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THE INTERNET AND
COMPETITIVE ADVANTAGE IN
AUSTRALIAN PROFESSIONAL
SPORT ORGANISATIONS

Daniel Evans
BBus (Deakin)

Submitted in fulfilment of the requirements
for the degree of
Master of Commerce

Deakin University
October, 2002
CANDIDATE DECLARATION

I certify that this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Daniel Evans

14.10.02
Date
ACKNOWLEDGEMENTS

The completion of this project was greatly assisted by a number of people, to whom I am very grateful. Firstly, to my supervisor, Dr. Aaron Smith. Your advice and guidance were both invaluable, and above and beyond that expected. You were a terrific supervisor, and remain a great friend. Thankyou.

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SYNOPSIS

The Internet and Competitive Advantage in Australian Professional Sport Organisations

The electronic revolution has proven to be a powerful stimulus for change in business practice. As a business tool however, the Internet must endure the same scrutiny under which other business activities are placed. If the use of the Internet in business is a sound strategy, then it must contribute toward competitive advantage. The sport business industry has not been isolated from the vagaries of Internet applications. Moreover, as the industry has become more competitive, forcing sporting organisations towards unprecedented levels of accountability and business practice, the Internet has been increasingly seen as a potential ‘holy grail’ for sport organisations struggling for revenue (Stewart & Smith, 1999). This research is a response to these pressures. It seeks to identify Internet based opportunities for competitive advantage, and to provide strategies and recommendations for the successful use of the Internet in Australian professional sport organisations.

In realising this objective, a newly developed and integrated Business Activity Model has been constructed. The model assists in the identification of specific Internet based competitive advantage strategies, and provides a theoretical framework for this research. The Business Activity Model conceptualises, for the first time, the relationships between the value chain, constituents of electronically enabled competitive advantage, and the Internet.

With Australia’s limited group of fully professional sports capable of sustaining the human resources and budgets necessary to implement comprehensive e-commerce strategies, the organisations selected to participate in this research represent the pinnacle of Australian professional sport clubs. Specifically, the 55 clubs competing in the Australian Football League (A.F.L.), National Basketball League (N.B.L.), National Rugby League (N.R.L.), and National Soccer League (N.S.L.) constituted the research sample and population. In concert with the 87% participation rate, sampling approached a census. A telephone-administered survey, based primarily on
the rigorously tested instrument developed by Sethi and King (1994), was employed for data collection.

This research employs a comprehensive set of descriptive statistics, and is bolstered by a confirmatory and an exploratory factor analysis, undertaken on one component of the data. The outcome of this research was the identification of seven practical recommendations for Australian professional sport organisations seeking to improve competitive advantage via the Internet. These recommendations were based on an inventory of the ‘gaps’ between the strategies proposed by the literature, and the practices of the sample, and relate to both overall Internet strategy, and specific website applications. The development of the new Business Activity Model and the identification of key online strategy themes support and complement these recommendations. An examination of variations in the practices of participating organisations, and some comparisons against United States sporting organisations, also provides depth and context to the findings.

This research provides a platform for sport managers to effectively harness the potential of the Internet, through their web sites in particular, and realise significant competitive advantages. The Business Activity Model provides managers in all industries with a tool for the detection and understanding of potential elements of competitive advantage, and incorporates all activities critical to business in the new digital economy. Seven practical recommendations for improved online performance based on identified competitive advantage and strategies fulfils the primary objective of this research. E-commerce continues to grow at astronomical rates, and with the Internet poised to become the life-blood of 21st century sporting organisations, these recommendations will assist managers in their ongoing search for competitive advantage.
CHAPTER 1: INTRODUCTION

A tsunami of transformation! Just one of the many superlatives attached to the Internet, and the electronic revolution that has caused a tidal wave of change in business practice. The speed with which numerous Internet applications have been integrated into society has been stunning. E-mailing, for example, already seems like a way of life, not the relatively new application that it is. As a business tool however, the Internet must endure the same scrutiny under which other business activities are placed. In the simplest possible terms, it must provide competitive advantage.

