot group to receive feedback firsthand (Granello & Wheaton 2004). After initial development, the survey instrument that was used for the study was pilot tested amongst a convenience sample of event and non-event respondents. Where possible, the researcher was present when the instrument was tested. Based on the feedback obtained from the initial pilot

testing, the Web site and the program being used proved to be inappropriate, mainly due to technical restrictions with the design options. In particular, the program had very limited options for question design. For example, it was not possible to design matrix-style questions that use a Likert-type scale and have a number of different variables.

As a result, a subscription-based survey design program called *SurveyMonkey* (SurveyMonkey 2005) was used to develop the second version of the survey instrument. This option allowed for increased flexibility in terms of the instrument design (for example, layout of questions and filters) and delivery of results in a usable spreadsheet format. The second version of the survey was pilot tested by the convenience sample used in the first pilot. Feedback was positive, and the program proved to be more reliable and user friendly in comparison to the initial version. Importantly, the new version enabled the technical problems associated with the first version to be overcome. For example, all 20 key impacts could be viewed on the same page, and were also able to be included in a drop-down menu both of which were not available in the earlier version. The instruments developed for Round Two and Round Three of the survey were also pilot tested, as each round was deemed to be important in the context of the Delphi study.

4.6 Selection of the Panel

The second important step in the development stage of the survey was to select the panel of event experts. According to Chan, Yung, Lam, Tam and Cheung (2001), the success of the Delphi method depends primarily on the careful selection of the panel. For example, in choosing the panel, a balanced representation of respondents is advisable. For this study, a group of event experts was selected to provide a range of opinions on potential indicators, which could be used to measure the list of key event impacts. The following criteria were used to identify eligible participants for the Delphi survey:

- Academics who have either published or lectured in the field of special event evaluation;

- Experts who are involved in event management in either State Tourism Organisation or quasi-government event agencies (for example, EventsCorp in Western Australia);
- Local Government representatives involved in events; and
- Practitioners who have extensive experience in managing special events in urban and regional settings.

A list of 55 potential panel members was developed from the existing networks of the Centre for Hospitality and Tourism Research and the Sustainable Tourism Cooperative Research Centre. Potential panel members were contacted by phone to seek their interest and consent to being involved in the project, and of the 55 contacted, 38 agreed to participate in the survey. The phone call was also used to make sure that the correct email address was recorded for each of the panel members. Therefore, the panel constituted a consultative network, which represented Step 3 in the indicator development process proposed by Segnestam et al. (2000) that underpins the approach taken in this study to develop a set of TBL indictors for the evaluation of the impact of events.

4.7 Administration of the Survey

The survey was conducted over three rounds. In short, the aim of Round One of the Delphi survey was to use the knowledge of the event experts to establish the importance of each of the impacts identified in the previous chapter, as well as to give the experts the chance to add any impacts to the list. The results were used to decide which impacts should be taken through to Round Two, as the list of 20 impacts was deemed too cumbersome for the proposed model. The aim of Round Two was to enable the experts to suggest indicators for the impacts, whilst Round Three allowed the panel to reflect on the indicators and to make general comments. The three rounds will be discussed in more detail in this section.

4.7.1 Round One

4.7.2 Notification of Respondents

Each of the 38 event experts was sent an email that contained information about the background and aims of the study, the URL and instructions for the Web site and contact details for any ethical or administrative problems (see Appendix Four for examples of the survey instrument),. The respondents were given a period of three weeks to complete the survey, which started from the day the email was sent out. At the end of the three-week period, 26 panel members had responded to the survey. A reminder email was subsequently sent out and the panel members were given an additional five days to complete the survey. After this time, the survey was closed off and was no longer accessible to the panel.

4.7.3 Round One Results

4.7.3.1 Response Rate and Response Time

From the 38 panel members that were sent emails, 30 (79%) responded to the first round of the survey. Of these, 29 fully completed the survey and one completed only the first two questions. The average response time for the survey was 10.6 days, which was almost twice as long as that found by Cobanoglu et al. (2001), that is, 5.97 days. One explanation for this may be that 55% of the panel members were academics and an important annual academic conference was held during the period in which Round One took place.

4.7.3.2 Type of Organisation of Respondents

The final question in the survey asked the respondents which type of business best described their organisation. As revealed in Table 4.4, 55% were from a university and almost 25% were from State Government. These results are in proportion to the percentages of the population of panel members.

Table 4.4 Type of Organisation of Respondents

Organisation	Panel members	%	Responses	%
University	21	55.3	16	55.2
State Government	10	26.3	7	24.1
Local Government	4	10.5	4	13.8
Event Management	3	7.9	1	3.4
Other (Event Strategist)			1	3.4
	38		**29**[a]	**76.3**

[a] One respondent did not answer his question

4.7.3.3 Rating the Impacts

In Question One of the survey, experts were asked to indicate how important it is to assess each of the impacts. A five-point Likert-type scale was used which consisted of the levels of Unimportant, Of Little Importance, Moderately Important, Important and Very Important. As shown in Table 4.5, in terms of the economic impacts, the highest mean rating was given to the economic benefits (4.5), destination promotion (4.4), visitor expenditure (4.4), legacy of infrastructure and facilities (4.1) and costs of staging event (4.0). The remaining economic impacts were rated as moderately important. In regard to the social impacts, improvement in quality of life of host community (4.1) and community pride (4.0) were rated as important, whilst the other impacts were rated as moderately important. In general, the economic impacts were rated higher than the social impacts. A contributing factor to this result may be that the economic impacts were the most numerous in the list. The single environmental impact (4.0) was rated as being important in an assessment of a special event.

Table 4.5 Rating the Importance of the Impacts

Impact	Mean Rating
Economic	
Economic benefits	4.5
Destination promotion	4.4
Visitor expenditure	4.4
Legacy of infrastructure and facilities	4.1
Costs of staging the event	4.0
Damage to reputation of destination	3.9
Employment opportunities and skills development	3.9
Business development and investment opportunities	3.9
Development of tourism industry	3.8
Sponsorship benefits	3.7
Expenditure on construction of facilities	3.6
Under-utilisation of infrastructure	3.3
Inflation caused by event	3.0
Social	
Improvement in quality of life of host community	4.1
Community pride	4.0
Disruption of lifestyle of host community	3.9
Celebration of community values	3.8
Overcrowding, congestion and noise	3.8
Increased crime and vandalism	3.6
Environmental	
Affect on natural resources	4.0

Note: 1= Unimportant, 5 = Very important

4.7.3.4 Additional Impacts and Comments

In Question Two of the survey, respondents were given the opportunity to suggest additional impacts that were not included in the original list. A number of respondents took the chance to contribute to the general discussion on impacts as well as suggesting further impacts, and this information proved to be very valuable. Feedback from the panel suggested that:

- There was a level of ambiguity and some overlap amongst some of the economic and social impacts;
- Some impacts in the list were components of other impacts;
- All impacts should be on a macro level;
- The descriptions of the impacts should be as neutral as possible rather than positive or negative in nature;

- A wider range of environmental impacts was needed to counter the large number of social and economic impacts; and
- The scale of the event should be considered when choosing which impacts should be used in an evaluation.

4.7.3.5 Ranking the Impacts

In Question Three, the panel members were asked to choose which five impacts from the list they considered to be the most important in descending order of importance. In order to achieve weighted rankings, the choices were given the following scores: Most important = 5; 2nd most important = 4; 3rd most important = 3; 4th most important = 2; and 5th most important = 1. As is shown in Table 4.6, the economic impacts were ranked consistently higher than the social impacts and consistent with the results from Question One, 'Destination promotion' and 'Economic benefits' were the highest ranked economic impacts. In general, the positive impacts were ranked above the negative impacts, which again, appeared to reflect the results in Question One. Indeed, the negative economic impacts of 'Under-utilisation of infrastructure' and 'Inflation caused by event' and the social impacts of 'Increased crime and vandalism' and 'Overcrowding, congestion and noise' were not ranked at all by the respondents. The environmental impact was ranked lower in comparison to the rating it received in Question One. Table 4.7 below, shows the five most important impacts as ranked by the panel members.

Table 4.6 Weighted Ranking of Importance of Impacts

Impact	Rating
Economic	
Economic benefits	121
Destination promotion	52
Employment opportunities and skills development	34
Business development and investment opportunities	30
Visitor expenditure	29
Legacy of infrastructure and facilities	24
Costs of staging the event	19
Expenditure on construction of facilities	8
Sponsorship benefits	6
Development of tourism industry	3
Damage to reputation of destination	2
Social	
Community pride	37
Improvement in quality of life for host community	32
Celebration of community values	19
Disruption of lifestyle of host community	5
Environmental	
Affect on natural resources	13

Table 4.7 Five Most Important Impacts

Impact	Rating
Economic benefits	121
Destination promotion	52
Community pride	37
Employment opportunities and skills development	34
Improvement in quality of life for host community	32

4.7.3.6 Final List of Impacts

The original list of 20 key impacts was collapsed into a list of 11 impacts, as shown in Table 4.8. As the researcher intends to use a triple bottom line approach, the 11 impacts are categorised in terms of the economic, social and environmental dimensions. The justification for the inclusion and exclusion of the impact is discussed below. In short, it was deemed important to ensure that each impact contained in the final list was a) on a macro level, b) distinct from the other impacts, c) worded in a neutral fashion, and d) supported by the findings from the survey. A

discussion was held with a panel of experts to ensure that the results reflected these criteria.

Table 4.8 Final List of Impacts

Economic
Business development and investment opportunities
Destination promotion
Economic impact on host destination
Employment opportunities and skills development
Legacy of infrastructure and facilities
Social
Celebration of community values
Community pride
Impact on quality of life of host community
Environmental
Education and promotion of environmental programs
Energy and water Consumption
Waste generation

4.7.3.6.1 Economic Impacts

The respondents rated 'Business development and investment opportunities' as an important impact. In addition, it was considered to be a macro level impact and was included in the final list. Destination promotion was included in the list as it was rated and ranked the second highest of the economic impacts. In addition, it incorporated the negative economic impact of damage to reputation of destination. The next impacts that were included in the list was employment opportunities and skills development, which was justified in a similar manner to business development and investment opportunities as it was both a macro level impact and rated highly by the respondents. Comments from the respondents suggested that there was a need to neutralise the impacts to include both the benefits and costs. As a result, economic benefits, which was rated and ranked as the most important impact, was changed to economic impact on host destination.

Additional comments suggested that there was a degree of overlap amongst the impacts and that some were considered to be components of other higher-level impacts. For example, even though visitor expenditure and costs of staging the event were rated highly, they are considered to be components of economic impact on host destination, and as such, were excluded from the final list. Similarly, inflation caused

by event was also a component of economic impact on host destination. The third economic impact on the list is legacy of infrastructure and facilities, which was rated the fourth highest economic impact. Moreover, the impact takes into account the expenditure on construction of facilities and under-utilisation of infrastructure, neither of which were rated nor ranked highly by the respondents. Finally, sponsorship benefits and development of the tourism industry were not rated highly and therefore were not included in the final list.

4.7.3.6.2 Social Impacts

The three social impacts that were included in the list were community pride, impact on the quality of life for host community and celebration of community values. The social impacts not included in the list were disruption of lifestyle of host community, overcrowding, congestion and noise and increased crime and vandalism. It was considered that these three impacts were components of change in quality of life for host community.

4.7.3.6.3 Environmental Impacts

The panel commented on the lack of environmental impacts, as only one was included in the list of 20 key impacts. It was suggested that a wider range of environmental impacts should be included to ensure that more of a balance was achieved between the economic, social and environmental dimensions. In addition, as the literature analysis showed, environmental impacts have been largely ignored in both academic publications and actual impact assessments. Thus, without the addition of more environmental impacts, the status quo will be perpetuated. Therefore, the single impact of affect on natural resources was revised and expanded to the three impacts of education and promotion of environmental programs, water and energy consumption and waste generation, which were drawn from the *Waste wise events toolkit* (EcoRecycle Victoria 2005) and Chernushenko and UNEP (2001).

In summary, the overriding aim of the first round of the survey was to determine the importance of the list of impacts that were derived from the analysis conducted in Chapter Three. The survey gave the panel of experts the opportunity to rate and rank

the impacts, as well as make suggestions and general comments on the impacts. The result was a validated and reduced list of 11 key economic, social and environmental impacts.

4.7.4 Round Two

The aim of Round Two was to give the panel of experts the opportunity to suggest indicators to measure each of the 11 impacts. As with the first round, an email was sent out to the panel, which included a summary of the results of Round One, instructions for Round Two and the link to the Round Two survey instrument (refer to Appendix Four for examples of the survey instrument). The email also included a link to a Web page that contained additional information for those respondents that required more detail on the results of Round One (see Appendix Four). After the initial period, a reminder email was sent out to the panel members, which was successful in prompting additional responses.

4.7.5 Round Two Results

4.7.5.1 Response time and response rate

The average response time for Round Two of the survey was 14.2 days. This was slower than Round One, which had an average response time of 10.6 days. In addition, the response rate of 47.4% (see Table 4.9) was considerably lower than that obtained in Round One. In terms of the breakdown of respondents, Table 4.9 reveals that the non-responses came from panel members from Universities and State Government. Moreover, none of the Event Management panel members responded. The loss of panel members through the various rounds or iterations in a Delphi study is referred to as panel attrition. Garrod and Fyall (2004) suggest that there are a number of reasons for this occurring, which include weariness with the subject matter, disillusionment with the process, or lack of time to complete the survey. Moreover, panel attrition appears to be a common issue in Web-based and paper based Delphi surveys (Sherwood, Jago & Deery 2006). One reason for panel attrition in the present study may be that Round Two of the survey required considerably more reflection on the part of the panel than what was required in Round One.

Table 4.9 Type of Organisation of Respondents

Organisation	Panel members	%	Responses	%
University	21	55.3	12	66.7
State Government	10	26.3	2	11.1
Local Government	4	10.5	4	22.2
Event Management	3	7.9		
Other				
	38		**18**	**47.4**

4.7.5.2 Development and Selection of Indicators

The aim of Round Two was to develop indicators for each of the 11 impacts. Panel members were presented with the 11 impacts and asked to suggest up to two indicators for each of the impacts. The panel members were offered guidance for the development of the indicators, to assist with how indicators were best expressed. The instructions suggested that indicators could be expressed as an existence (yes/no), category, number, percent or ratio. In addition, for each TBL dimension, examples of indicators were supplied, which were drawn from a database of indicators (Sustainable Measures 2005).

The majority of respondents offered two suggestions, which resulted in a large number of different indicators. As the number of indicators was too large for a parsimonious TBL evaluation model, a decision was made to reduce the number of indicators. A selection process was used to assist in reducing the number of indicators so that only those that were most effective for an event evaluation would be taken forward into the third round of the survey. Sandhu-Rojon (2003) proposed an indicator selection approach based on the acronym SMART. The approach suggested that a series of questions should be asked in regard to the indicators in order to select the most appropriate. Thus, the selection process involved applying the following five questions to each of the indicators:

1. Specific – Is it clear exactly what is being measured?
2. Measurable – Is it a reliable and clear measure of results?
3. Attainable – Are the results realistic?
4. Relevant – Does the indicator capture the essence of the desired result?

5. Trackable – Are data actually available at reasonable cost and effort?

In terms of the five questions, the major problem appeared to be specificity, as a large number of the indicators proposed by the panel members were not specific enough, and, therefore, failed in the first instance. The remaining indicators were subjected to questions 2-5, which eliminated more of the indicators. Those indicators that survived the culling process were discussed by a separate expert panel, which scrutinised each of the indicators for their applicability. During this process some of the indicators were modified, in particular, to reflect the level of specificity required and to neutralise indicators that would otherwise be too positive in nature. The final suite of indicators is shown in Table 4.10.

Table 4.10 Impacts and Indicators Derived from Delphi Survey Round Two

TBL Dimension	Impact	Indicator
Economic	Business leveraging and investment opportunities	Number of businesses hosted at event Category of business representatives hosted: Senior management, Middle management, Other
	Destination promotion	Value of destination coverage in newspapers, television and radio coverage outside of the destination Number of visiting journalists
	Economic impact on the host community	Direct inscope expenditure of event
	Employment opportunities and skills development	Number of full time equivalent jobs created Number of people given training as part of the event
	Legacy of infrastructure and facilities	Dollar value of new infrastructure and facilities
Social	Celebration of community values	Impact of event on the sense of community Ratio of local resident to non-resident attendees
	Community Pride	Number of positive letters to editor in local newspaper during event period Impact on community pride of hosts community
	Impact on the quality of life of the host community	Impact of the event on the quality of life of the host community as a whole
	Impact on the quality of life of local residents	Impact of the event on the personal quality of life of the host community
Environmental	Education and promotion of environmental programs	Amount spent on promotion of environmental programs as percentage of event related expenditure Existence of an environmental and education plan
	Energy and water Consumption	Amount of energy used per attendee Volume of water used per attendee Estimate of energy used for transport to and from the event Net water consumed (minus water recycled) per attendee Percent of energy that comes from green sources
	Waste Generation	Mass of waste sent to landfill per attendee Ratio of recycled waste compared with non-recycled waste Mass of solid waste and per attendee

4.7.6 Round Three

4.7.7 Delphi Study Round Three Aims

The third round was important in terms of gaining consensus amongst the Delphi panel. As can be seen from Appendix Four, there were two sections in the Web survey. In the first section, the aim was to allow the experts to select the most appropriate indicators from those that were gathered from Round Two. The panel had three options, namely, 'accept', 'modify' or 'reject' each indicator. If 'modify' was chosen, room was provided for panel members to suggest how the indicator could be modified. In the second section of the survey, the panel members were asked to weight the impacts by allocating 100 points across each of the three TBL dimensions. The results from this question will potentially inform the aggregation of the impacts in the TBL evaluation framework.

4.7.8 Round Three Results

The average response time for Round Three was 12.5 days, which was longer than the previous two rounds. As shown in Table 4.11, the response rate of 63.2% for this round was higher than Round Two (47.4%), but lower than Round One (76.3%). Thus, although, there was evidence of panel attrition from rounds one to two, more panel members responded in round three than round two. This result is not surprising given that of the three rounds, Round Two required the most work for the panel members. Similar to the previous rounds, the majority of respondents were from Universities, by way of their large representation in the panel.

Table 4.11 Type of Organisation of Respondents

Organisation	Panel members	%	Responses	%
University	21	55.3	13	61.9
State Government	10	26.3	3	30.0
Local Government	4	10.5	2	50.0
Other	3	7.9	3	100.0
Did not answer			3	
Total	**38**		**24**	**63.2**

As shown in Table 4.12, there was a uniform acceptance of the indicators across the three TBL dimensions. In terms of modifications, more were suggested for the economic indicators, as there were on average 4.3 suggested modifications to economic indicators per respondent. In contrast, there were more rejections of the Social indicators.

Table 4.12 Indicator Selection by Dimension

	Economic		Social		Environmental	
Selection	Number of panel members	Average per panel member	Number of panel members	Average per panel member	Number of panel members	Average per panel member
Accept	137	17.13	100	16.7	171	17.1
Modify	34	4.3	14	2.3	25	2.8
Reject	10	3.3	15	3.8	15	1.9

As revealed in Table 4.13, the University respondents suggested, on average, the highest number of modifications to the indicators. One of the university respondents suggested modifications to 11 of the indicators. In addition, one of the University respondents was the only respondent to suggest acceptance of all 24 of the indicators. In contrast to the university respondents, the State Government respondents rejected more of the indicators. Also, one respondent suggested eight modifications. In terms of the Local Government there were slightly more rejections than modifications. No inferences can be drawn from the 'Other' category as it contains some missing data.

Table 4.13 Indicators Selection by Respondent Organisation

Respondent Organisation	Accept	Modify	Reject
University	18.5	5.0	1.8
State Government	17.8	4.3	3.0
Local Government	17.0	3.0	4.0
Other	12.0	4.5	2.3

4.7.8.1 Selection of Indicators

As revealed in Table 4.14, Table 4.15 and Table 4.16, the majority of indicators were unchanged as a result of the information gained from Round Three of the Delphi Survey. Those indicators that were modified were numbers 1, 3, 4, 8, 10, 11 and 19.

For each of the indicators that were modified, the tables include comments that address and justify the changes based on the panel member's suggestions as well as the decision that was made in regard to each indicator. The tables also show the responses in terms of how the respondents accepted, modified or rejected the pool of indicators.

Table 4.14 Economic Indicator Selection Results from Survey Round Three

Indicators, Comments and Decisions	Selection Results	
1. Number of businesses hosted at event **Comment** - The panel members suggested that this indicator needs to be modified to take into account two things. Firstly, the objectives of the event need to be considered in terms of their alliance with the businesses and what the event is trying to achieve through the alliance. Presently, this appears to be beyond the scope of the indicator, and another indicator may need to be developed to take this into account. The second grouping of suggestions focused on enabling the indicator to profile the businesses in some way. **Decision** - It was held that the issues raised by panel members are adequately covered in Indicator 2, therefore the indicator remains unchanged.	Accept Modify	13 10
2. Category of business representatives hosted: Senior management, Middle management, Other. **Decision -** Indicator unchanged	Accept Modify Reject	18 1 4
3. Dollar value of positive, negative and balanced newspaper, television and radio coverage of the destination in target areas **Comment** – Respondents suggested that the indicator needed to include more than just positive coverage, and this was accounted for in the modified indicator, as was a specificity of measuring the coverage in the target audience. In addition, respondents suggested that the indicator needed to include an element of conversion from promotion to actual visitation, however, this was considered to be a longer-term impact, which is beyond the scope of this study. **Decision -** The indicator was modified to reflect more than just positive coverage	Accept Modify Reject	18 1 4

Table 4.14 continued

4. Number of visiting journalists from target areas **Comment** - Respondents suggested a number of modifications mostly concerned with the output of the journalists, which is covered in the previous indicator. Also, the journalists need to be relevant to the event, which means that the origin of the journalists can include local, national or international depending on the goals of the event and target market. **Decision** - The indicator was modified to include 'from target areas'	Accept Modify Reject	15 6 2
5. Direct inscope expenditure of the event **Decision** - Indicator unchanged	Accept Modify	21 1
6. Number of full time equivalent jobs created **Decision** - Indicator unchanged	Accept Modify	19 3
7. Number of people given training as part of the event **Decision** - Indicator unchanged	Accept Modify	20 1
8. Dollar value of new infrastructure and facilities established for the event **Comment** - Respondents raised a number of issues concerning this indicator, which were relevant but could not be covered here, as the aim was to keep the indicators as general as possible. **Decision** - The indicator was modified to include 'established for the event'.	Accept Modify	16 6

Table 4.15 Social Indicator Selection Results from Survey Round Three

Indicators, Comments and Decisions	Selection Results	
9. Impact of the event on sense of community **Decision** - Indicator unchanged	Accept Modify	20 2
10. Ratio of local resident to non-resident attendees **Comment** – A reasonable number of respondents suggested that this indicator should be rejected with one of the main arguments being that it is 'valid only if event aims to attract visitors'. In other words the objective of an event may not be to attract visitors but to provide social opportunities for the local community. It was suggested that the indicator does not reflect the degree to which local residents are involved in an event in, for example, volunteering or the providing some for of cultural input such as displays or stalls of local arts and crafts or entertainment. It was also noted that this would be more interesting data to collect. Also, it was suggested that the indicator was not a measure of community celebration; rather it was more closely linked to economic outcomes than social outcomes. Finally, the data gathered for this indicator would come from an estimate of the number of local people, which would most likely be taken from the intercept surveys. Thus, the results would be estimates only. **Decision** – In short, it appeared that a measure of the ratio of local attendees did not provide meaningful data on the involvement of local residents. Therefore, despite the number of acceptances, there appear to be strong arguments against the inclusion, and as such, the indicator is rejected.	Accept Modify Reject	14 2 5
11. Number of positive letters to editor in local newspaper during event period **Comment** - There were a large number of modifications and rejections for this indicator. Respondents questioned the type of media, the timing of the measurement, the type of indicator, and the need to consider the positive and negative letters. **Decision** - As such retention of the indicator is doubtful, without considerable modification.	Accept Modify Reject	8 6 8
12. Impact of event on community pride **Decision** - Indicator unchanged	Accept Reject	20 1
13. Impact of the event on the quality of life of the host community **Decision** - Indicator unchanged	Accept Modify Reject	19 2 1
14. Impact of the event on the personal quality of life of the host community **Decision** - Indicator unchanged	Accept Modify Reject	19 1 1

Table 4.16 Environmental Indicator Selection Results from Survey Round Three

Indicators, Comments and Decisions	Selection Results	
15. Amount spent on promotion of environmental programs as percentage of event related expenditure **Decision** - Indicator unchanged	Accept Modify Reject	18 2 2
16. Existence of an environmental and education plan **Decision** - Indicator unchanged	Accept	21
17. Amount of energy used per attendee **Decision** - Indicator unchanged	Accept Modify Reject	15 4 2
18. Volume of water used per attendee **Decision** - Indicator unchanged	Accept Modify Reject	16 3 2
19. Estimate of energy used per attendee for transport to and from the event **Decision** – Although there were a number of modifications and rejections, the indicator remained unchanged.	Accept Modify Reject	14 4 4
20. Net water consumed (minus water recycled) per attendee **Decision** - Indicator unchanged	Accept Modify Reject	18 1 2
21. Percent of energy that comes from renewable sources **Decision** – 'Renewable' substituted for 'Green'	Accept Modify Reject	19 1 1
22. Mass of waste sent to landfill per attendee **Decision** - Indicator unchanged	Accept Modify Reject	17 3 1
23. Ratio of recycled waste compared with non-recycled waste **Decision** - Indicator unchanged	Accept Modify	19 3
24. Mass of solid waste per attendee **Decision** - Indicator unchanged	Accept Modify Reject	14 3 2

4.7.9 Suite of Indicators

The final list of impacts and the suite of corresponding indicators is presented in Table 4.17. In all there are 23 indicators, specifically, eight economic, five social and ten environmental. It should be noted that in regard to the impacts, energy and water consumption were separated.

Table 4.17 Key Impacts and Proposed Indicators

TBL Dimension	Impact	Indicator
Economic	Business leveraging and investment opportunities	Number of businesses hosted at event Category of business representatives hosted: Senior management, Middle management, Other
	Destination promotion	Dollar value of positive, negative and balanced newspaper, television and radio coverage of the destination in target areas Number of visiting journalists from target areas
	Economic impact on the host community	Direct inscope expenditure of the event
	Employment opportunities and skills development	Number of full time equivalent jobs created Number of people given training as part of the event
	Legacy of infrastructure and facilities	Dollar value of new infrastructure and facilities established for the event
Social	Celebration of community values	Impact of the event on sense of community
	Community Pride	Number of positive letters to editor in local newspaper during event period Impact of the event on community pride
	Impact on the quality of life of the host community	Impact of the event on the quality of life of the community as a whole
	Impact on the quality of life of local residents	Impact of the event on the personal quality of life'
Environmental	Education and promotion of environmental programs	Amount spent on promotion of environmental programs as percentage of event related expenditure Existence of an environmental and education plan
	Energy Consumption	Amount of energy used per attendee Percent of energy that comes from renewable sources Estimate of energy used for transport to and from the event
	Water Consumption	Volume of water used per attendee Net water consumed (minus water recycled) per event visitor
	Waste Generation	Mass of waste sent to landfill Ratio of recycled waste compared with non-recycled waste Mass of solid waste and per visitor

4.7.10 Weightings across Indicator Dimensions

The final question in Round Three asked panel members to suggest a weighting out of 100 across each of the TBL dimensions. The aim was to use this information to inform a later stage in the research in which the indicators would be integrated into a TBL model such as that proposed by Fredline, et al. (2004), which was outlined in Chapter Three. As shown in Table 4.18, the weightings were relatively evenly spread across each of the dimensions, particularly for the social and environmental impacts. In regard to the economic impacts, the legacy of infrastructure and facilities was given a noticeably lower weighting than the other indicators.

Table 4.18 Weightings across Indicator Dimensions

Economic	**Weighting**
Economic impact on the host community	26.5
Destination promotion	22.0
Employment opportunities and skills development	19.5
Business leveraging and investment opportunities	18.4
Legacy of infrastructure and facilities	14.0
Social	
Quality of life of the host community	27.5
Quality of life of local residents	25.8
Community pride	24.5
Celebration of community values	22.3
Environmental	
Energy and water consumption	36.9
Waste generation	33.7
Education and promotion of environmental programs	29.4

4.8 Conclusion

Through a comprehensive analysis of a large body of event evaluation-related publications and impact assessments, the previous chapter presented a list of the key impacts used in event evaluations. The aim of this chapter was to consult with a panel of event experts to develop indicators to measure the key impacts, which was achieved through a Web-based Delphi survey. Initially, the chapter discussed the Delphi method and revealed how the technique has been used to gather the opinions of experts on a range of issues. In general, Delphi surveys have been used in two ways, namely, to predict future scenarios or to propose solutions to complex issues.

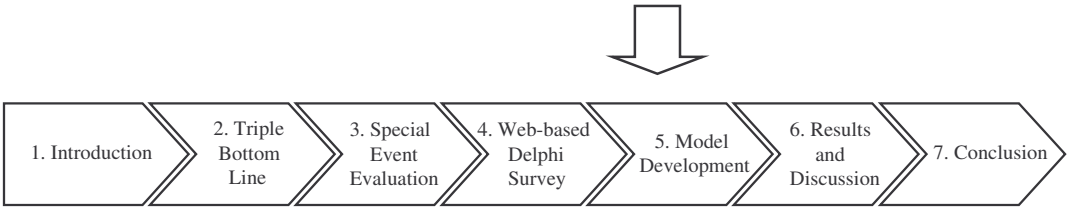
The chapter revealed that whilst Web-based surveys have been used in a number of research areas, there appear to be few studies that used Web-based Delphi surveys, particularly in tourism and event research.

This study used a modified, three-round Web-based Delphi method and the aim was to consult with a panel of event experts in order to develop a suite of indicators to measure the TBL impacts. In the first round, panel members were asked to consider the list of impacts and were given the opportunity to add or remove impacts. In the second round, the expert panel were asked to suggest indicators for each of the impacts. In the third round, panel members were asked to reflect on the indicators and to make recommendations to either accept, modify or reject each of the indicators. Based on these recommendations, a pool of indicators was proposed, which was presented in Table 4.7. The Web-based Delphi survey represented Step 3 in the indicator development process (Segnestam et al. 2000), which underpins the structure of this thesis. Segnestam et al. (2000) recommended that Step 3 in the process be the establishment of a consultative network. The next stage in the study is to develop an event evaluation framework and to further refine the pool of indicators. This will be the aim of the proceeding chapter.

Chapter

5

Model Development



Chapter Structure

- Model Development
- Event Evaluation Framework
- TBL Model
- Selection of Indicators for Testing in Case Studies

5.1 Introduction

Having established the need for a broader framework to evaluate the impact of events, this thesis explored the TBL evaluation in terms of sustainable development and the influence on business practices and performance reporting. Chapter Three presented a comprehensive analysis of event evaluation literature and impact assessments, from which were derived a list of the key impacts used in event evaluations. Chapter Four outlined a Web-based Delphi survey of event experts, whose opinions were used to develop a suite of indicators to measure the key impacts.

The initial aim of this chapter is to develop an event evaluation framework. Initially, the chapter builds a framework, which conceptualises the evaluation of an event. The framework comprises four concepts, namely, the event generators, the event inputs, the event outcomes and the event evaluation. The development of the framework represents Step 5 in the indicator development process (Segnestam et al. 2000) that has been used to underpin this research study. The second aim is outlined in the second section, where it is argued that the inclusion of all of the indicators derived from the Delphi survey would result in a cumbersome model that would be difficult to operationalise due to cost and time constraints. Finally, in the third section, a selection process is applied to the pool of indicators, which results in the selection of a more manageable number of indicators to be included in the two event evaluation case studies.

5.2 Model Development

Despite the amount of research that has been conducted on the impact of events, there have been few studies that have attempted to model event impacts or the event evaluation process. One example of this was developed by Getz (1997) (Figure 5.1), which modelled what Getz referred to as the key perspectives and important linkages between the various elements of an event. The central component of the model is the event itself and the outer components consist of the various stakeholders who contribute to an event such as the organiser, sponsor, customer and community. Getz (1997) claimed that the model showed that events needed to meet diverse and multiple goals, which if achieved would result in a greater likelihood of an event gaining community support, attracting grants and sponsorship, as well as achieving sustainability. Although the model illustrates the various components of an event, the focus is more on the management of an event rather than its evaluation.

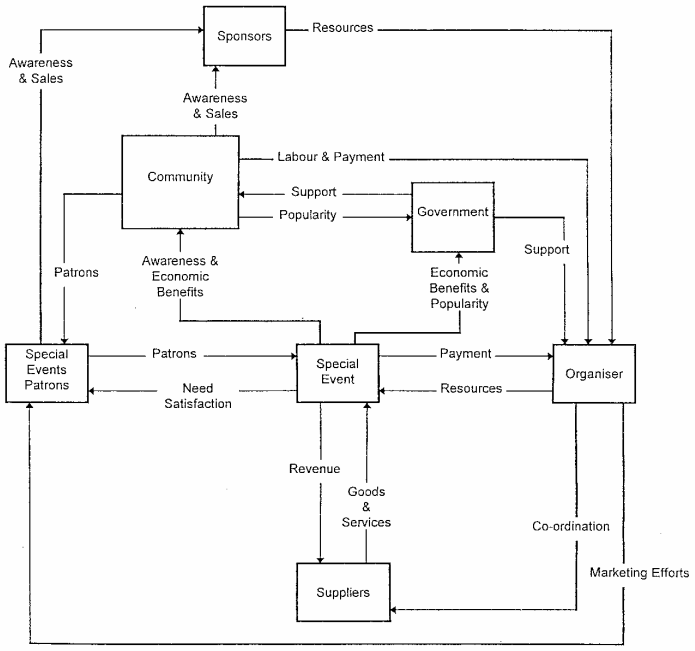
Figure 5.1 Perspectives on the Roles and Impacts of Events

Source: Getz (1997, p. 42)

In response to the model by Getz (1997), Jago (1997a) suggested that the economy and the environment components were not needed, and that perspectives of business and government should be added (see Figure 5.2). Jago (1997a) claimed that there was a need to consider the complexity of the interrelationships between the perspectives. Thus, Jago's (1997a) model illustrated the relationships between the directions of the inter-linkages, and suggested that these linkages represented the various components' needs in terms of assessing the success of an event. Jago (1997a) also maintained that there was a time consideration in that some of the perspectives were short-term, and some were long-term. In short, although the model by Jago (1997a) made advances on the model developed by Getz (1997), they both focused on the operation and management of an event. In order to develop an evaluation framework, specifically a TBL evaluation, a model needs to also consider the impacts of the event in terms of its components. The first stage of this process is to develop an event evaluation framework that would place the TBL evaluation model into the context of the staging of an event. This is the focus of the next section of this

chapter. Firstly, the event drivers will be discussed, followed by the event inputs and finally the event outputs including the TBL evaluation.

Figure 5.2 Model of Special Events



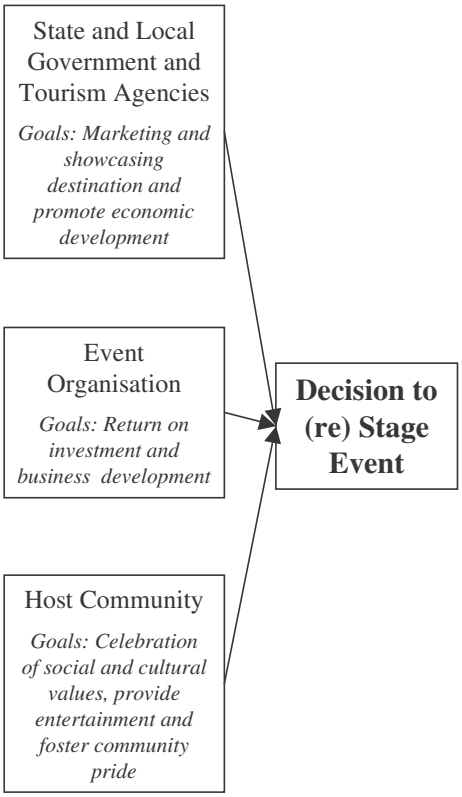
Source: Jago (1997a, p. 8)

5.2.1 The Event and its Impacts

5.2.2 Event Generators

Drawing on the models of Getz (1997) and Jago (1997a) as well as other relevant literature, Figure 5.3 reveals the major generators of events. Allen et al. (2002) proposed that there were three distinct types of event generators, namely, government, corporate and community. Some of the generators were described by Reid and Arcodia (2002) as being the primary stakeholders of an event, and as such have a direct interest in the event. Together, these three groups have a major stake in the event and direct input into the planning of the event as well as the decision about whether or not an event is to be staged or restaged.

Figure 5.3 Event Generators and Goals



5.2.2.1 Local and State Government

In Australia, both State and Local Governments have invested heavily in special events as a means of achieving positive economic and social outcomes. Moreover, both levels of government in Australia have increasingly produced policies in an attempt to facilitate the growth of events as a platform for industry and economic development (Burgan & Mules 2000b), or for overcoming seasonality and creating new attractions (Hall 1997). An example of this has been the establishment of special event divisions within most of the state and territory tourism organisations in Australia.

The main role of these organisations is to bid for and attract events that enable the destination to be showcased and marketed to a national and international audience of potential tourists. One of the roles of state government tourism agencies such as

Tourism Victoria is to provide funding for the development of new events as well as the retention of existing events. For example, the Tourism Victoria Strategic Plan 2002- 2006 stated that one of the strategies was to 'develop a Victorian events strategy that balances event acquisition and sustainability of existing events' (Tourism Victoria 2002, p. 120). Another indicator of the importance of events to the Victorian economy was the recent release of the 10 Year Tourism and Events Strategy, which, by including events in the name of the strategy, places the events industry as a high priority in Government decision-making on economic, social and environmental issues (Department of Innovation Industry and Regional Development 2006). Moreover, the Strategy proposed a new emphasis on boosting the tourism benefits that flow from major events and claimed that events generated economic benefits of AUD$1 billion per year to the State of Victoria.

On a smaller scale, local governments tend to support local community events and festivals, which, according to Getz (1997), are produced by governmental and non-profit, community-based organisations. Other studies have also shown that there is considerable support amongst local governments for events in Australia (Whitford 2005) as well as overseas (Thomas & Wood 2004). Another way in which governments support special events is through contributing funds for major upgrades to infrastructure such as sports stadia and other event facilities, especially for large-scale events (Dwyer, Forsyth & Spurr 2005a).

5.2.2.2 Local Community

The alternative to the top down approach of event development is events that are initiated by the host community. It has been suggested that where communities are involved in driving the development of events, the three most common reasons for staging them are to foster community pride, for family fun and entertainment and to enhance tourism (Mayfield & Crompton 1995). Moreover, in a survey of community festivals in Canada, the most frequently cited goals for staging events were to promote the community, provide a good program, to make money, provide an educational experience and to increase the market size of the festival (Getz & Frisby 1988).

One of the most important elements in the development of community initiated events is to have community leaders and other key stakeholders involved in the event planning process, as the community is then able to gain some ownership of the event, which is vital to the success of the event (Delamere et al. 2001). Similarly, Arthur and Andrew (1996, p. 21) stated that 'event organisers believed that the successful and professional implementation of the event would have been impossible without this unequivocal community advocacy', and that community involvement was an indisputable necessity. In regard to regional festivals, the level of community support also appears to be an important factor in the continuation of successful events (Molloy 2002). This community support can manifest itself in a number of ways such as involvement in the organisational structure, or the provision of financial and in-kind support (Molloy 2002). Derret (2003, p. 36) maintained that an event that emerges from the local community rather than being imposed upon it, tends to have a larger degree of community acceptance.