The sport business industry has not been isolated from the vagaries of Internet applications. Moreover, the industry has become highly competitive, forcing sporting organisations towards unprecedented levels of accountability and business practice (Stewart & Smith, 1999). This research is a response to these pressures, the purpose of which is the identification of Internet based opportunities for competitive advantage, and strategies for Australian professional sport organisations.

This chapter provides an overview of the study’s research problem, and the approach taken to addressing it. Specifically, the aim of this chapter is to develop an appropriate background from which the study’s key concepts - Internet strategies, competitive advantage (CA) and web site profitability - can be considered, and to outline the model adopted by the study in order to address the stated research problem.

Australia is widely admired for both its sporting culture and remarkable international success. Despite this success, the sporting industry is far from removed from the corporate pressures faced in the wider business community, making any opportunities to obtain CA precious. The significant CA opportunities presented by the Internet are identified in chapter 2, which presents evidence that demonstrates the indisputable impact of the World Wide Web on business and its customers.
Having established the Internet opportunity, a newly developed and integrated Business Activity Model was constructed to assist in the identification of specific Internet-based CA strategies, and to provide a conceptual framework for the research. Crucially, despite Australia’s considerable sporting achievements, the country’s relatively small population, combined with a vast array of organised sports and a formidable infrastructure, has resulted in a thin line of fully professional sports capable of sustaining the human resources and budgets necessary to implement comprehensive e-commerce strategies. Those organisations that can realistically consider broad Internet strategies however, are the specific focus of this research.

Given the focus of the research, the organisations selected to participate in this research represent the pinnacle of Australian professional sport. They operate with enormous supporter bases, incur intense public scrutiny, and present a conduit for significant economic turnover. Specifically, the 55 teams competing in the Australian Football League (A.F.L.), National Basketball League (N.B.L.), National Rugby League (N.R.L.), and National Soccer League (N.S.L.) were effectively the research sample and the population. These four leagues and their member organisations are the major constituent of Australian professional sport organisations capable of applying this study’s findings. With this in mind, the 87% participation rate achieved in this research is approaching census status, or 100% participation.

A telephone administered survey, based primarily on previously tested instruments, was utilised for data collection, and applied to a series of secondary research objectives designed to support the primary purpose of the research. A full list of these objectives and their relationship to the identification of Internet-based CA opportunities and strategy follows later in this chapter. To fulfil these objectives a comprehensive set of descriptive statistics was developed, and bolstered by a confirmatory and an exploratory factor analysis undertaken on one component of the data. Again, an explanation of the study objectives and research methodology occurs later in this chapter, and in full detail, in chapter 3.

The outcome of this research was the identification of seven practical recommendations for Australian professional sporting organisations seeking to improve CA via the Internet. The development of the new Business Activity Model
and the identification of key online strategy themes support and compliment these recommendations. Further, an examination of variations in the practices of participating organisations, and some comparisons against United States sporting organisations, provides depth and context to the findings.

In short, with significant amounts of revenue circulating online and increasing cost savings and customer service benefits attributed to the medium, this research seeks to refine the CA opportunities available to Australian sporting organisations via the Internet. The principle objective of the research therefore, is to identify opportunities for increasing CA via the Internet for Australian professional sporting organisations.

This chapter now summarises the key elements of the research, progressing logically though the issues as they appear in the study. Initially, an overview of the research problem will be provided, followed by a range of relevant facts that highlight the Internet opportunity. Following a brief insight into the findings of relevant theory and literature contained in chapter 2, the study objectives identified in chapter 3 are stated and explored. The re-conceptualised, integrated Business Activity Model developed to provide the framework for the study’s analysis is discussed, as are the definitions, key concepts, delimitations, limitations and assumptions associated with the research. Finally, the significance of the study, and the importance of the Internet to sporting organisations in Australia and internationally are outlined.

1.1 The Research Problem

The application of the World Wide Web as a commerce medium is something of an anomaly. Both limitless in potential and relatively untapped as a resource, it has proven to be an international communication and information revolution. However, in most instances site proprietors have been unable to capitalise with consistently profitable Internet strategies, or identify the many other possibilities for CA attached to information technology (IT) (Caskey & Delpy, 1999).