5.2.2.3 Event Organisation

Allen et al. (2002) suggested that there are four broad areas within the corporate sector that are involved in staging events, namely, companies and corporations, industry associations, entrepreneurs, and the media. The authors maintained that there were a range of different drivers depending on the type of organisation involved in staging the event. For example, companies and corporations are involved in promotions and product launches, industry associations are involved in promotions and trade fairs, entrepreneurs are involved in ticketed sporting events and concerts and the media are involved in staging events such as promotions and concerts (Allen et al. 2002). Regardless of the type of organisation, the event organiser is a key stakeholder in the event, and the goals of the event manager will be reflected in the type of event being staged (Allen et al. 2002).

In most cases though, if the event organisation is a business entity, the organiser aims to develop an event and to earn a profit (Getz 1997). Event organisations can have other priorities for staging an event, hence, there are also events that are staged for reasons other than for profit. For example, in regard to community festivals, Mayfield

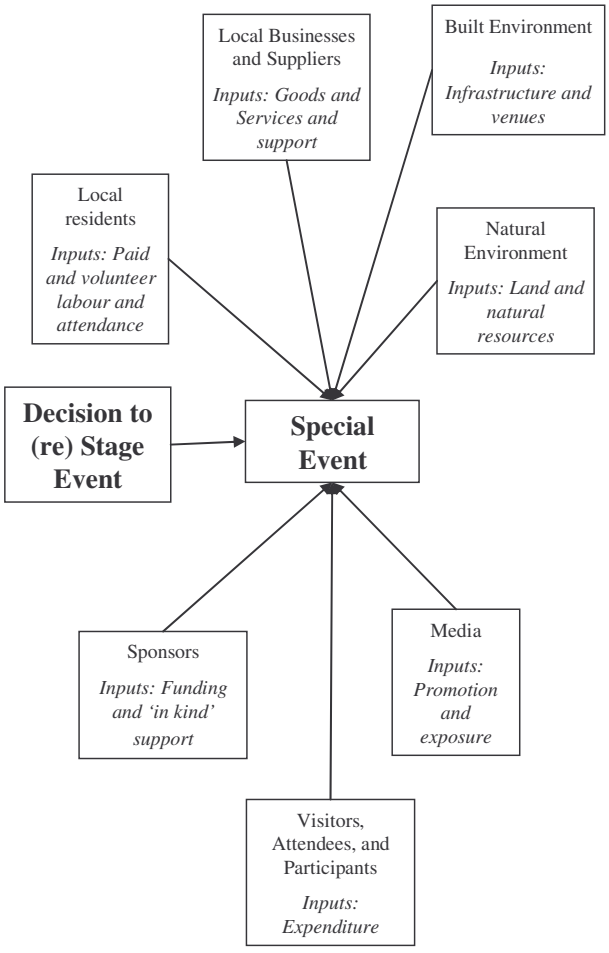
and Crompton (1995) suggested that the primary reason for staging events where there is a commercial imperative, was financial return on investment. Moreover, the predominant motivations for staging of events for rural event organisers were to increase socialisation, promote and preserve culture, improve the well-being of the community, and to gain recognition and support the community (Mayfield & Crompton 1995).

One of the focuses for an event organiser in terms of managing an event is to produce value for the various event stakeholders (Goldblatt 2000). For example, according to Bob, Swart and Moodley (2005), due to the highly competitive nature of sport event production, corporate clients are now more likely to demand that event organisers demonstrate the value or return on investment resulting from sponsorship of an event. Goldblatt (2000) claimed that stakeholder benefits can be achieved firstly, through a well-developed understanding of the range of stakeholder expectations, and secondly, by attempting to meet the expectations through the successful delivery of the event. An in-depth discussion of event stakeholders was presented by Reid and Arcodia (2002). The authors classified stakeholders as either primary or secondary, and suggested that the primary stakeholders included employees and volunteers, sponsors, suppliers, spectators, attendees and participants. These stakeholders are influenced by the decisions of the event organisation, contribute directly to the event and therefore, have an important stake in the event (Reid & Arcodia 2002).

5.2.3 Event Inputs

Having established the main drivers of an event, the next section of the event evaluation framework presents the range of inputs that combine to form a special event. Figure 5.4 reveals the range of actors involved in an event and the associated inputs that each of the actors provides to an event. In contrast to the event drivers, those individuals and organisations that provide inputs into the event are more involved in the organising phase, rather than the planning stage. The seven inputs will be discussed in the following section.

Figure 5.4 Event Inputs



Adapted from Getz (1997) and Jago (1997b)

5.2.3.1 Local Residents

Local residents are the major suppliers of both paid and volunteer labour for events. For example, one of the ways that residents can be involved with an event is being a member of the organising committee, as a provider of entertainment for an event or as a volunteer providing support services. Whilst there is considerable research that has been conducted into the impact of events on the host community in terms of their perceptions and reactions (See, for example, Fredline & Faulkner 2000a; Soutar & McLeod 1993), there appears to be considerably less research into the type and level of involvement of local residents in events. A study by Arthur and Andrew (1996)

pointed to the importance of the role of the community in the staging of an event. The authors found that event organisers claimed that the successful and professional performance of the event would not have been possible without the involvement and support of the local community. The type of involvement of local residents in events can take various forms, for example, volunteerism, first aid, home hosting, displays and food and entertainment (Arthur & Andrew 1996). A study of 12 regional and rural events by Molloy (2002) also outlined the importance of resident involvement through volunteer and community support. For instance, in the majority of the cases, the festivals were being run on a shoestring budget, and as a result, a strong level of local support was necessary in order to sustain the events over a period of time. In a recent contribution to this area of research, Gursoy and Kendall (2006) claimed that, along with the perceived costs and benefits of staging an event, community support is affected by a range of variables such as the level of community concern, ecocentric values and the level of community attachment. For a broader discussion on these concepts, see, for example, Bow and Buys (2003) and Williams, Patterson, Roggenbuck and Watson (1992).

5.2.3.2 Local Businesses and Suppliers

Local businesses and suppliers provide a range of goods and services to events. In regard to successfully managing an event, Wicks (1995) suggested that one of the components of an event that event managers should consider is to actively engage with local businesses, as they are in a position to provide a range of support to an event. This includes inputs such as in-kind contributions, assistance with the volunteer program, as well as general support for the event. For regional events in particular, Wicks (1995) noted that the business sector can also play a key role in ensuring the ongoing success of an event by providing direct sponsorships and institutional support. Local businesses can also add to the diversity of the experience associated with an event, and in some instances event organisers can give preference to local businesses for the supply of event-related services (Harris 2005).

As well as providing inputs, local businesses are also recipients of the indirect impacts of events, such as those arising from second-round spending of money in the form of

local business transactions (Hall 1997). Despite the reported economic impact on the host destination, however, it appears that the benefits to local businesses are often unevenly distributed (Chalip & Leyns 2002). For example, in a study of the 1995 Special Olympic World Games, Putsis (1998) found that the construction and business service sectors benefited from the event, but local businesses in the downtown area appeared to be worse off, as local residents who were the major clients, stayed away from the area during the games. Thus, Chalip and Leyns (2002) claimed that one of the issues of concern for local businesses is how the level of local residents is maintained during the staging of an event.

As noted by Reid and Arcodia (2002), suppliers to an event are one of the primary stakeholders, however, the supply chain for an event is a more complex arrangement than in normal business setting. The distinction is twofold, in that, due to the short-term nature of a special event, suppliers to an event are only engaged for the duration of the event and the majority of the components of an event are outsourced. In contrast, suppliers to a conventional business generally have longer-term arrangements and the majority of elements of a business are sourced in-house. Suppliers to an event can include the venues, artists as well as the physical resources that are required to stage an event (Allen et al. 2002). In addition to this, suppliers are also needed to provide elements such as transport and accommodation, catering, tours, technical support such as security, emergency response, merchandisers, communications, waste and recycling and technicians and related equipment (Getz 1997).

The relationship between suppliers and event organisers is an important one in terms of coordinating the various elements of an event. For example, a study by Campiranon (2005) indicated that event managers need to build a strong relationship with their customers, as well as with their suppliers, employees, and communities. Moreover, as suppliers are part of the overall event network, the staging of an event involves on-going interaction with suppliers (Mackellar 2005) such as active engagement on risk management issues (Miller & Ritchie 2002) and sourcing of the goods and services (Reid & Arcodia 2002). There are also instances of strategic alliances between event organisers and suppliers. For example, Brown (2000) studied

an event where one of the aims of the event was to showcase a supplier of the region's cuisine. These strategic alliances have also shown to be the case with local events such as farmers markets (Dore & Frew 2000), whilst another example is the Taste of Tasmania, held each year in Hobart, which focuses on showcasing the range of local cuisine and locally grown produce.

5.2.3.3 Built Environment

The built environment mainly consists of the infrastructure that is used to stage an event. This can be in the form of existing buildings (for example, purpose built stadia), roads or gardens, or temporary structures that are needed for the event such as stages or marquees. Whilst smaller events utilise existing infrastructure such as roads and gardens, in contrast, mega events such as the Olympic Games often require the construction of new buildings, which are left behind as legacies for use in the future by residents of the host destination. In addition, the hosting of mega events such as the Olympics can result in improvements to existing infrastructure such as stadia, or larger urban regeneration projects that result in investment to improve environmental spaces (Essex & Chalkey 1999). In some instances, however, these projects might have happened anyway, but were brought forward as a consequence of the staging of the event.

One interesting example of investment in infrastructure projects was the staging of the Tokyo Olympics in 1964. A total of US$2.7 billion (approximately US$17 billion today) was spent on related infrastructure projects such as the high-speed railway that linked Tokyo with the Games site Osaka, a 25-mile subway expansion, 62 miles of new expressway and government subsidised loans to increase hotel capacity (Cicarelli & Kowarsky 1973). Of the total spending, however, only US$70 million was directly associated with Olympic facilities. Nevertheless, Getz (1990) noted that most events do not require special facilities or improvements to infrastructure. Investment in infrastructure and the associated changes to urban environments can also have negative consequences such as displacement of residents (Hiller 2000), loss of amenities and a legacy of massive public debt (Burbank, Andranovich & Heying

2002). As well as the urban environment, changes can also affect the natural environment.

5.2.3.4 Natural Environment

As discussed in Chapter Three, little has been written about the role of the natural environment in the staging of special events. One of the few studies that addressed this issue was that by May (1995), which focused on the environmental implications of the 1992 Winter Olympic Games held in Tarentaise in the French Alps. May (1995) suggested that the main difficulty in judging the environmental impact of the games was that the changes might have occurred at any rate, but more slowly over a longer period of time. As the Winter Olympics are staged in Alpine environments, the localised impacts would differ to those of the Summer Olympics where the events are staged in an urban environment. May (1995) found that there were both beneficial impacts (for example, improvement of river water quality and waste-processing and compost-production plant) as well as damaging impacts (for example, destruction of river and wetland habitats, disruption of animal migration routes and forest clearance for piste construction) associated with the planning and staging of the Games.

Although Faulkner (1993) suggested that environmental impacts are those that affect the ecological balance of the local environment, not all of the impacts manifest themselves in the local environment. For example, the release of carbon dioxide (CO_2) into the atmosphere is a global impact as the gasses spread beyond arbitrary or economical destination borders into the atmosphere (Rickard 2004). Of particular significance is the release of CO_2 into the upper atmosphere, which occurs through the emissions associated with air travel (Rickard 2004). Carlsen, et al. (2001) maintained that the cost of avoiding or mitigating the environmental impacts should be considered as an event-specific externality, and that the event organiser should have responsibility for the associated costs.

In regard to the inputs to the event, the natural environment provides a range of resources. These include the following:

- Water – drinking, washing and flushing of toilets;

- Fossil fuels – coal used to generate electricity;
- Land – production of food and fibre and space for landfill for the deposit of solid waste; and
- Oil – converted to petroleum-based products to fuel the various types of transport.

5.2.3.5 Media

Events have become an increasingly significant component of destination branding strategies (Jago, Chalip, Brown, Mules & Ali 2003). For instance, in association with many large-scale events, destination marketing organisations supply video footage of the destination to electronic media outlets, which is then shown during breaks in the event program. Moreover, these images are carefully crafted to appeal to potential visitors from the destination's target markets.

Despite this, not all media are controlled by the destination marketing organisations, and events can occasionally draw negative publicity. Exposure through the various forms of media can be counterproductive, particularly when events draw adverse publicity as was the case with the bombing that occurred during the Atlanta Olympics in 1996 (Whitelegg 2000). This can also occur with events that are staged in politically sensitive destinations such as Israel (Kliot & Collins-Kreiner 2003). Moreover, it appears that with increasing scale, the potential for sporting events to create negative impacts such as the displacement of poor and visible minority residents, also increases (Olds 1998).

5.2.3.6 Visitors, Attendees, and Competitors

Visitors and attendees bring 'new' income into the region or state in which the event takes place. This is referred to as 'direct in-scope expenditure', which is money that would not have been spent in the region had the event not been held. This method of analysis excludes local expenditure, which is classified as money that is already in the region. Depending on the type of event, the event can be focused on attracting attendees (for example, a Van Gogh Exhibition), competitors (for example, the World

Masters Games) or exhibitors (for example, an Events Industry trade show). There are issues with open ticketed events where there are challenges such as counting the number of people at the event (See, for example, Raybould, Mules, Fredline & Tomljenovic 2000; Tyrrell & Ismail 2005).

5.2.3.7 Sponsors

It is widely recognised that sponsorship plays an important role in most types of tourism, cultural and sporting events (Carlsen 2003), as well as arts events (Kerstetter & Gitelson 1995; O'Hagan & Harvey 2000; Ryan & Fahy 2003; Stotlar 2004). According to Kerstetter and Gitelson (1995), sponsorship is used by companies to enhance their identity among opinion leaders, members of the local community, as well as customers and employees. Sponsorship of events can take the form of partnerships between sponsors and the event, and such arrangements can be seen as a source of innovation and creativity (Ryan & Fahy 2003).

A method of evaluating sponsorship effectiveness is to use audience surveys that determine the degree of sponsor recall by event attendees, however, the results of studies that have trialled this method have indicated that event attendees had trouble recalling the sponsors of the event (Kerstetter & Gitelson 1995). Overall, Kerstetter and Gitelson (1995) concluded that the study did not support the notion that sponsorship allows a company to establish a link with an event. Nevertheless, sponsorship can contribute to a marketing strategy, and one of the ways in which the effectiveness of sponsorship can be gauged is to determine whether or not the objectives of the sponsor were met (Stotlar 2004). Sponsorship has been an integral part of larger events including the Olympic games, which are regarded as the ultimate sponsorship event opportunity (Stipp 1998).

5.2.4 Licence to Stage an Event

As discussed previously, businesses are granted a 'licence to operate' by society, which requires businesses to operate as good corporate citizens (Downing 2001; Robson & Robson 1996). As such, this research argues that special events are granted a 'licence to stage' the event by a range of event stakeholders, which are represented

in Figure 5.3 and Figure 5.4. Consequently, between these entities and an event, exists a set of social contracts, which Moir (2001) suggested include implicit behaviours and responsibilities. In contrast to a business entity, however, the social contract for an event appears to be a more fluid arrangement, due to the temporary nature of events, particularly one-off events. Despite the conceptual contrast, this thesis argues that those organisations involved in staging an event are also accountable for the use of the range of financial, human and community resources that are entrusted to them, as described by Brown and Fraser (2006).

5.2.5 Event Outcomes

The initial stage of the model illustrated the three event drivers, namely, STOs, event organisers and the host community, which are involved in the decision to stage or restage an event. In the second stage of the model, it was proposed that an event is staged with a set of inputs, which are provided by a range of individuals and organisations. Whereas the previous section drew on the literature, the next section is drawn from the first two phases of this research, namely, the comprehensive analysis of event evaluation literature and impact assessment, as well as the Web-based Delphi Survey of event experts.

5.2.5.1 TBL Impacts

As a result of the staging of an event, a number of outcomes are produced. As discussed in Chapter Two, one of the purposes of an evaluation is to assess the outcomes of an entity (Robson 2000). Figure 5.5 shows the event outcomes, which are, in essence, the event impacts and the TBL indicators that measure each of the impacts. The impacts were derived from the analysis of event literature and impact assessments that were presented in Chapter Three. In addition to this, each of the impacts was vetted by a panel of event experts in the Web-based Delphi survey that was presented in Chapter Four. These research phases represent steps 2-4 in the indicator development process (Segnestam et al. 2000) that was outlined in Chapter One and underpins the structure of this research.

Figure 5.5 Event Outcomes

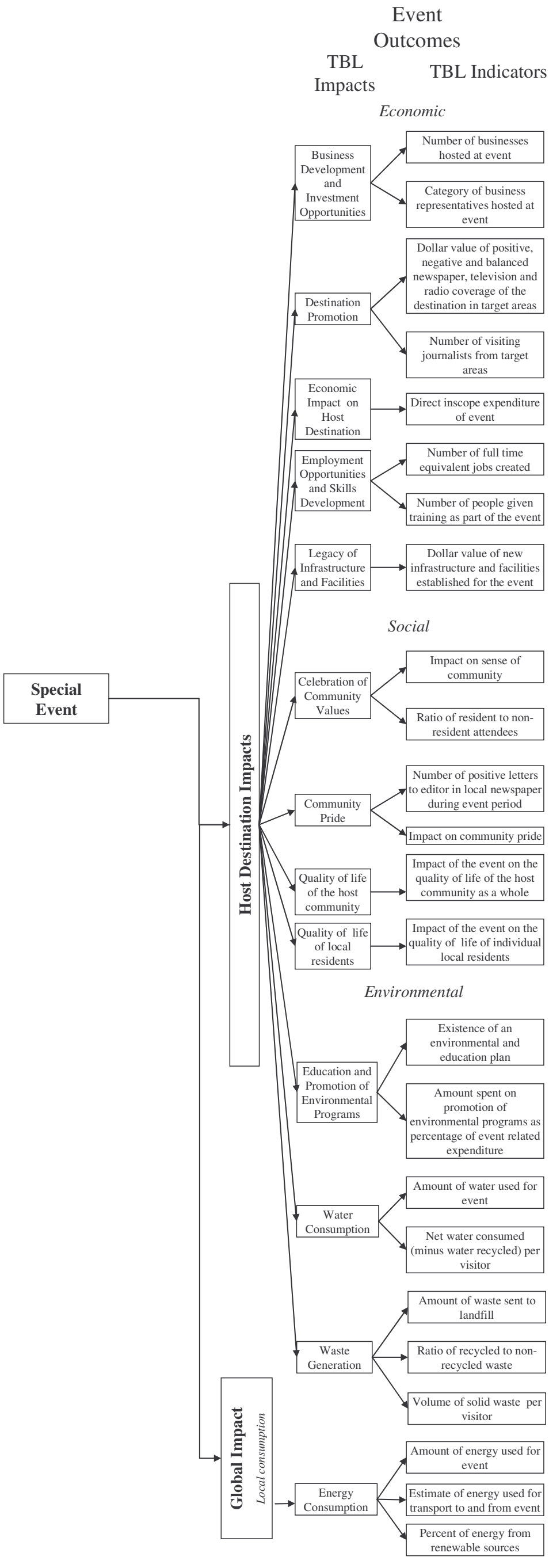


Figure 5.5 reveals that the impacts have been separated into two components, namely, destination impacts and global impacts. The majority of event impacts occur within the host destination, which includes all of the economic and social impacts and most of the environmental impacts. Energy use, however, is determined to be a global impact, and the release of CO_2 into the atmosphere through energy use such as electricity and gas, is not geographically confined to the local environment. For example, the CO_2 emissions for the air component of travel to and from an event, are released into the upper atmosphere and therefore are not attributable to the host destination (Rickard 2004).

5.2.5.2 TBL Indicators

The second set of event outcomes shown in Figure 5.5 is the pool of TBL indicators. As stated at the outset, the aim of this study is to develop a set of indicators to measure the TBL impact of special events. As discussed in Chapter Two, indicators have been developed to measure the progress towards sustainable development goals. There are a number of indicator frameworks (see, for example, Bell & Morse 1999; Meadows 1998) that provide guidance for the development of indicators, however, these frameworks are mostly concerned with developing indicators for systems. In contrast, the indicator development framework called the Global Reporting Initiative (2006b), has been developed specifically to help both public and private organisations to evaluate their TBL performance and move towards sustainability reporting.

The indicators for this research were not specifically developed to measure the sustainability of events. Rather, they were developed with the aim of measuring the TBL performance of special events. The reasoning behind this is that unlike a business entity that is an on-going concern, events are short term in duration, and, furthermore, are sometimes staged only once in a particular destination. One of the few studies to address these issues was by Bramwell (1997) who questioned the applicability of events in the pursuit of sustainable tourism development. Bramwell (1997, pp. 13-14) claimed that although 'sustainable development provided an integrative framework to assess the diverse impacts of sports mega-events', 'their short-term nature certainly may discourage concern for sustainability'. This apparent

contradiction was also highlighted by Atkinson (2000) who suggested that, in a wider business context, there does not appear to be much substance in the concept of a sustainable corporation, beyond a set of indicators to measure the progress towards sustainable development goals (Atkinson 2000). Therefore, rather than attempting to measure the sustainability of an event, this research argues that the focus should be more towards managing an event in a more sustainable manner. As such, although the indicators developed by this study do not measure the sustainability of an event, the indicators are still aligned with the general principles of sustainable development, in that they encompass the economic, social and environmental dimensions of a special event.

The TBL indicators shown in Figure 5.5 were derived from the Delphi survey of event experts that was presented in Chapter Four. To recapitulate, in the second round of the survey, the panel of event experts was asked to suggest up to two indicators to measure each of the key impacts. Guidance was provided to the panel members in regard to how indicators could be expressed, namely as either an existence, category, number, percentage or ratio (Sandhu-Rojon 2003). Apart from this guidance, however, the panel members were encouraged to brainstorm potential indicators to measure each of the impacts. Thus, as shown in Figure 5.5, the indicators are expressed in a number of ways such as numbers, percentages and ratios. Furthermore, most of the impacts were represented by more than one indicator and in total, 24 indicators were suggested for measuring the key impacts. The indicators are presented in the three TBL dimensions, namely, economic, social and environmental.

5.3 Event Evaluation Framework

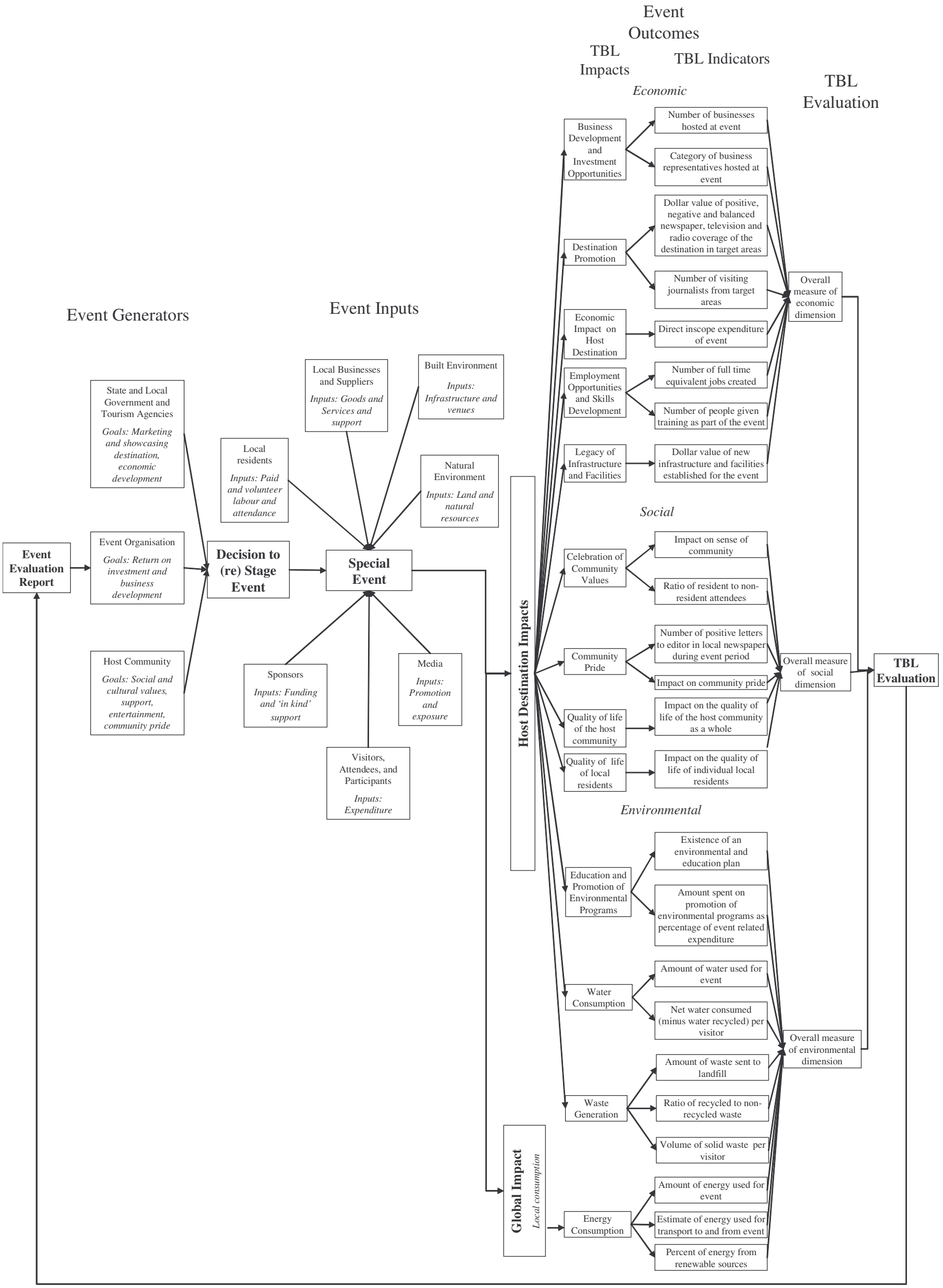
The aim of this research is to develop a broad-based evaluation to account for the economic, social and environmental impact of events, rather than just the economic impact, which has been the case thus far in the majority of event evaluations. The dominance of the economic paradigm in event evaluations is reflected in the trends identified in the academic literature (Formica 1998; Getz 2000; Hede et al. 2002; Sherwood et al. 2005b) and a large number of actual event impact assessments (Sherwood et al. 2005a). A more holistic evaluation of events would provide

stakeholders with a better understanding of the broader impact of events, specifically one that includes social and environmental impacts. Without such an approach, problems may occur in the longer term such as over emphasising the narrow economic impacts and under emphasising the social and environmental impact of events. Moreover, the development of a set of standardised TBL measures would enable comparisons to be made of a range of different events. This is a development that has been lacking in event evaluation thus far (Carlsen et al. 2001).

Given this background, the full event evaluation framework is presented in Figure 5.6. The framework shows the link between the event drivers, the event inputs and the event outcomes, namely the impacts and the indicators. In addition, a fourth component is included in the framework, which is the TBL evaluation. The TBL evaluation component includes an overall measure for each of the TBL dimensions, which would then be integrated into a model which represents the TBL evaluation. Lastly, a feedback loop is proposed in the form of a TBL report on the evaluation of the event. The results of the TBL report would be used to inform the major stakeholders, or drivers of the event, feeding into the decision-making process about whether or not to restage the event. Consequently, the last step would only be relevant for on-going events, rather than one-off events.

Thus far, this chapter has focused on developing an event evaluation framework, which contains the various elements that are involved with the staging and evaluation of an event. Presently, the indictors shown in Figure 5.6 represent a pool of possible indicators. As stated in research question three, the aim is to develop a parsimonious event evaluation model. Accordingly, such a large number of indicators would produce a cumbersome model that would be costly and time consuming to operationalise. Therefore, a subset of indicators needs to be chosen for the TBL model. The focus of the next section is to identify which of these indicators should be included in the two case studies, in which the TBL indicators will be tested for their appropriateness for a TBL evaluation model.

Figure 5.6 Event Evaluation Framework



5.4 TBL Evaluation Model

Although the framework shown in Figure 5.6 includes a TBL evaluation component, the focus of this research is the development of indicators to measure the TBL impacts. The next section presents a discussion of possible TBL models that can be used to integrate the indicators and provide an overall assessment of an event. This discussion is warranted in that it provides a perspective of the overall direction of the research. Moreover, when considering the choice of indictors, it is necessary to take into account not only the potential for the indicators to be operationalised, but also options for how the set of indicators can be integrated into a model that provides an overall measure or 'score' of the TBL performance for an event.

An important step in the progress towards a fully operationalised TBL evaluation of events is the development of a mechanism by which the indicators can be brought together to provide an overall assessment of an event, as well as a comparison of the performance of a range of different events. This is a complex stage in the research, which involves combining a range of different indicators for each of the three or more dimensions. This would also require weightings to be developed in order to reflect the relative importance of each indicator or alternatively each dimension, namely, economic, social and environmental. Bell and Morse (2003) maintained that there were two approaches to integration of the indicators, namely, a visual approach that shows the results in a table of diagram, or a numerical approach that combines the indicators into a single index. More research is needed to develop this stage of the TBL evaluation model.

Nevertheless, whilst a fully developed, integrated TBL evaluation model is beyond the scope of the current study, the aim of this section is to contribute to the understanding of how this can be achieved. As well as bringing together the interpretation of the framework shown in Figure 5.6, the discussion of the approaches to a TBL evaluation model represents Step 5 of the indicator development process (Segnestam et al. 2000), outlined in Chapter One. This step suggested that part of the indicator development process was to develop tools for analysis and visualisation in order to communicate the results gained through the use of the indicators. The benefit

of this step is that it aids and informs the decision making process, which is one of the major purposes for using indictors (Meadows 1998).

The challenges involved in modelling a TBL evaluation were addressed by Fredline et al. (2005c), and include the difficulties of combining a range of indicators into a common measurement. For example, a possible measurement of the economic dimension would be a type of dollar value, however, this type of measurement would not be appropriate for the social indicators. On the other hand, there have been previous attempts to develop dollar estimates that represent some of the social impacts based on the willingness to pay (see, for example, Burns & Mules 1986), however, as the indicators used in the current research focus on the impact on the quality of life, this type of approach would not be appropriate. Similarly, the environmental indicators would be better expressed as a measurement of, for example, the ecological footprint of an event, rather than a dollar amount. Fredline et al. (2005c) also noted that there were impacts beyond the TBL such as the exposure that is gained through showcasing the destination and the leveraging that is possible through business inter-linkages that can be made as a result of the event. As such, any model must be flexible enough to handle modifications, yet robust enough to support a variety of indicators representing not only economic, social and environmental impacts, but also a range of more holistic measures.

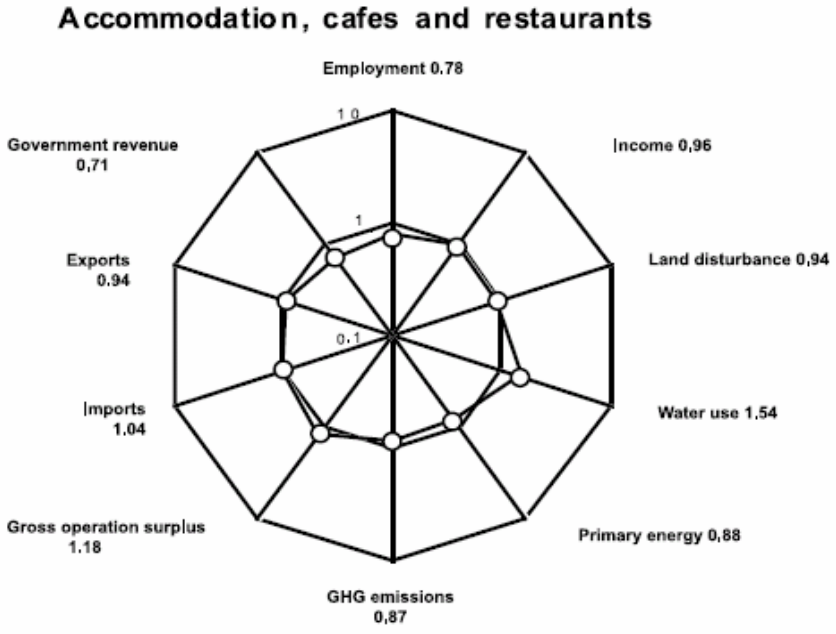
Regardless of the number or type of indicators chosen, the indicators need to be aggregated in order to be operationalised and graphically represented in a TBL model, so that an overall assessment of the TBL impact of an event can be attained. The two alternatives that will be discussed in this section are to normalise each indicator into a common denominator, or aggregate the indicators at the TBL dimension level. These two options would be examples of an index approach, as outlined by Bell and Morse (2003).

5.4.1 Model Option One – Indicators Normalised at the Indicator Level

The first approach is for each of the indicators to be normalised in a consistent format. An example of this approach to a TBL evaluation is shown in Figure 5.7. The

representation is called a spider diagram, in which all data have been normalised at a dollar value (Foran et al. 2005). Specifically, the indicators have been developed as an intensity, that is, each indicator represents a measure of one dollar of final demand or per one dollar spent for consumption in everyday life. Foran et al. (2005) claimed that the aim of the analysis was to answer the calls from society, industry, government and institutions for a framework to make decisions based on a broader set of criteria than just the financial bottom line.

Figure 5.7 Spider Diagram for TBL Evaluation



Source: Foran et al. (2005, p. 77)

The study used an input-output analysis and was undertaken across 135 economic sectors within Australia. The sector specific approach provided a framework for both individual products and firms, and presents a benchmark against which individual firms and institutions may measure their own TBL performance (Foran et al. 2005). For each evaluation, the study used three financial, three social and four environmental indicators. Figure 5.7 reveals the TBL analysis for the Accommodation, café and restaurant sector, which includes hotels, accommodation

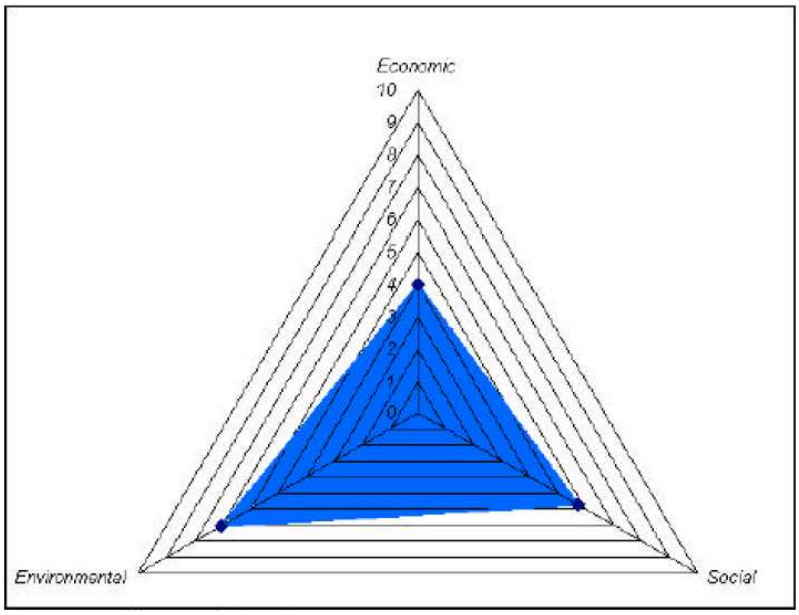
services, cafes, restaurants, licensed and non-licensed clubs and meal preparation and presentation. The authors interpreted the results of the TBL evaluation of this sector as a notable one, in that there were approximately average results across each of the 10 indicators.

5.4.2 Model Option Two – Indicators Normalised at the Dimension Level

The second method is to normalise the indicators across each of the three TBL dimensions rather than at the indicator level. For example, in this approach, the economic dimension could be aggregated into a dollar figure, the social dimension into a mean rating of an impact scale, and the environmental dimension into a measure of the ecological footprint. This type of approach was supported by Korhonen (2003), who claimed that social and ecological indicators can be combined with economic indicators, but should not expressed in monetary terms. The major technical challenge associated with this approach is that each dimension would need to be scaled be able to be represented on a similar tangent or scale.

A discussion on the applicability of this method of event evaluation was presented by Fredline et al. (2004; 2005c). The authors highlighted the methodological challenges that practitioners would be faced with when attempting to develop an holistic appraisal of event impacts. A conceptual model was proposed that synthesised the TBL evaluation (see Figure 5.8), which consisted of three scales that were used to plot each dimension, based on a zero to ten scoring system. The shaded area represents a hypothetical assessment of an event, which can be measured as a proportion of the overall area of the grid. In addition to the TBL, the authors proposed two more dimensions, namely, business leveraging and destination image, which they suggested warranted inclusion in a broader framework.

Figure 5.8 The Event Footprint



Source: Fredline et al. (2005c, p. 11)

This study argues that the second framework appears to be the most appropriate for a TBL evaluation of the impact of events, especially given that the aim of the research is to develop a parsimonious model. Moreover, given the variety of indicators that would need to be integrated, a more efficacious approach would be to aggregate at the dimension level, rather than at the indicator level. Likewise, the level of data analysis needed for the model shown in Figure 5.7 is less complex than that needed for the model in Figure 5.8. For example, the model by Foran et al. (2005) used a much broader data set that included data from the supply chain for each of the 10 components, moreover, the analysis focused on the economy and each sector from a system's perspective. In contrast, as outlined earlier, special events are entities that operate for a short time period within a tourism system, rather than being a system itself. An aggregation at the dimension level would still result in a set of standardised measurements and allow for comparison of the relative performance of a range of different events. As shown in Figure 5.8, the model proposed by Fredline et al. (2005c) has yet to define how the indicators will be integrated into the framework. For example, there is uncertainty about how each of the scales will be operationalised

in regard to the minimum and maximum for each scale and what measurement the scale actually represents. These technical issues illustrate the challenge of designing such a framework. Moreover, this discussion reinforces the fact that these developments, whilst being part of the larger TBL research project, are beyond the scope of this current research. Nevertheless, the results of this research will be a starting point for future discussions and developments in this area.

5.5 Selection of Indicators for Testing

As discussed earlier, a subset of indicators needs to be selected for testing in the two event case studies. Firstly, there were a number of issues that need to be considered in selecting a subset of indicators. The issues include the practical aspects of collecting and analysing the data, making the data easy to understand for end users, the requirements of stakeholders such as STOs, and the potential use of the indictors in a type of rapid assessment tool for evaluating the TBL impact of events.

The practical implication is that an evaluation that included all of the indicators shown in Figure 5.6 would result in a cumbersome TBL evaluation model. This is particularly important given that a comprehensive evaluation is an emerging area, consequently there is a need to keep the model as simple as possible so as not to overwhelm potential end users. In addition, as stated earlier, an evaluation that attempted to collect data for all 24 indicators would be expensive both in terms of the time and cost involved in collecting and analysing the data. In selecting a subset of indicators, the challenge is to find measures that can capture key changes, as well as combining what is relevant with what is realistically practical in regard to collecting and managing the data (Sandhu-Rojon 2003).

There are a range of different characteristics of good indicators. For instance, Meadows (1998) suggested that a set of indicators should be chosen that is small and meaningful enough to comprehend and be easily understood. Similarly, Mortenson (1997) claimed that indicators should utilise data that are readily available and attainable at a reasonable cost and that the indicators should be limited in number and conceptually well-founded. Harger and Meyer (1996) maintained that indicators

should be simple, cover the diversity of issues (economic, social and environmental), be measurable and allow trends to be determined over time. In addition, one of the types of indictors suggested by Lawrence (1997) was comparative indictors, which were noted earlier as being more relevant for the current research given that the aim is to be able to compare a range of different events.

Whilst the above characteristics were important in regard to the development of indicators in general, there were also a number of considerations that were important in the development of special event-specific indicators. As part of the development of the larger TBL project referred to earlier, discussions were held with representatives from a number of State and Territory Tourism Agencies who were stakeholders in the project to develop a TBL evaluation model. It was generally agreed that the model needed to be a parsimonious one, which, ideally, would utilise a small number of indicators, yet capture enough information for a TBL evaluation. Another consideration was that the indicators needed to measure short-term impacts of events, as reflected in the third research question.

One of the challenges involved in a TBL assessment of events noted by Fredline et al. (2004), was that it was an essential goal that any effort to synthesise the TBL results needed to be conceptually simple. The authors explained that this was because the results of the TBL evaluation would need to be interpreted by a range of different stakeholders. This would likely include event managers, government agencies as well as event researchers and if the information was available, the general public.

Given the above, the criteria used to select appropriate indicators were as follows:

- Timely - short term focused as the research seeks to measure the short-term impact of events;
- Cost effective - able to be administered at a relatively low cost;
- Available – require data that was readily available for collection; and
- Relevant to a TBL evaluation.

The next section outlines the process for selecting which indicators will be used and operationalised in the event evaluation case studies. It should be noted that because of

the interlinkages between the impacts and indicators shown in Figure 5.6, for any indicator that is not used in an evaluation, the corresponding impact is also deselected. This is not to say that the impacts are not important, rather they are not appropriate for the type of model being developed in this research.

5.5.1 Economic Indicators

Of the three TBL dimensions, the economic impacts appeared to be the most diverse in terms of the breadth and depth of data needed for analysis. Therefore, careful consideration was needed when making decisions about which indicators to either include or exclude from the case studies. As highlighted in Table 5.1, the majority of the economic indicators were not selected to be used in the case studies, in keeping with the aim of developing a parsimonious TBL evaluation model. Drawing on relevant literature, comments are made below concerning the justifications for either including or excluding each of the indicators from the case studies. In short, the majority of the social and environmental indicators were retained, thus, most of the culling involved the economic indicators. Consequently, the majority of the following section is concerned with a discussion of the economic indicators.

Table 5.1 Economic Indicator Collection Details

Impact	Indicator		Time (Short, Medium, Long)	Costs (High, Medium, Low)	Availability of Data (Easy, Medium, Difficult)	Include in Testing
Business leveraging and investment opportunities	EC1	Number of businesses hosted at event	Short	Low	Easy	Yes
	EC2	Category of business representatives hosted: Senior management, Middle management, Other	Short	Low	Easy	Yes
Destination promotion	EC3	Dollar value of positive, negative and balanced newspaper, television and radio coverage of the destination in target areas	Short	High	Difficult	No
	EC4	Number of visiting journalists from target areas	Short	Low	Medium	No
Economic impact on the host community	EC5	Direct inscope expenditure of the event	Short	Medium	Medium	Yes
Employment opportunities and skills development	EC6	Number of full time equivalent jobs created	Short	Low	Medium	No
	EC7	Number of people given training as part of the event	Short	Medium	Difficult	No
Legacy of infrastructure and facilities	EC8	Dollar value of new infrastructure and facilities established for the event	Long	Medium	Difficult	No

5.5.1.1 EC1 and EC2 - Number of businesses hosted at the event and category of business representatives hosted

These two indicators could be referred to as proxy indicators, as they represent an attempt to measure the business leveraging component of an event. Gallopin (1997) defined a proxy indicator as a variable assumed to be correlated to some attribute that is not directly observable. From a number of studies on local business leveraging at sports events, Chalip and Leyns (2002) concluded that the potential for leveraging was largely unrealised, and that the event organisers had the most to benefit from fostering and managing local business leveraging. In regard to both economic and event marketing, there are apparent short-term benefits (for example, higher visitor spend) and long-term benefits (for example, enhancing the atmosphere and overall quality of the event) to event leveraging (Chalip & Leyns 2002).

According to O'Brien (2006), event business leveraging represents a slight, yet important paradigm shift in the international event sector, and that the concept requires further analysis. Morse (2001) claimed that an important component of the staging of the Sydney 2000 Olympic Games was to leverage the Games to promote tourism. Some of the practical aspects of this strategy were developing joint promotions between the various sponsors of the event, and setting up a business development plan, through which influential international tourism identities were invited to attend the Games. Further research needs to be undertaken to determine how this information can be compared to other events, however, given that the cost of the data collection would be low and easy to gather, the indicators were chosen to be used in the two event case studies.

5.5.1.2 EC3 - Dollar value of media coverage

There is little doubt that this is an important indicator given the emphasis of the role that events play in showcasing destinations. This was evidenced by the fact that the destination promotion was mentioned in just over 80% of the event evaluation publications, used in just under 50% of the event assessments that were analysed in Chapter Three and given a high priority in the Delphi survey of event experts. One of

the significant benefits for an event destination and the state can derive from media coverage of the event (Dwyer et al. 2000a, p. 183). This can be measured in advertising costs saved. The collection of data for evaluating the dollar value of media coverage of an event, however, is an expensive process that usually involves contracting a media-monitoring organisation to undertake the research. In theory, the evaluation is based on an estimate of the equivalent cost of paying for the coverage that was generated by the event.

In spite of this, there appear to be some problems with operationalising this indicator. For example, Dwyer et al. (2000a) maintained that the current measures of destination promotion were very crude and in need of further refinement by event researchers. In regard to measuring the awareness of the destination as a result of the event, the associated problems are the high cost of data collection in many dispersed, multi-language markets (Ritchie 1984). Additional challenges to measuring the media coverage of events are how to the treat less than favourable media coverage, the labour intensive nature of estimating the outcomes and the high degree of subjectivity involved in the analysis (Dwyer et al. 2000a). Moreover, there are measurement limitations such as the extent to which the free advertising associated with a destination can be tracked, and the further conversion of increased awareness to actual visitation also needs further investigation (Carlsen et al. 2001). Furthermore, there are problems associated with assessing the value of the message, particularly as the message can be positive or negative, as it is shown in key target markets, as well as the cost of data collection.

A potential solution is a new development in Australia called Mediaportal (Media Monitors 2006), which may have potential to offer a cost-effective alternative. Mediaportal is a media management tool that captures analyses and disseminates news on a single Website. The benefit is that it also offers examination of where and how extensively the news has been disseminated, how it is being received and what people are saying (Switzer 2006). Nevertheless, as a result of the complexity, scope as well as the high cost of collecting data for this indicator, it was excluded from the case studies.

5.5.1.3 EC4 - Number of visiting journalists from target areas

This indicator was proposed by the panel of event experts as an attempt to measure the impact of an event in terms of destination promotion. Another way to view the indicator is as a proxy indicator for the dollar value media coverage. There appear to be a number of issues concerning this indicator. For example, it is not necessarily the number of journalists that is the important element of destination promotion, but rather the quantity and quality of the output of the journalists. Despite this, the indicator was short term, low cost and medium accessibility and therefore, the indicator was included in the case studies.

5.5.1.4 EC5 - Direct inscope expenditure of the event

This indicator was deemed to be a vital component of any TBL evaluation, as event assessments often begin with an estimation of visitor numbers and their expenditure (Breen, Bull & Walo 2001). Furthermore, many events receive support from government agencies, and as such, event organisers are required to produce an economic evaluation, which is used to justify the allocation of the financial support. Whilst debate continues in terms of economic modelling, namely, input-output versus computable general equilibrium (See, for example, Burgan & Mules 1992; Dwyer et al. 2005a; Dwyer, Forsyth & Spurr 2006), as well as the use of multipliers (See, for example, Crompton & McKay 1994), this indicator is well established in terms of underpinning the economic impact of events. For example, direct inscope expenditure is used as the basis for the Encore Event and Festival Evaluation Model. Another advantage of this indicator is its potential to be used to calculate a measure of the return on investment for the event, such as the subsidy multiplier proposed by Laesser et al. (2003). The use of a coefficient such as this could enable a standardised measurement to be developed that could facilitate the comparison of different types of events, regardless of their scale. Given the above, this indicator was used in the case studies.

5.5.1.5 EC6 - Number of full time equivalent jobs created

These data have traditionally been estimated via an economic evaluation, through the use of employment multipliers. The use of these multipliers, however, has been problematic. For instance, Dwyer et al. (2000a) suggested that caution should be exercised with the use of employment multipliers as the use of these tends to exaggerate the amount of employment generated by an event. In addition, it has also been argued that special events are not likely to generate lasting employment effects, which is due to their one-off or short-term nature (Burgan & Mules 1992; Crompton 1995; Getz 1991). Moreover, rather than events being responsible for the creation of new jobs, much of the demand is taken up by existing employees working additional hours (Crompton 1995; Dwyer et al. 2000a). In short, due to the problematic nature of this indicator it was not used in the two case studies.

5.5.1.6 EC7 - Number of people given training as part of the event

This indicator was proposed as a way of capturing the skills development aspect of events. Although Table 5.1 indicates that it is a short-term measurement, there are issues in terms of the availability of data. For example, much of the training is done 'on the job' and through a range of different organisations involved in staging an event, which would make it very difficult to capture these data during the event. There are also issues concerning the boundaries of these data, for example, the following are not yet identified: which organisations would be taken into account (the event organiser, suppliers, and contractors); how many hours of training is needed in order to qualify; how comparable are the data between different events; what type of training is being conducted; and how could the data be used to inform event stakeholders. As such, more work needs to be undertaken on this indicator to refine its scope before it could be included in the case studies.

5.5.1.7 EC8 - Dollar value of new infrastructure and facilities established for the event

This indicator is problematic in terms of the time frame, the cost of data collection and data availability. In addition, it appears that the indicator would most likely be

more suited to an evaluation of larger events rather than smaller events as many events do not require additional infrastructure to be built (Getz 1990). It also appears to be a long-term indicator and thus not applicable to an assessment of the short-term event impacts, which was the aim of the research. Data may also be difficult to gather due to the commercial nature of infrastructure development associated with events. Further issues in regard to measuring this impact are the conversion costs for venues to be utilised for future events, the costs of venue construction and maintenance over time and the potential for hosting of future events (Carlsen et al. 2001). Moreover, the indicator does not take into account the economic sustainability of the facility. In other words, the long term use of the infrastructure is of more value than its initial cost. For example, an expensive stadium that is not being used is potentially a drain on the community. In addition, for many events it is a matter of infrastructure projects being brought forward in line with the staging of the event or for smaller events refurbishment of existing infrastructure rather than the development of new infrastructure. As such, this indicator was not tested in the case studies.

In short, those economic indicators that were not selected for inclusion in the two case studies were the ones that were more complex in nature or represent impacts that become manifest over a longer term. These two criteria ran counter to the intention of the research, which was to develop a parsimonious TBL evaluation. This is an important consideration given that the potential end-users of these indicators are often event organisers and other event stakeholders, who would be better informed by more easily understood indicators.

5.5.2 Social Indicators

In terms of the social indicators identified by the Delphi panel, only the 'Number of positive letters to the editor in local newspaper during event period', was not tested in the two case studies. There were a number of reasons for this decision, for example, there were issues concerning what time frame would be used for the collection of data, the subjective judgement of what was a positive letter, and why would negative and neutral letters not also be included. Furthermore, it might be difficult, costly and time consuming to gather the data from the papers. The

development of Mediaportal, mentioned previously, might assist in the future in gathering data for this indicator.

The four indicators that related to the impact on quality of life were included in the case studies. These four were included as they had been used in previous research (Fredline, Deery & Jago 2005a), and that this would enable a comparison to be made with the results from the other events that have been evaluated using these indicators. As Table 5.2 indicates, the data availability was classified as medium for all but one of the indicators, mainly as the data collection usually takes place through either a phone or mail-out survey. Response rates are normally low for these types of surveys, as they are dependent on the willingness of the public to respond. One of the reasons put forward for this is that in recent times, the public have been over surveyed to some degree, especially considering the invasive reputation of telemarketers (Czaja & Blair 2005).

Table 5.2 Social Indicator Collection Details

Impact	Indicator	Time (Short, Long)	Costs (High, Medium, Low)	Availability of Data (Easy, Medium, Difficult)	Include in Case Studies
Celebration of community values	Percentage of community believing event enhances their sense of community	Short	Medium	Medium	Yes
Community Pride	Number of positive letters to editor in local newspaper during event period	Short	Medium	Difficult	No
	Impact on community pride	Short	Medium	Medium	Yes
Quality of life of the host community	Impact on the quality of life of the host community as a whole	Short	Medium	Medium	Yes
Quality of life of local residents	Impact on the quality of life of individual local residents	Short	Medium	Medium	Yes

5.5.3 Environmental Indicators

In contrast to the economic and social indicators, the environmental indicators have been under used in event evaluations (Sherwood et al. 2005a). As a result, one of the major contributions of this research lies in the development of a set of environmental indicators, as well as the calculations that underpin the analysis of the data. As shown in Table 5.3, the majority of environmental indicators were taken forward and used in the case studies.

Each of the environmental indicators was deemed to be short-term in nature as the impacts occurred during the event or a relatively short time after the event. For instance, water and energy consumption occurred during the event, and depending on availability, could be measured soon after the event concluded. Similarly, the cost of collecting the data for each of the environmental indicators was deemed to be low. This was because most of the data would be measured as a matter of course. As noted earlier, businesses that choose to move towards a TBL assessment often find that much of the data are already being collected (Global Reporting Initiative 2006b). For example, a range of event suppliers might already be collecting the necessary environmental data, however, it may not have been previously collated and analysed. For the majority of indicators, environmental data were seen to be readily available, however, this is dependent on the type of event. For example, a venue-based event might have more readily accessible data as opposed to an event that is staged in a public space. This is because purpose-built stadia are more likely to have the capacity to measure and collect environmental data in comparison to parks and gardens that lack the necessary event infrastructure.

In short, the only environmental indicators that were not included in the model were those that measured the education and promotion of environmental programs of an event. There are two main reasons for this. Firstly, unlike the other indicators, these indicators were not linked to resource use, for example, waste generation, water use or energy consumption. Secondly, the indicators represented a process rather than performance. Therefore, although these indicators were perceived to be readily available, it was felt that they would not contribute to a TBL evaluation.

Table 5.3 Environmental Indicator Collection Details

Impact	Indicator	Time (Short, Long)	Costs (High, Medium, Low)	Availability of Data (Easy, Medium, Difficult)	Include in Case Studies
Education and promotion of environmental programs	Amount spent on promotion of environmental programs as percentage of event related expenditure	Short	Low	Easy	No
	Existence of an environmental and education plan	Short	Low	Easy	No
Energy Consumption	Amount of energy used for event	Short	Low	Medium	Yes
	Estimate of energy used for transport to and from the event				
	Percent of energy that comes from renewable sources	Short	Low	Medium	Yes
Water Consumption	Net water consumed (minus water recycled) per event visitor	Short	Low	Medium	Yes
	Volume of water used for the event	Short	Low	Medium	Yes
Waste Generation	Mass of waste sent to landfill	Short	Low	Medium	Yes
	Ratio of recycled waste compared with non-recycled waste	Short	Low	Medium	Yes
	Mass of solid waste and per visitor	Short	Low	Medium	Yes

5.5.4 Indicators to be used in Case Studies

As a result of the application of the selection criteria to the pool of 24 potential indicators, 16 were chosen for inclusion in the two case studies. As shown in Table 5.4, there were four economic, four social and seven environmental indicators. The large number of environmental indicators chosen is a reflection of the exploratory nature of this area of the current research. As suggested by Sherwood et al. (2005b), the development and inclusion of environmental indicators may be the key to unlocking the TBL evaluation of events as compared to the economic and social measures, as there has been considerably less discussion of either the environmental impacts or developing indicators to measure the impacts. This contrasts with the business cases presented in Chapter Two, which suggested that environmental performance measures were operationalised ahead of the social performance measures. Table 5.4 also reveals what the anticipated units of measurement are for the each of the indicators. The indicators are expressed in a number of different forms, for example, numbers, scales and ratios, which illustrates the challenges in integrating a set of TBL indicators into a holistic framework such as that proposed by Fredline et al. (2005c).

Table 5.4 Indicators to be used in Event Evaluation Case Studies

Indicator	Unit of Measurement
Economic	
Category of business representatives hosted: Senior management, Middle management, Other	% for each category
Number of businesses hosted at the event	Number
Number of visiting journalists from target areas	Number
Direct inscope expenditure of event	$ amount of direct inscope expenditure and event organiser expenditure and income
Social	
Impact on sense of community'	Seven-point Likert-type scale (-3 to +3)
Affect on pride in your community'	Seven-point Likert-type scale (-3 to +3)
Impact on quality of life of the community as a whole	Seven-point Likert-type scale (-3 to +3)
Impact on personal quality of life'	Seven-point Likert-type scale (-3 to +3)
Environmental	
Volume of water used for event	Kilolitres
Net water consumed (minus water recycled) per visitor	Litres
Mass of waste sent to landfill	Kg/Tonnes
Ratio of recycled to non-recycled waste	Ratio
Mass of solid waste per visitor	Kg
Percent of energy from renewable sources	%
Amount of energy used for event	Kilowatt hours (kwh)
Estimate of energy used for transport to and from event	Kg of CO_2

5.6 Conclusion

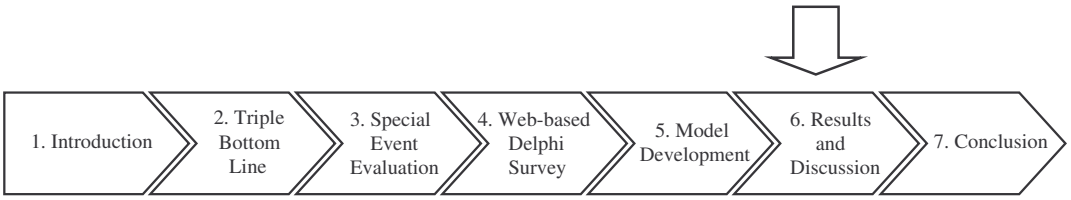
This chapter had two aims. The first aim was to introduce and explain the conceptual framework for the study, which was an event evaluation framework. The framework consisted of a number of stages, namely, the event generators, the event inputs, the event outcomes and the TBL evaluation. This framework was used to place into context the TBL evaluation. Included in the event outcomes was a pool of 24 possible indicators, which were drawn from the Delphi survey of event experts that was presented in Chapter Four. As the aim of this research was to develop a parsimonious TBL evaluation, using all 24 indicators would have resulted in a cumbersome model, which would have been difficult to operationalise. Therefore, the second aim of this chapter was to select a subset of these indicators, which was undertaken through a consultation with project stakeholders, the application of selection criteria and a

review of relevant literature. The next stage of the research will be to test these indicators in two event case studies, which will determine their appropriateness for a TBL evaluation model. This will be the focus of the next chapter.

Chapter

6

Results and Discussion



Chapter Structure

- Research Approach
- Case Study Sites - Equitana Asia Pacific 2005 and Ironman Western Australia Triathlon 2005
- Data Collection Approach
- Results of Case Study One
- Results of Case Study Two
- Discussion and Recommendation on Indicators
- Feedback from Stakeholders

6.1 Introduction

The first phase of this research established a list of the key impacts, which were derived from a comprehensive analysis of a large number of special event publications and impact assessments. In the second phase, a Web-based Delphi survey of event experts was used to establish a set of potential indicators to measure the TBL impact of events. In the previous chapter, an event evaluation framework was proposed that places the indicators into context and then a subset of indicators was chosen for use in the case studies. The aim of this chapter is to present the case studies that were used to operationalise and test the feasibility of the indicators for a

parsimonious TBL evaluation of special events. The first section of the chapter briefly outlines the research approach taken and the background for the two special event case studies. The case studies represent Step 6 in the indicator development process (Segnestam et al. 2000) that underpins this study. The next section explains the data collection approach that was taken and, following this, the results of the case studies are presented. In order to provide a means of understanding the results of the environmental data, the chapter then compares the environmental data from each of the two case studies as well as against data from normal domestic use. The penultimate section presents a discussion of the indicators, and based on the results of the case studies, makes recommendations on which indicators are appropriate for a TBL evaluation. In the final section, feedback is sought from a number of project stakeholders, on the indicators and the results of one of the case studies. This phase of the research equates to the final step (7) in the indicator development process (Segnestam et al. 2000).

6.2 Research Approach

6.2.1 Case Studies

The research approach used for this phase of the study was based on the case study method and the details of the research method will be discussed in this section. Stated simply, 'the purpose of the case study method is to obtain information from one or a few situations that are similar to the researcher's problem situation' (Zikmund 1999, p. 107). Yin (2003) claimed that the case study is the preferred method in the following conditions: when the research is focused on examining contemporary events; when the researcher does not require control over the relevant behaviours of the event; and where the research question is based upon how or why. One of the main strengths of the case study is that it allows for a variety of evidence to be dealt with such as documents, artefacts, interviews, and observations (Yin 2003).

Another advantage of a case study is that an entire entity can be investigated in depth and with meticulous attention to detail (Zikmund 1999). Zikmund (1999) cautioned, however, that the results from case studies should be seen as tentative, and that

generalising from a few cases can be dangerous as the majority of situations are atypical in some sense, a view supported by Neuman (1991). De Vaus (2002) claimed that the case study method does not rely on comparing cases but on a full understanding of the 'wholeness' of a particular case. Nevertheless, this research will attempt to make some comparisons between the two case study entities. It is acknowledged, however, that the results will be limited in their generalisability.

The case study approach has been widely used in the social sciences and more specifically in tourism research. For example, Yin (2003) found that this method has been used in a large proportion of dissertations in the social sciences. Moreover, in an analysis of case studies that appeared in tourism journals, Xiao and Smith (2007) concluded that the method has been used across a variety of subjects or issues, mostly to address broader or more holistic areas such as tourism planning and development. The majority of case studies in the sample used by Xiao and Smith (2007) focused on small geographic locales, adopted one point in time for the data collection and were limited to a single case. In the current research, two cases were used, involving events that were located in quite different regions. Moreover, a single point in time was used in that each event was only evaluated once.

6.3 Selection of Case Study Sites

As was outlined in Chapter One, the research sites for this study were Equitana Asia Pacific 2005, which was staged in Melbourne, Victoria and the Western Australian Ironman Triathlon 2005, which was held in Busselton, Western Australian. As pointed out in Chapter One, the researchers had little influence over the selection of the case study sites, as these events were chosen by the stakeholders involved in the larger Tourism Australia research project. Nevertheless, the two events provided a degree of contrast on a number of levels. For instance, Equitana was held in a city location, was a fully-ticketed event and was staged in purpose-built stadia. On the other hand, the Ironman event was held in a regional setting, was an open-ticketed event and was staged in and around a park, where little or no permanent infrastructure was available. This section presents the background to the two case study sites.

6.4 Case Study Site One – Equitana Asia Pacific 2005

6.4.1 Background to the Event

Equitana Asia Pacific was first staged in 1999 and is an event that presents a comprehensive program featuring a range of activities that relate to the equine industry. The event was previously held in Melbourne in 1999, 2001, 2002 and 2003. There were three main elements to Equitana Asia Pacific 2005, which were:

- Entertainment - Cavalcade - Reins of Fire, Western Spectacular and the Dressage Spectacular;
- Education and demonstration - over 150 educational sessions, world-class clinics, performance horses and equine specialists from around the world; and
- Exhibition – a large collection of equine goods and services (Definitive Events 2005).

The majority of Equitana 2005 was staged at the Melbourne Exhibition and Convention Centre (MECC). The MECC is a 30,000 square metres purpose-built exhibition space that was opened in 1996, and has hosted a large number of public and trade exhibitions in Australia including the International Motor Show, which attracts in excess of 250,000 people (MECC 2005). The main event, however, Cavalcade – Reigns of Fire, was staged at a separate venue, namely, the Rod Laver Arena. Rod Laver Arena is a multi-purpose venue in Melbourne Park, where other events such as the Australian Open Tennis Championships are held each year. Cavalcade – Reigns of Fire was a 90-minute theatrical production, which featured 40 horses as well as their riders, acrobats and musicians. The event is organised by Definitive Events, an organisation that has staged events since 1998 including Australian Music Week, East Coast Blues and Roots Music Festival, Melbourne International Music Festival and World Hot Air Balloon Championships (Definitive Events 2005).

6.5 Case Study Site Two - Ironman Western Australia Triathlon 2005

6.5.1 Background to the Event

The Ironman Western Australia Triathlon was held in Busselton, Western Australia on 27 November 2005. Busselton is situated 232 km south of Perth near the Margaret River region, which is an area well known for wine growing and surfing. IMG is contracted to stage the event for three years (2004-2006), thus, the 2005 event was the second time that the event had been staged in Busselton. At the time the event was staged, negotiations were underway for the Ironman event to be staged in Busselton for an additional three years from 2007-2009 (Hamilton 2005). According to Tourism Western Australia (2005b), the 2004 Ironman Western Australia Triathlon, was a successful event with over 850 athletes entering the race.

Ironman triathlons are extremely demanding endurance events, which require participants to swim 3.8km, cycle 180km and run 42km, without a pause between each activity. There are currently three Ironman Triathlons operating in Australia and New Zealand, namely, Ironman Australia (Port Macquarie), Ironman Western Australia (Busselton) and Ironman New Zealand (Taupo). International Management Group (IMG) operates all three events under licence from the World Triathlon Corporation. Although there are competing Ironman-type events, the World Triathlon Corporation Ironman brand has emerged as the dominant brand in the marketplace in Australia and New Zealand (Dickson, Griggs & Schofield 2005). The World Triathlon Corporation also operates the Ironman Hawaii, which was established in 1978, and is promoted as the Ironman Triathlon World Championships. Athletes can qualify for the Ironman Hawaii by competing in any of the 24 qualifying events held throughout the world in countries such as Canada, Brazil, Germany, and Australia (Dickson, et al 2005).

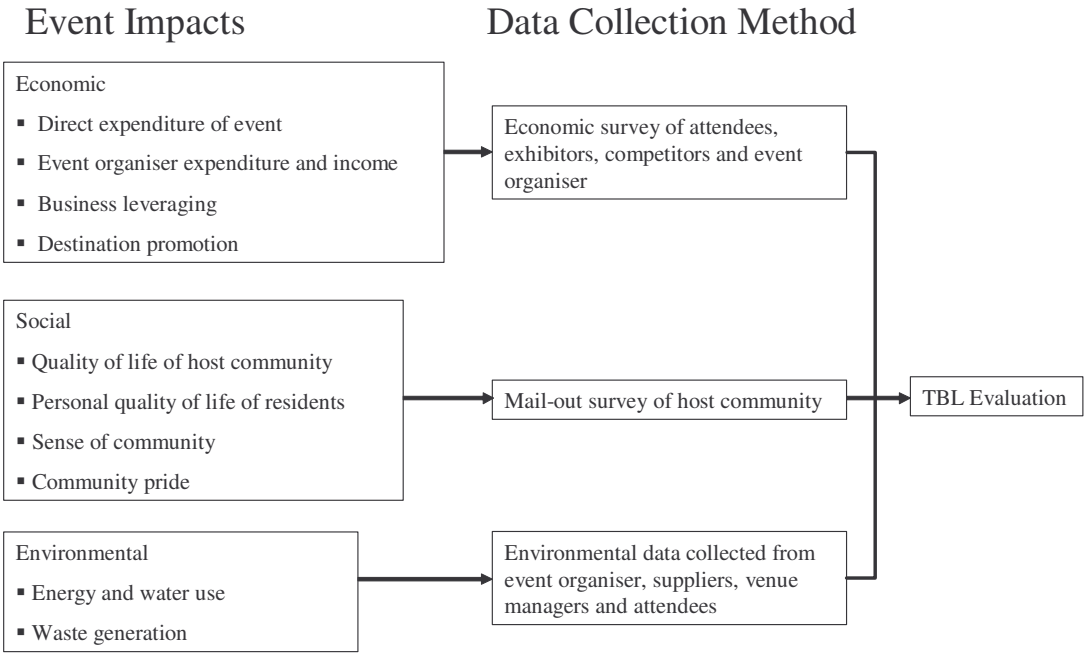
In contrast to Equitana 2005, Ironman 2005 was a competitor-focused event. That is, it was staged predominantly for competitors. As a result, the event was a non-ticketed event for spectators, although tickets could be purchased for a number of official event functions. This presents issues in terms of crowd estimates (for a discussion of

this issue, see, for example, Raybould et al. 2000), however, the only impact was on the data collection, whereby attendees were dispersed in a wide area around the Ironman course, rather than located within a single venue or stadium.

6.6 Data Collection Approach

As a range of economic, social and environmental data were to be collected for the two event case studies, a number of different data collection methods were needed. Figure 6.1 reveals the framework used to undertake the TBL evaluation of the two special events. The framework was adapted from a model proposed by Faulkner (1993), which was developed to monitor the evaluation of hallmark events. In the original model, the flow of information (represented by the arrows) was in the opposite direction. It is argued here that the information flow should be from the impacts to the data collection rather than the reverse. The reason for this is that from a chronological standpoint, firstly the impacts occur and secondly, the data are collected. For example, in regard to the social impacts, the impact on the quality of life occurs during and after the event, and then following the event, the social survey is mailed out to local residents to capture the impact of the event. It is acknowledged that there are social impacts such as the dislocation effect that can occur prior to an event such as the Grand Prix, however, this impact was not included in this research. In regard to environmental data, energy use, for example, could only be collected after the event had finished. The next section will outline the methods that were used to collect data for the two case studies. Figure 6.1 shows that the event impacts are monitored by three elements, namely, an economic survey, a social survey and an environmental assessment. In addition, the framework reveals that the monitoring systems feed into a TBL evaluation.

Figure 6.1 Framework for Monitoring the TBL Impacts of Special Events



Source: Adapted from Faulkner (1993)

6.6.1 Economic Survey

Personal (or intercept) interviews were used for competitors and attendees at Equitana 2005 and for attendees at Ironman 2005. According to Breen et al. (2001), the most common method for estimating visitor expenditure is via surveying a sample of visitors, and that the two most popular methods used are exit interviews and daily expenditure records that are usually entered into a diary during the visit. Although Breen et al. (2001) claimed that recall interviews may result in lower estimations of visitor expenditure compared with the diary method, in the present research, the method chosen was exit (or intercept) interviews as this was the most feasible and approach to take, particularly in comparison to the diary method. Burgan and Mules (1992) stated that approaches to measurement of the economic impacts appear to fall into two categories, namely, a survey of the recipients or a survey of the spenders. Moreover, in Australia, studies have tended to rely upon conducting surveys of the spenders at the

event (Burgan & Mules 1992). Faulkner (1993) suggested that interviews with attendees was an appropriate way to gather economic data. Therefore, as the aim was to collect approximately 500 responses from event attendees, intercept interviews appeared to be the most efficient of the two data collection methods.

6.6.1.1 Web-based survey

A Web-based survey was used to gather data from the Ironman 2005 competitors. Web-based surveys can be administered by e-mail or via a Web site. Czaja and Blair (2005) noted that there are issues associated with conducting e-mail surveys such as differing mail configurations, the size of attachments and server security in regard to downloading attachments, which can be used to transmit computer viruses. In one of the case studies, the event organiser assured the researchers that the competitors were familiar with using the Web to conduct surveys as the previous evaluation of the event in 2004 employed an email survey. As well as economic data, the Web-based survey gathered quantitative and qualitative feedback for the event organiser. As discussed in Chapter Four, Web-based surveys offer an efficient and innovative method for conducting surveys (Couper & Nicholls 1998), but there is also an underlying expectation that survey respondents have at least a medium level of skill in computer applications.

6.6.1.2 Self-completed questionnaires

Self-completion questionnaires were used for surveying the Exhibitors at the two event case studies. Self-completion questionnaires are more convenient for these types of respondents, as the exhibitors are able to complete the questionnaires when they want and at the speed that they want (Bryman 2004). The other advantage of self-completion surveys is that they can be dropped off and picked up at a later time or day, depending on the circumstances. In addition, they offer flexibility in that exhibitors can complete questionnaires when they are not busy and return the completed surveys via mail after the event.

6.6.2 Environmental data

A range of environmental data were collected during and after the two events. As shown in Figure 6.1, the aim was to collect data on the energy and water use and waste generation. Contacts were made through the event organisers and venue managers to allow for some of these data to be collected, as not all of these data were publicly available or measured on-site. In addition, there were questions included in the economic surveys, which provided environmental data so that the energy used by attendees for the land-based transport to and from the two events could be calculated. The air transport was excluded from the event, as this component was considered to be outside the control of the event organiser.

6.7 Case Study One – Equitana Asia Pacific 2005

The following section presents the data collection method for the evaluation of Equitana 2005. Firstly, the instrument development is discussed, followed by the administration of the economic and social surveys and the environmental data collection method.

6.7.1 Data Collection Instrument Development

6.7.1.1 Equitana 2005 Economic Survey Instruments

Three separate survey instruments were used for the economic evaluation of Equitana 2005 (See Appendix Five for examples of the survey instruments). The aim was to gather economic data from attendees, competitors and exhibitors and then combine the separate economic evaluations to arrive at an aggregated figure. In addition, data were gathered from Definitive Events, the event organiser, in regard to its expenditure and income related to the event.

The economic-related questions used in each of the survey instruments were derived from an economic model known as Encore Festival and Event Evaluation Kit. The Encore model was developed by the Sustainable Tourism CRC, and was based on the DIY kit originally developed in partnership with Arts Victoria. As can be seen from

Appendix Four, the economic questions for the three survey instruments were the same, except for the exhibitor's survey, in which it was not necessary to ask how many adults or children the expenditure covered. This was based on the assumption that the expenditure was per exhibiting organisation, rather than per person. The economic items contained in the survey instruments are detailed in Table 6.1 below.

Table 6.1 Economic Survey Instrument Items

Item	Details
Demographics	Age and gender
Origin of visitors	Region in which respondents live
Length of stay	Nights stayed in region and state
Expenditure in region and state	Expenditure on accommodation, meals, food and drinks, event tickets, other entertainment, transport, personal service, other expenditure
Number covered by expenditure	Number of adults and children covered by expenditure
Motivation	Determine which respondents extended their stay as a result of the event

6.7.1.2 Additional Questions

The three economic survey instruments also contained a limited number of additional questions, which provided feedback to the event organiser. The general thrust of the questions was to gather information on the level of satisfaction with the event from the perspective of the attendees, competitors and exhibitors. Thus, each of the three instruments had different feedback questions, which corresponded to the particular needs of the three groups. The additional questions were based on previous surveys and negotiations with the event organiser. The additional questions were contained in a report for the event organiser, however, they were not included in this study, as they were not related to the development of the TBL indicators. In an attempt to boost the response rates, the number of feedback questions was kept to a minimum. In addition, Definitive Events provided an incentive of $150 worth of equipment for the attendee's survey, which was used to boost the response rate of that survey.

6.7.1.3 Event Organiser Data

In addition to the economic data collected via the three economic survey instruments, and in order to run the evaluation through the Encore model, it was necessary to obtain data from the event organiser. As shown in Table 6.2 and Table 6.3, data were required in terms of the gross income and expenditure for a number of categories at the event. In addition, it was necessary to obtain estimates of the percentage of income and expenditure that came from outside the region and state. Definitive Events provided the estimated number of attendees at the event as well as the event organiser income and expenditure figures. This information was gathered after the event, once Definitive Events had closed off the event accounts. In addition, Definitive Events were asked to provide data on the business leveraging and destination promotion impacts.

Table 6.2 Information Required on Event Organiser Income

Item	Gross event income $	Income from outside region %	Income from outside State %	Estimated number of attendees
Box office sales				
Sponsorship				
National Govt grants				
State Govt grants				
Local Govt grants				
Other subsidies				
Sale of event merchandise				
Other income				

Table 6.3 Information Required on Event Organiser Expenditure

Item	Gross event expenditure $	Percent from outside region	Percent from outside State	Expenditure external to region $	Expenditure external to State $
Performers/ competitors					
Construction/ hire					
Marketing					
Salary/wages					
Travel					
Admin/Exhibition fees/prizes					
Other expenses					

6.7.2 Administration of the Economic Surveys

The three economic surveys were administered slightly differently, as will be outlined in the next section.

6.7.2.1 Attendees Survey

Economic data were collected by a team of interviewers, who conducted intercept interviews of attendees over the four days of the event. Interviews were conducted at the MECC during each of the four day sessions as well as the two night sessions. In addition, intercept interviews were conducted at Rod Laver Arena before the performance and during intervals at the two evening sessions that featured the Cavalcade - Reins of Fire show. As the majority of the event was staged at the MECC, during the day, the majority of the interviews took place at this venue during the day sessions.

6.7.2.2 Competitors Survey

Economic data were collected via intercept interviews with competitors, demonstrators and educators who were involved in the competition and educational components of Equitana 2005. Interviews took place over the four days of the event at the MECC. Competitors were the most accessible of the three groups, and were approached in either the stables area or in an adjacent car park. Typically, the interviews occurred after the competitors had finished their participation in the event, as at that time they were more amenable to being interviewed.

6.7.2.3 Exhibitors Survey

Economic data were collected from exhibitors via a self-completion questionnaire. Survey instruments were distributed to each of the 250 exhibitors over the course of the event. Exhibitors were given the option of either returning the completed questionnaire to the organiser's office during the event, or posting it to the researcher after the event. A return address was included in the final page of the survey instrument (refer to Appendix Five). On the final day of the event, members of the interview team visited

the exhibitors and either collected completed surveys or prompted them to complete the survey as a means of increasing the response rate.

6.7.3 Social Survey of Host Community

Mail-out surveys were used as the method for conducting a survey of Melbourne residents relating to the social impact of Equitana 2005. According to Czaja and Blair (2005), the recent rise in the volume of telemarketing has resulted in a decline in the response rate gained from phone surveys, as many potential respondents find it difficult to distinguish telemarketing from legitimate surveying. Also, the cost involved in administering a phone survey is very high as interviewers have to spend a considerable amount of time to get the requisite number of interviews completed. Therefore, it was decided that a mail out survey was the most efficacious and cost effective method to survey residents of the host community for both case studies.

6.7.3.1 Instrument Design

The instrument was based on the social indicators developed in this study and a set of additional questions that had previously been used surveys in event and tourism research (See, for example, Fredline et al. 2005b). The reason for the use of the additional questions was that a survey that only used the four social indicators derived from this study would be too short. Additional questions not only added to the quality of the survey instrument, but also allowed for some of the other social issues to be addressed such as the level of community involvement in the event. The additional questions were not reported here as this study focused only on those indicators that were derived from the Delphi survey of event experts. Table 6.4 reveals the key items that were contained in the survey instrument (see Appendix Five for a full version of the survey instrument).

Table 6.4 Social Survey Instrument Items

Item	Details
Awareness	Aware of event being staged
Event Impacts	Open ended questions about positive and negative impacts of event
Impacts and scale of impacts	Personal quality of life, quality of life of community, sense of community and community pride
Attendance	Attendance at current or previous Equitana events
Interest in event	Level of interest in event
Involvement	Type of involvement in event by respondent or household member
Proximity	Distance that respondent lives from the event
Demographic	Gender and year born

Of the items shown in Table 6.4, only the 'Impacts and scale of impacts' items were used for this study. The remainder of the questions were for the broader research project, as outlined in Chapter One. The impact questions asked respondents whether or not the event affected their personal quality of life, the quality of life of the community as a whole, their sense of community and their pride in the community. If respondents answered in the affirmative for any of the four items, they were asked to indicate the strength of the impact. To measure this, a seven-point Likert-type scale was used, which ranged from –3 (very negative impact) to +3 (very positive impact). The scale was derived from a previous study that used a similar scale (Fredline et al. 2005b).