With businesses in the United States spending more than half a trillion dollars on information systems (Business Week, 1986), or between 1.5% and 3% of revenues on
IT (Ian, 1989), information systems expenditure is now recognised as a significant balance sheet item (Sullivan-Trainor, 1989). Having recognised this, Sethi and King (1994) conclude that measures of CA are critical to “demonstrate and justify the value of IT to top management” (1994:1602), a view shared by Hasan and Tibbets who counsel:

As the role of IT in achieving business objectives continues to increase, measuring the value of IT and evaluating Information Systems’ (IS) performance is becoming more important to managers. They need to know if a particular investment in IS or IT is worthwhile, if their current IT applications are successful and if the IS function is productive and efficient (2000:442).

The findings of Caskey and Delpy (1999) provide further fuel to the research problem, and highlight the anomaly. Having found that nearly all United States sporting organisations surveyed reported that sport sites in general were capable of making money, Caskey and Delpy’s research indicates that fewer than half the sport sites were actually making money, and one third of organisations were spending nothing on promoting their web sites. If the Internet can generate revenue, why are web sites and e-commerce not being developed and marketed as revenue generating tools?

Generic difficulties such as an initial reluctance from consumers to develop ongoing Internet purchasing patterns, and the fluctuating perception of the Internet amongst business leaders, contribute to this dilemma. This study aims to clarify the issues surrounding e-commerce, investigate leading online strategies, and examine the position of the sporting industry in the digital age.

This type of exploratory study is valuable for a number of reasons. If professional sporting organisations are approaching Internet commerce in either an ad hoc or inconsistent fashion, a restructuring of organisational strategy may assist in capturing a more significant percentage of the Internet revenue ‘pie’. This review of related strategic theory, and the ability to make industry comparisons (through the Caskey study), provides Australian sporting organisations with the opportunity to both gauge their global position and plan for the future.
1.2 The Internet Opportunity

The incentives to exploit the Internet’s global reach, low cost, and ease of use is stark. The 1998 On-line Advertising Report conducted by Jupiter Communications estimates that by the year 2002, traditional advertising on the web will reach US$7.7 billion annually (Storck, 1997). In addition, according to a report by the United States Commerce Department, Internet traffic is doubling every 100 days, and more than 100 million people are currently online (Net Use Doubling, 1998). Further, there is evidence of a ‘growing convergence’ between the multi billion dollar television industry (in which sport is a major player) and the Internet, in the form of Netcasting (Sacharow, 1997; Turner, 1999).

Boasting some of the most popular and well-trafficked web sites, (Caskey & Delpy, 1999) and with remarkably similar demographics between U.S. web users and sports fans (Delpy & Bosetti, 1998), the sporting industry appears to have an advantage over its counterparts in the search for successful Internet commerce techniques.

1.3 Theory and Literature

The importance of the electronic age has long been recognised. In the 1950s and 1960s researchers such as Woodward (1958; 1965), Perrow (1967; 1968), and Thompson (1967) led the research on technology and organisational structure by establishing the hitherto under-developed relationships between the two organisational elements. As this technology has improved to include advanced information technologies, the literature has also expanded. As Child (1984:245) noted, “this new form of technology has emerged as a major contingency which (organisations) have to take into account”. Slack (1997) also noted the importance of advanced information technology, with Porter (1985) dedicating significant attention to the specific issue of CA and technology.

The focus of the literature on the advantages of e-commerce for sporting organisations, has generally focused on four components which do not directly create revenue: reduced operating costs, increased flexibility, pre-sale product design, and
increased control and integration (Child, 1984; Radding, 1989; Smith, 1989; Slack, 1997). Empirical studies of these factors however are limited, as is literature that examines revenue generating e-commerce activities.

As Slack (1997:170) clearly stated, “little theoretical or empirical work within the field of sport management has looked at the influence of technology on any type of sport organisation”. In recent years however, some research has been undertaken investigating the development of the Internet and television as a revenue generating tool (Turner, 1999). In addition, Caskey and Delpy (1998) found that whilst United States sporting web sites were highly trafficked, content rich, and predominantly designed with profitability as a goal, most were not operating profitably. Indeed, many were also spending nothing promoting their web sites.