In order to boost the response rate, the survey instrument included a cover letter that highlighted the importance of the survey. In addition, a reply paid envelope and an incentive of a chance to win a $150 Myer voucher were included with the survey. In addition, although a similar instrument had been used in previous social impact studies, the survey was piloted to ensure that there were no problems with it.

6.7.3.2 Definition of Population for Survey

The population of interest for evaluating the social impact of Equitana 2005 was defined as the permanent population of Greater Melbourne. These residents were the host community and as such would be most likely to be affected by the staging of the

event. The number of residents of Greater Melbourne is quite large, thus, a sampling frame was needed. One source of a representative sample was through the electoral rolls, but inquiries led to the understanding that these were no longer possible to purchase. Another option was to purchase a list of residents from a list broker, as these organisations are able to supply up-to-date names and addresses of Melbourne residents. Three such organisations were contacted and a decision was made to use an organisation called *The Prospect Shop*. The list of residents was derived from the *Australian Master File*, which is a comprehensive consumer database, which allows profiling of individuals based on variables such as age, income, property ownership and life stages. In addition, the list is updated on a weekly basis.

6.7.3.3 Selection of Sampling Frame

Given that the *Australian Master File* was to be used, decisions needed to be made concerning the sampling frame. According to Fredline, et al. (2005a), a considerable amount of evidence already exists about the relationship between the proximity of where residents live and the social impacts, and that over representation was not needed. Therefore, a decision was made to select a random sample of 2,500 permanent residents of Melbourne. In addition, it was decided to include only residents who lived within a 15 km radius of the centre of Melbourne. This decision recognises that many event impacts such as noise and traffic congestion are manifested locally. Moreover, this approach is consistent with similar research on the social impact of events conducted by Fredline et al. (2005a), who stated that the employment of a 15 km radius would 'adequately represent people living close to the event precinct' (2005a, p. 256). Thus, comparisons of the results of this study can be made with other similar studies. The parameters were conveyed to the list broker, and a random sample of 2,500 Melbourne residents who lived within a 15 km radius of the MECC, was extracted from the *Australian Master File*, which in its original form contained a list of 694,870 State-Owner Occupiers for Victoria.

6.7.3.4 Administration Method

The survey was administered via a postal survey. The alternative method was to conduct a telephone survey, however, previous attempts to use this method yielded a particularly low response rate. The postal method has its limitations such as data errors or missing data, however, these issues can be overcome through good instrument design principles and pilot testing, which were applied in this study. For example, the survey contained a cover letter, which outlined the justification for the research, the instrument was limited to two pages and a reply-paid envelope was included. In addition, an incentive of a chance to win a $150 voucher was included as a way of encouraging responses. Whilst response rates are difficult to predict, a similar study gained a response rate of 32.2% (Fredline & Faulkner 2002).

6.7.4 Environmental Data

Unlike the economic and social surveys, there was no single environmental survey instrument, however, a standard letter was drafted that outlined the data collection requirements from management at the two venues used for the event. The environmental data were sourced from a number of contacts, which were established with venue management at the two event venues. The letters were sent out detailing the type of environmental data that were sought for the evaluation. A number of follow-up meetings and phone calls were also made to secure the data. In general, data were needed for energy consumption, water consumption and waste generation, as outlined in Table 6.5. Furthermore, the economic survey for event attendees contained questions that gathered data on the type of transport used to travel to the event and the distance travelled.

Table 6.5 Environmental Data Sought for Event Evaluation

Impact	Indicator	Measurement
Energy Consumption	Amount of energy (electricity and gas) used for event	Kilowatts per hour (kwh)
	Amount of energy (electricity and gas) per event visitor	Kilowatts per hour (kwh)
	Percent of energy from renewable sources	%
Water Consumption	Volume of water used for the event	Kilolitres (kl)
	Net water consumed per event visitor	Kilolitres (kl)/Litres
	Volume of recycled water used	Volume
	Volume of recycled water used per visitor	Volume
Waste Generation	Mass of waste sent to landfill	Tonnes/Cubic metres
	Ratio of recycled waste compared with non-recycled waste	%
	Mass of solid waste and per visitor	Tonnes/Cubic metres
	Amount of CO_2 emissions from transport to and from event	Kilograms of CO_2

6.7.4.1 Transport to and from Event

The aim was to measure the environmental impact of travel to and from Equitana 2005 for event attendees. In order to achieve this, additional questions were included in the economic survey instrument that was administered via intercept interviews to Equitana 2005 attendees. Respondents were asked to provide the postcode (or suburb) from which they departed on the day of the event as well as to specify the type of transport that they used to travel to the event.

The types of transport used were derived from ecological footprint calculators developed by EPA Victoria (2005), which in turn were sourced from the Australian Greenhouse Office Factors and Methods Workbook (Australian Greenhouse Office 2005). The workbook can be used to calculate Australian greenhouse emissions for energy (fuel combustion and natural gas), industrial processes (synthetic gases and refrigerants), waste to landfill, agriculture and land-use change and forestry (vegetation sinks). For each of the transport types (for example, tram, rail, small car and family car), calculations can be made to estimate the amount of CO_2 equivalents per passenger, per km. The transport types and calculations will be discussed in a later section of this Chapter.

6.8 Case Study Site Two - Ironman Western Australia Triathlon 2005

6.8.1 Data Collection Instrument Development

In general, the approach taken in the case study of Ironman 2005 was similar to that for Equitana 2005. That is, an evaluation was undertaken of Ironman 2005, based on the framework presented in Figure 6.1, using an economic survey, a mail-out social survey and an environmental assessment. There were some differences such as the administration of the economic survey for competitors and the sampling method used for the social survey of residents of Busselton. Consequently, the next section will focus on the areas where there was a different approach taken for the Ironman 2005 evaluation.

6.8.1.1 Attendees Survey

A team of interviewers conducted intercept surveys of Ironman 2005 attendees on the day of the event. The central location of the event was Barnard Park, which was where the finish line, transition areas, event office and exhibition were situated. Appendix Six shows that the intercept questionnaire was similar to that used for attendees at Equitana. The survey instrument also contained a number of additional questions that were sourced from the questionnaire used to evaluate the Ironman event in 2004.

6.8.1.2 Competitors Survey Instrument

One of the major differences between the Ironman 2005 and Equitana 2005 evaluations was that the competitor's survey instrument for Ironman was administered via a Web-based survey, rather than through intercept interviews. In an evaluation of the Ironman event conducted in 2004, the competitor survey had been conducted via email, however, this time it was felt that a Web-based survey would be more appropriate, particularly given the high use of the Internet by competitors, as suggested by IMG, the event organiser. Another factor was the limited opportunity to conduct face-to-face interviews with competitors during the event.

The software program SurveyMonkey (the same program used to conduct the Web-based Delphi surveys) was used to design and administer the survey to the competitors. Appendix Six shows examples of three of the pages from the Web-based survey instrument. The survey was piloted amongst several event experts and IMG management. IMG contended that, in order to encourage responses from the competitors, the survey instrument should have the feedback on the event before the economic questions. This advice was heeded and incorporated into the final version of the survey instrument. In order to increase the response rate, IMG provided a number of incentives such as free entry to the 2006 Ironman events and six pairs of running shoes.

IMG did not want to release the list of names and email addresses of the competitors, which had implications for the administration of the survey. Therefore, in order to capture email addresses for entry into the draw for the survey incentives, a separate Web page was developed. The logic behind the separate page was that it would not compromise the anonymity of the survey as there was no connection between survey respondents and email addresses. The other implication was the IMG was responsible for sending out the invitation and reminder email to the 700 competitors. The invitation email outlined the importance of the survey and contained instructions for accessing the survey via the URL that was included in the email. After one week, a reminder email was sent out by IMG. One of the issues with conducting Web-based surveys is that the soliciting emails can get buried in inboxes, as a consequence, reminders help to keep emails nearer to the top of competitor's inboxes.

6.8.1.3 Exhibitors Survey

The design and administration of the exhibitor's survey for the Ironman 2005 evaluation was similar that of Equitana 2005. The only difference was that the additional questions were changed to reflect the event-specific feedback requirements of IMG.

6.8.2 Social Survey

The second major difference between the two case studies was in the definition of the host population and the selection of the sampling frame. These issues will be addressed next.

6.8.2.1 Definition of Population for Ironman

The population of interest for evaluating the social impacts of Ironman 2005 was defined as the permanent population of the Shire of Busselton. These residents were the host community for the event, and as such, would most likely be directly affected by the staging of the event. The number of residents of the Shire is approximately 26,000 (Market Equity 2005), which is relatively small, however, a sampling frame was still needed as a mail-out of this size would be expensive and time consuming to administer. One source of a representative sample was through the electoral roll, but inquiries led to the understanding that this was no longer possible to purchase. Another option was to purchase a list of property owners from the Shire of Busselton. Therefore, as the aim was to survey the permanent population of the Shire of Busselton, the use of the Owners Listing was deemed to be an appropriate method for accessing a sample of the population for the social survey.

6.8.2.2 Selection of Sampling Frame

A sample of residents needed to be drawn from the Owners Listing, which contained the names and addresses of over 17,000 owners of properties in Busselton. A decision was made to randomly select 2000 names and addressed from the list as this would provide a large enough sample to be representative of the population. In order for the list to be converted into a usable format, a number of steps were taken (see Table 6.), after which, a final list of 2000 residents was ready for the mail-out survey.

Table 6.6 Steps Taken to Ready Owners Listing for Mail-out Survey

Steps Taken	Details
Step 1	A computer program called ZRandom (2005) was used to generate a random number between 1 and 17,581 for each name in the list
Step 2	The list was sorted into numeric order
Step 3	Non-residential items were deleted
Step 4	The first 2000 items were selected
Step 5	Non-Busselton addresses were deleted
Step 6	Items were added to bring list up to 2000
Step 7	Names were delimited into three columns
Step 8	Second and third names were deleted

6.8.2.3 Survey Design and Administration Method

The survey instrument and administration method for the social survey for Ironman 2005 was similar to the one used in the evaluation of Equitana 2005 (see Appendix Six for a copy of the survey instruments used for the Ironman evaluation).

6.8.3 Environmental Data

A range of environmental data were needed from the event site. Contacts were established through IMG and the Shire of Busselton to gather the environmental data that were needed for the evaluation. Environmental data were obtained via a number of sources including the event organiser and suppliers of bins and portable toilets. As Ironman 2005 was not a venue-based event, the environmental data collection process was more problematic in comparison to the Equitana evaluation. Nevertheless, it was a useful event to evaluate especially given that many events are staged outdoors, in regional areas and utilise temporary structures. Thus, researchers would likely face similar issues in environmental evaluations of other events.

6.9 Results of Case Study One – Equitana 2005

This section presents the results of the evaluation of the Equitana 2005 case study. Firstly, the economic results are presented, followed by the results of the social survey and then the results of the environmental assessment.

6.9.1 Results of the Economic Evaluation

6.9.1.1 Response rates

A total of 484 responses were gathered from intercept interviews with event attendees over the four days and two evenings of the event. This included attendees at both venues, namely, MECC and Rod Laver Arena. Definitive Events estimated that the number of attendees at the event was 45,601. In addition, 60 responses were gathered from intercept interviews with competitors from a population of 120, representing a 50% response rate, and 118 responses were gathered from the 250 exhibitors, which was a response rate of 48%.

6.9.1.2 Direct inscope expenditure of the event

The economic data from the three surveys along with the expenditure and income data from Definitive Events were entered into the Encore evaluation model. The economic evaluation of Equitana 2005, estimated that the direct in-scope expenditure generated for Metropolitan Melbourne as a result of the event was $17.0m, and for the State of Victoria was $13.7m. The results compared favourably with economic evaluations of previous Equitana events, although direct comparisons were problematic given that the prior evaluations used multipliers in the method for calculating the economic impact.

6.9.1.3 Number of businesses hosted at the event and category of business representatives hosted

Data were not available for these two indicators for Equitana 2005. The main reason for this was that, due to the nature of the event, business leveraging did not occur.

6.9.1.4 Number of visiting journalists from target areas

Data were not available for these two indicators for Equitana 2005. Definitive Events did not collect data that could be used to measure this indicator. It ma be that y

6.9.2 Survey of Host Community

6.9.2.1 Response Rate

A total of 255 responses were gathered from the postal survey of 2,500 Melbourne residents. In addition, there were 85 nondeliverable and three ineligible, which translated into a response rate of 10.6%. This is a low response rate, particularly considering that a previous postal survey of Melbourne residents (in relation to the Formula One Grand Prix) resulted in a response rate of 32.2% (Fredline & Faulkner 2002). De Vaus (2002) suggested that some of the elements that can influence response rates include the topic, the nature of the sample and the length of the instrument. Similarly, Fredline and Faulkner (2002, p. 118) considered that it was likely that 'nonresponse was associated with variation in attitude to the phenomenon under investigation', and that the 'nonresponding group would generally be more likely to be ambivalent'. Accordingly, a large number of the residents of Melbourne may not have found the topic of Equitana 2005 and the associated social impact of the event to be of interest. Moreover, in comparison, the residents of Melbourne may be less interested in Equitana than the Grand Prix. This may be a result of Equitana being more of a niche event, which draws from a more narrow market segment than would the Grand Prix. Therefore, the lower the profile of the event, the lower the level of awareness of the event amongst members of the general public.

Overall, there was a low level of awareness of the event amongst the sample. This was also to be expected given the nature of the event (equine industry), and the large number of events that are staged in Melbourne throughout the calendar year. In addition, it is highly unlikely that residents who live within a 15 km radius of the Melbourne CBD would be owners of horses. As a result, the impact on the quality of life, community pride and sense of community were negligible across the four scales that were included in the study.

As stated previously in this chapter, the instrument used for this survey contained a number of questions that were not related to this study. The only questions included in this study were those that were derived from the Delphi survey of event experts. The remaining questions were part of the larger TBL project with which this study is

associated. The results of the additional questions were included in a separate TBL evaluation report, which was distributed to event stakeholders. It is worth noting, however, that the first question of the survey asked respondents if they were aware of the event, and of the 255 respondents, only 32 (12.5%) indicated that they were aware that Equitana 2005 was staged. As shown in the survey instrument (Appendix Five), being aware of the event was a prerequisite for answering the social impact questions for this study. Those respondents who were not aware of the event were filtered through to another set of questions in the survey.

6.9.2.2 Social Impact on Host Community

Given the above, respondents who indicated that they were aware of Equitana 2005 were asked if the event affected them in regard to the four indicators. If so, the respondents were then asked to rate the impact using a seven-point Likert-type rating scale, where –3 equated to very negative impact and +3 represented a very positive impact. This type of questioning has been used in previous social impact studies of events (See, for example, Fredline et al. 2005a).

As shown in Table 6.7, the majority of respondents who answered the four questions indicated that the event did not have an impact on either the community as a whole or on a personal level. It should be noted that those respondents who stated that they were not aware of the event were assigned a zero score on the seven-point impact rating scale, as this response was deemed to equate to the event having no effect. Table 6.7 reveals that the majority of the respondents felt that the event had no effect in relation to any of the four indicators. Those few respondents who did state that the event had an impact, maintained that the impacts were positive. Indeed, the only impact that registered was the impact on community pride, which received a mean rating of 0.1. In short, the results indicate that Equitana 2005 did not have any noticeable social impact on the host community. In addition, the results appear low when compared to the results of two similar studies of residents of events in Melbourne that were undertaken by Fredline et al. (2005a). This comparison will be discussed later in the chapter.

Table 6.7 Summary of Social Survey for Equitana 2005

Indicator	Very Neg. -3	-2	-1	No effect 0	+1	+2	Very pos. +3	Mean	Std Dev
Community quality of life				97.3%	1.6%	1.2%		0.0	0.25
Community pride				95.3%	1.6%	2.7%		0.1	0.39
Sense of community				98.5%	1.2%	1.2%		0.0	0.24
Personal quality of life			0.2%	98.4%		0.8%	0.8%	0.0	0.37

6.9.3 Environmental Data

A range of environmental data were gathered for the three areas of energy use, water use and waste generation. The main sources of environmental data were from the two event venues (MECC and Rod Laver Arena), venue suppliers, and via the economic survey of event attendees. The next section presents the results of the environmental data collected from Equitana 2005.

In both of the case study results presented in this chapter, there is considerably more depth in the environmental results compared to the results of the social and economic impacts. This is due to the exploratory nature of the environmental indicators, which was evidenced by the lack of research in this area, as highlighted in the literature analysis presented in Chapter Three. In addition, the economic and social impacts as well as the methods for measuring them are well documented.

6.9.3.1 Environmental Data Collection

A range of data were collected from the two event venues and one of the venue suppliers. With permission from Definitive Events, the Event Operations Manager at the MECC provided a range of environmental data after the event was held. In terms of the three components (energy, water and waste), data were available for energy use, but data on water use were not available. Water use is not metered for individual events at the venue, rather, an arbitrary amount is charged to the event organiser on a cost recovery basis. At Rod Laver Arena, Origin Energy, which is the electricity supplier,

provided detailed energy data on the amount of electricity used on an hourly basis. A cross check was made with Definitive Events for the 'bump-in' and 'bump-out' times, in order to arrive at the correct amount of electricity that was attributable to the event. Management at Melbourne and Olympic Parks (Rod Laver Arena) supplied data for water use and a range of waste data, however, much of the waste data were not usable mainly due to the range of environmental data as well as the types of data measurements provided. For example, data were supplied from the event in regard to the amount of sand used for the temporary arena as well as the number of bales of straw that were used to feed the horses that were used for the event. These data are examples of ancillary, event-specific environmental impacts of events. The types of data available are dependant on a range of factors such as the type of event, the type of venue used to stage the event as well as the location of the event. Due to the variety of data they were not included in the event evaluation.

6.9.3.1.1 Energy Consumption

Table 6.8 shows the usable data that were collected from the two event venues for energy consumption. The total amount of electricity was 80,325.5 kwh (Kilowatts per hour), which was converted into a CO_2 equivalent (CO_2-e) of 86 tonnes, using the EarthCheck Energy Calculator, which was developed by Scott (2001). The amount of electricity per event visitor (2 kg) was calculated using the attendance figures from the event (45,601), which were provided by Definitive Events. In addition, none of the energy used for the event came from renewable sources.

Table 6.8 Energy Consumption Data from Equitana 2005

Item	Detail	Results
Energy Consumption	Amount of energy (electricity and gas) used for event	80,325.5 kwh
	CO_2-e [a]	86 tonnes
	CO_2-e per event visitor [b]	2 kg
	Percent of energy that comes from renewable sources	0%

[a] EarthCheck Energy Calculator used to calculate CO_2-e (Scott 2001)

[b] Based on attendance figures of 45,601

6.9.3.1.2 Water Consumption

As stated earlier, water consumption data were only available from Rod Laver Arena. The MECC does not measure the water used by individual events. The results in Table 6.9 show that 840 kl of water were used by Equitana 2005 during the event, which equates to 82 litres per person. In addition, none of the water used for the event was recycled water.

Table 6.9 Water Consumption Data from Equitana 2005

Item	Detail	Results
Water Consumption	Volume of water used for the event[a]	840 kl
	Net water consumed per event visitor	82 litres
	Volume of recycled water used	0
	Volume of recycled water used per event visitor	NA

[a] Data available for Rod Laver Arena only

6.9.3.1.3 Waste Generation

Table 6.10 shows the waste generation data from Equitana 2005. This area of the environmental data was difficult to combine, as a range of different waste components as well as measurements were provided by the venue operators, and a weighbridge was not available to get an overall measurement of the waste. For example, waste data from the MECC were provided in tonnes, whilst waste from Rod laver Arena, was measured in the number of 240 litre bins and in cubic metres. Data that were provided in litres were converted to m^3, although this would still prevent any potential conversion to a CO_2-e, which are normally calculated from a base measurement in tonnes. It would appear from the results that more waste is recycled from Rod Laver Arena than from the MECC. Thus, even between venues, there are differences in the collection of environmental data, in terms of what data are collected and how data are measured. In short, the results of the waste generation data further illustrate the problems associated with undertaking an environmental assessment of events.

Table 6.10 Waste Generation Data from Equitana 2005

Item	Detail	Results
Waste Generation	Mass of waste sent to landfill (MECC)	20 tonnes
	Ratio of recycled waste compared with non-recycled waste (MECC)	1/3
	Mass of solid waste per visitor	NA
	Mass of waste sent to landfill (RLA)	$9m^3$
	Ratio of recycled waste compared with non-recycled waste (RLA)	9/10
	Mass of solid waste per visitor[a]	$0.01m^3$

[a] Based on attendance at Rod Laver Arena of 10,279

6.9.3.2 Transport Data

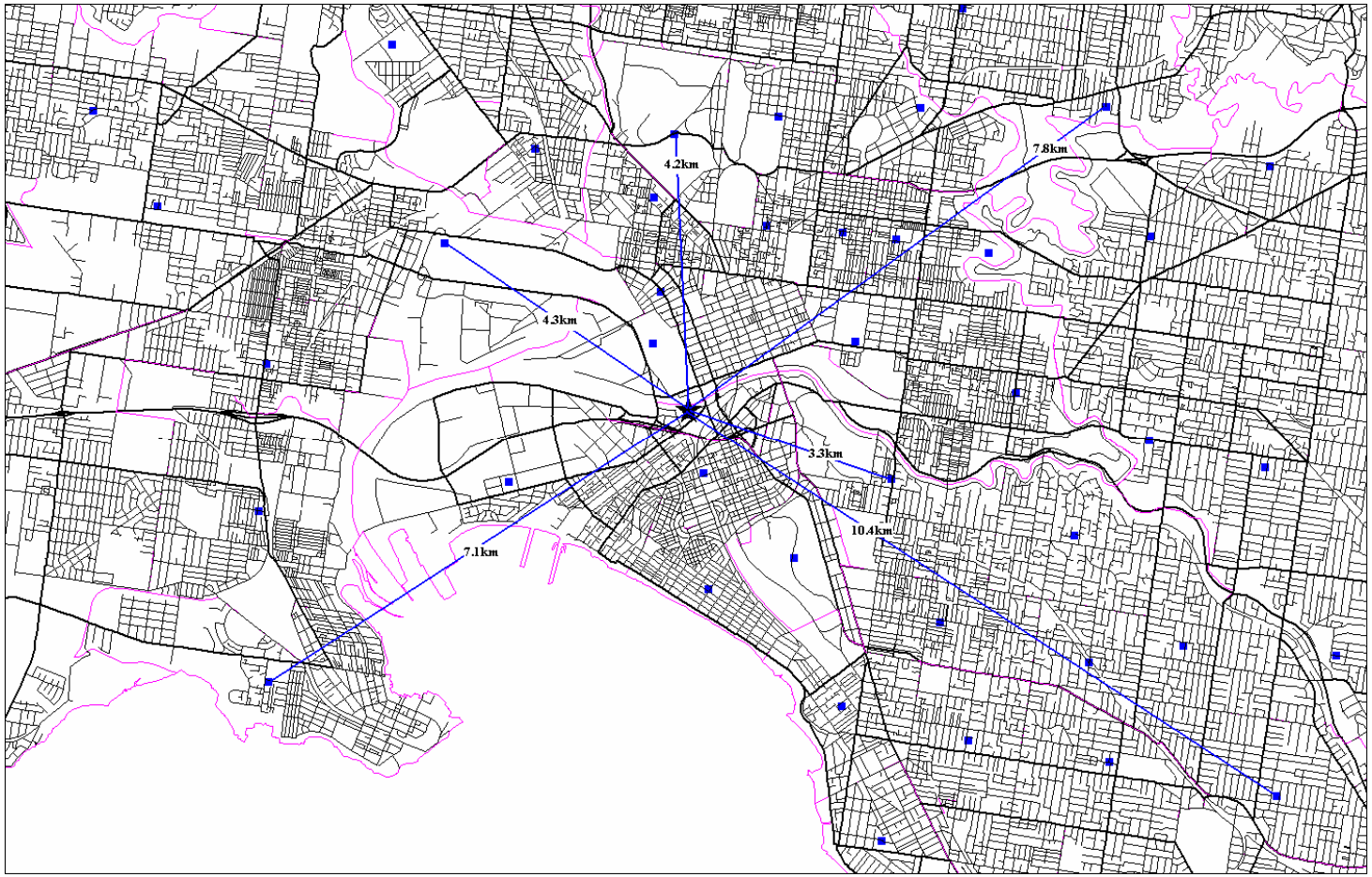
The aim of this section of the environmental data collection was to calculate the CO_2 emissions from transport to and from the event. Data were sourced via the economic survey on the transport activities of event attendees. Respondents were asked to provide the postcode of their point of departure for travel to the event venue on that day, as well as the type of transport that they used. In addition to these data, information relating to the number of people in the travel group was derived from the economic question that asked how many adults the event expenditure covered. A cross tabulation of postcode of departure and how many number of adults, layered with the type of transport used, resulted in 123 usable cases, which represented 157 adult return trips to the event.

6.9.3.3 Distance Travelled

The distance travelled by each event visitor was calculated using MapInfo, which is a Geographic Information System (GIS) program. In the economic survey, attendees were asked to report the postcode of the region from which they had travelled that day to attend the event. The GIS was then used to identify the centroid of each postcode region and the centroid of the event zone (A centroid is a two dimensional mid point based on latitude and longitudinal coordinates). Figure 6.2 illustrates a number of the centriods layered over a map of central Melbourne. The region (or postcode) centriods are marked by a blue square, and the centroid of the event zone (the Melbourne

Exhibition and Convention Centre) is represented by the blue star. In addition, the postcode boundaries are represented by the pink lines. The GIS was then used to calculate the Euclidian (straight line) distance, in kilometres, between the postcode and event regions for each case. While a straight-line distance between two points will generally be an underestimate of the actual distance travelled on the road network, the time savings in using this method were significant over the alternative of measuring the total distance of the most likely route taken. One of the alternative methods will be briefly discussed in the next chapter.

Figure 6.2 Melbourne Postcode Centroids and Distances to Event Centroid



6.9.3.4 Type of Transport Used

The type of transport used and the corresponding CO_2-e emission factors were sourced from the Australian Greenhouse Office (2005). As shown in Table 6.11, for each transport type there is an estimate of the kilograms CO_2-e per passenger per km. The factors are essentially divided into two sections, namely, public transport (including aircraft) and private transport. In terms of the public transport, trams have the lowest CO_2-e of 0.044, whilst the highest was air travel (in Australia) with 0.20. As discussed in the previous chapter, air travel has a high level of emissions as the CO_2 is released into the upper atmosphere, and as a result, there is less dispersion of the greenhouse gasses in comparison to other land-based forms of transport such as rail and bus. In regard to private transport, there are CO_2-e factors for the different types of cars for each passenger as well as a loading of 0.01 for each additional passenger, which accounts for the weight of any extra passengers. Hence, the more passengers in the car, the less the CO_2-e emitted per person per kilometre. The lowest CO_2-e was for hybrid vehicles (0.11), which are fuelled by petrol and electricity, and the highest is for large cars and 4WD vehicles (0.37).

Table 6.11 Transport Emission Factors

Transport type	Kilograms CO_2-e per passenger per km
Ride/walk	0.00
Tram	0.044
Rail , city	0.058
Rail , country	0.051
Bus, city	0.11
Bus, country	0.07
Air travel (in Australia)	0.20
For 1 passenger	
Hybrid (Prius, Insight)	0.11
Small car	0.18
Family car	0.28
Large car, 4WD	0.37
For each additional passenger	0.01

Source: Australian Greenhouse Office (2005)

6.9.3.5 Calculation of CO_2 Emissions for Transport

CO_2 emissions were calculated using the emission factors discussed above. In terms of calculating the CO_2 emissions for the public transport, the per kilometre factor was multiplied by the number of km travelled. This figure was then multiplied by the number of adults and the number of cases from the survey data. The calculation can be expressed as follows:

((factor * distance travelled) * No. of adults) * No. of cases

The calculations of the emissions for the other types of transport required an additional layer. That is, for each extra car passenger, 0.01 kg/km needed to be added to the CO_2-e factor. This figure was then divided by the number of passengers, multiplied by the per km factor and then multiplied by the number of km travelled. The calculation can be expressed as follows:

(((per km factor + loading * (No. pax –1)) / No. Pax) * km travelled) * No. of cases

The results of the two calculations were then added together. Table 6.12 reveals that the 157 adult return trips produced an estimated total of 4182 kilograms of CO_2. This equates to 27 kg of CO_2 per person. Table 6.12 also shows that the average return distance travelled to the event was 183km.

Table 6.12 CO_2 Estimation and for Equitana 2005

Details	Results
Kilograms of CO_2	4182 kg
Responses from survey	157
Kilograms of CO_2 per person	27 kg
Average return distance travelled to attend event	183 km

6.9.3.6 Transport Ecological Footprint Conversions

An additional level of calculations were undertaken to convert the kilograms of CO_2 into an energy footprint. The calculations used for these estimations were based on the EPA Ecological Footprint Calculators (2005), which underpin the transport component of the Eco-footprint Calculator for Events (EPA Victoria 2006). As discussed in Chapter Two, the concept of the Ecological Footprint has been applied in

a number of settings, and is largely based on the work of Wackernagel and Rees (1996). The Ecological Footprint is a measurement of the anthropogenic demand placed on global ecological resources (Rickard 2004).

The calculations for the Energy Footprint Conversion are shown in Table 6.13. To arrive at an energy footprint conversion, the total kg of CO_2 is multiplied by 2.68 m^2 to convert the energy footprint into a measurement of average global square meters. The result is then divided by 10,000 to arrive at a measurement of the amount in Global hectares. This is divided by the number of cases (157), which gives the amount of Global hectares per person (0.007). The next step is to take the individual annual footprint allowance in global hectares (1.9). This figure is referred to as the World Bio-capacity per person, and equates to the 'area required to supply resources and assimilate waste without compromising the ability of those areas to continue to provide services' (Wackernagel, et al 2005, p. 28) The final step is to divide the global hectares per person (0.007) by the annual footprint allowance to give the transport footprint as a percentage of the average annual footprint. Therefore, the return trip to the event represented 0.37% of the annual individual footprint allowance. This set of calculations represents a way of normalising one of the components of the environmental data, which could potentially be compared against a range of other events.

Table 6.13 Transport Energy Footprint Conversion

Details	Results
Kilograms of CO_2 from transport to and from event	4182
Energy footprint conversion[a]	2.68^2
Average global m^2	11207.48
Global hectares	1.12
Number of cases	157
Global hectares per person	0.007
Estimated individual annual footprint in global hectares (World Bio Capacity)[a]	1.9
Percent of average annual footprint	0.37%

[a] EPA Victoria (2005)

6.9.3.7 Proportion of 'Fair Earth Share' of Transport

Another method for normalising this component of the environmental impact is the concept of the fair earth share. As discussed in Chapter Two, Peeters and Schouten (2006) proposed a relative measurement of the ecological footprint that was called the 'fair earth share', which equated to an area of 49.3m^2. This figure represents the per person per day proportion of the annual World Bio Capacity (1.9 Global hectares) (EPA Victoria 2005). Table 6.14 reveals the calculations for estimating the proportion from transport, which was that the transport footprint represented 145% of the daily share.

Table 6.14 Transport Footprint as a Proportion of the Daily 'Fair Earth Share'

Details	Results
Kilograms of CO_2 from transport to and from event	4182
Energy footprint conversion[a]	2.68^2
Average global m^2	11207
Number of cases	157
Per person per day footprint	71.4 m^2
'Fair earth share'	49.3m^2
Transport footprint as a proportion of the daily fair earth share	145%

[a] EPA Victoria (2005)

6.10 Results of Case Study Two – Ironman 2005

6.10.1 Economic Evaluation

A total of 280 responses were gathered via the Web survey from the 700 Ironman competitors, giving a 40% response rate. In addition, 206 responses were gathered from attendees at the event from an estimated 3000 attendees (IMG), and 13 responses were obtained from the 25 exhibitors, which was a response rate of 52%. Data were also gathered from IMG for the event-related income and expenditure. For reasons of confidentiality, the direct inscope expenditure for the region of Busselton and the State of Western Australia cannot be reported here. As a result, it was not possible to compare the economic evaluations of the two case studies.

6.10.1.1 Number of Businesses Hosted at the Event and Category of Business Representatives Hosted

Similar to the evaluation of Equitana, data were not available for these indicators from the event organisers. It appeared that, like Equitana, this event was not an event through which business leveraging was attempted.

6.10.1.2 Number of Visiting Journalists

Likewise, data for this indicator was not available from IMG in regard to Ironman 2005. IMG may not have considered this an important component of managing the event.

6.10.2 Social Survey

From the mail out survey of 2000 owners from the Shire of Busselton, a total of 447 responses were returned. In addition, there were 10 ineligible surveys and 11 unreachable residents, resulting in a response rate of 22.6%, which was double the response rate from the Equitana 2005 survey of Melbourne residents. Of these, 409 (91.7%) were aware that the Ironman event had been staged in the region. It is worth noting that the number of unreachable surveys was considerably lower for the Ironman 2005 survey in comparison to the survey of Melbourne residents for Equitana 2005. In other words, the property owners listing purchased from the Shire of Busselton proved to be more accurate (0.55% unreachable) than the list of Melbourne residents purchased from a list broker (3.4% unreachable).

6.10.2.1 Impact of Event on Quality of Life of Host Community

Respondents were asked if the event had any impact on their quality of life, and if so, they were then asked to rate the impact on a seven-point Likert-type rating scale, where –3 equated to very negative impact and +3 represented a very positive impact. Those that stated that the event had no impact were assigned a zero rating on the scale, as this response was deemed to equate to the event having no effect. Table 6.15 shows that, in contrast to Equitana 2005, a large proportion of respondents felt that the event had a positive impact in terms of each of the indicators. This was evidenced by the mean ratings of the community quality of life (1.7), community pride (1.7) and

sense of community (1.5). The event had less of an impact in regard to the impact on the resident's personal quality of life (0.5). The results compare favourably with another regional (cultural) event where residents rated community quality of life (1.5) and personal quality of life (0.7) (Fredline et al. 2005a). This aspect will be discussed in more detail in the next chapter.

Table 6.15 Social Impacts of Ironman 2005

Indicator	Very Neg. -3	-2	-1	No effect 0	+1	+2	Very pos. +3	Mean	Std Dev
Community quality of life	0.9%	0.4%	0.4%	25.2%	7.6%	30.7%	34.7%	1.7	1.29
Community pride	0.7%	0.2%	0.2%	26.9%	12.9%	22.3%	36.7%	1.7	1.30
Sense of community	0.9%		0.2%	33.4%	12%	22.7%	30.7%	1.5	1.31
Personal quality of life	1.3%	0.4%	1.6%	69.9%	5.6%	9.4%	11.8%	0.5	1.17

6.10.3 Environmental Data

6.10.3.1 Data from the Event Site

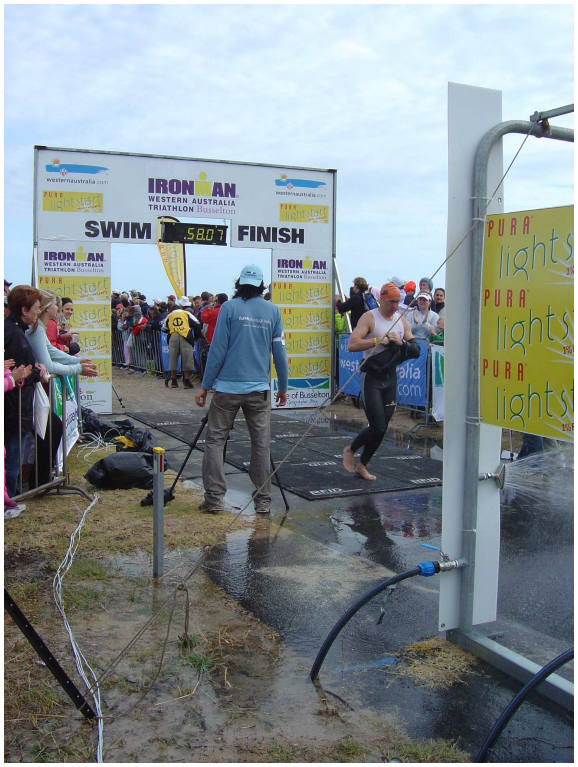
A variety of environmental data were gathered from attendees during the event and event suppliers after the Ironman 2005 event. Environmental data were needed in terms of energy consumption, water consumption, waste generation and transport use. Table 6.16 shows the data that were available from Ironman 2005. In terms of energy consumption, no data were obtainable, as most of the energy supplied to the event was not metered, as there were no electricity (or water) meters installed at Barnard Park where the event was staged. Data were available on the volume of water used for the on-site portable toilets (10,500 litres), which was provided by the supplier. With an estimated population of 3725 (3000 attendees, 700 competitors and 25 exhibitors – supplied from IMG), this equated to 2.8 litres per person. Water was also used at the end of the swim leg (see Figure 6.3 and Figure 6.4) and at the drink stations on the run leg. None of the water consumed was recycled water. Unfortunately, there was no capacity for the waste to be measured in mass, which limits the conversion of the data to CO_2-e. The supplier of skips and bins for the event estimated that a total of 96 cubic metres of solid waste was produced by the event, of which none was recycled. This equated to 0.03 cubic metres per person.

Table 6.16 Environmental Data from Ironman 2005

Item	Detail	Ironman
Energy Consumption	Volume of energy (electricity and gas) used for event	NA
	CO_2 equivalent	NA
	Volume of energy (electricity and gas) per event visitor	NA
	Percent of energy that comes from renewable sources	NA
Water Consumption	Volume of water used for the event	10.5 kl
	Net water consumed per event visitor	2.8 litres
	Volume of recycled water used	0%
	Volume of recycled water used per event visitor	NA
Waste Generation	Mass of waste sent to landfill	96 m^3
	Ratio of recycled waste compared with non-recycled waste	0%
	Mass of solid waste per visitor	0.03 m^3

Figure 6.3 Hot Showers at the end of the Swim Leg

Figure 6.4 Hot Showers at the end of the Swim Leg



6.10.3.2 Transport Data

A similar approach was taken to the Equitana 2005 evaluation to estimate the CO_2, emissions from transport as well as the ecological footprint conversions and fair earth share proportions. MapInfo was used to calculate the distance travelled by event attendees using Barnard Park as the event centroid, as this was where most of the event-related activities took place. In total, 123 cases were obtained from the attendee interviews for data on the distance travelled and type of transport used. As revealed in Table 6.17, the amount of kg of CO_2 from the 123 cases was 2091 kg, which equated to 17 kg per person. The average distance travelled by the attendees to Ironman 2005 was 184 kms return, which was very similar to Equitana (183km). Table 6.18 shows the ecological footprint data from Ironman 2005. It was estimated that the proportion of transport to and from the event in regard to the annual individual ecological footprint allocation was 0.24%.

Table 6.17 CO_2 Estimation and for Ironman 2005

Details	Results
Kilograms of CO_2	2091 kg
Number of cases from economic survey	123
Kilograms of CO_2 per person	17 kg
Average distance of return trip to the event	184 km

Table 6.18 Transport Ecological Footprint for Ironman 2005

Details	Results
Kilograms of CO_2	2091
Number of adult trips	123
Kilograms of CO_2 per person	17
Energy footprint conversion[a]	2.68^2
Average global m^2	5603
Global hectares	0.56
Global hectares per person	0.005
Estimated individual annual footprint in global hectares[a]	1.9
Percent of average annual footprint	0.24%

[a] EPA Victoria (2005)

6.10.3.3 Proportion of 'Fair Earth Share' of Transport

As was presented in the results of Case Study One, an alternative measurement of the ecological footprint is the 'fair earth share', which was proposed by Peeters and Schouten (2006). Table 6.19 shows the calculations for estimating the proportion of the share from transport to and from the event. It is revealed the per person transport footprint represents 92.3% of the daily fair earth share. This was lower than the estimation for Equitana, which was 145%.