Caskey and Delpy's (1998) pioneering research is critical in understanding the use of the World Wide Web as a revenue source, and the work of Sethi and King (1991,1994) has been pivotal in the development of credible measures of CA for IT applications. These two studies play an important role in this research. Sethi and King (1994) specifically identify the need to develop measures for the assessment of “the strategic role of technology, (and) the impact of IT on CA” (1994:1601). The need for such measures is equally important in the sporting industry.

This research aims to further investigate Internet strategy and its implementation within the Australian sporting industry, and build on the literature currently available. Chapter 2 provides a comprehensive synthesis of the existing research and popular literature, leading to the formulation of the model applied in this research.

1.4 Objectives of the Study

A growing number of authors are developing Internet strategies that incorporate traditional management theories, while catering for the unique opportunities and challenges provided by the cyber world. These generic Internet strategies are readily applicable to the sporting industry, and crucially, with its own unique product, web strategists and researchers repeatedly pinpoint the inherent advantage of sport as an
industry conducive to Internet commerce. Indeed, although Internet literature is still in its infancy, the recurring acknowledgment of the opportunities for sport on the web by academics and electronic commerce professionals alike, are readily apparent to both the professional sport manager as well as the lay commentator (Janal, 2000; Judson & Kelly, 1999; Martin, 1997; Pratt, 1998; Sacharow, 1997; Standing, 2000; Turner, 1999).

The specific purpose of this research is to identify CA opportunities and strategies for Australian professional sporting organisations via the Internet, and to propose practical recommendations for improved performance. Five secondary objectives support this primary objective, and are described in the complete objective list provided below:

**Primary Objective:**

The primary objective of this research is to identify competitive advantage opportunities and strategies for Australian professional sporting organisations via the Internet, and to propose practical recommendations for improved performance.

**Secondary Objectives:**

1. To develop a new generic conceptual business activity model to form the framework of the analysis and guide the research;

2. To test the application of the generic Business Activity Model on the Australian sport industry, and identify key areas of competitive advantage via the Internet for sporting organisations;

3. To establish the Internet practices of Australian professional sporting organisations contained in the sample;
4. To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the Australian Football League, National Basketball League, National Rugby League and National Soccer League (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).

Each of the secondary objectives contributes to the primary objective. The Business Activity Model is a critical tool for the identification of CA opportunities, and provided the theoretical underpinnings of the research. The generic nature of the model however, necessitated an evaluation of its impact in the sport business environment. By establishing the Internet practices of the population and comparing the results with the literature review, additional specific CA opportunities can be identified. The analysis is enhanced by a micro and macro analysis of practice and strategy variations, and when combined with each of the secondary objectives provide a comprehensive platform for the achievement of the primary objective. The method adopted to undertake each of the secondary objectives is fully explained in chapter 3.

1.5 A Conceptual Model

In order to guide the development, analysis and interpretation of this work, and in keeping with the secondary objective 1, a conceptual model that identifies the position of the Internet amongst traditional business activity models was developed.

The work of Porter (1985) in developing the value chain forms the core of this study's conceptual model. As a means for understanding CA, the value chain identifies all of the activities an organisation performs and which "contribute to a firm's relative cost position and create a basis for differentiation" (1985:33). According to Porter:
The value chain disaggregates a firm into its strategically relevant activities in order to understand the behaviour of costs and the existing and potential sources of differentiation. A firm gains competitive advantage by performing these strategically important activities more cheaply or better than its competitors (1985:33).

Although the value chain identifies technology development as a support activity, and recognises through the use of dotted lines that this activity can be associated with specific primary activities as well as support the entire chain, a compelling argument can be made that the emergence of the Internet warrants an expansion of Porter’s generic value chain. This argument is bolstered by the increasing consideration of the impact of the Internet on the value chain in the literature (Bickerton, Bickerton, & Simpson-Holley, 1998; Johnston & Mak, 2000; Tapscott, 1996; Warc, Gebauer, Hartman, & Roldan, 1998; Westland & Clark, 2000).

Bickerton et al. (1998), expanded Porter's model by adding the Internet around the entire chain as “an external tool that can support all internal activities and increase the overall margin and competitive advantage” (1998:39). Although they do not address the capacity of the generic model to adequately provide for the Internet in itself, by expanding the chain, Bickerton et al. (1998) argue that the Internet should be considered as a separate element.