Table 6.19 Proportion of 'Fair Earth Share' of Transport

Details	Results
Kilograms of CO_2 from transport to and from event	2091
Energy footprint conversion[a]	2.68[2]
Average global m^2	5603 m^2
Number of cases	123
Number of days of event	1
Per person per day footprint	45.5 m^2
'Fair earth share'	49.3 m^2
Transport footprint as a proportion of the daily fair earth share	92.3%

[a] EPA Victoria (2005)

6.10.4 Comparison of Environmental Results

Given the complexity of the environmental data, it was felt that it would be beneficial to show a comparison of the results of the two case studies. Table 6.20 shows that it is difficult to compare much of the data, which, as discussed at the beginning of the chapter, is one of the limitations of the case study approach (Neuman 1991). The lack of comparability also highlights the challenges of conducting a TBL evaluation of events, given the variety of locations in which they are staged. In addition, in regard to energy consumption, no comparison can be made as there were no data available from Ironman 2005. Data were available for water consumption from both events, however, the only water usage data available from Ironman 2005 was from the portable toilets, as the water was not metered in Barnard Park. The waste generation shows that waste data were available, yet the variables were measured differently, which limits the comparability and the potential for further analysis. As a result of the uniform collection of data on transport, a direct comparison can be made between the two events. Table 6.20 reveals that the amount of CO_2 per person was lower for

Ironman 2005 as was the proportion of the annual allowance, even though the distance travelled were very similar for each event. This may be explained by the larger proportion of large cars and 4WD vehicles used for transport to Equitana 2005, which is most likely the reason for the fair earth share of Equitana (145%) being considerably higher than that of Ironman (92.3%).

It is worth noting, for comparative purposes, that similar studies have been undertaken on calculating CO_2-e for marine tourism. For example, a study that estimated the greenhouse gas emissions from marine tours in Australia, found that for each tourist there was an extra 61kg CO_2-e for a diesel powered boat and 27kg CO_2-e for a boat with a petrol engine (Byrnes & Warnken 2006). Moreover, the study claimed that this approximated to a single person driving 300 km or 140 km respectively.

Table 6.20 Comparison of Environmental Data of Two Case Studies

Item	Details	Equitana	Ironman
Energy Consumption	Volume of energy (electricity and gas) used for event	80,325.5 kwh	NA
	CO_2- equivalent	80,325.5 kwh	NA
	CO_2- equivalent per event visitor	86 tonnes	NA
	Percent of energy that comes from renewable sources	2 kg	NA
Water Consumption	Volume of water used for the event	840 kl	10.5 kl
	Net water consumed per event visitor	82 litres	2.8 litres
	Volume of recycled water used	0%	0%
	Volume of recycled water used per event visitor	NA	NA
Waste Generation	Mass of waste sent to landfill	20 tonnes	96 cubic metres
	Ratio of recycled waste compared with non-recycled waste	1/3	NA
	Mass of solid waste per visitor	NA	0.03 cubic metres
Transport	Kilograms of CO_2	4182 kg	2091 kg
	Kilograms of CO_2 per person	26 kg	17 kg
	Percent of average annual footprint	0.37%	0.24%
	Average distance of return trip to event	183 km	184 km
	Proportion of fair earth share	145%	92.3%

6.10.5 Comparison of Environmental Data from Equitana 2005 and Average Daily Use

One of the issues highlighted by the results in Table 6.20 is that there are difficulties in comparing the results due to missing data as well as providing data that are useful to potential users and stakeholders. This is also a result of the fact that there are few other studies in this area. One way to overcome this is to substitute the missing data with data that represent the average daily use per person for similar environmental variables. Therefore, Table 6.21 presents the per capita per day results from Equitana 2005 with the average domestic per capita consumption. In addition, the last column shows the proportion of the Equitana 2005 results compared to the average domestic use. The results indicate that the highest proportion was CO_2 emissions from transport, as those travelling to the event produced, on average, 355.3% more was CO_2 than they would normally. This is not surprising given that the average return distance travelled to the event was 180 km. The next largest proportion was waste generated at the event, which accounted for nearly 60% of the daily average. This could be a related to the amount of packaged food sold at events. CO_2 emissions accounted for 36.5% of the daily average, and water 22.7%. The lowest proportion was for energy, which accounted for only 5.2% of the daily consumption. It should be noted that the domestic use figure of 31MJ is derived from Brisbane, whereas the event was staged in Melbourne.

Table 6.21 Environmental Data from Equitana 2005 and Average Daily Usage

Resource or waste stream	Equitana 2005 per capita use per day	Per capita average daily domestic use	Proportion of daily average used at event (%)
Waste generation	1 kg	1.7 kg[a]	58.8
CO_2 emissions from transport	27 kg	7.6 kg[a]	355.3
Water consumption	41 litres	180 litres[b]	22.7
Energy consumption	1.6 MJ	31 MJ[c]	5.2

[a] Adapted from CSIRO (2001)
[b] South East Water (2005)
[c] STCRC (2004)

The comparison shown in Table 6.21 does not intend to suggest that the use of energy, water and waste generation associated with an event would be the only use by an individual on that day. For instance, there would likely be additional consumptions such as a morning or evening shower at home as well as continuing energy use at home due to electrical applications being switched to standby or the use of a pilot light on a gas heater. In addition, there may be other life cycle considerations in the waste stream of an event such as the preparation of food prior to the event taking place, which are not accounted for in the per capita waste data. Thus, future research may need to consider the boundaries for the environmental analysis.

Despite the above, the data shown in Table 6.21 represent a starting point from which a comparison can be made between the environmental consequences of attending an event and those associated with everyday use. Further research needs to be conducted to ensure that the domestic figures are up-to-date and that data are available for a range of city and regional destinations, given the potential for an event evaluation tool to be administered in a variety of settings throughout Australia as well as internationally.

The other benefit of the comparison provided by the proportions of event use and domestic use is the potential for the development of environmental scales. More specifically, the proportion of use at the event compared to 'normal' use could be used as a scale using 0%-100%, which would compare with average use as well as comparing a range of different events. This approach was supported by Fredline et al. (2004). A fifth scale could be added, which represents the percentage of recycling achieved at an event. One of the problems with this approach is that there is an underlying assumption that the proportions will be no more than 100%, and, as shown in Table 6.21, the proportion of CO_2 emissions from transport associated with Equitana was over 300% of the normal use.

The focus of this section of the chapter has been on the two event case studies, which were a vehicle for testing the appropriateness of the indicators for inclusion in a parsimonious TBL evaluation of the impact of events. The next section presents answers to the three research questions that were proposed in the introductory chapter.

6.11 Research Questions

This section of this chapter discusses each of the three research questions that were proposed for the study. Whilst the first two research questions were in effect answered in the results that were presented in Chapters 3 and 4, the third question was not. Hence, the bulk of this section focuses on the discussion of the third research question.

6.11.1 Research Question One - What are the key impacts that are currently being used to evaluate the impact of special events?

Chapter Three of this study presented a comprehensive analysis of 224 special event evaluation publications and 85 actual event impact assessments. Whilst there had been a number of studies that had analysed event literature in terms of the general trends (See, for example, Formica 1998; Getz 2000; Hede et al. 2002), this study took a contrasting approach that drilled down into the literature in a more specific fashion. In addition, this research focused on event evaluation literature, whereas the previous studies did not focus specifically on this particular aspect of event literature.

The aim was to analyse existing event evaluation research in order to derive a list of the key impacts that had been used in event evaluations. The analysis of the event publications provided an understanding of the impacts that had been considered in event research, however, it was felt that an analysis of a range of actual impact assessments would provide a counterpoint to the event literature, as the assessments provided a 'reality check' for what was happening in non-academic event evaluations. This point was highlighted by the fact that consultants undertook the majority of the impact assessments used in the analysis. It appeared that few other studies had analysed a large number of these reports, which was most likely due to the lack of availability of these types of assessments and the commercially sensitive nature of the data contained in many of the reports. Indeed, Carlsen et al. (2001) claimed that most of these reports are unpublished and do not receive widespread circulation, and as a result, are largely unavailable to researchers. Thus, these reports represent a potentially rich and largely untapped source of secondary data, and as such, the analysis of 85 of these impact assessments is a key contribution of this research. With

the assistance of a number of STOs and event academics, 85 actual event impact assessments were obtained and analysed.

The analysis confirmed the findings of earlier studies (Formica 1998; Getz 2000; Hede et al. 2002) that economic impacts were the most commonly cited impacts in the special event literature. The analysis also found that an increasing number of researchers were focusing on the social impact of events (See, for example, Delamere 1997; Fredline & Faulkner 2000b). The other important finding was that few of the studies considered the environmental impacts of events. Therefore, this is an area of special event evaluation that has so far been under-researched as there were only two publications that focused on the environmental impacts, namely, May (1995) and Harris and Huyskens (2002).

Similarly, in regard to the sample of event impact assessments gathered for the study, the majority analysed the economic impact of events. A small number of the assessments included social impacts, and consistent with the event publications, few assessments considered the environmental impact of events. Overall, the results were consistent with the claim of Uysal and Gitelson (1994) that there is little consistency in relation to the methodologies that are employed in impact assessments. Significantly though, one of the assessments attempted a TBL evaluation of an event (Rugby World Cup 2004). In short, whilst there have been calls from a number of researchers for a TBL evaluation (See, for example, Fredline et al. 2004, 2005c; Sherwood et al. 2005a, 2005b), only one of the assessments (Rugby World Cup 2004), attempted to evaluate the impact of an event from a TBL perspective.

The answer to Research Question One was presented in Table 3.8 in the form of the 20 key impacts that were derived from the literature and impact assessment analysis. The spread of the impacts reflected the dominance of the economic paradigm in event evaluations, as economic impacts were the most commonly cited impacts in the literature and the most widely used impacts in the assessments. As such, the list of key impacts consisted of 13 economic impacts, a lesser number of social impacts (6), which highlighted the emerging concern with the social impacts, and a single environmental impact that reflected the minimal focus given to the environmental

impact of events. One of the main concerns about basing an assessment of TBL evaluation on a spread of studies that is dominated by the economic dimension was that it would tend to reinforce the status quo. In other words, there would continue to be an overemphasis on economic impacts and an under emphasis on the environmental impacts. Therefore, the Delphi survey of event experts was undertaken so that a more even spread of impacts and indicators would be developed across the three TBL dimensions.

Answer: List of key impacts used in event evaluations shown in Table 3.8

6.11.2 Research Question Two - Which indicators would measure these impacts for a TBL evaluation of special events?

Chapter Four presented a Web-based Delphi survey of event experts, whose opinions were used to develop a set of indicators to measure the key impacts. Delphi surveys are a group communication process that have been widely used for addressing complex issues, however, there appeared to be few studies that have employed Web-based Delphi surveys (Sherwood et al. 2006). In addition, this method appeared to be an underutilised method in tourism and events research (Sherwood et al. 2006).

Fifty five event experts were approached to be part of the survey, and of these, 38 agreed to be involved. The panel comprised representatives from universities, State Tourism Organisations, Local Government, Federal Government and event practitioners. As such, the panel of event experts constituted a type of consultative network, which corresponded to Step 3 in the indicator development process (Segnestam et al. 2000) used to steer this study.

The study used a modified Delphi method, which was conducted over three rounds. The Delphi survey was modified in that the panel members were presented with a list of impacts, rather than being asked to develop a list in the initial round, which is traditionally the case. In the first round, panel members considered the list of 20 key impacts and were asked to rank and rate the impacts, as well as to suggest any additional impacts. The results indicated that the two most important impacts in

regard to event evaluation were economic benefits and destination promotion. A revised list of impacts was derived from the first round, which included an expanded number of environmental impacts (see Table 4.7). In the second round, panel members were prompted to suggest indicators that could be used to measure each of the impacts that were derived from the round one of the survey. A total of 24 indicators were suggested for the 11 impacts. In the third round, panel members were asked to select the most appropriate indicators from those that were gathered from Round Two, by choosing to either 'accept', 'modify' or 'reject' each indicator. Table 4.16 presented the key impacts and the corresponding indicators, which were derived from the Delphi survey.

As outlined in Chapter Five, a TBL evaluation model that employed all 24 indicators was considered to be a cumbersome model that would be too costly and time consuming to operationalise. Hence, a subset of indicators was needed. A selection criteria, which was applied to the pool of indicators was based on three constraints, namely, the cost of collecting the data, data availability and time frame of the indicator. In addition, the needs of end users were considered in the overall selection. As a result of this step, 15 of the indicators were chosen to be used in the two case studies (see Table 5.4).

Answer: List of indicators that could be used to measure the impacts revealed in Table 5.4

6.11.3 Research Question Three – Which indicators could be used to enable an overall measure of an event to be gained?

This section of the chapter presents a discussion of the indicators that were used in the two case studies. The aim of the case studies was twofold, firstly, to test how the indicators could be operationalised in a TBL evaluation and secondly, to test the indictors for their applicability for inclusion in a TBL evaluation model. The case study approach was chosen as it has been widely used in the social sciences (Xiao & Smith 2006), and is the preferred method when the research is focused on examining contemporary events (Yin 2003).

As noted earlier, this section is more expansive in comparison to the discussion on the previous two research questions. Initially, for each dimension, a brief discussion is presented on the data collection. Following this, where applicable, four questions were addressed when considering the appropriateness of each indicator, namely:

- How did the indicator work?
- Were the data available?
- Was the indicator useful?
- How could the indicator be modified?

6.11.3.1 Economic Indicators

6.11.3.1.1 Number of Businesses Hosted at the Event

This indicator was used to capture data on business leveraging at the events. Data were not available from the event organisers for this indicator.

6.11.3.1.2 Category of Business Representatives Hosted

This indicator sought to capture data on the level that the business representatives at the event held within their respective organisation. Similar to the previous indicator, no data were available from either of the event organisers.

It appears that the two events used in the case studies were not the type of events that incorporated business leveraging into the planning or staging of the event. Furthermore, although no data were available for these indictors, it appears that the general thrust of this indicator tends to diverge from the type of business leveraging outlined by Chalip and Leyns (2002), which the authors interpreted as being the potential for local business to leverage benefits in terms of spending by event attendees. Therefore, a possible modification of the indicator would be to reflect the percentage of local businesses that are involved in the event. Moreover, if, as suggested by Chalip and Leyns (2002), event patrons are making impulse purchases, then perhaps exhibiting at an event is a way for local businesses to capitalise on this type of marketing opportunity. Regardless, the mere presence of senior business representatives may not provide enough information, therefore, the emphasis should

be on gathering data about the actions and interactions that constitute business leveraging. In short, no conclusion could be drawn about the usefulness and appropriateness of these two economic indicators for a TBL evaluation. Further research is needed to test this indicator.

6.11.3.1.3 Number of Visiting Journalists from Target Areas

This indicator was proposed as an alternative measure for the impact of an event on destination promotion. Given that data were not available from the two event case studies, it may be more beneficial to capture the downstream outputs of the journalists in regard to the number of stories filed or the type of reporting that are produced, and wether they are positive, negative or neutral. The impact of the journalists would also be dependant on the relevance of what they can provide in terms of the type of magazines that publish the material and the size of readership of their publications. Thus, a measure of tracking may be more beneficial for this type of indicator. In addition, the indicator does not include local journalists, who may also be relevant if the coverage ends up being distributed to international publications. The indicator could be modified to include a wider set of stakeholder such as the government agencies that fund an event, which may be involved in visiting journalist programmes.

6.11.3.1.4 Direct Inscope Expenditure of the Event

This indicator was used to measure the direct inscope expenditure of the event visitors. Data were collected from surveys of attendees, competitors and exhibitors in regard to spending, length of stay and demographics. In addition, data were collected from the event organisers for a range of income and expenditure items as well as details concerning the percentage of these items that came from outside the region and the state. The data were then processed using the Encore Event Evaluation model. Chapter Five suggested that this indicator was a core component of an event evaluation.

In regard to the usefulness, the indicator is important for understanding the economic impact of an event, however, there are issues with taking this indicator forward for use in comparing the relative performance of a range of different events. Because the

indicator is expressed as a raw number, it is difficult to compare the performance of a small event, for example with an evaluation of $0.6m with a large event that has an evaluation of $15.0m. In other words, the economic evaluation does not take into account the scale of the event. That is not to say that the inscope expenditure should not be used, however, in order for the indicator to be used in a TBL evaluation, it needs to be normalised so that the result of one event can be compared with other events. Another important consideration in the development of this indicator is that, due to issues of confidentiality, the amount of direct inscope expenditure cannot always be released into the public domain (as was the case with one of the cases in the current study).

Given the above, this indicator needs another layer of analysis to provide a useful and meaningful measure of the economic evaluation of an event. As the focus of STOs is on the economic evaluation of an event from a state-level perspective rather than the region, the economic indicator needs to provide a state level result. Laesser et al. (2003) suggested two coefficients that could be used for this type of approach, namely, a subsidy multiplier and a regional share of the inscope expenditure. Although these coefficients do provide scalable measures, the focus is on the results from a regional level, rather than on a state level, which is more important given that the majority of support for events comes from state event agencies.

6.11.3.2 Social Indicators

Four indicators were included in the two case studies to evaluate the social impact of the events. The impacts measured how the event affected the quality of life of the community as a whole and the personal quality of life of residents, community pride and sense of community. The four social indicators used in this study are well developed and have been used in previous studies (See, for example, Fredline et al. 2005a). As such, the discussion of the social indicators is more comparative than exploratory.

6.11.3.2.1 Comparison of Social Indicators with other Event Evaluations

Table 6.22 shows the mean ratings of the social impact scales (-3 to +3) from the two case studies compared to three other events that used similar indicators and impact scales. One of the most pointed differences is with the results of the Equitana evaluation compared with the other results, which illustrates the negligible impact of Equitana on the residents of Melbourne for both of the social indicators. This may be indicative of Equitana being regarded as more of a niche event, in contrast to an event such as the Grand Prix, which has a much wider appeal. This was also reflected in the low level of awareness of the Equitana (12.5%) amongst the survey respondents. Table 6.22 also shows that the regional events (Ironman and Art Is…) received higher mean ratings for community quality of life and personal quality of life in comparison to the city-based events (Grand Prix and Moomba). Lastly, the results of the Ironman evaluation are consistent with the other events in that the impact on the personal quality of life of host residents is usually lower than the impact on the community as a whole. The difference may be explained through social representation theory, which suggests that individuals can be indirectly impacted by the events through their social networks and the media, in which a 'feel good' factor about the event can be manifest despite the individual experiencing no effect or a negative effect on a personal level (Fredline & Faulkner 2002). It is also worth noting that the quality of life indicators measure the perceptions of the impacts rather than the direct impact itself.

Table 6.22 Comparison of Mean Ratings of the Social Impact Scales

Indicator	Mean Impact Ratings				
	Ironman	Equitana	Grand Prix[a]	Moomba[a]	Art Is…[a]
Community quality of life	1.7	0.0	1.36	1.43	1.54
Personal quality of life	0.5	0.0	0.35	0.41	0.72

[a]Source: Fredline et al. (2005a)

6.11.3.3 Environmental Indicators

6.11.3.3.1 Volume of Water Used for the Event

Water consumption data for the evaluation of Equitana 2005 were only available from Rod Laver Arena, as the MECC does not measure the water use for individual events staged at the facility (though a standard fee is charged to event organisers for water use). According to venue management, none of the water used for the event was recycled water.

Water use was more difficult to obtain at Ironman 2005. This was to be expected with an event of this nature, given that it was staged outdoors over a large area, rather than contained within a specific venue or sports arena. The lack of data on water was mainly due to the fact that the event was staged in a park where few permanent buildings exist. Consequently, there was no capacity to meter either the on-site water or electricity use. Barnard Park is under the jurisdiction of the Shire of Busselton, and as a result, whatever costs were associated with water and electricity use were absorbed by the Shire, which means that ultimately, local residents indirectly subsidise this component of the event. Nevertheless, data were available on the volume of water used for the on-site portable toilets. In addition, none of the water was from recycled water. Water was used at Ironman 2005 for a range of elements, most notably in the warm showers for competitors after the swim leg (see Figures 6.5 and 6.6), which ran for at least 30 minutes prior to the athletes completing the swim. In addition, water was used for the drink stations during the cycle and run legs of the event.

There does not appear to be a reason to modify this indicator, however, potential exists for further analysis of the water use to convert the volume used into a CO_2-e. The Australian Greenhouse Office (2005) provided calculations that can be used to estimate the CO_2-e for municipal wastewater treatment. The greenhouse gas emissions from municipal wastewater treatment are represented as the sum of emissions from wastewater and sludge treatment. The calculations are based on the population that is generating wastewater rather than the volume of water used. Default values are provided for the quantity in kilograms of Biochemical Oxygen

Demand per capita per year of wastewater, which equates to 22.5 kg per person per year. As events are only staged for a short period of time, this amount could be divided by 365 and then multiplied by the number of days that the event was staged. For example, for Equitana 2005, the event was staged over four days so the amount would be .25 kg per person for the event. Therefore, with a population of 45,601, this would equate to 82.8 tonnes CO_2-e, for the event or 1.8kg CO_2-e per person. Nevertheless, as Equitana 2005 was staged in an urban environment, there may be issues with the use of these particular calculations, which are claimed to be most relevant to local government authorities (Australian Greenhouse Office 2005).

6.11.3.3.2 Net Water Consumed (Minus Water Recycled) Per Visitor

This indicator was used to measure the amount of non-recycled water used per visitor. As none of the water consumed at Rod laver Arena was recycled, data for this indicator were unavailable. As this indicator is reliant on the use of recycled water, its use in future TBL evaluations is questionable. There may be merit in measuring the water use per person without attempting to account for the amount of recycled water used. Furthermore, as outlined above, there may be value in developing an indicator that accounts for the downstream treatment of the wastewater, rather than at the level of consumption during the event.

6.11.3.3.3 Amount of Energy Used for the Event

Data were sought for this indicator in regard to the amount of energy (electricity and gas) consumed during the event. Energy is used at events to provide services such as lighting, air conditioning, refrigeration and food preparation and while there are no emissions at the point of consumption for electricity, it is usual to measure the environmental impact of electricity consumption (Sustainable Tourism Cooperative Research Centre 2004).

Where available, data were collected from event suppliers and venue mangers. Data were available for the amount of electricity used at the two event venues and the EarthCheck Energy Calculator (Scott 2001) was used to calculate the CO_2-e for the electricity. In the case of the evaluation of Ironman 2005, no energy data were

available due the event being staged at Barnard Park. Energy was used at the Ironman event for supplying power to the event marquees as well as for lighting, food preparation and air conditioning. In addition, diesel was used to power a number of generators for lighting areas of the park, particularly for the run leg, as some athletes did not finish the event until after 11pm. Similar to the water consumption, most of the energy supplied to the event was not metered due to the lack of permanent infrastructure in the park.

This indicator has merit and should be included in a TBL evaluation. The indicator could be included with the data from the transport indicator and then converted into a measure of the ecological footprint. This would allow the indicator to be comparable to other events. As stated earlier, indicators need to be comparable with other events, and as a stand-alone figure, for example, 2 kg per person for Equitana, would have little meaning unless a comparison can be made with other similar measurements.

6.11.3.3.4 Percent of Energy from Renewable Sources

None of the electricity used for Equitana 2005 came from renewable sources. Similar to the indicator 'Net water consumed (minus water recycled) per visitor', this indicator could be considered as a secondary indicator as there is a reliance on the availability of the primary energy data. Given current international developments in regard to climate change, a future policy direction might result in a mandate for energy suppliers to source minimum levels of renewable energy such as wind power. Such a situation may reduce the significance of this indicator. In short, this indicator may be used as an additional indicator, but should not be considered as a core component of a TBL evaluation, as it is not able to be included in a calculation of the ecological footprint.

6.11.3.3.5 Mass of Waste Sent to Landfill

The aim of this indicator was to gather data on the generation of solid waste associated with the events. Data were available from both Equitana 2005 and Ironman 2005, however, due to the nature of the data, further analysis was not possible. The data gathered for this indicator were problematic in that the data were

not available in a consistent format. For example, in the evaluation of Equitana 2005, data were provided by the MECC in mass, at Rod Laver Arena in volume and for Ironman 2005 in volume. In order to potentially convert the data into a CO_2-e, data needs to be collected in mass rather than volume. Venue management at Rod Laver Arena also provided a range of miscellaneous data, which were itemised in a variety of measurements such as bins, pallets and bales. This was a direct result of the nature of the event and the materials that were used to stage the equine event. Future event evaluations should endeavour to have the solid waste measured in mass, and one possible solution for this would be through the use of weighbridges, which could facilitate further analysis and conversion of the raw data into a CO_2-e.

6.11.3.3.6 Mass of Solid Waste per Visitor

The purpose of this indicator was to derive a per person measurement of the mass of solid waste from an event. With a per person value, there is potential for the indicator to be used to compare a range of events. Given the difficulties associated with the core indicator above, however, the results of this indicator were limited. The only data that were useful were that for the MECC. Similar to the other secondary indicators above, this indicator is reliant on consistent and available data, however, it is argued that this indicator should be included in a TBL evaluation as per visitor measures allow comparisons to be made of a range of different events.

6.11.3.3.7 Ratio of Recycled to Non-Recycled Waste

This indicator was used to determine the degree to which solid waste from the events was recycled. The data were gathered from event management at both venues for Equitana 2005. No waste was recycled from Ironman 2005. The reason given by the supplier for this was that it was not economically viable to transport and sort the waste into recyclable and non-recyclable materials. Given that this indicator is a ratio, there is merit in its retention in the TBL evaluation model, however, if expressed as a percentage rather than a ratio, there may be an increase in the usefulness of the indicator for comparative purposes.

6.11.3.3.8 Estimate of Energy Used for Transport to and from the Event

This indicator was used to gather data on the environmental impact of land-based travel to and from the events. The data were gathered via intercept interviews of event attendees at the events. The economic surveys contained specific questions about the postcode of departure on the day of the event and what type of transport event attendees used to travel to the event. In addition, as part of the economic evaluation, attendees were asked the number of people travelling in the group. The information was used to calculate the distance travelled, which was multiplied by a series of CO_2 factors (Australian Greenhouse Office 2005) and the number of people in the surveys, to arrive at an average amount of CO_2 per person. For Equitana, the average amount of CO_2 per person was 27 kg and for Ironman, 17kg. The difference in the two results is most likely attributable to the higher proportion of large and 4WD vehicles used by attendees at Equitana 2005.

An estimate was also made of the proportion of this trip in regard to the annual individual ecological footprint allocation and the daily fair earth share that was proposed by Peeters and Schouten (2006). The results estimated that transport to and from the event represented 0.24% of the annual EF allocation of 1.9 global hectares. For the transport data, the Ecological Footprint Calculators (EPA Victoria 2005) were used to calculate the CO_2 emissions and the Global footprint calculations were taken from the factors developed by Australian Greenhouse Office (2005). As discussed in Chapter Two, ecological footprints have been used in a number of contexts and offer potential for the application of events (Rickard 2004). The work by Rickard (2004) developed an ecological footprint for conventions, which, as well as transport, also considered the impact of food at the event, accommodation, office space, land use and paper use, however, these components were not considered in the current evaluations. The results also estimated that the CO_2 emissions from transport to and from the event represented 145% of the fair earth share for Equitana and 92.3% for Ironman.

Whilst the CO_2 emissions for electricity were calculated using an existing model developed by Scott (2001), no such model existed to analyse the transport data. These calculations were undertaken manually, which took a considerable amount of time. Any future attempt at this type of analysis would benefit from the development of a

more automated approach to the calculations of distance and transport emissions. The process for calculating the transport data was onerous and involved a number of steps. This included manually calculating the distance travelled and the amount of CO_2 for each trip and for each person. Further research is needed to automate this process for future evaluations, and could be based on the initial work undertaken in this research. For example, this data could be captured on a PDA device at the event and automatically calculated based on a set of algorithms.

In terms of data collection for this indicator, data should also be collected from competitors and exhibitors so as to broaden the approach. For example, competitors at Equitana 2005 usually brought horse floats and drove 4WD vehicles, and so would have emitted a larger amount of CO_2 in comparison to other forms of transport.

For evaluations of Australian events, there is a low-cost alternative to calculating the distance travelled to and from an event. A Web site called whereis.com (Telstra 2005) can be used to obtain distances from any two addresses within Australia (including Tasmania). The two addresses are entered into the 'from' and 'to' sections of the Web page and a choice is made to either calculate the fastest time or the shortest distance for the trip. The query results provide step-by-step directions and maps for navigation of the journey, and also the distance in km for the trip. Although this method is onerous, as each case would have to be entered individually, it offers a low-cost alternative to calculating the distances using MapInfo. Moreover, whereis.com requires considerably less expertise (and cost) to use in comparison to the GIS software program MapInfo.

One way in which this indicator could be modified is to include data on the air component of travel to and from the event, which was not included in the calculations for this study. According to a study by Rickard (2004), the air component of the environmental impact dwarfed the land component in terms of the ecological footprint. Indeed, Rickard (2004) found that the transport component accounted for 84% of the ecological footprint of a business event. Similarly, in a study of inbound tourism into Amsterdam, Peeters and Schouten (2006) concluded that approximately 70% of the environmental impact was attributable to transport into the city. An

analysis that included the air component of an event should only include the air travel by those event attendees that travelled to the destination specifically for the event. In contrast, Rickard (2004) counted the air travel of all event attendees regardless of their travel motivations.

In addition, in order to fully capture the ecological footprint of an event, more detail than just the transport to and from the event needs to be included. The other factors that could be captured and included in the ecological footprint calculations are the environmental impact arising from accommodation used by event attendees (for example, consumption of energy and water, consumption of food and goods, waste production, and the direct use of land the hotel has been built on), and leisure activities (for example, shopping, restaurants and theatres), which was the approach adopted by Peeters and Schouten (2006). As the economic evaluation captures data from event attendee's expenditure on accommodation, food and drink and entertainment, this approach would provide a more holistic appraisal of the impact of an event.

6.12 Recommendations on TBL Indicators

This section discusses the recommendations for which indicators could be included in a parsimonious TBL evaluation. Table 6.23 reveals the suite of TBL indicators, which could be used in a parsimonious model for a TBL evaluation of the impact of events. This set of indicators represents the third contribution of this research, the first being the list of key impacts from the event publications and impact assessments and the second being the pool of possible indicators that were developed through the Web-based Delphi Survey of event experts. The first column shows that there are 12 indicators, specifically, three economic, four social and five environmental. These 12 indicators were chosen as they were relatively simple to understand, enabled a comparison to be made of different events, and captured enough data to give a broad understanding of the impact of an event. The second column shows a suggested measurement for each of the 12 indicators.

Table 6.23 Recommended TBL Indicators and Measurements

Indicator	Measurement
Economic	
Direct inscope expenditure from the event	Economic evaluation of the event and event organiser
Social	
Impact on quality of life of community	Seven-point impact scale (-3 to +3)
Impact on community pride	Seven-point impact scale (-3 to +3)
Impact on sense of community	Seven-point impact scale (-3 to +3)
Impact on personal quality of life	Seven-point impact scale (-3 to +3)
Environmental	
Energy and gas use	CO_2-e per person
Solid Waste sent to landfill	CO_2-e per person
Emissions from transport to and from event	CO_2-e per person
Water use	Litres per person
Percent of solid waste recycled	%

There is one economic indicator as shown in Table 6.23. The indicator is the direct inscope expenditure from the event, which is a vital component of an event evaluation and underpins any TBL evaluation. The other two indicators attempt to capture the leveraging from the event, particularly for local businesses, which was a response to the literature (See, for example, Chalip & Leyns 2002). The four social indicators were unchanged from those that were tested in the two case studies. The environmental indicators are predominantly measurable in terms of the CO_2-e. That is, in operationalising the indicators, three out of the five could be measured with this common denominator. The advantage is the potential for further analysis into a footprint analysis. As suggested in earlier, one approach is to compare the results to a per person 'fair earth share', which was proposed by Peeters and Schouten (2006). Given the increasing awareness of the issue of climate change and global warming, this approach has particular merit. In short, environmental indicators that provide data on a per person level are more easily compared across a range of different events. Per person measurements allow a comparison to be made against the average daily consumption (examples were presented in Table 6.21).

6.13 Feedback from Stakeholders

6.13.1 Background

The final stage of this research was to obtain feedback from a small number of project stakeholders on the results of the event evaluations. This stage of the research was important on a number of levels. Firstly, it was felt that it was important to obtain feedback from stakeholders to provide confirmation on the results of the findings in regard to direction and usefulness. Secondly, the consultation with stakeholders represented the final step in the indicator development process (Segnestam et al. 2000), which underpins this research. Step 7 suggested that the indicator development process should be concluded with a dissemination of the tools, information, and results of the case studies. Therefore, the feedback to stakeholders meets this criteria as it represents dissemination of the results of the TBL evaluation and provides a discussion of the indicators and the proposed model. Thirdly, as noted in Chapter Two, stakeholder consultations are an important component in the development of TBL indicators and TBL reporting (Global Reporting Initiative 2006b). Indeed, the reporting guidelines suggested that indicators are of little value if they are not useful to stakeholders (Global Reporting Initiative 2006b). In addition, Searcy et al. (In press) suggested that key stakeholders must be involved throughout the entire indicator development process, and that the results cannot be assessed in the absence of stakeholder feedback.

The specific aims of this stage of the research were to obtain feedback on three areas, namely, the results of the case studies, the indicators that were used in the TBL evaluation and the type of model that was proposed. Due to the wider range of data that were generated from the evaluation of Equitana 2005, particularly environmental data, it was more convenient to use the results from this event as the basis of the stakeholder feedback.

6.13.2 Method

Four stakeholders were chosen for the feedback phase of the research. The four stakeholders included two event experts (who were also members of the Delphi

panel), one event organiser from Definitive Events and one representative from the State and Tourism Organisation (Tourism Victoria). Thus, the group represented a range of event stakeholder views.

The stakeholders were initially contacted by phone to gain their consent to participate in this stage of the research and each agreed to participate in the review. A time was arranged for either a face-to-face meeting or a phone call, depending on the location, during which a discussion was held on the feedback. The stakeholders were sent a four-page summary via email, which consisted of the results of the economic, social and environmental evaluation, an example of the proposed model (adapted from Fredline et al. 2005c), and four questions that the stakeholders were to consider. The first two questions were applicable to each of the stakeholders, whereas the last two were more specific to the event organiser and the STO. The four questions were as follows:

1. Do the results provide you with a broader understanding of the impact of the event?
2. Do you have any comments on the economic, social or environmental indicators used in the research?
3. Would a model like the one above provide you with a useful tool for evaluating and comprehending a TBL assessment of an event?
4. Would the information assist your organisation with decisions about the staging of events?

6.13.3 Results of Feedback

6.13.3.1 Do the results provide you with a broader understanding of the impact of the event?

In general, the stakeholders agreed that the results provided a broader understanding of the impact of Equitana 2005 and that event assessments needed to extend beyond economic evaluations. There was a suggestion from one of the academics that event evaluations could be extended further to include a measure of the employment effect of an event. In terms of understanding the evaluation, the academic remarked that, in particular, the social results presented arbitrary numbers and there was a need for a

comparison with other results in order to provide a better understanding of the relative impact of the event. For example, a number of the social indicators showed zero, and some comparative results would help with the interpretation. The event organiser maintained that the economic impact research indicators were valuable in that they provided support for their economic business model.

6.13.3.2 Do you have any comments on the economic, social or environmental indicators used in the research?

The stakeholders gave a range of responses to this question. Because of the nature of the event, the STO did not expect the social or environmental impacts to be an issue. In general, they suggested that there were limited use for environmental indicators, however, if there were any adverse environmental impacts arising from an event, issues such as pollution or rubbish removal, this would most likely be picked up during the event. An indication of the increased recognition of the environmental consequences of an event was that for future events, event organisers would be required to implement a waste-wise strategy as a condition of funding.

Despite the agreement for the need for additional measurements beyond purely economics, one of the academics questioned whether stakeholders were interested in these indicators. He suggested that there should instead be an assessment of the opportunity costs of staging event. Similar to the response to the previous question, the other academic maintained that although the environmental indicators provided a lot of detail, the results needed to be compared with other figures or events in order to explain the relative performance. For example, the results of the event could be compared to the average daily usage, which would improve the understanding of the results substantially. The event organisers claimed that the economic indicators used in the research would provide important feedback for their organisation. In short, there appeared to be too much focus on the economic indicators from the stakeholder responses.

6.13.3.3 Would a model like the one above provide you with a useful tool for evaluating and comprehending a TBL assessment of an event?

In short, there was support for the development of this type of model for the analysis of an event. The STO stated that the economic component was an important one especially considering the financial support given by the STO to Equitana. The event organiser maintained that information would assist by providing a more comprehensive evaluation of the event, which would appeal to a broader range of stakeholders. The academics approved of the model, but suggested that more research and data were needed to underpin the analysis. Such a model could be delivered online and link in with existing tools such as EarthCheck, which could provide additional background data, especially for the environmental component.

6.13.3.4 Would the information assist your organisation with decisions about the staging of events?

There were a variety of responses to this question. The most positive was from the event organiser who believed that the information presented in the evaluation would be helpful when assessing marketing strategies for the event in the future. The STO was more circumspect and suggested that the information was likely to help, but it depended on the type of event being evaluated. The STO recommended that a measure of the impact on destination profile should be included, for example looking at the broadcast of the event and how the event showcased the destination, which is an important consideration for STOs and other such organisations.

On the whole, one of the academics did not think that an event organiser would find the analysis particularly useful, except for the public relations value, where there is a need for a message to be sent, in a similar way in which sustainability reporting is showing that the business is doing the right thing. In a practical sense, however, the environmental indicators could be used to show, for example, the level of recycling and the performance of events in order to determine if they are doing enough in this area.

The academic also proposed that two versions of the evaluation model could be developed, in which the shorter version would have the aim of meeting the public relations needs for stakeholders, whilst the longer version could be used for a more detailed TBL evaluation depending on the level of detail required. In short, the model represented a positive step forward, but needs more context and work to develop the indicators that are needed to underpin a TBL evaluation.

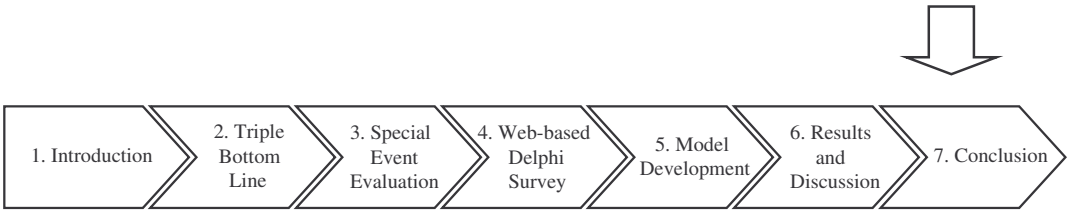
6.14 Conclusion

This chapter presented Steps 6 and 7 in the indicators development process that was developed by Segnestam et al. (2000) and underpins this research. Step 6 was the two special event case studies, namely, Equitana Asia Pacific 2005, which was staged in Melbourne, Victoria and Ironman Western Australia Triathlon 2005, which was staged in Busselton, Western Australia. The evaluations of the two events were undertaken to operationalise the indicators and to test their applicability for inclusion in a model to evaluate the TBL impact of events. Step 7 was the feedback from event stakeholders, which sought discussion on the indicators and the results of one of the case studies. The final chapter will present the conclusion to this research.