Porter (1985) states that “technology is embodied in every value activity in a firm, and technological change can affect competition through its impact on virtually any activity” (1985:166). Porter goes on to state that “information systems technology is particularly pervasive in the value chain, since every value activity creates and uses information” (1985:166). Whilst Porter would presumably point to these statements, along with the physical representations outlined earlier, as evidence that no expansion is necessary, a number of factors reviewed in depth in chapter 2 refute this. The Internet is not merely a new technology. Indeed, of itself the Internet only facilitates business applications. The implications of this fact, along with the understanding that these applications far exceed the information exchanges that were available at the time the value chain was developed, are also discussed in chapter 2.
Also critical to the conceptual model utilised in this research is the work of Sethi and King (1991, 1994). Having recognised both the theoretical and organisational importance of measuring IT investments, Sethi and King (1991, 1994) developed a tool for the measurement of the CA provided by IT. In the course of their research Sethi and King (1994) both incorporate Porter's value chain into their methodology, and identify seven dimensions that constitute the overall competitive advantages that can be provided by an information technology application. Given that the Internet is not a technology application, but a 'physical' facilitator of technologies, and that seven distinct dimensions of CA have been attributed to IT applications, an expansion of the value chain is further justified. The seven CA dimensions identified by Sethi and King (1994) are combined with the adjustment suggested by Bickerton et al. (1998) to constitute the final model.

The expanded value chain shown in Figure 1.1 below was utilised as the conceptual model upon which this research is based. A comprehensive validation and explanation of the model takes place in chapter 2.

**Figure 1.1: The generic Business Activity Model**

The model above allows for a cohesive, integrated approach to this research. Using this model as a framework, secondary objectives 2-5 can be achieved.
1.6 Methodology

Secondary objective 1, the development of the Business Activity Model shown in Figure 1.1, provides the major framework for the analysis undertaken. The entire process surrounding the Business Activity Model is described in the literature review.

Secondary objective 2, the testing of the Business Activity Model on the sport industry, is addressed using an instrument developed by Sethi and King (1994), who conducted a factor analysis that proposes seven dimensions of CA through IT applications, with 29 measures (survey questions 2-4 contain the 29 measures: refer to appendix 1). These 29 measures are applied to the sporting organisations and both confirmatory and exploratory factor analyses conducted to determine whether the industry has any unique areas of focus.

Secondary objective 3, the establishment of the practices of Australian professional sporting organisations contained in the population, is completed using the 26-question survey (a total of 52 measures including the 29 Sethi and King questions). Chapter 3 of the research outlines the 26-question survey utilised to collect data.

Secondary objective 4, is to review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the population. This objective is conducted using the chapter 2 literature review, and the data obtained through the entire 26-question survey.

Secondary objective 5 comprises two parts. The examination of practice and strategy variations amongst the A.F.L., N.B.L., N.R.L., and N.S.L. (micro analysis), is conducted through the data generated by the survey. Variations between the population and, where possible, their United States counterparts (macro analysis) is conducted through the results contained in Caskey’s (1998) research into the use of web sites by United States professional sport organisations.
The methodological process for the secondary objectives are summarised in Table 1.1 below:

Table 1.1: Methodological Process: Secondary Objectives

<table>
<thead>
<tr>
<th>Secondary Objective</th>
<th>Framework of Analysis</th>
<th>Survey Question</th>
<th>Analysis Method</th>
<th>Primary Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Develop a new, generic conceptual business activity model.</td>
<td>N/A</td>
<td>N/A</td>
<td>Literature review</td>
<td>Porter (1985)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sethi and King (1994)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Biokerton et al. (1998)</td>
</tr>
<tr>
<td>2 Test the application of the Business Activity Model on the sport industry.</td>
<td>Business activity model</td>
<td>2-4</td>
<td>Factor analysis</td>
<td>Sethi and King (1994)</td>
</tr>
<tr>
<td>3 Establish the practices of the population.</td>
<td>Business activity model</td>
<td>1-26</td>
<td>Descriptive statistics</td>
<td>26-question survey</td>
</tr>
<tr>
<td>4 Review literature and conduct gap analysis.</td>
<td>Business activity model</td>
<td>1-26</td>
<td>Literature review</td>
<td>26-question survey review</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Descriptive statistics</td>
<td>26-question survey</td>
</tr>
</tbody>
</table>

The fulfilment of the five secondary objectives according to the methodology above, culminates in the ability to answer the study's primary objective – to identify CA opportunities and strategies for Australian professional sporting organisations through the Internet, and to propose practical recommendations for improved performance.