Chapter

7

Conclusion



Chapter Structure

- TBL Evaluation of Events
- TBL Dimensions
- Implications for Policy and Practice
- Limitations of this Research
- Further Research

7.1 Introduction

Based on an indicator development process outlined by Segnestam et al. (2000), this study suggested that a TBL evaluation would be an appropriate framework to underpin a broad-based assessment of the impact of special events. An analysis of a large number of event evaluation publications and actual impact assessments was undertaken, from which was derived a list of the key impacts that were used in event evaluations. A Web-based Delphi survey was then used to enable a panel of event experts to suggest indicators to measure the list of impacts. A sub-set of the indicators was chosen from the pool of indicators and subsequently used in two event case studies in order to operationalise the indicators and test their appropriateness for inclusion in a TBL evaluation of events. In the previous chapter, recommendations were made concerning which indicators would be most appropriate for a parsimonious TBL event evaluation model.

This chapter presents the concluding remarks on the research, and is divided into five sections. The first section presents a brief discussion on the TBL evaluation of events. The second section addresses some of the issues concerning each of the TBL dimensions. In the third section, a number of implications for policy and practice are addressed, whilst the last two sections present the limitations of the research and suggestions for further research.

7.2 TBL Evaluation of Events

This research has built on earlier studies that have advanced event evaluation beyond a narrow economic focus. The major contributions of previous studies included the proposal for a broader evaluation framework for evaluating the impact of hallmark events (Ritchie 1984), a cost benefit analysis that explored social dimensions such as traffic congestion (Burns & Mules 1986), a proposal to scale the intangible and tangible measures with pluses and minuses to account for the scale of the impact (Dwyer et al. 2000a), the establishment of criteria for a broader evaluation framework (Carlsen et al. 2001), the development of a conceptual framework for evaluating the TBL impacts based on sustainability reporting (Sherwood et al. 2004) and the proposal of a framework for integrating the TBL dimensions into a holistic event evaluation (Fredline et al. 2004, 2005c). In addition, this research has built on previous studies such as Formica (1998), Getz (2000) and Hede et al. (2002), which explored the general trends in event literature.

7.2.1 Indicator Development

The contribution of the current research was to develop a set of indicators to measure the TBL impact of events, which would underpin a broad-based evaluation model such as the one proposed by Fredline et al. (2004; 2005c). In order to develop the indicators, the thesis generally followed a seven-step indicator development process that was developed by Segnestam et al. (2000). Segnestam's process was used for this study as it provided a practical approach that combined stakeholder consultations with testing of the indicators via case studies. In addition, the process was relevant

for this research as it was based on a number of collaborative projects that developed indicators to measure sustainable development, which involved a number of leading international organisations such as the International Centre for Tropical Agriculture, the World Bank, and the United Nations Environment Program. The benefit of the program was that it provided practical guidance to other indicator developers (Segnestam et al. 2000). Table 1.1 showed the steps suggested by Segnestam et al. (2000), and the corresponding stages involved in the current research. The three most significant stages of the current research were the comprehensive analysis of event evaluation literature and event impact assessments, the Web-based Delphi survey of event experts and the two TBL event evaluations. The final stage of the research was a consultation with event stakeholders, which was presented in Chapter Six. According to the Sustainability Reporting Guidelines (Global Reporting Initiative 2006b), stakeholder consultations are an important step in the process of developing indicators, particularly as stakeholders are the end users of the indicators and are the people that are most likely to use the information in a decision-making context.

As discussed earlier, the integration of a set of indicators into a TBL model such as that proposed by Fredline et al. (2004; 2005c) was beyond the scope of this research. Nevertheless, it is necessary to address some of the challenges that future researchers face. The first consideration is how the indicators can be integrated into a holistic model. Bell and Morse (2003) maintained that there are two approaches to the integration of indicators, namely, a visual approach that shows the results in a table or diagram, or a numerical approach, which combines the indicators into a single index. The benefit of a single index is that it enables a comparison to be made of a range of different events. The second consideration is the weighting of the indicators. For example, an event that has a strong social purpose needs to have a greater weighting for the social dimension of the TBL. This issue was explored in the discussion by Fredline et al. (2004; 2005c). The integration of the indicators into a holistic model is an important and complex stage and more research is needed in this area in order to develop a fully operational TBL model.

7.2.2 Standardised Set of Measurements

One of the gaps identified in this research was the need to establish a set of standardised measurements for the evaluation of special events. Indeed, recognition of this research gap has come from the highest level within the events area in Australia. For instance, one of the activities that Tourism Events Australia aims to undertake is to develop a 'national base measurement for the economic, social, cultural and environmental impact of major events in Australia' (2005, p. 3). As a result, as stated in Chapter One, the current research is part of a wider research project to develop a TBL evaluation of the impact of special events, which is supported by Tourism Australia.

The call for a standardised set of measurements has come from a number of event researchers. For example, Carlsen et al. (2001, p. 247), claimed that 'there is potential for the development of an agreed framework for evaluation of tourism effects that could be applied to all major events'. Moreover, Getz (2000, p.21) concurred and claimed that 'there is a need for more standardised methodology for evaluating events and their impacts; more comprehensive methods and measures of value must be used'. As shown in the analysis of a sample of 84 impact assessments presented in Chapter Three, event evaluations are undertaken by a range of consulting agencies, moreover, a variety of methods are employed for estimating the impact of events, particularly in the use of multipliers to estimate both the economic impacts and the number of jobs that are created as a result of an event. The major benefit of the development of a standardised set of measurements such as those developed in the current study is that it would enable a comparison to be made of a range of different events. Historically, given the variety of methods used in event evaluations, this has not been the case.

7.2.3 Comparing the Results of a Range of Different Events

As such, the need to be able to compare the performance of a range of events has also been an underlying driver towards the development of a TBL evaluation. One method for achieving this was presented by Laesser et al. (2003), who proposed a set of coefficients that provided ways of combining a variety of measurements, which would

allow a comparison to be made of different events. As shown in the current research, indicators that provide per person measurement (for example, the impact of the quality of life of an individual or the level of water use per attendee) are a way of comparing the performance of different events.

The current research tested a set of indicators using two event case studies. One of the case studies was of an event staged in an urban setting using existing infrastructure, whilst the other event was staged in a regional setting and utilised temporary buildings. As shown in the previous chapter, these two events produced contrasting results in regard to data availability. More case studies are needed to further operationalise the indicators, as well as developing a less onerous way of calculating the environmental impacts, particularly the CO_2 emissions from transport to an event. The benefit of being able to compare the performance of a range of different events is that this information can be used in the decision making process of staging events.

In short, there is a need for better-informed decisions about which events merit support from government event agencies and therefore which events should be staged. Historically, decisions have been based on narrow economic impacts, however, many of this type of assessments overestimate the economic impacts and under estimate or ignore the social and environmental impacts. A broad-based TBL evaluation may inform event stakeholders such as government tourism agencies about whether an event merits on-going financial support. In addition, other event generators such as event organisations and host communities would be better informed about whether or not an event should be restaged.

7.2.4 Research Objectives

In summary, the main objective of this research was to develop a set of indicators that would enable a parsimonious TBL evaluation of the impact of special events. In addition, the aim was to develop the indicators so that they would represent a set of standardised measurements. The development of standardised measurements would allow a comparison to be made of a range of different events. As discussed in the

response to the research questions presented in the previous chapter, and in the above discussion, this objective has been achieved. Table 6.23 revealed the set of TBL indicators that were developed by this study.

7.3 TBL Dimensions

7.3.1 Economic Dimension

In Chapter Two, the literature on the economic dimension of the TBL was divided into two streams, namely defining economic sustainability and advancing methods to measure the concept. Economic Sustainability was considered to account for a wider group of stakeholders than the traditional financial reporting, and included customers, suppliers, employees, providers of capital and the public sector (Global Reporting Initiative 2006b). In line with the original concept of the TBL proposed by Elkington (1999a), much of the literature focused on capturing the value created out of the move from financial performance measurement to economic performance measurement, for example sustainable shareholder value (Castro & Chousa 2006) and a measure called financial value added (Taplin et al. 2006).

The analysis presented in Chapter Three supports the findings of Formica (1998), Getz (2000), Hede et al. (2002), in that the majority of discourse in event evaluation literature was concerned with the economic impacts. This was in contrast to the number of academic publications on the economic dimension of the TBL, in comparison the environmental and social dimensions. The results of the analysis of event impact assessments revealed a predominance of economic impact assessments. One of the main issues in regard to the economic dimension of an event evaluation was the sensitive nature of the economic results. In other words, the results of an economic evaluation are usually held back from public release, which is mainly due to the commercially sensitive nature of the results. This was evidenced in the current research where only one of the results was available for publication. Given that the economic dimension of the TBL is an important component of an event evaluation, there is a need to establish a way of revealing the results without releasing the final figures. A possible solution to this problem was presented by Laesser et al. (2003),

who proposed two coefficients that could be used for this type of approach, namely, a subsidy multiplier and a regional share of the direct inscope expenditure. Although these coefficients do provide scalable measures, the focus of the latter is on the results from a regional level, rather than on a state level, which is seen as being more important given that the majority of support for events, in Australia at least, comes from state-level government agencies. However, the use of coefficients such as these is bounded by the development of appropriate and supportive indicators. Further research is required in order to develop an 'anonymous' way of representing and scaling the economic evaluation figures.

7.3.2 Environmental Dimension

The literature reviewed for this thesis highlighted the concept of the limit to growth, which recognises that human development has been occurring at a faster rate than the earth's ability to cope, which has resulted in an ecological overshoot (Wackernagel et al. 1999). According to Agenda 21, which was produced by way of the 1992 Rio Earth Summit, businesses are seen as major actors in regard to finding solutions to the pressure being placed on the natural environment. Recently, the Stern Report on climate change (Stern 2006), highlighted the critical impact that human development is having on the natural environment. Moreover, the Al Gore book (Gore & Melcher Media. 2006) and documentary, 'An Inconvenient Truth', has brought the environmental challenges facing society into the minds of an increasing number of individuals, governments and organisations. As such, climate change is becoming a more widely accepted reality and governments are responding with policies to address some of the issue. The impact of these developments, along with the increasing price and decreasing availability of oil, is that travellers in the future may face choices in terms of the type and frequency of travel, especially long haul travel, which could have implications for sourcing attendees for major events.

There is a growing recognition in the tourism literature that, particularly with transportation, the tourism industry is a major contributor to greenhouse gas emissions (Dubois & Ceron 2006), especially given the current level of environmental impact of air travel (Peeters & Schouten 2006; Rickard 2004). The ecological footprint was

developed by Wackernagel and Rees (1996), and is a tool that is being promoted and used to assess the global environmental impact of various entities. This approach was used in this research to convert the transport emissions into measurements of ecological footprint. There is value in this type of approach as a tool for integrating a number of the environmental indicators and comparing the results of a range of different events.

Recognition and measurement of the environmental impacts of events would better align events with broader destination tourism strategies. For example, the *Towards 2020: New South Wales Tourism Masterplan* (Tourism New South Wales 2003) has as its basis an Ecological Sustainability Framework. Therefore, it is important for the event industry to firstly, recognise that events produce significant environmental impacts and secondly, account for these impacts through the implementation of a broader evaluation framework. In addition, recognition and measurement of the environmental impacts of events would better align events with broader destination tourism strategies such as the Ecological Sustainability Framework proposed by Tourism New South Wales (2003), which is being used to underpin an economically, socially and environmentally sustainable tourism industry. The analysis of events from a TBL perspective will bring events in line with trends in the wider business community, where the social and environmental impacts are being measured more frequently along with the traditional financial performance (Mays 2004).

7.3.3 Social Dimension

7.3.3.1 Licence to Stage

One of the important issues that arose from the sustainable development literature, particularly the area of corporate social responsibility, was the concept of a 'licence to operate'. Downing (2001) and Robson and Robson (1996) suggested that a business has a 'licence to operate' and by operating as a good corporate citizen, this license can be retained. Moreover, as this right to operate is granted by society, it is therefore important for organisations to demonstrate their economic, social and environmental performance to stakeholders (World Business Council for Sustainable Development

2003; Yongvanich & Guthrie 2006). Chapter Two revealed that the concept of a 'licence to operate' has its origins in Social Contract Theory, which holds that the licence is informally granted by society and played out through the fulfilment or not of a series of social contracts.

This concept could also be applied to special events, in which case the event organiser is granted a 'licence to stage' an event by society, and specifically, the primary stakeholders of an event. Therefore, it is important for event organisers to demonstrate that their organisation (and the event being staged) is a good corporate citizen, so as to retain the licence. As such, event organisers need to be responsive to the values of the primary event stakeholders, and this can be achieved through being accountable for not only the economic impact, but also the social and environmental impact of an event.

One of the issues with event stakeholders, however, is the degree to which they can influence the behaviour of event organisations, particularly given the short-term nature of events. It would appear that government agencies and the host community would be better placed to exert influence on the way in which events are managed. In contrast, a business that is an ongoing concern and has a more clearly defined group of stakeholders, and has more structured mechanisms for influencing corporate behaviour such as shareholder meetings. The retention of a 'licence to stage' an event would appear to be more relevant for on-going or recurring events rather than one-off events.

7.4 Implications for Policy and Practice

7.4.1 Event Management

This research argued that the aim in developing a broad-based evaluation should not be to determine the sustainability of events, a view that is supported by Bramwell (1997). Moreover, there appears to be no clear understanding of what a sustainable business is. Indeed, Atkinson (2000) maintained that there does not appear to be much substance in the concept of a sustainable business, beyond a set of sustainability

indicators that can be used to measure the progress towards sustainable development goals. Therefore, in the context of events, the broader focus should be on managing events in a more sustainable manner, which is a strategy that was also advocated by Fredline et al. (2004), and evaluating events from a TBL perspective would assist in achieving this goal.

Given the lack of research in regard to environmental impacts, there are a number of implications for environmental management of events. As discussed earlier, given the increasing awareness of climate change and global warming, society expects organisations to be more accountable for their environmental impact. Moreover, there appears to be a groundswell of opinion that one of the ways for individuals and organisations to be more responsible. Event organisers also need to take into consideration the event suppliers and how these organisations are contributing to a more sustainable future. In addition, events need to promote their environmental strategies through implementing practices such as the Waste Wise Events program.

7.4.2 Use of TBL Evaluation for Decision-making

Since the 1980's there has been an explosion in the number of events being staged, which is evidenced by the increasing number of events appearing in event calendars (Jago & McArdle 1999). There is also evidence of the economic contribution of events to destinations. For example, in 2002-03 major events were estimated to contribute $960m to the economy of Victoria, Australia (Tourism Victoria 2005). The result of this rapid expansion is the creation of a dynamic relationship between an increasing number of events being staged and event organisers that are chasing a limited amount of funding from event agencies. These agencies are under increased scrutiny to justify their spending to their respective treasuries. Moreover, as the general public has become more aware of the use of public resources in the pursuit of securing and funding major events (Crompton & McKay 1994), more questions are being asked about the level of public funding used to stage major events. In addition, the increased number of events being staged may have an impact on the quality of the delivery of events and consequently the quality of the experience for event attendees.

As discussed in Chapter Two, a TBL evaluation of an event is conducted to assess the outcomes of the event. There are implications for one-off events and on-going events. As such, from the perspective of an STO that provides support for an event, a likely question for a one-off event might be: What is the worth or value of the event (compared to other events)? Moreover, for an ongoing event, the next question would be: Does the event merit on-going support. The answers to these questions consequently form part of the decision to re-stage an event in that particular destination, as illustrated in the Event Evaluation Framework presented in Figure 5.6.

7.4.3 Event Evaluation

As stated earlier, there are existing event evaluation tools such as the Encore Festival and Event Evaluation Kit, which is a tool that can be used for the economic evaluation of an event. The indicators developed in this research could be used as the basis for the development of a tool to evaluate the TBL impacts, however, more research is needed to determine the method for integrating the indicators into a framework that provides an overall measure of the impact of an event such as that proposed by Fredline et al. (2005c).

One of the important indicators that was not tested in this research was the dollar value of media coverage. Event managers could also be encouraged through the strategic use of press releases to target the public about an event. Moreover, the media releases can then be monitored and analysed to gain a measure of exposure about the event. The cost of this exercise may not be expensive, especially if a minimal analysis is undertaken. This would allow the event organisers to target, monitor and analyse the media impact of a key message from the event. This can be analysed by a media-monitoring organisation, which can provide a quantitative report of the media coverage of the key message from the event. More research is needed to establish the most cost effective way to measure this impact, but it appears that there are two main areas, namely, a measure of the publicity or a measure of the take up of the key message from an event.

Further research could explore the possibility of using a number of proxy indicators, which may be more cost effective in regard to data collection. For example, Fredline et al. (2005c) proposed a range of social indicators that utilised non-survey data such as percentage of locals who attended the event, crime reported associated with the event and locals who volunteer at the event. Further research is needed to determine the availability and usefulness of these proxy indicators.

All events are suitable for a TBL evaluation, however, some events may be precluded due to the limited availability of resources that are needed to undertake this type of analysis. For example, TBL evaluations may be more applicable to larger-scale events that have larger budgets and can therefore afford to undertake the necessary data collection and analysis. There is a considerable cost and time involved in conducting mail-out surveys to local residents. In addition, the cost and time needed and the complexity of some of the analysis of the environmental indicators may limit the potential for a TBL evaluation of some events. Thus, careful consideration needs to be given to which events are considered for future TBL evaluation case studies. In the present research, for example, the TBL evaluations would not have occurred without support from Tourism Australia. One approach is to establish a cut-off point in the level of funding provided to events, above which it would be necessary to undertake a TBL evaluation. In addition, as shown in the two case studies used for this research, the data collection needed for the economic, social and environmental indicators was extensive, moreover, the data were not always available. For example, Equitana Asia Pacific 2005, which was staged in permanent stadia, provided more consistent environmental data than did Western Australia Ironman Triathlon 2005, which was staged in an open park and utilised temporary facilities and infrastructure.

7.5 Limitations

The use of the case study approach for this research enabled an in-depth analysis of the topic to be undertaken. The case study approach, however, limits generalising the findings to a broader context than the focus of the specific study. Some consideration has been given to the findings of this study in relation to the broader context of special

events, but further research is needed to validate these discussions. For example, one of the case studies was a regional event and the other was staged in an urban setting.

Earlier in the study, it was acknowledged that the choice of which events were used for the case studies was directed by the priorities of the larger research project in which this study was involved. Different events may have been more appropriate for the testing of the indicators. For example, there were limited environmental data available for Ironman 2005. Whilst the limitations are acknowledged, it is argued that they do not detract from the significance of the overall findings.

Whilst the literature used in the Chapter Three was drawn from a range of international journals, the focus of this study has been on the evaluation of events from a mainly Australian perspective. In regard to the TBL indicators, whilst the economic and social indicators have a wider application, the environmental indicators were developed using Australian factors and conversions. This may limit the generalisability of the results from the study.

7.6 Further Research

This study has highlighted that although considerable progress had been made in regard to a TBL evaluation of special events, further research is still required. The study provides a platform for the development of indicators that can measure the TBL impacts of special events.

The study developed a pool of possible indicators for inclusion in a TBL evaluation. With an increasing number of businesses measuring and reporting on their TBL performance, this is an important area of research, especially given the current focus on climate change and global warming. The results of this study show that a TBL evaluation of events is possible, but further research is needed to develop the indicators and design a model that integrates the indicators into an overall assessment of the impact of events on the host destination. This information will provide a more holistic understanding of the impact of events, which can be used by event managers and government agencies to determine the broader worth of events in terms of which

events merit support and ultimately are staged. Neglect of the social and environmental impacts of events in favour of the economic, risk continued scepticism by the host community leading to a lack of support. Moreover, failure to consider the environmental impact that events have on natural resources and greenhouse gases, particularly in terms of the CO_2 emissions that are generated through the use of air and land transport associated with travelling to events, waste generation, energy consumption and wastewater treatment, underestimates some of the costs of staging events. Continued over reliance and sometimes potential overestimation of the financial benefits of events leads to a misunderstanding of the true worth of events.

Recommendations have been made throughout the course of this chapter in regard to further research on the evaluation of special events, but some of the key recommendations that have emerged from this study are summarised below.

Research is required to:

- Determine the 'boundaries' for the environmental dimension of a TBL event evaluation in terms of the supply chain, for example, cleaning products used by food providers, paper used for printing tickets, posters and booklets, pesticides and chemicals used by venues and flights by event attendees
- Explore the possibility of incorporating accommodation and leisure activities as well as transport into ecological footprint calculations
- Determine if there are more social indicators needed such as a measure of community involvement or community support
- Explore alternatives or proxy indicators for the social indicators as a more cost-effective method than conducting a mail-out survey to local residents
- Explore ways to automate the data analysis of the environmental indicators
- Further develop and test the business leveraging indicators
- Conduct further case studies on a range of special events, particularly cultural events as the two case studies used in this research were sports events
- Determine how the indicators can be integrated on a TBL dimensional level
- Develop a rapid assessment tool similar to the Encore Evaluation Kit that can be used to undertake a TBL evaluation of events
- Establish baseline data for each of the indicators

- Explore the possibility of electronic data collection via hand-held devices such as PDA's or mobile or other technology whereby environmental data can be collected and imported into the software
- Explore the development of a cost effective way to measure the impact of destination promotion resulting from an event, for example, through the release of strategic media releases and the subsequent tracking by media monitoring organisations.

Given the above points, there remains much work that needs to be done in order to establish a fully operational TBL event evaluation model. Nevertheless, that event researchers have identified the need for such a model since the 1980's, the development of the TBL indicators in this research is an important step in the progress towards such a framework. It is hoped that this research has laid a foundation for achieving this long-held goal of event researchers and that future research will build upon this work.

Given the importance of the event sector to most tourism destinations, a TBL evaluation of events will help to underpin a more sustainable tourism and event industry, especially since event calendars are becoming increasingly crowded with cultural, sporting and entertainment events. In addition, monitoring of the social impact of events on the host community may provide the event organisers with feedback that can be used to adjust to any negative issues, which may assist in the retention of the licence to stage the event.

Lastly, a TBL evaluation of events will bring the events industry in line with the wider business community and enable event organisers to manage events in a more sustainable manner. This is important given the increasing awareness of issues of climate change and the recognition of the contribution of the tourism industry to greenhouse gas emissions, particularly the air component of travel. There are implications for the tourism and events industry to face in the future.

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Appendices

Appendix One: List of References from Literature Analysis

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Appendix Two: Extracts from Literature Analysis

List of Impacts from Event Literature Before Collapse

Microsoft Excel - Special Event Literature Analysis1.xls

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		1	2	3	4	5	6	7	8	9	10	11	12	13	14
2	Endnote refernce				569	##	216	567	685	686	687	623	572	48	##
3		1990	1990	1990	1991	1991	1991	1992	1992	1992	1992	1993	1993	1993	1993
4		Chang & Singh	Long & Perdue	Ritchie & Lyons	Getz	Murphy & Ritchie & Smith		Burgan & Mules	McCann & Thompson	Roche	Roslow, Nicholls & Lackey	Soutar & McLeod	Whitson & Macintosh	Denton & Furse	Walle
12	**Type of impact**														
14	**Economic**														
15	***Positive***														
16	Additional economic activity created by the event								1						
17	All available commecial accommodation is utilised														
18	Attracting governmnet funding or subsidies												1		
19	Attracting tourists to the comminity/city				1										1
20	Attracting sponsorship													1	
21	Business opportunities											1			
22	Changes in gross regional product														
23	City becomes widely known as a tourist destination														
24	Contribution of facilities to the critical mass of attractions														
25	Contribution to the local economy														
26	Creation of new tourist attractions and facilities														
27	Development of city's infrastructure														
28	Development of local labour force skills									1					
29	Direct job creation				1			1							
30	Enhancing the local tourism industry		1												
31	Event simulated sales by non-residents														
32	Expenditure on tourism enterprises														
33	Facility construction and accociated capital expenditure									1			1		
34	Generate economic returns for sponsors														
35	Generating overnight stays														

Special event literature / Sheet2 / Sheet3

Ready

List of Impacts after 1st Collapse

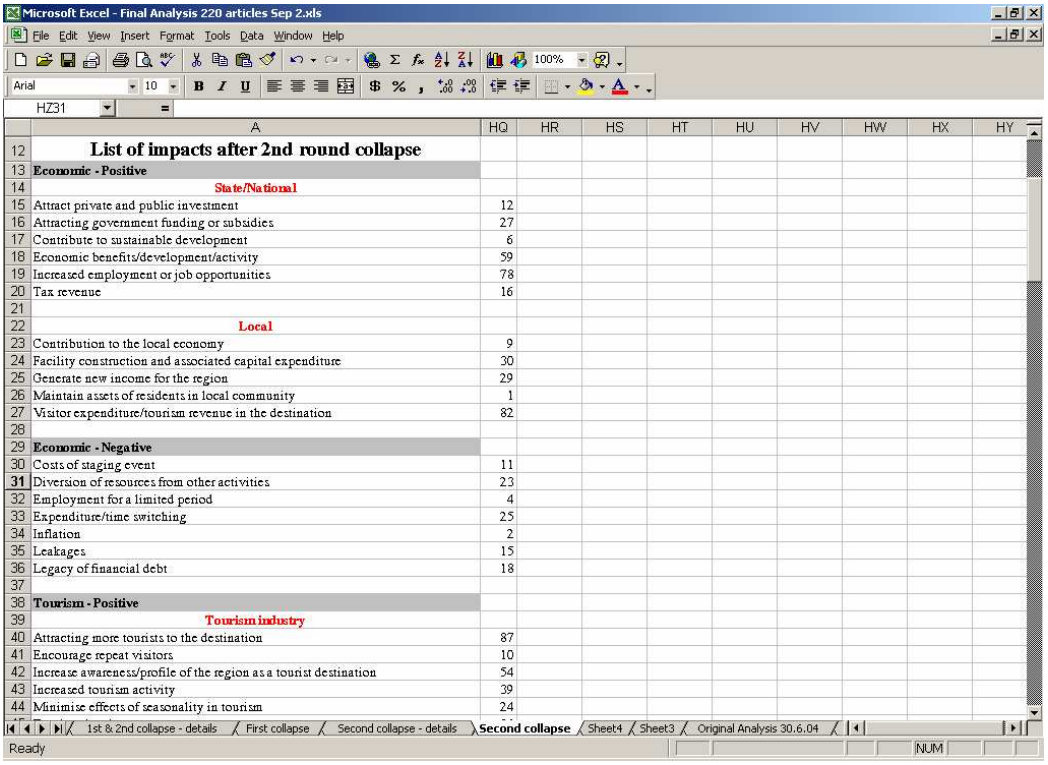
Microsoft Excel - Special Event Literature Analysis2.xls

	A	HQ	HR	HS	HT	HU	HV	HW	HX	HY
11										
12	**Economic - Positive**									
13	State/National									
14	Attract private and public investment	12								
15	Attracting government funding or subsidies	27								
16	Contribute to sustainable development	6								
17	Diversify the economy	1								
18	Economic benefits/development/activity	50								
19	Financial legacy	3								
20	Increase in National Income	3								
21	Increased employment or job opportunities	78								
22	Indirect expenditure	1								
23	Induced expenditure	1								
24	Return on investment	6								
25	Tax revenue	16								
26										
27	Local									
28	Contribution to the local economy	8								
29	Civic government paying subsidies and financial concessions	1								
30	Generate new income for the region	29								
31	Maintain assets of residents in local community	1								
32	Utilisation of local resources	2								
33	Visitor expenditure/tourism revenue in the destination	82								
34	Public infrastructure expenditure	5								
35	Infrastructure investment	9								
36	Investing in recreational facilities	4								
37	Facility construction and associated capital expenditure	13								
38										
39	**Economic - Negative**									
40	Costs to achieve a net benefit	2								
41	Costs to build facilities	2								
42	Diversion of resources from other activities	21								
43	Employment for a limited period	4								
44	Expenditure/time switching	25								

First collapse - details / First collapse / Original Analysis 30.6.04 / Preliminary findings / Sheet1 / Sheet2

Ready

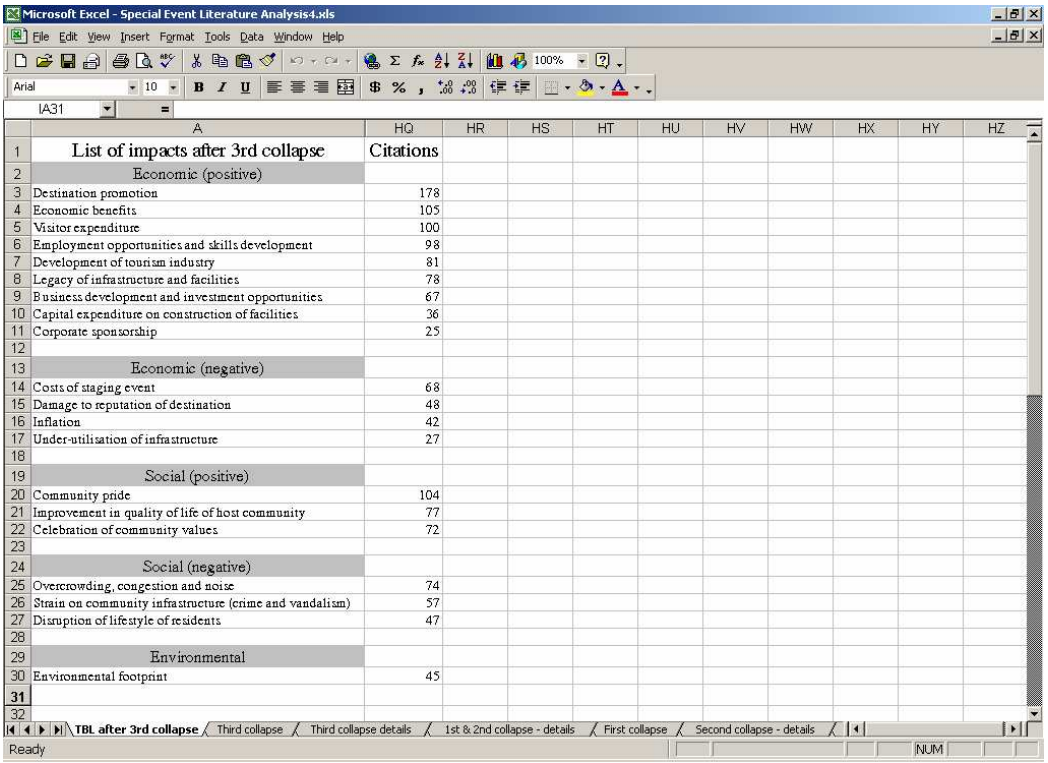
List of Impacts after 2nd Collapse



Microsoft Excel - Final Analysis 220 articles Sep 2.xls

	A	HQ
12	**List of impacts after 2nd round collapse**	
13	**Economic - Positive**	
14	**State/National**	
15	Attract private and public investment	12
16	Attracting government funding or subsidies	27
17	Contribute to sustainable development	6
18	Economic benefits/development/activity	59
19	Increased employment or job opportunities	78
20	Tax revenue	16
21		
22	**Local**	
23	Contribution to the local economy	9
24	Facility construction and associated capital expenditure	30
25	Generate new income for the region	29
26	Maintain assets of residents in local community	1
27	Visitor expenditure/tourism revenue in the destination	82
28		
29	**Economic - Negative**	
30	Costs of staging event	11
31	Diversion of resources from other activities	23
32	Employment for a limited period	4
33	Expenditure/time switching	25
34	Inflation	2
35	Leakages	15
36	Legacy of financial debt	18
37		
38	**Tourism - Positive**	
39	**Tourism industry**	
40	Attracting more tourists to the destination	87
41	Encourage repeat visitors	10
42	Increase awareness/profile of the region as a tourist destination	54
43	Increased tourism activity	39
44	Minimise effects of seasonality in tourism	24

List of Impacts after 3rd Collapse



Microsoft Excel - Special Event Literature Analysis4.xls

	A	HQ
1	List of impacts after 3rd collapse	Citations
2	Economic (positive)	
3	Destination promotion	178
4	Economic benefits	105
5	Visitor expenditure	100
6	Employment opportunities and skills development	98
7	Development of tourism industry	81
8	Legacy of infrastructure and facilities	78
9	Business development and investment opportunities	67
10	Capital expenditure on construction of facilities	36
11	Corporate sponsorship	25
12		
13	Economic (negative)	
14	Costs of staging event	68
15	Damage to reputation of destination	48
16	Inflation	42
17	Under-utilisation of infrastructure	27
18		
19	Social (positive)	
20	Community pride	104
21	Improvement in quality of life of host community	77
22	Celebration of community values	72
23		
24	Social (negative)	
25	Overcrowding, congestion and noise	74
26	Strain on community infrastructure (crime and vandalism)	57
27	Disruption of lifestyle of residents	47
28		
29	Environmental	
30	Environmental footprint	45
31		

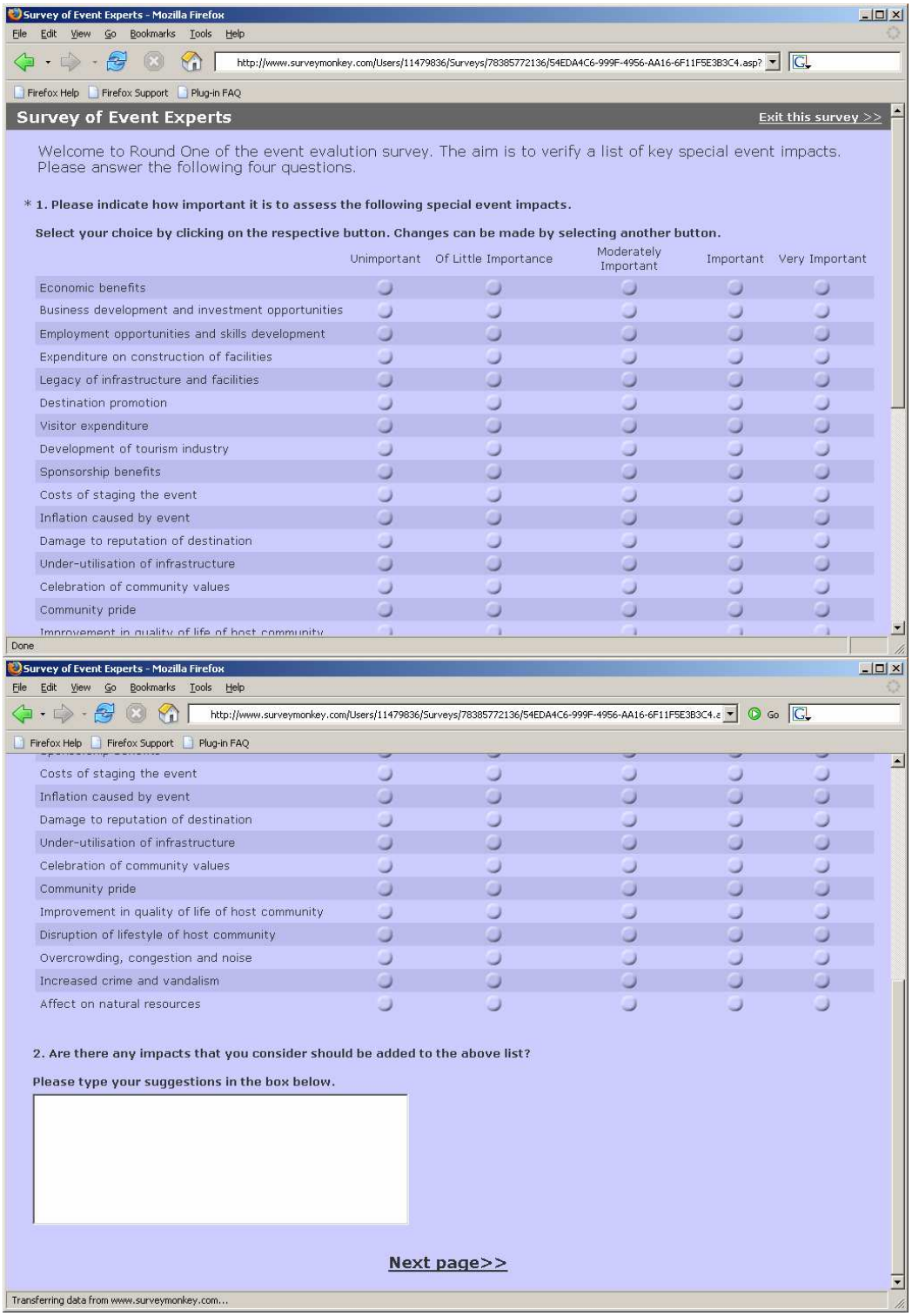
Appendix Three: Sample of Impact Assessments Used in Analysis

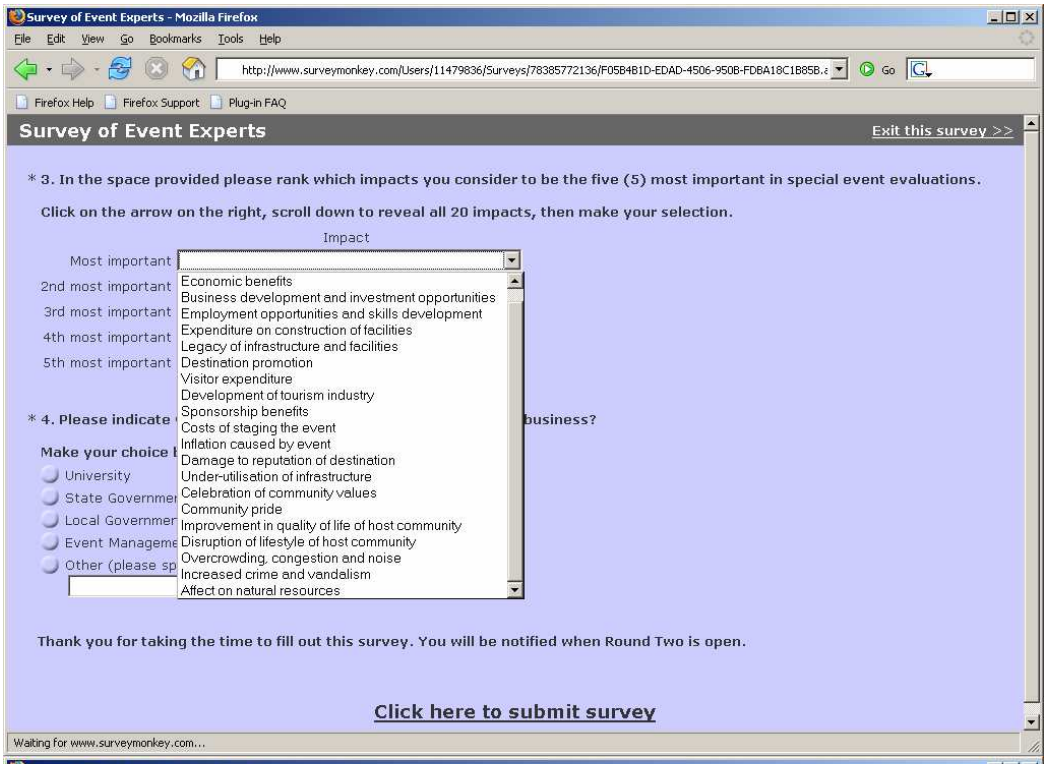
	Event	Year
1	World Cup in Athletics	1985
2	World Cup for Weightlifting	1986
3	VII World Veterans' Games	1987
4	Melbourne Comedy Festival	1988
5	World Expo 88	1988
6	Australian Masters Games	1988
7	Tall Ships Visit	1988
8	Australian Formula One Grand Prix	1989
9	Australian Motorcycle Grand Prix	1989
10	Australian Open Tennis Championships	1990
11	Drug Offensive Masters	1990
12	Toulouse Lautrec Exhibition	1991
13	Australian Motorcycle Grand Prix	1991
14	6th World Swimming Championships	1991
15	Melbourne International Festival	1991
16	Melbourne Comedy Festival	1991
17	Australian International Airshow & Aerospace Expo	1992
18	Australian Formula One Grand Prix	1992
19	The Surfmasters	1993
20	Spring Racing Carnival	1993
21	World Masters Games	1994
22	Australian Indycar Grand Prix	1994
23	Van Gogh Exhibition	1994
24	Nissan International Regatta	1994
25	7th World Veterans Table Tennis Championships	1994
26	World Police and Fire Games	1995
27	Gippsland Harvest Festival	1995
28	Melbourne International Comedy Festival	1995
29	Airshow Downunder	1995
30	Australian Indycar Grand Prix	1995
31	Spring Racing Carnival	1996
32	Formula One Grand Prix	1996
33	Australian Formula 1 Grand Prix	1996
34	Adelaide Festival	1996
35	World Cup Soccer Qualifier	1997
36	Opera in the Outback	1997
37	Melbourne International Flower and Garden Show	1997
38	ITU Triathlon World Championship	1997
39	IndyCar Event	1997
40	Ford Australian Open	1997
41	Bledisloe Cup	1997
42	Australian Motorcycle Grand Prix	1997
43	Australian International Airshow And Aerospace Expo	1997
44	Winternationals	1998
45	Sydney Gay and Lesbian Mardis Gras	1998
46	Presidents Cup	1998
47	IndyCar Event	1998
48	AFL Grand Final	1998
49	Adelaide Test Match	1998

50	Superbike World Championships	1999
51	World Sailing Championships	1999
52	Wangaratta Festival of Jazz	1999
53	Manchester United Vs Socceroos	1999
54	Australian International Rowing Championships	1999
55	Qantas Australian Grand Prix	2000
56	Interhash	2000
57	Sydney Olympic and Paralympic Games	2000
58	Pacific Circle Music Expo	2000
59	World Motocross Grand Prix	2001
60	National Celtic Folk Festival	2001
61	Melbourne International Comedy Festival	2001
62	Kangaroo Hoppet	2001
63	EQUITNA Asia Pacific	2001
64	Barossa Vintage Festival	2001
65	Australian International Airshow	2001
66	Audi Spray Farm Spring Festival	2001
67	World Masters Games	2002
68	Melbourne International Flower and Garden Show	2002
69	Warrnambool International Children's Festival	2002
70	Mildura Country Music Festival	2002
71	Johnny Walker Classic	2002
72	ILF Lacrosse World Championships	2002
73	Global Warning Tour	2002
74	Festival of Sport	2002
75	Australian Open	2002
76	Women's World Cup of Hockey	2002
77	St Kilda Festival	2003
78	Melbourne International Music and Blues Festival	2003
79	BMX World Championships	2003
80	Australian International Air Show	2003
81	Equitana Asia Pacific	2003
82	Rugby World Cup	2004
83	Melbourne International Music and Blues Festival	2004
84	Sand Sculpting Australia	2004
85	Rugby World Cup	2004

Appendix Four: Web-based Survey Instruments

Round One

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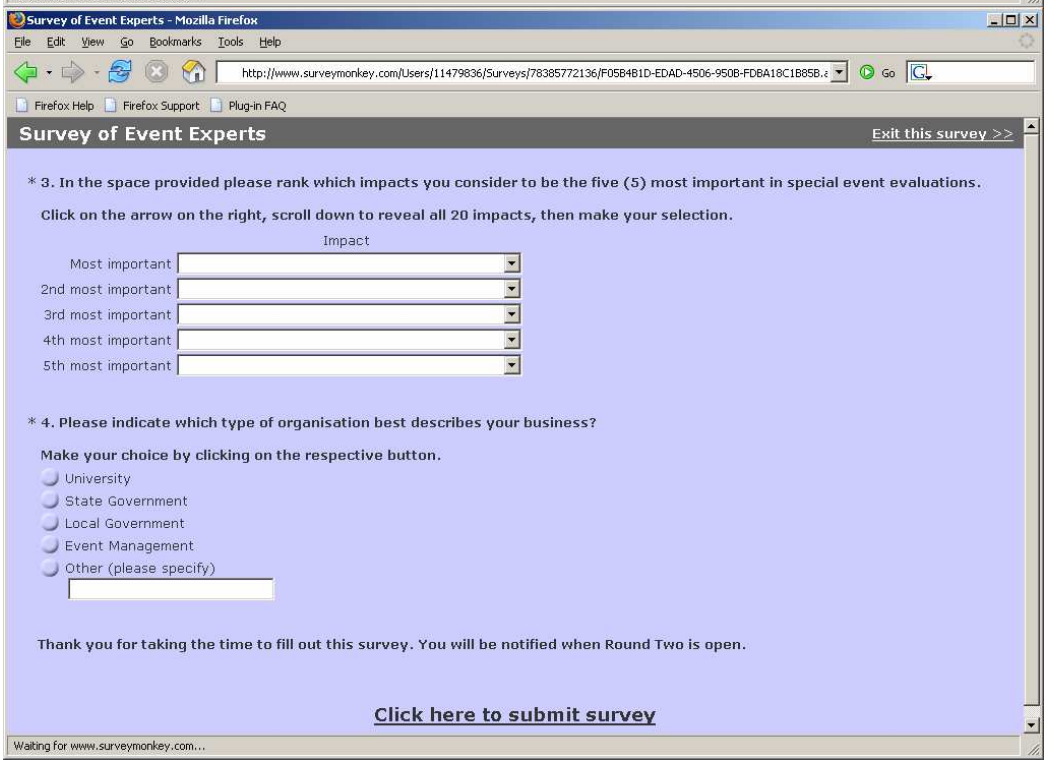
Survey of Event Experts
Exit this survey >>
* 3. In the space provided please rank which impacts you consider to be the five (5) most important in special event evaluations.
Click on the arrow on the right, scroll down to reveal all 20 impacts, then make your selection.
Impact
Most important
2nd most important
3rd most important
4th most important
5th most important
Economic benefits
Business development and investment opportunities
Employment opportunities and skills development
Expenditure on construction of facilities
Legacy of infrastructure and facilities
Destination promotion
Visitor expenditure
Development of tourism industry
Sponsorship benefits
Costs of staging the event
Inflation caused by event
Damage to reputation of destination
Under-utilisation of infrastructure
Celebration of community values
Community pride
Improvement in quality of life of host community
Disruption of lifestyle of host community
Overcrowding, congestion and noise
Increased crime and vandalism
Affect on natural resources
* 4. Please indicate
business?
Make your choice
University
State Governmer
Local Governmer
Event Manageme
Other (please sp
Thank you for taking the time to fill out this survey. You will be notified when Round Two is open.
Click here to submit survey
Waiting for www.surveymonkey.com...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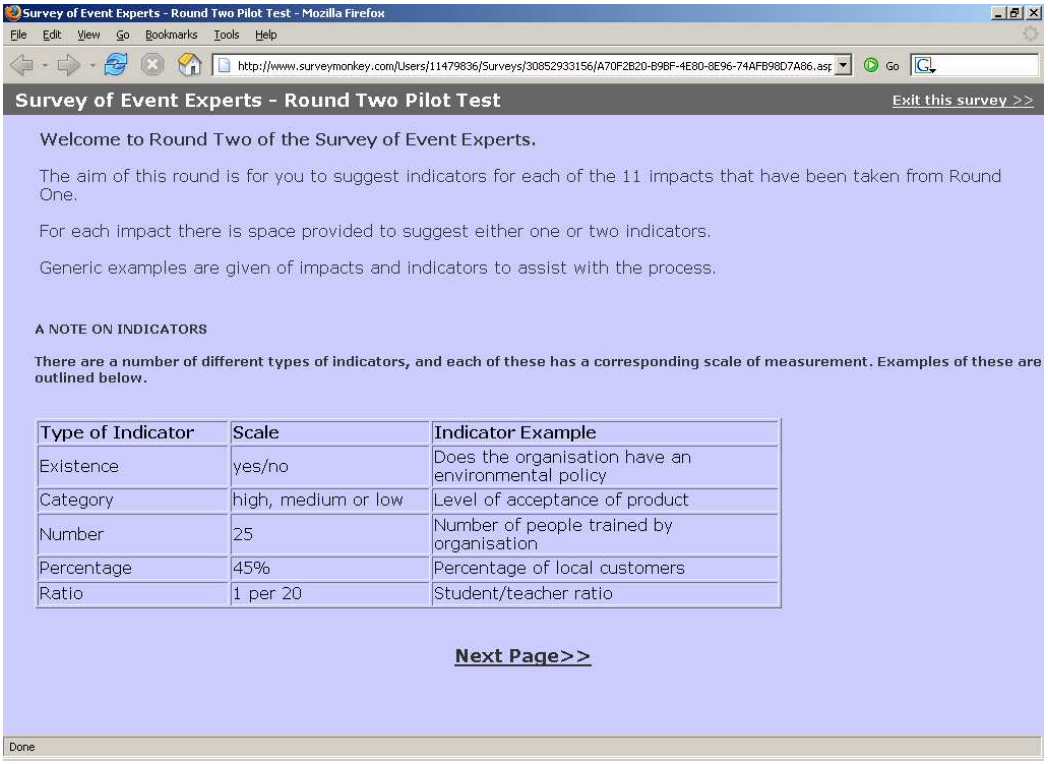
Survey of Event Experts
Exit this survey >>
* 3. In the space provided please rank which impacts you consider to be the five (5) most important in special event evaluations.
Click on the arrow on the right, scroll down to reveal all 20 impacts, then make your selection.
Impact
Most important
2nd most important
3rd most important
4th most important
5th most important
* 4. Please indicate which type of organisation best describes your business?
Make your choice by clicking on the respective button.
University
State Government
Local Government
Event Management
Other (please specify)
Thank you for taking the time to fill out this survey. You will be notified when Round Two is open.
Click here to submit survey
Waiting for www.surveymonkey.com...

Round Two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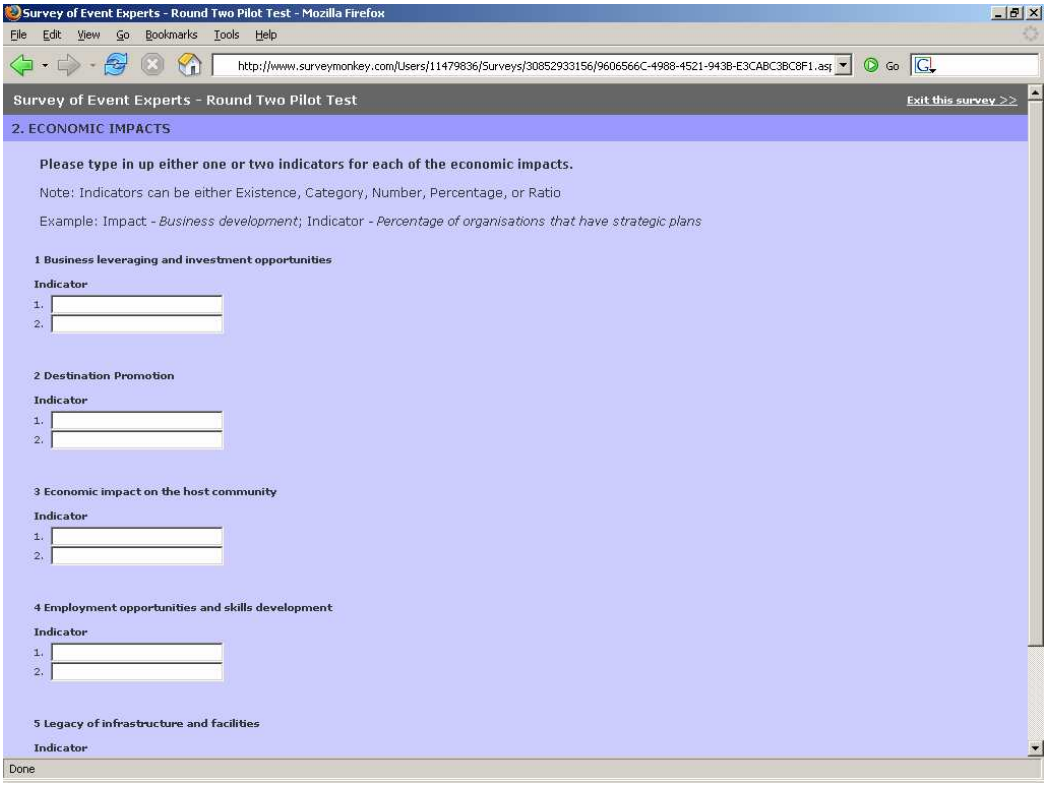
Go
Survey of Event Experts - Round Two Pilot Test
Exit this survey >>
Welcome to Round Two of the Survey of Event Experts.
The aim of this round is for you to suggest indicators for each of the 11 impacts that have been taken from Round One.
For each impact there is space provided to suggest either one or two indicators.
Generic examples are given of impacts and indicators to assist with the process.
A NOTE ON INDICATORS
There are a number of different types of indicators, and each of these has a corresponding scale of measurement. Examples of these are outlined below.
Type of Indicator
Scale
Indicator Example
Existence
yes/no
Does the organisation have an environmental policy
Category
high, medium or low
Level of acceptance of product
Number
25
Number of people trained by organisation
Percentage
45%
Percentage of local customers
Ratio
1 per 20
Student/teacher ratio
Next Page>>
Done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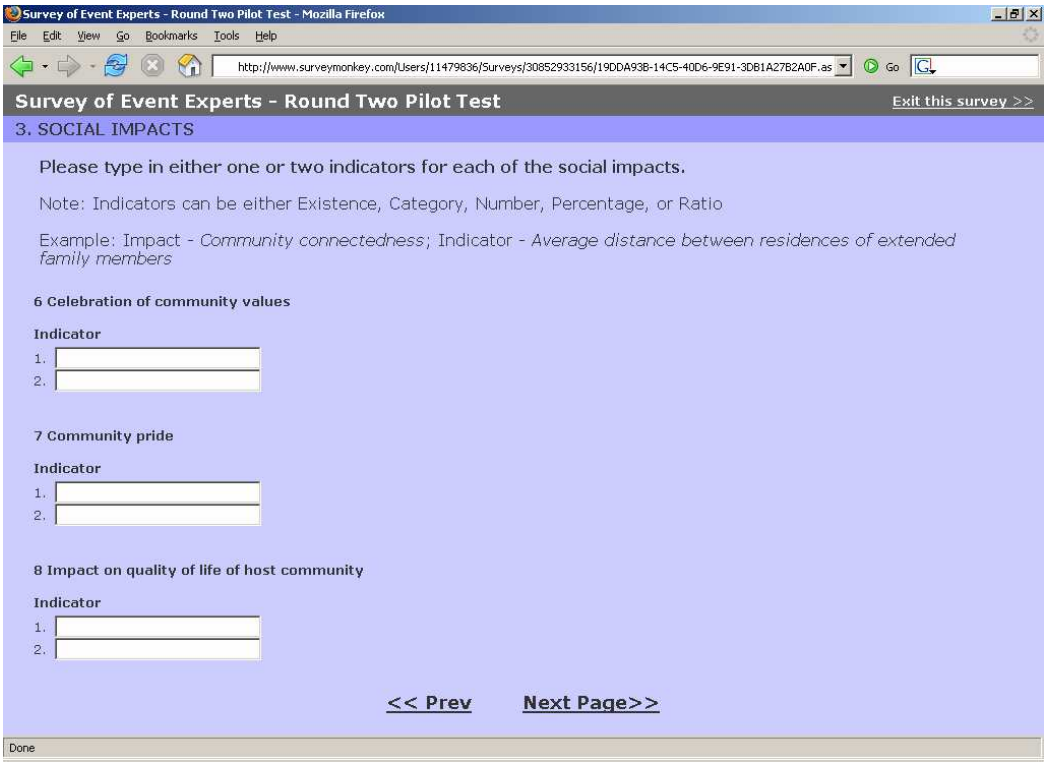
Go
Survey of Event Experts - Round Two Pilot Test
Exit this survey >>
2. ECONOMIC IMPACTS
Please type in up either one or two indicators for each of the economic impacts.
Note: Indicators can be either Existence, Category, Number, Percentage, or Ratio
Example: Impact - Business development; Indicator - Percentage of organisations that have strategic plans
1 Business leveraging and investment opportunities
Indicator
1.
2.
2 Destination Promotion
Indicator
1.
2.
3 Economic impact on the host community
Indicator
1.
2.
4 Employment opportunities and skills development
Indicator
1.
2.
5 Legacy of infrastructure and facilities
Indicator
Done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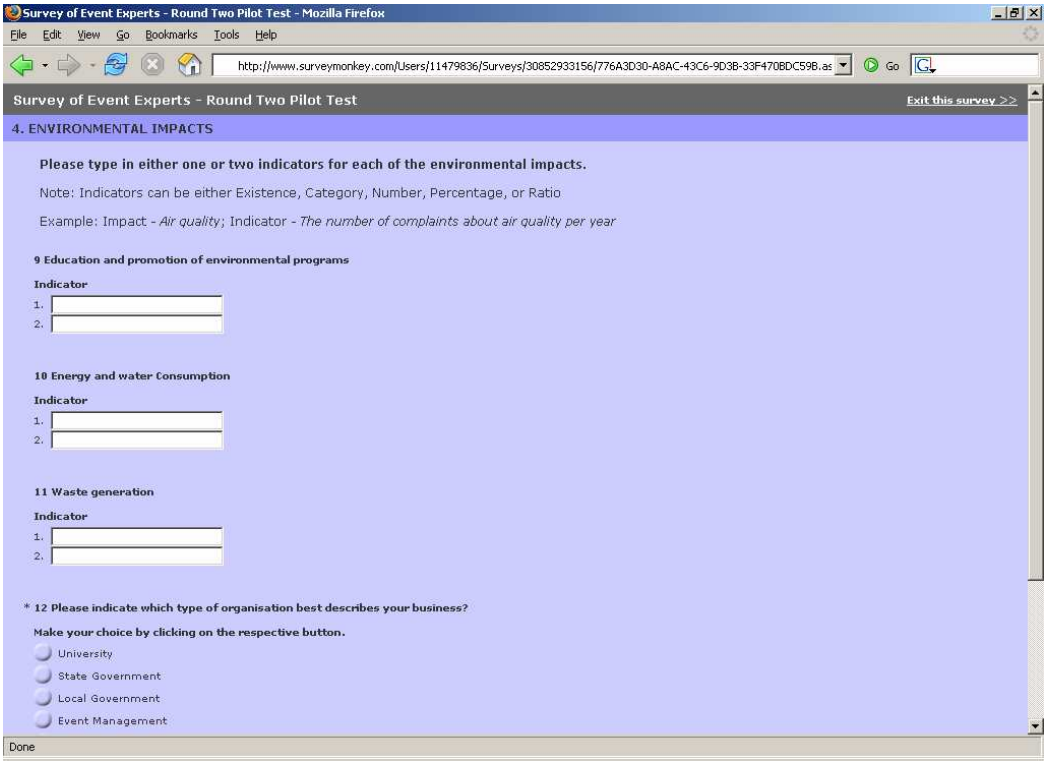
Go
Survey of Event Experts - Round Two Pilot Test
Exit this survey >>
3. SOCIAL IMPACTS
Please type in either one or two indicators for each of the social impacts.
Note: Indicators can be either Existence, Category, Number, Percentage, or Ratio
Example: Impact - Community connectedness; Indicator - Average distance between residences of extended family members
6 Celebration of community values
Indicator
1.
2.
7 Community pride
Indicator
1.
2.
8 Impact on quality of life of host community
Indicator
1.
2.
<< Prev
Next Page>>
Done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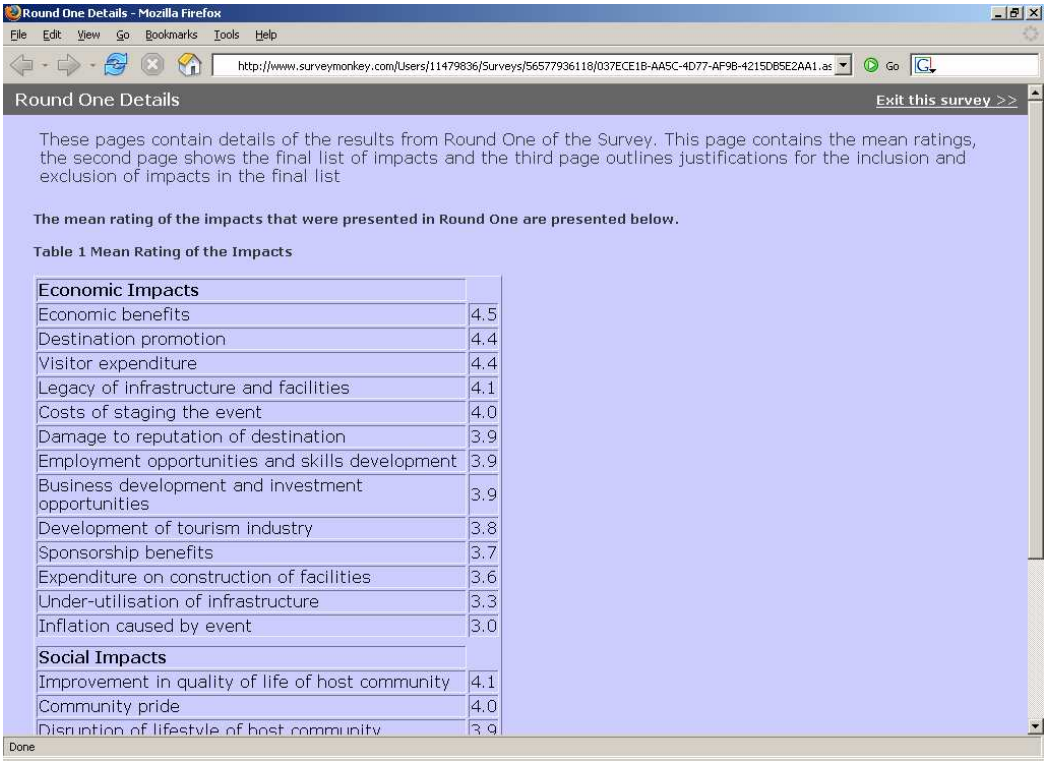
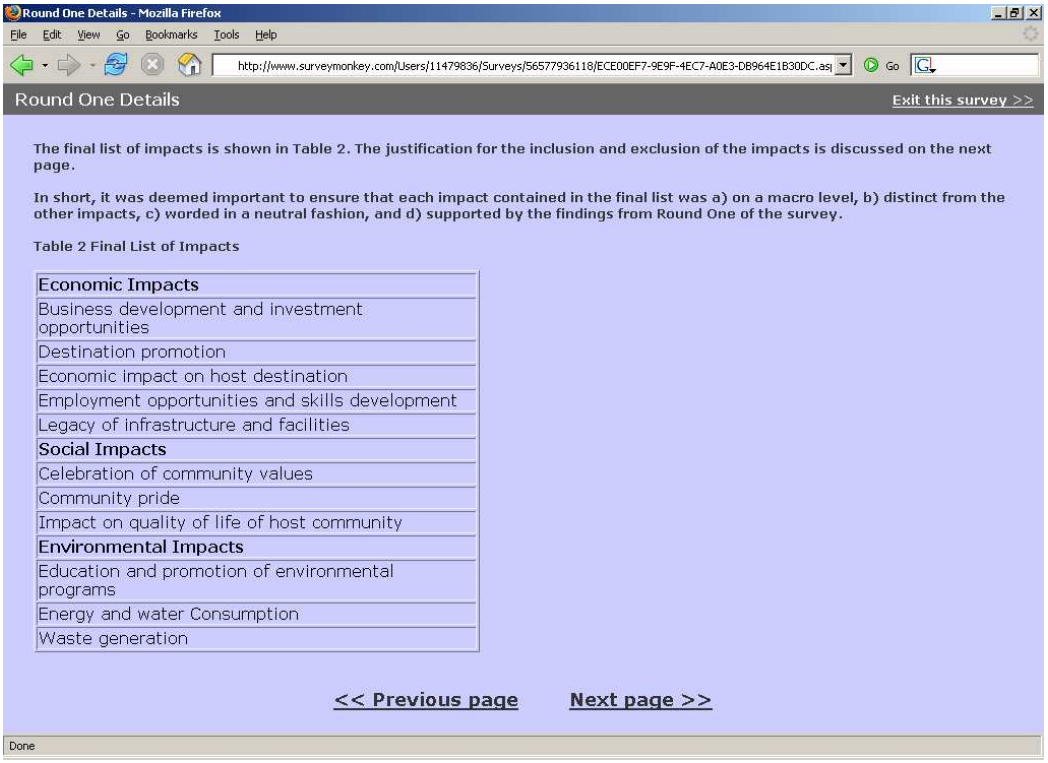
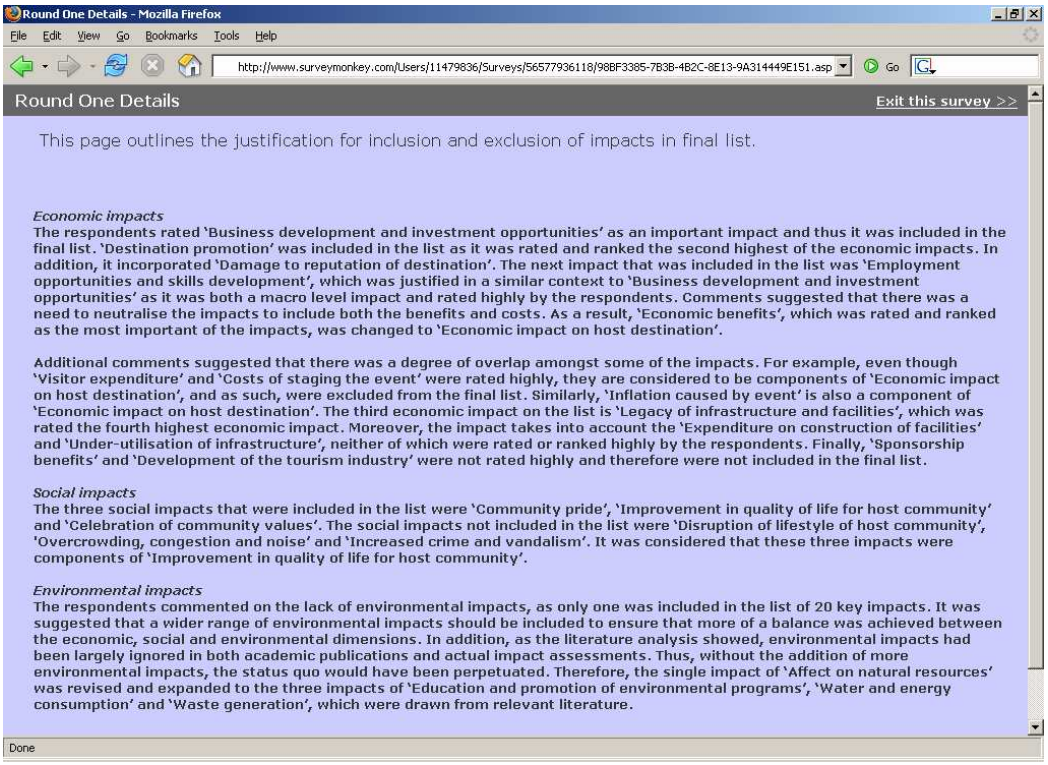
Go
Survey of Event Experts - Round Two Pilot Test
Exit this survey >>
4. ENVIRONMENTAL IMPACTS
Please type in either one or two indicators for each of the environmental impacts.
Note: Indicators can be either Existence, Category, Number, Percentage, or Ratio
Example: Impact - Air quality; Indicator - The number of complaints about air quality per year
9 Education and promotion of environmental programs
Indicator
1.
2.
10 Energy and water Consumption
Indicator
1.
2.
11 Waste generation
Indicator
1.
2.
* 12 Please indicate which type of organisation best describes your business?
Make your choice by clicking on the respective button.
University
State Government
Local Government
Event Management
Done

Round Two - Details for Respondents



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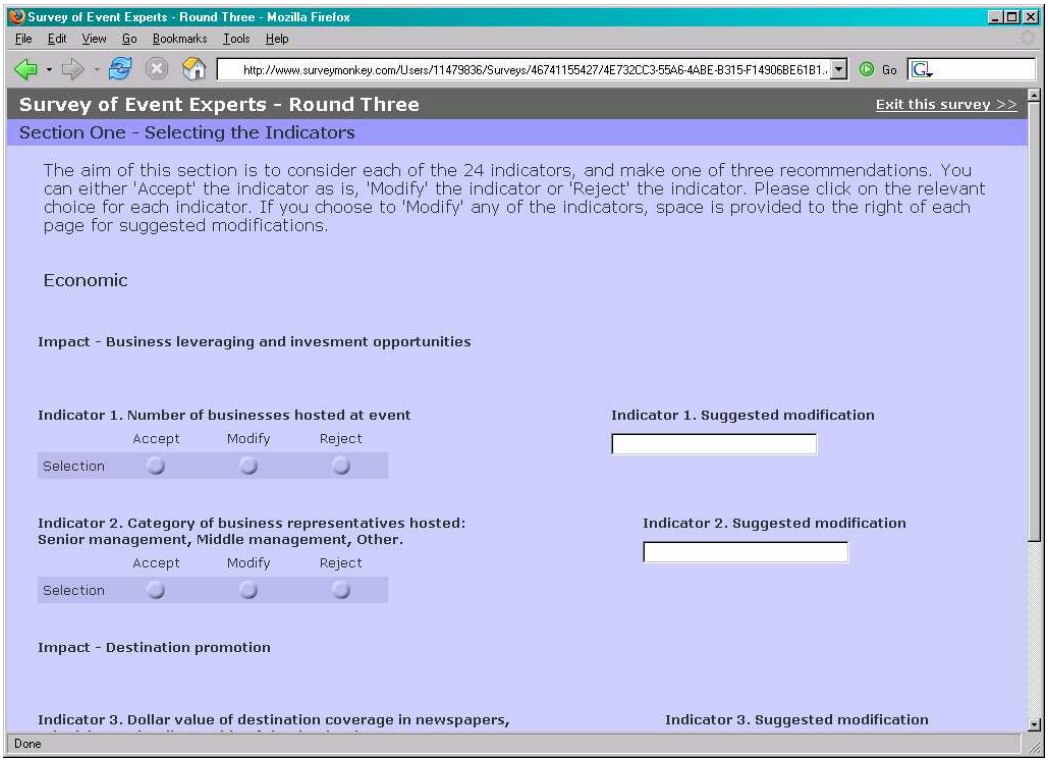
Go
Round One Details
Exit this survey >>
This page outlines the justification for inclusion and exclusion of impacts in final list.
Economic impacts
The respondents rated 'Business development and investment opportunities' as an important impact and thus it was included in the final list. 'Destination promotion' was included in the list as it was rated and ranked the second highest of the economic impacts. In addition, it incorporated 'Damage to reputation of destination'. The next impact that was included in the list was 'Employment opportunities and skills development', which was justified in a similar context to 'Business development and investment opportunities' as it was both a macro level impact and rated highly by the respondents. Comments suggested that there was a need to neutralise the impacts to include both the benefits and costs. As a result, 'Economic benefits', which was rated and ranked as the most important of the impacts, was changed to 'Economic impact on host destination'.
Additional comments suggested that there was a degree of overlap amongst some of the impacts. For example, even though 'Visitor expenditure' and 'Costs of staging the event' were rated highly, they are considered to be components of 'Economic impact on host destination', and as such, were excluded from the final list. Similarly, 'Inflation caused by event' is also a component of 'Economic impact on host destination'. The third economic impact on the list is 'Legacy of infrastructure and facilities', which was rated the fourth highest economic impact. Moreover, the impact takes into account the 'Expenditure on construction of facilities' and 'Under-utilisation of infrastructure', neither of which were rated or ranked highly by the respondents. Finally, 'Sponsorship benefits' and 'Development of the tourism industry' were not rated highly and therefore were not included in the final list.
Social impacts
The three social impacts that were included in the list were 'Community pride', 'Improvement in quality of life for host community' and 'Celebration of community values'. The social impacts not included in the list were 'Disruption of lifestyle of host community', 'Overcrowding, congestion and noise' and 'Increased crime and vandalism'. It was considered that these three impacts were components of 'Improvement in quality of life for host community'.
Environmental impacts
The respondents commented on the lack of environmental impacts, as only one was included in the list of 20 key impacts. It was suggested that a wider range of environmental impacts should be included to ensure that more of a balance was achieved between the economic, social and environmental dimensions. In addition, as the literature analysis showed, environmental impacts had been largely ignored in both academic publications and actual impact assessments. Thus, without the addition of more environmental impacts, the status quo would have been perpetuated. Therefore, the single impact of 'Affect on natural resources' was revised and expanded to the three impacts of 'Education and promotion of environmental programs', 'Water and energy consumption' and 'Waste generation', which were drawn from relevant literature.
Done

Round Three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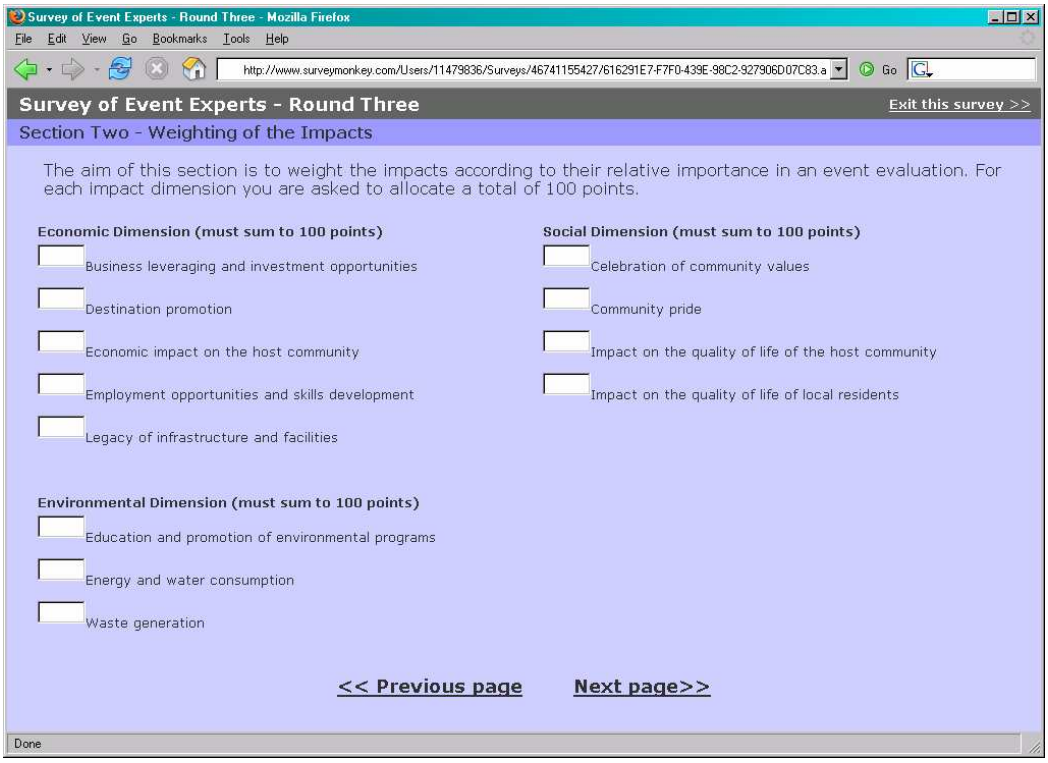
Survey of Event Experts - Round Three
Exit this survey >>
Section One - Selecting the Indicators
The aim of this section is to consider each of the 24 indicators, and make one of three recommendations. You can either 'Accept' the indicator as is, 'Modify' the indicator or 'Reject' the indicator. Please click on the relevant choice for each indicator. If you choose to 'Modify' any of the indicators, space is provided to the right of each page for suggested modifications.
Economic
Impact - Business leveraging and invesment opportunities
Indicator 1. Number of businesses hosted at event
Accept Modify Reject
Selection
Indicator 1. Suggested modification
Indicator 2. Category of business representatives hosted: Senior management, Middle management, Other.
Accept Modify Reject
Selection
Indicator 2. Suggested modification
Impact - Destination promotion
Indicator 3. Dollar value of destination coverage in newspapers,
Indicator 3. Suggested modification
Done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Go
Survey of Event Experts - Round Three
Exit this survey >>
Section Two - Weighting of the Impacts
The aim of this section is to weight the impacts according to their relative importance in an event evaluation. For each impact dimension you are asked to allocate a total of 100 points.
Economic Dimension (must sum to 100 points)
Business leveraging and investment opportunities
Destination promotion
Economic impact on the host community
Employment opportunities and skills development
Legacy of infrastructure and facilities
Social Dimension (must sum to 100 points)
Celebration of community values
Community pride
Impact on the quality of life of the host community
Impact on the quality of life of local residents
Environmental Dimension (must sum to 100 points)
Education and promotion of environmental programs
Energy and water consumption
Waste generation
<< Previous page
Next page>>
Done

Appendix Five: Equitana Asia Pacific 2005 Survey Instruments

Intercept Questionnaire for Attendees

Intercept Questionnaire
Equitana Asia Pacific – Melbourne 2005
Attendees Questionnaire

Interviewer Name……

Introduction: Approach over 15 years of age

Hello, I'm employed by Victoria University and we are conducting a questionnaire on Equitana Asia Pacific – Melbourne 2005 that will only take a few minutes to complete, and we'd like your help. ***There will be a prize drawn of an Equitana Asia Pacific 2005 Gift Pack valued at $150.00.***

1. Gender:

Female	1
Male	2

2. In which age bracket do you fall?

15 to 17	1
18 to 24	2
25 to 34	3
35 to 44	4
45 to 54	5
55 to 64	6
65 or more	7

If under 15 Finish

3. Where do you normally live?

What is your postcode? _____

What region is this in?

Melbourne	1	Go to Question 12
Other Victoria besides Melbourne	2	Go to Question 4
Other than Victoria	3	Go to Question 4
International	4	Go to Question 4

4. How many nights do you intend to stay in Melbourne during this visit?
_____ Go to Question 6

(For Interstate and International visitors only)

5. How many nights do you intend to stay in Victoria including the nights in Melbourne during this visit? _____

(Note that Q6-Q11 is for non-Melbourne visitors only)

6. What is your estimated expenditure in Melbourne as well as Victoria during this visit?

Please include all spending made by you or likely to be made by you and all members of your family. Remember to include all payments made by cheque, bankcard and credit cards. Include your best estimates if you are unsure of exact amounts.