The methodological process for the primary objective is shown in Table 1.2 below:

Table 1.2: Methodological Process: Primary Objective

<table>
<thead>
<tr>
<th>Primary Objective</th>
<th>Framework of Analysis</th>
<th>Survey Question</th>
<th>Analysis Method</th>
<th>Primary Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify CA opportunities and propose recommendations.</td>
<td>Business activity model</td>
<td>1-26</td>
<td>Literature review</td>
<td>Secondary objective results.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Factor analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Descriptive statistics</td>
<td></td>
</tr>
</tbody>
</table>
A number of strategic themes are identified in response to this objective, and seven practical recommendations are identified. These themes and recommendations are outlined in chapter 6.

1.7 Definitions

A number of terms require definitions for the purpose of this research. These include, the Internet, the World Wide Web, electronic commerce, web site, and CA. Each of these terms is now considered, with subsequent definitions employed throughout the research.

The Internet

Delpy and Bosetti (1998) define the Internet as “a global collection of computer networks” (1998:22). In recognition that the Internet is a tool through which IT applications can be applied, this study utilises a definition provided by Prescott and Slyke (1997). They state that “the Internet is a communication mesh of networked computers with their associated resources, including, but not limited to, e-mail, ftp, gopher and the Web” (1997:119).

The World Wide Web

Although the Internet and the World Wide Web are often considered synonymously, the World Wide Web, as shown in the definition above, is an Internet application. Herbig and Hale (1997:96) state that “the World Wide Web is a hypertext based information service (that) provides access to multi-media and complex documents and databases”. Technical definitions such as this abound, however this research adopts Delpy and Bosetti’s (1998) more visual definition of the World Wide Web as being the “abstract cyberspace of information available on the Internet” (1998:22).
Electronic Commerce

Electronic commerce definitions combine two readily definable terms, and are usually straightforward. Kiani (1998:185) defines electronic commerce as "the electronic exchange of information, goods, services, and payments". This study adopts Standing's similar definition of electronic commerce, being "the online exchange of goods, services, and money within firms and between firms and their customers" (2000:4).

Web Site

A web site should not only be considered a single IT application; in many ways it is the epitome of electronic commerce. Hasan and Tibbits (2000) for example, conduct a review of an Australian state-government utilities' web site in their review of the organisations' strategic management of electronic commerce. In that study, the web team responsible for the site recognises the distinct nature of the web site as the public face of the company. This study defines a web site as the functional public face of the organisation on the World Wide Web.

Competitive Advantage (CA)

Porter's (1985) work on CA is pivotal to the concept. He describes CA as stemming from the many discrete activities a firm performs in designing, producing, marketing, delivering, and supporting its product, and manifesting as either a contribution to organisational cost position or differentiation. Cronin's observation of a "global advantage", coming from "realising growth opportunities, managing internal information, attracting new customers, and expanding market share through integrated implementation of a broad range of Internet capabilities" (1996:174), is also an insightful view of the Internet's impact on CA.

This study adopts a hybrid of the two descriptions. Thus CA is defined for the purpose of this study as an improvement in organisational cost position, product
differentiation, internal operations, or customer relationships, through the implementation of an information technology.

### 1.7.1 Acronyms

Numerous acronyms are frequently used throughout the research, including the Australian Football League (A.F.L.), Australian Rugby League (A.R.L.), National Soccer League (N.S.L.) and National Basketball League (N.B.L.). Other acronyms used include Information Technology (IT), Competitive Advantage (CA), and Information System (IS).

### 1.8 Limitations

The limitations of this study, along with other important research issues including delimitation’s and assumptions, are covered in detail in chapter 3: Methodology. Briefly however, the limitations of the chosen research instrument (a 26 Question telephone administered survey) include population and sampling restrictions, and inherent quantitative measurement constraints.