Note: There are two sets of questions; **Column 1** is for **all non-Melbournians.** **Column 2** is an extra question for **non-Victorian residents only – that is residents from other states of Australia and overseas.** The amounts in Column 2 must be equal to, or greater than, the amounts in Column 1. It may be easier to complete this section by working across the columns.	**Column 1** Expenditure in Metropolitan Melbourne	**Column 2** Expenditure in **Victoria**, include expenditure in Metropolitan Melbourne
Accommodation? (include prepaid)	**$A……**	**$A……**
Meals, food and drinks not included in your accommodation bill	**$A……**	**$A……**
Event Tickets? (include advance bookings)	**$A……**	**$A……**
Other Entertainment Costs (eg. If going to other tourist attractions not connected to Equitana - Attendees eg. Museum)	**$A……**	**$A……**
Transport in Melbourne? (eg. Taxi fares, petrol, vehicle repairs, car hire)	**$A……**	**$A……**
Personal services? (eg. Hairdressing, laundry, medical)	**$A……**	**$A……**
Any other expenditure (eg. Films, gifts, books, wine, souvenirs, clothing, toiletries)	**$A……..**	**$A……..**

7. How many people does all of this expenditure cover?

Adults _____

Children (Under 15) _____

8. Would you have come to Melbourne this year had Equitana not been held?

Yes	1	Go to Question 9
No	2	Go to Question 12
Don't Know	3	Go to Question 12

9. If you were coming to Melbourne in any case this year, was your visit an additional visit especially for Equitana?

Yes	1	Go to Question 12
No	2	Go to Question 10

By additional visit we mean you came on an extra visit because of the event

10. Since you were coming to Melbourne in any case at this time of year, did you extend your stay because of Equitana?

Yes	1	Go to Question 11
No	2	Go to Question 12

11. How many more nights did you stay? _____

12. What form of transport did you use to travel to the event today?

Walking	1
Cycling	2
Public transport	3
Bus	4
Train	5
Small car	6
Family car	7
Large car - 4wd	8

13. What was the postcode or suburb of your point of departure today?

_____

14. How did you first find out about Equitana 2005? (One response only)

Through direct mail	1
Through equine magazines	2
Through your local equine club/newsletter	3
In the newspapers	4
Via the Internet/email	5
Word of mouth	6
From exhibitor	7
Other source	8

(Please specify)_____

15. What was the primary reason for your attendance at Equitana 2005?

The range and quality of the competitors	1
Western or Dressage Spectacular	2
Education program	3
Clinics	4
Exhibition	5
Shopping	6
Other	7
(Please specify)_____	

16. On a scale of 1 to 5, where 1 represents Very dissatisfied and 5 represents Very satisfied, how satisfied are you with the following aspects of Equitana?

	Very dissatisfied				Very satisfied	Not Applicable
The Exhibition	1	2	3	4	5	
Competition events	1	2	3	4	5	
The educational demonstrations	1	2	3	4	5	
The educational lectures	1	2	3	4	5	
Western Spectacular	1	2	3	4	5	
Dressage Spectacular	1	2	3	4	5	
Clinics	1	2	3	4	5	
Equitana 2005 overall	1	2	3	4	5	

17. Is there any particular aspect of Equitana 2005 on which you would like to comment? _____
_____
_____
_____

18. Did you, or will you, attend the Cavalcade - Reign of Fire?

Yes	1
No	2

Intercept Questionnaire for Competitors

Intercept Questionnaire
Equitana Asia Pacific – Melbourne 2005
Competitors Questionnaire

Interviewer Name……

Introduction: Approach over 15 years of age

Hello, I'm employed by Victoria University and we are conducting a questionnaire on Equitana Asia Pacific – Melbourne 2005 that will only take a few minutes to complete, and we'd like your help. ***There will be a prize drawn of an Equitana Asia Pacific 2005 Gift Pack valued at $150.00.***

1. Gender:

Female	1
Male	2

2. In which age bracket do you fall?

15 to 17	1
18 to 24	2
25 to 34	3
35 to 44	4
45 to 54	5
55 to 64	6
65 or more	7

If under 15 Finish

3. Where do you normally live?

What is your postcode? _____

What region is this in?

Melbourne	1	Go to Question 12
Other Victoria besides Melbourne	2	Go to Question 4
Other than Victoria	3	Go to Question 5
International	4	Go to Question 5

4. How many nights do you intend to stay in Melbourne during this visit? _____ Go to Question 6

(For 'Other than Victoria' and 'International' only)

5. How many nights do you intend to stay in Victoria including the nights in Melbourne during this visit? _____

(Note: Q6-Q11 are for non-Melbourne residents only)

6. What is your estimated expenditure in Melbourne as well as Victoria during this visit?

Please include all spending made by you or likely to be made by you and all members of your family. Remember to include all payments made by cheque, bankcard and credit cards. Include your best estimates if you are unsure of exact amounts.

Note: There are two sets of questions; **Column 1** is for **all non-Melbournians.** **Column 2** is an extra question for **non-Victorian residents only – that is residents from other states of Australia and overseas.** The amounts in Column 2 must be equal to, or greater than, the amounts in Column 1. It may be easier to complete this section by working across the columns.	**Column 1** Expenditure in Metropolitan Melbourne	**Column 2** Expenditure in **Victoria**, include expenditure in Metropolitan Melbourne
Accommodation? (include prepaid)	**$A……**	**$A……**
Meals, food and drinks not included in your accommodation bill	**$A……**	**$A……**
Event Tickets? (include advance bookings)	**$A……**	**$A……**
Other Entertainment Costs (eg. If going to other tourist attractions not connected to Equitana - Attendees eg. Museum)	**$A……**	**$A……**
Transport in Melbourne? (eg. Taxi fares, petrol, vehicle repairs, car hire)	**$A……**	**$A……**
Personal services? (eg. Hairdressing, laundry, medical)	**$A……**	**$A……**
Any other expenditure (eg. Films, gifts, books, wine, souvenirs, clothing, toiletries)	**$A……..**	**$A……..**

7. How many people does all of this expenditure cover?

Adults _____

Children (Under 15) _____

8. Would you have come to Melbourne this year had Equitana 2005 not been held?

Yes	1	Go to Question 9
No	2	Go to Question 12
Don't Know	3	Go to Question 12

9. If you were coming to Melbourne in any case this year, was your visit an additional visit especially for Equitana 2005?

Yes	1	Go to Question 12
2No	2	Go to Question 10

10. Since you were coming to Melbourne in any case at this time of year, did you extend your stay because of Equitana 2005?

Yes	1	Go to Question 11
No	2	Go to Question 12

11. How many more nights did you stay? _____

12. Which of the following Equitana 2005 competitions have you competed in, or expect to compete in?

World Cup Dressage Qualifier	1
World Cup Showjumping Qualifier	2
Driving – Obstathon	3
Open Cutting and Open Non Pro championships	4
Interstate Mounted Games Challenge	5
Master Reining Championship	6
Ladies Open Barrel Race	7
Pony Club of Victoria Activities	8
Saddle Horse Competition	9

13. I you have competed in Equitana previously, in which years was this?

1999	1
2001	2
2002	3
2003	4

14. Using a scale of 1 to 5, where 1 represents Very dissatisfied and 5 represents Very satisfied, how satisfied are you with the following aspects of Equitana Asia Pacific 2005?

	Very Dissatisfied				Very Satisfied	Not Applicable
Horse Safety (security)	1	2	3	4	5	
Veterinary Services	1	2	3	4	5	
Horsewash	1	2	3	4	5	
Stabling	1	2	3	4	5	
Arena Surface	1	2	3	4	5	
On-site Assistance from staff	1	2	3	4	5	
Competitor Amenities	1	2	3	4	5	

15. Please list below any comments you would like to make regarding the surface of the competition area at the Melbourne Exhibition Centre.

_____
_____
_____
_____

Intercept Questionnaire for Exhibitors

Dear Exhibitor
The organisers of Equitana Asia Pacific – Melbourne 2005 are seeking to determine the economic impact and the level of exhibitor satisfaction with the event. The findings will be used to improve the next Equitana Asia Pacific. As your feedback is valuable we would appreciate you completing the attached questionnaire.

The questionnaire will only take about five minutes to complete and responses are anonymous.

Once you have completed the questionnaire, please return it to the organiser's office.

If you would like to make any further comments, please do not hesitate to contact me on (03) 9919 5055.

We hope you enjoy Equitana Asia Pacific – Melbourne 2005 and thank you for your assistance.

Yours faithfully,

Prof Leo Jago
Deputy CEO and Director of Research Sustainable Tourism CRC
C/- Centre for Hospitality and Tourism Research
Victoria University
PO Box 14428
Melbourne City MC
Victoria, Australia 8001
Tel: (613) 9919-5055

For each question, please circle the number that corresponds to your answer. Where questions ask you to write in a number or provide some details, please use the space provided. If you make a mistake, cross it out and circle your correct answer.

1 Gender:

Female	1
Male	2

2 In which age bracket do you fall?

15 to 17	1
18 to 24	2
25 to 34	3
35 to 44	4
45 to 54	5
55 to 64	6
65 or more	7

If under 15 Finish

3 Where do you normally live? _____

What is your postcode? _____

What region is this in?

Melbourne	1	Go to Q11
Other Victoria besides Melbourne	2	Go to Q4
Other than Victoria	3	Go to Q4
International	4	Go to Q4

4 How many nights do you intend to stay in Melbourne during this visit?
_____ Go to Q6

(For Interstate and International visitors only)

5 How many nights do you intend to stay in Victoria including the nights in Melbourne during this visit? _____

(Note: Q6-Q10 are for non-Melbourne residents only)

6 What is your estimated expenditure in Melbourne as well as Victoria during this visit?
Please include all spending made by you or likely to be made by you or your organisation. Remember to include all payments made by cheque, bankcard and credit cards. Include your best estimates if you are unsure of exact amounts.

Note: There are two sets of questions; **Column 1** is for **all non-Melbournians.** **Column 2** is an extra question for **non-Victorian residents only – that is residents from other states of Australia and overseas.** The amounts in Column 2 must be equal to, or greater than, the amounts in Column 1. It may be easier to complete this section by working across the columns.	**Column 1** Expenditure in Metropolitan Melbourne	**Column 2** Expenditure in **Victoria**, include expenditure in Metropolitan Melbourne
Accommodation? (include prepaid)	**$A……**	**$A……**
Meals, food and drinks not included in your accommodation bill	**$A……**	**$A……**
Exhibition fee? (include advance bookings)	**$A……**	**$A……**
Other Entertainment Costs (eg. If going to other tourist attractions not connected to Equitana - Attendees eg. Museum)	**$A……**	**$A……**
Transport in Melbourne? (eg. Taxi fares, petrol, vehicle repairs, car hire)	**$A……**	**$A……**
Personal services? (eg. Hairdressing, laundry, medical)	**$A……**	**$A……**
Any other expenditure (eg. Films, gifts, books, wine, souvenirs, clothing, toiletries)	**$A……..**	**$A……..**

7 Would you have come to Melbourne this year had Equitana - exhibitors not been held?

Yes	1	Go to Q8
No	2	Go to Q 11
Don't Know	3	Go to Q11

8 If you were coming to Melbourne in any case this year, was your visit an additional visit especially for Equitana - exhibitors?

Yes	1	Go to Q11
No	2	Go to Q9

9 Since you were coming to Melbourne in any case at this time of year, did you extend your stay because of Equitana - exhibitors?

Yes	1	Go to Q10
No	2	Go to Q11

10 How many more nights did you stay? _____

11 How did you first find out about Equitana? (Choose one item only)

Through direct mail	1
Through equine magazines	2
Through your local equine club/newsletter	3
In the newspapers	4
Via the Internet/email	5
Word of mouth	6
Other (Please specify)	7

_____

12 Using a scale of 1 to 5, where 1 represents Very Dissatisfied and 5 represents Very Satisfied, how satisfied are you with the following aspects of Equitana? (please circle answer)

	Very Dissatisfied				Very Satisfied	Not Applicable
Venue	1	2	3	4	5	
Venue Catering	1	2	3	4	5	
Pre-event Information	1	2	3	4	5	
Access to Equipment	1	2	3	4	5	
Hours of Exhibition/Operation	1	2	3	4	5	
On-site Assistance	1	2	3	4	5	
Promotion of Equitana	1	2	3	4	5	
On-site Sales/Leads	1	2	3	4	5	

13 What was your primary motivation for exhibiting at Equitana 2005? (Choose one only)

To be involved in an international exhibition	1
To capture extra sales at the exhibition	2
To obtain leads for future business	3
To launch a new product	4
Other, please specify	5

_____

14 How likely would it be for you to exhibit at the next Equitana?

Definitely not	1
Probably not	2
Not sure	3
Probably will	4
Definitely will	5

15 Is there any particular reason that you will/will not exhibit at the next Equitana?

_____
_____
_____
_____

THANK YOU FOR YOUR TIME.

PLEASE RETURN YOUR COMPLETED QUESTIONNNAIRE IN THE BOXES LOCATED NEAR THE ORGANISER'S OFFICE AT EITHER OF THE EQUITANA VENUES.

If you are unable to hand in your completed questionnaire during Equitana 2005 please post your questionnaire to:

Equitana Exhibitors Survey
Victoria University
Centre for Hospitality and Tourism Research
PO BOX 14428
Melbourne MC 8001.

November 2005

Dear Resident

Major events are now a way of life and the social impact of these events is an area of interest for the community. You have been randomly selected to take part in a survey designed to find out how your quality of life was affected by Equitana Asia Pacific 2005 (an equestrian event). By quality of life, we mean your satisfaction with your life conditions, and we are interested in whether this has changed because of Equitana Asia Pacific 2005. This study, conducted by the Centre for Hospitality and Tourism Research, has obtained federal funding from Tourism Australia, and is part of a wider investigation into the social, economic and environmental effects of events throughout Australia. The survey is important, as it will provide the information needed for residents' views to be considered in the future management of Equitana Asia Pacific and other such events.

Your participation is completely voluntary, but we hope you will find time to complete the survey. It should take about five minutes to complete.

As an incentive, all residents who fully complete the survey will go into a draw to win a $150 Myer voucher. Please provide your contact details at the bottom of the page and return the slip with your questionnaire.

Please read the instructions carefully before you fill in your answers. It is important that you answer every question. If you have any queries, please phone me on 9919 5055 or email on leo.jago@vu.edu.au. Once you have completed the survey, please return it in the reply paid envelope by 16/12/2005.

Regards,

Prof Leo Jago
Deputy CEO and Director of Research Sustainable Tourism CRC
C/- Centre for Hospitality and Tourism Research
Victoria University
PO Box 14428 Melbourne City MC, Victoria, 8001

✂

Yes I wish to be included in the prize draw for the $150 Myer voucher

Please enter your name and a contact phone number and place this slip into return enveloped if you wish to be included in the prize draw.

Name	Contact Number

Survey of residents on the impacts of EQUITANA ASIA PACIFIC 2005

1. Were you aware that Equitana Asia Pacific (an equestrian event) was staged at Melbourne Exhibition and Convention Centre a few weeks ago (4-7 November)?

☐ Yes (go to Q2a)
☐ No (go to Q9)

2a. What do you think were the most positive impacts of EQUITANA?

_____

_____

2b. What do you think were the most negative impacts of EQUITANA?

_____

_____

3a. Did EQUITANA have any impact on your personal quality of life? ⇒

☐ Yes (go to Q3b)
☐ No (go to Q4)

3b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negative impact			Neutral			Very positive impact
-3	-2	-1	0	+1	+2	+3

4a. Do you think EQUITANA affected the community as a whole? ⇒

☐ Yes (go to Q4b)
☐ No (go to Q5)

4b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negative impact			Neutral			Very positive impact
-3	-2	-1	0	+1	+2	+3

5a. Do you think EQUITANA affected your sense of community? ⇒

☐ Yes (go to Q5b)
☐ No (go to Q6)

5b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negatively			Neutral			Very positively
-3	-2	-1	0	+1	+2	+3

6a. Do you think EQUITANA affected your pride in your community? ⇒

☐ Yes (go to Q6b)
☐ No (go to Q7)

6b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negatively			Neutral			Very positively
-3	-2	-1	0	+1	+2	+3

7. Did you attend EQUITANA this year?

- ☐ No
- ☐ Yes

8. Have you attended EQUITANA in previous years?

- ☐ No
- ☐ Yes

9. On the scale below, please indicate how interested you are in equestrian events? (choose one only)

1. ☐ I am an avid fan of equestrian events
2. ☐ I am interested in equestrian events and follow them when I can
3. ☐ I am not particularly interested in equestrian events, but Equitana is an enjoyable experience
4. ☐ I am not interested in equestrian events but I sometimes attend or watch because family/friends are interested
5. ☐ I have absolutely no interest in equestrian events

10. Please indicate whether any of the following apply to you or to another member of your household (circle all that apply)

Paid to work at Equitana this year	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Volunteered at Equitana this year	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Worked at Equitana (either paid or as a volunteer) in previous years	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work for or own a company that is involved with Equitana (e.g. supplied goods or services, sponsor)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Benefited in some way other than above (e.g. rented a property to a tourist visiting for the Equitana)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work in other events	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work in the tourism / hospitality industry	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Participated in Equitana as a competitor	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Any other involvement with Equitana (please state)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE

_____

11. Approximately how far do you live from Melbourne Exhibition and Convention Centre?

1. ☐ Within 1km
2. ☐ 1-5 km
3. ☐ 6-10 km
4. ☐ 11-15 km
5. ☐ More than 15 km

12. What is your gender?

1. ☐ Male
2. ☐ Female

13. In which year were your born? _____

THANK YOU FOR COMPLETING THE SURVEY
PLEASE RETURN THE SURVEY IN THE PRE-PAID ENVELOPE

Appendix Six: Ironman Western Australia 2005 Triathlon Survey Instruments

Intercept Questionnaire for Attendees

Intercept Questionnaire for Attendees
Ironman Western Australia Triathlon 2005

Interviewer Name……

Introduction: Approach over 15 years of age

Hello, I'm employed by Smart Events and we are conducting a questionnaire on the economic impact of the Ironman Western Australia Triathlon. It will only take a few minutes to complete, and we'd like your help. All those interviewed have a chance to win a $150 Myer voucher.

1 Gender:

Female	1
Male	2

2 In which age bracket do you fall?

15 to 17	1
18 to 24	2
25 to 34	3
35 to 44	4
45 to 54	5
55 to 64	6
65 or more	7

If under 15 Finish

3 Where do you normally live?_____

3a What is your postcode? _____

3b What region is this in?

Busselton	1	Go to Q12
Perth	2	Go to Q4
Other Western Australia besides Busselton and Perth	3	Go to Q4
Interstate	4	Go to Q4
International	5	Go to Q4

4 How many nights do you intend to stay in Busselton during this visit?

_____

5 How many nights do you intend to stay in Western Australia including the nights in Busselton during this visit?

_____

(Note: Q6-Q11 are for non-Busselton residents only)

6 What is your estimated expenditure in Busselton as well as Western Australia during this visit?

Please include all spending made by you or likely to be made by you. Remember to include all payments made by cheque, bankcard and credit cards. Include your best estimates if you are unsure of exact amounts.

Note: There are two sets of questions; **Column 1** is for **all non-residents of Busselton** **Column 2** is an extra question for **non- Western Australian residents only – that is residents from other states of Australia and overseas.** The amounts in Column 2 must be equal to, or greater than, the amounts in Column 1. It may be easier to complete this section by working across the columns.	**Column 1** Expenditure in the Busselton	**Column 2** Expenditure in **Western Australia,** include expenditure in Busselton
Accommodation? (include prepaid)	**$A……**	**$A……**
Meals, food and drinks not included in your accommodation bill	**$A……**	**$A……**
Event tickets? (include advance bookings)	**$A……**	**$A……**
Other Entertainment Costs (eg. If going to other tourist attractions not connected to Ironman Western Australia Triathlon - eg. Museum, wineries)	**$A……**	**$A……**
Transport in Busselton? (eg. Taxi fares, petrol, vehicle repairs, car hire)	**$A……**	**$A……**
Personal services? (eg. Hairdressing, laundry, medical)	**$A……**	**$A……**
Any other expenditure (eg. Films, gifts, books, wine, souvenirs, clothing, toiletries)	**$A……..**	**$A……..**

7 How many people does all of this expenditure cover?
Adults _____

Children (Under 15) _____

8 Would you have come to Busselton this year had Ironman Western Australia Triathlon not been held?

Yes	1	Go to Q9
No	2	Go to Q 12
Don't Know	3	Go to Q12

9 If you were coming to Busselton in any case this year, was your visit an additional visit especially for Ironman Western Australia Triathlon?

Yes	1	Go to Q12
No	2	Go to Q10

10 Since you were coming to Busselton in any case at this time of year, did you extend your stay because of Ironman Western Australia Triathlon?

Yes	1	Go to Q11
No	2	Go to Q12

11 How many more nights did you stay? _____

12 What form of transport did you use to travel to the event today?

Walking	1
Cycling	2
Public transport	3
Bus	4
Train	5
Small car	6
Family car	7
Large car - 4wd	8

13 What was the suburb, place or postcode of your point of departure today?

_____

14 What was the main reason for attending Ironman Western Australian Triathlon?

Supporting a competitor in the event	1
Attending with family or friends	2
Enthusiastic follower of triathlons	3
Participate in other triathlons	4
Visiting region and heard about the event	5
Other (Please specify)	6

_____

15 On a scale of 1 to 5, where 1 represents Very dissatisfied and 5 represents Very satisfied, how satisfied are you overall with the Ironman Western Australian Triathlon?

Very dissatisfied				Very satisfied	Not applicable
1	2	3	4	5	

16 Are there any particular aspects about Ironman Western Australian Triathlon on which you would like to comment? _____

_____

_____

_____

Exhibitor Questionnaire - Ironman Western Australia Triathlon

November 2005

Dear Exhibitor

Major events are now a way of life and the economic impact of these events is of interest to communities, researchers and governments. In terms of the Ironman Western Australia Triathlon, we are seeking to determine the economic impact and the level of exhibitor satisfaction with the event. This research is part of a wider study into the economic, social and environmental impact of events throughout Australia, which has obtained support from Tourism Australia. As your feedback is valuable, we would appreciate you completing the attached questionnaire.

The questionnaire will only take about five minutes to complete and responses are anonymous.

Once you have completed the questionnaire, please return it to the organiser's office.

If you would like to make any further comments, please do not hesitate to contact me on (03) 9919 5055.

We hope you enjoy Ironman Western Australia Triathlon 2005 and thank you for your assistance.

Yours faithfully,

Prof Leo Jago
Deputy CEO and Director of Research Sustainable Tourism CRC
C/- Centre for Hospitality and Tourism Research
Victoria University
PO Box 14428
Melbourne City MC
Victoria, Australia 8001
Tel: (613) 9919-5055

For each question, please circle the number that corresponds to your answer. Where questions ask you to write in a number or provide some details, please use the space provided. If you make a mistake, cross it out and circle your correct answer.

1 Gender:

Female	1
Male	2

2 In which age bracket do you fall?

15 to 17	1
18 to 24	2
25 to 34	3
35 to 44	4
45 to 54	5
55 to 64	6
65 or more	7

If under 15 Finish

3 Where do you normally live? _____

3a. What is your postcode? _____

3b. What region is this in?

Busselton	1	Go to Q11
Perth	2	Go to Q4
Other Western Australia besides Busselton and Perth	3	Go to Q4
Interstate	4	Go to Q4
International	5	Go to Q4

4 How many nights do you intend to stay in Busselton during this visit?

_____

5 How many nights do you intend to stay in Western Australia including the nights in Busselton during this visit? _____

(Note: Q6-Q10 are for non-Busselton residents only)
6 What is your estimated expenditure in Busselton as well as Western Australia during this visit?

Please include all spending made by you or likely to be made by you or your organisation. Remember to include all payments made by cheque, bankcard and credit cards. Include your best estimates if you are unsure of exact amounts.

Note: There are two sets of questions; **Column 1** is for **all non-residents of Busselton** **Column 2** is an extra question for **non- Western Australian residents only – that is residents from other states of Australia and overseas.** The amounts in Column 2 must be equal to, or greater than, the amounts in Column 1. It may be easier to complete this section by working across the columns.	**Column 1** Expenditure in the Busselton	**Column 2** Expenditure in **Western Australia,** include expenditure in Busselton
Accommodation? (include prepaid)	**$A……**	**$A……**
Meals, food and drinks not included in your accommodation bill	**$A……**	**$A……**
Exhibition fee? (include advance bookings)	**$A……**	**$A……**
Other Entertainment Costs (eg. If going to other tourist attractions not connected to Ironman Western Australia Triathlon - eg. Museum, winery)	**$A……**	**$A……**
Transport in Busselton? (eg. Taxi fares, petrol, vehicle repairs, car hire)	**$A……**	**$A……**
Personal services? (eg. Hairdressing, laundry, medical)	**$A……**	**$A……**
Any other expenditure (eg. Films, gifts, books, wine, souvenirs, clothing, toiletries)	**$A……..**	**$A……..**

7 Would you have come to Busselton this year had Ironman Western Australia Triathlon not been held?

Yes	1	Go to Q8
No	2	Go to Q 11
Don't Know	3	Go to Q11

8 If you were coming to Busselton in any case this year, was your visit an additional visit especially for Ironman Western Australia Triathlon?

Yes	1	Go to Q11
No	2	Go to Q9

9 Since you were coming to Busselton in any case at this time of year, did you extend your stay because of Ironman Western Australia Triathlon?

Yes	1	Go to Q10
No	2	Go to Q11

10 How many more nights did you stay? _____

11 Using a scale of 1 to 5, where 1 represents Very Dissatisfied and 5 represents Very Satisfied, how satisfied are you with the following aspects of Ironman Western Australia Triathlon? (please circle answer)

	Very Dissatisfied				Very Satisfied	Not Applicable
Exhibitor space	1	2	3	4	5	
Pre-event Information	1	2	3	4	5	
Access to Equipment	1	2	3	4	5	
Hours of Exhibition/Operation	1	2	3	4	5	
On-site Assistance	1	2	3	4	5	
Promotion of event	1	2	3	4	5	
On-site Sales/Leads	1	2	3	4	5	
Event audience fit with target market						

12 What was your primary motivation for exhibiting at Ironman Western Australia Triathlon? (Choose one only)

To be involved in a triathlon exhibition	1
To capture extra sales	2
To obtain leads for future business	3
To launch a new product	4
Other, please specify	5

_____

13 Are there any general comments you would like to make concerning the organisation of Ironman Western Australia Triathlon?

_____

_____

_____

THANK YOU FOR YOUR TIME.

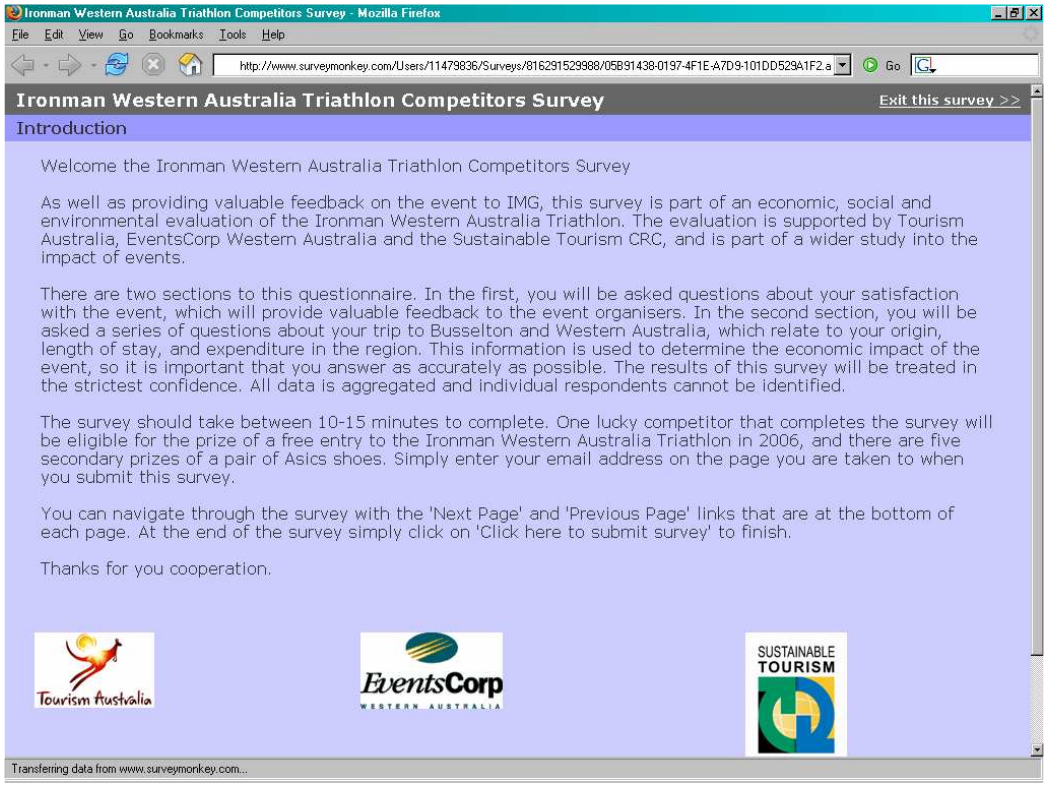
PLEASE RETURN YOUR COMPLETED QUESTIONNNAIRE TO THE ORGANISER'S OFFICE AT THE IRONMAN WESTERN AUSTRALIA TRIATHLON VENUE.

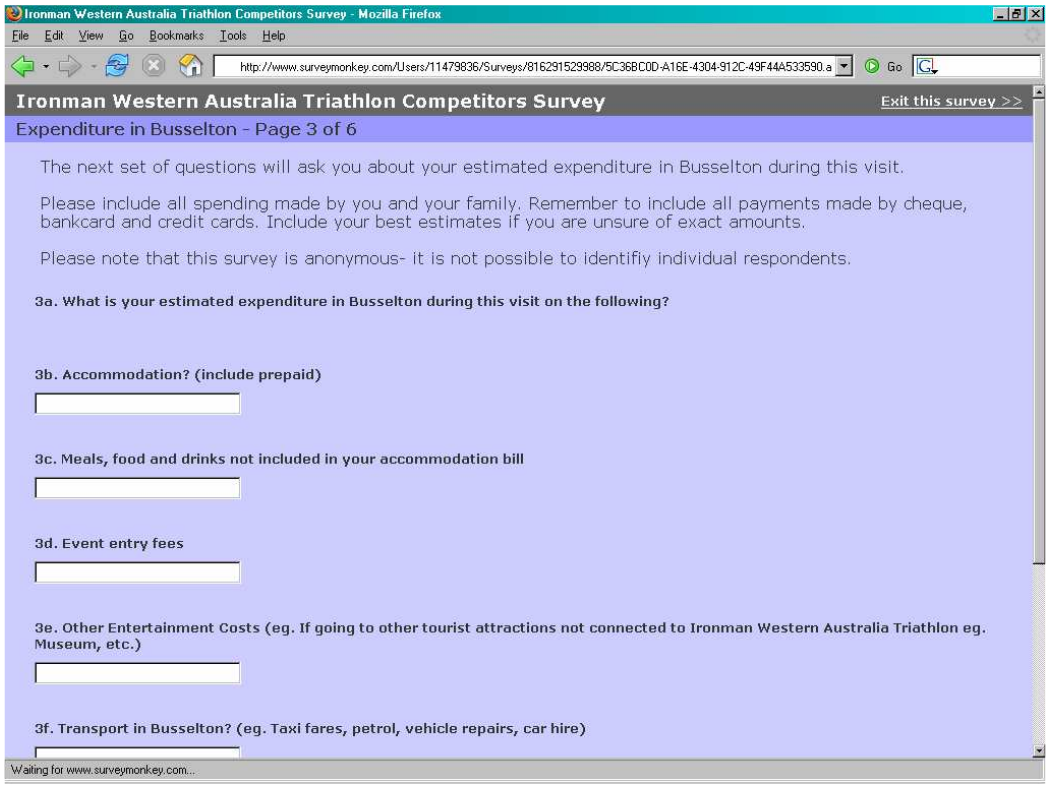
If you are unable to hand in your completed questionnaire during Ironman Western Australia Triathlon please post your questionnaire to:

Ironman Western Australia Triathlon Exhibitors Survey
Centre for Hospitality and Tourism Research
Victoria University
PO BOX 14428
Melbourne MC 8001
Victoria

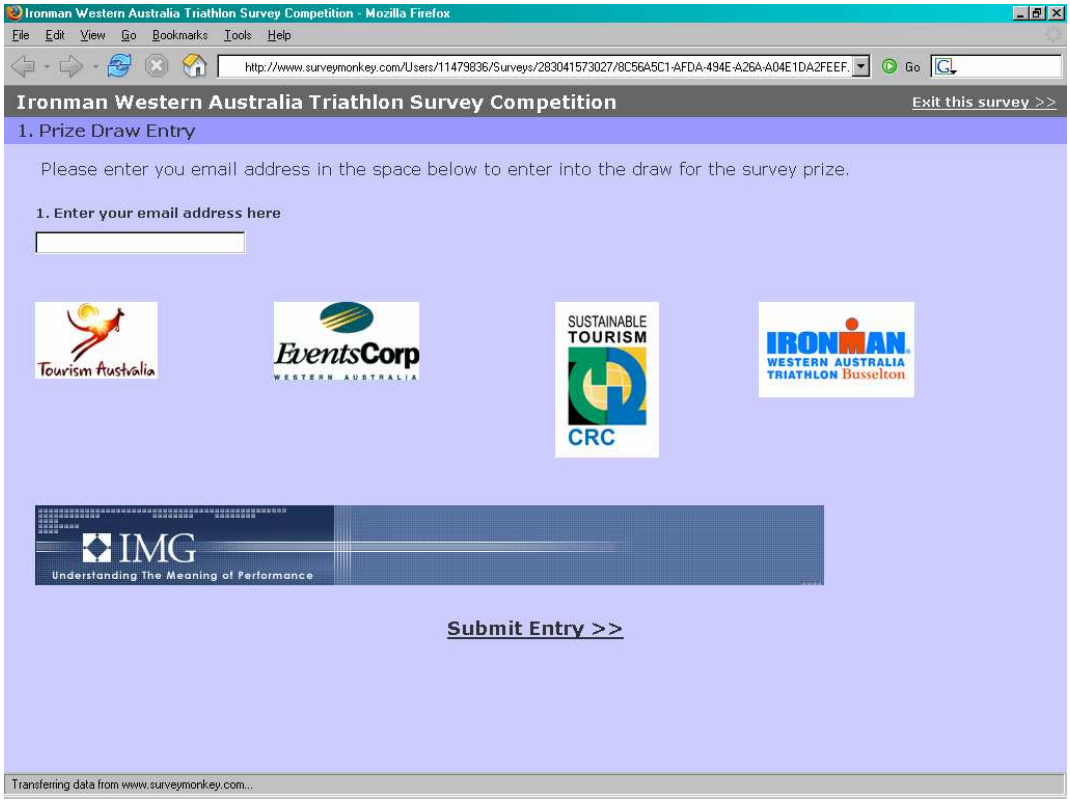
IRONMAN
WESTERN AUSTRALIA
TRIATHLON Busselton

Competitor Web Survey - Ironman Western Australia Triathlon





Ironman Western Australia Triathlon Survey Competition



December 2005

Dear Resident

Major events are now a way of life and the social impact of these events is an area of interest for the community. You have been randomly selected to take part in a survey designed to find out how your quality of life was affected by Ironman Western Australia Triathlon 2005. By quality of life, we mean your satisfaction with your life conditions, and we are interested in whether this has changed because of Ironman Western Australia Triathlon. This study, conducted by the Sustainable Tourism CRC, has obtained federal funding from Tourism Australia, and is part of a wider investigation into the social, economic and environmental effects of events throughout Australia. The survey is important, as it will provide the information needed for residents' views to be considered in the future management of Ironman Western Australia Triathlon.

Your participation is completely voluntary, but we hope you will find time to complete the survey. It should take about five minutes to complete.

As an incentive, all residents who fully complete the survey will go into a draw to win a $150 Myer voucher. Please provide your contact details at the bottom of the page and return the slip with your questionnaire.

Please read the instructions carefully before you fill in your answers. It is important that you answer every question. If you have any queries, please phone me on (03) 9919 5055, or email me at leo.jago@vu.edu.au. Once you have completed the survey, please return it in the reply paid envelope by 23/12/2005.

Regards,

Prof Leo Jago
Deputy CEO and Director of Research Sustainable Tourism CRC
C/- Centre for Hospitality and Tourism Research
Victoria University
PO Box 14428 Melbourne City MC
Victoria, 8001

✂

Yes I wish to be included in the prize draw for the $150 Myer voucher
Please enter your name and a contact phone number and place this slip into return enveloped if you wish to be included in the prize draw.

Name	Contact Number

Survey of residents on the impact of Ironman Western Australia Triathlon 2005

1. Were you aware that Ironman Western Australia Triathlon was staged in Busselton on 27 November 2005?

☐ Yes (go to Q2a)
☐ No (go to Q9)

2a. What do you think were the most positive impacts of Ironman?

_____

_____

_____

_____

_____

2b. What do you think were the most negative impacts of Ironman?

_____

_____

_____

_____

3a. Did Ironman have any impact on your personal quality of life? ⇒

☐ Yes (go to Q3b)
☐ No (go to Q4)

3b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negative impact			Neutral			Very positive impact
-3	-2	-1	0	+1	+2	+3

4a. Do you think Ironman affected the community as a whole? ⇒

☐ Yes (go to Q4b)
☐ No (go to Q5)

4b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negative impact			Neutral			Very positive impact
-3	-2	-1	0	+1	+2	+3

5a. Do you think Ironman affected your sense of community? ⇒

☐ Yes (go to Q5b)
☐ No (go to Q6)

5b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negatively			Neutral			Very positively
-3	-2	-1	0	+1	+2	+3

6a. Do you think Ironman affected your pride in your community? ⇒

☐ Yes (go to Q6b)
☐ No (go to Q7)

6b. If yes, please rate this impact on the scale below by circling the appropriate number

Very negatively			Neutral			Very positively
-3	-2	-1	0	+1	+2	+3

7. Did you attend Ironman this year?

☐ No
☐ Yes

8. Did you attend Ironman in 2004?

☐ No
☐ Yes

9. On the scale below, please indicate how interested you are in Ironman events? (choose one only)

1 ☐ I am an avid fan of Ironman events
2 ☐ I am interested in Ironman events and follow them when I can
3 ☐ I am not particularly interested in Ironman events, but Ironman is an enjoyable experience
4 ☐ I am not interested in Ironman events but I sometimes attend or watch because family/friends are interested
5 ☐ I have absolutely no interest in Ironman events

10. Please indicate whether any of the following apply to you or to another member of your household

(circle all that apply)

Paid to work at Ironman this year	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Volunteered at Ironman this year	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Worked at Ironman (either paid or as a volunteer) in 2004	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work for or own a company that is involved with Ironman (e.g. supplied goods or services, sponsor)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Benefited in some way other than above (e.g. rented a property to a tourist visiting for the Ironman)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work in other events	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Work in the tourism / hospitality industry	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Participated in Ironman as a competitor	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE
Any other involvement with Ironman (please state)	YOU	HOUSEHOLD MEMBER	NOT APPLICABLE

_____

11. Approximately how far do you live from Barnard Park in Busselton where the event was held?

1 ☐ Within 1km
2 ☐ 1-5 km
3 ☐ 6-10 km
4 ☐ 11-15 km
5 ☐ More than 15 km

12. What is your gender?

1 ☐ Male
2 ☐ Female

13. In which year were your born? _____

THANK YOU FOR COMPLETING THE SURVEY

PLEASE RETURN THE SURVEY IN THE PRE-PAID ENVELOPE

Appendix Seven: Transport Data Calculations

Transport data calculations

In terms of calculating the CO_2 emissions for the non-car transport, the per kilometre factor was multiplied by the number of kms travelled. This figure was then multiplied by the number of adults and then the number of cases from the survey data. The calculation can be expressed as follows:

((factor * distance travelled) * number of adults) * number of cases

The calculations of the emissions for the other types of transport required an additional layer. That is, for each extra car passenger, 0.01 kg/km was added (to account for passenger weight) and then this was divided by the number of passengers.

- For each extra car passenger add 0.01g/km (to account for passenger weight) and then divide by the number of passengers.
- Multiply the per km factor by the number of km travelled.
- The result will the kilograms of CO_2 emitted
- To arrive at the energy footprint from this multiply the CO_2 value by 2.68m^2/kg CO_2 to get the footprint in average global square meters
- To arrive t the hectares divide the metres square number by 10000

The calculation can be expressed as follows:

(((per km factor + loading * (No. pax –1)) / No. pax) * kms travelled) * No cases