The number of respondents (48) provided some technical problems for the factor analysis component of the research. These issues are discussed in chapter 3, however given that 87% of the identified population participated in the study, the sample is highly defensible. Speed (1999:206) states “the quality of the sample depends on the relationship between sample and population”, and goes on to identify that capturing the bulk of a small population is the strongest defense of a small sample.

There are limitations attached to quantitative methods of data collection such as the possibility of misinterpretation of questions or deliberately false statements. Although qualitative methods were considered, the overall advantages provided by the quantitative method and the impact of the telephone administered survey method on the stated limitations, supported its adoption.
1.9 Significance of the Study

Like all industries, the business of sport faces a bevy of challenges entering the new millennium. Increasing financial demands and decreasing governmental assistance have placed enormous pressure on sport managers to take advantage of all available resources, and continually become more professional in their approach (Smith & Stewart, 1999). The World Wide Web (the web) is one such resource.

The Internet has initially frustrated many businesses in terms of converting potential to ‘bottom line’ profits. Indeed, the cynics suggest that only the pornography and gambling industries have profited from the medium! However, managers throughout the world continue to pursue strategies that recognise the real and permanent impact of the Internet on the way we do business.

According to Gotting (2000), Australian businesses have spent more than AUS$100 million advertising on the Internet in the year 2000, a 300% increase on 1999. With global revenue to sports sites from advertising (US$6.27 billion), merchandise (US$3.8 billion), and ticketing sales (US$2.9 billion) predicted by 2005 (Church, 2000), the importance of the medium to the sporting industry can hardly be understated. Worldwide Internet user numbers continue to rise at an astonishing rate, with 175 million people globally estimated to be using the web by 2002, representing commerce of more than US$220 billion (Duncan & Campbell, 1999).

Literature in the areas of CA, the Internet, and the sporting industry are plentiful, however work investigating how these three elements interact most effectively together is significantly less prevalent. Given the sporting industry’s reputation for ‘lagging’ behind the wider corporate environment in the uptake of business strategy, the propensity of the literature to cite sports’ inherent link with the Internet medium presents an opportunity. Visionary sport managers can break this cycle and provide leadership in this compelling component of modern business.

The development of the Internet in Australia and the attached online commerce opportunities are well documented in chapter 2: Literature Review. These opportunities combined with the ever-increasing financial and service pressures on
the sporting industry make an understanding of CA strategies for the Internet essential for contemporary sport management.

1.10 Summary

Finally, it is worthwhile restating the importance of this type of study. Given society's growing acceptance of the Internet and the already massive amounts of money circulating on-line, the sporting industry is understandably interested in developing effective Internet commerce strategies.

With its proven popularity and affiliation with Internet users, the sporting industry, so often considered behind the corporate sector in its approach to research and development, has the opportunity to be pro-active in the identification and development of web sites that provide significant CA.

The integration of Porter's (1985) value chain and Sethi and King's (1994) seven dimensions of CA through IT to create this study's new Business Activity Model, provide for a cohesive approach to this research. The sporting industry's unique business is considered within this generic model, and the research aims are attacked from its base.

This research adopted a quantitative approach for the collection of data from the identified population, and subsequently assessed the gap between the results and a comprehensive review of the relevant literature. Given the magnitude of online commerce, the significance of even a small gap in this area is enormous, leading to this critical research problem.

The four leagues chosen to represent sporting organisations in Australia (The A.F.L., N.B.L., N.R.L. and N.S.L.) operate on large budgets and command the great majority of team sport media coverage throughout the country. Additionally, the individual sports have significant non-professional and junior participation, and as such were an ideal selection for the purposes of this study.
CHAPTER 2: LITERATURE REVIEW:

2.1 Introduction

A key element of any research, the literature review assumes additional importance in this study because it plays a key role in achieving several of the identified objectives. Firstly, the literature review is critical to the primary objective of the research, and provides important information to support its significance. Additionally however, this chapter provides direct support to the conceptualisation, development and testing of the Business Activity Model (secondary objective 1) that provides the framework of this research. Furthermore, the literature review fulfils a key component of secondary objective 4, the collation of Internet theory literature, to be used as a bookend in the gap analysis.

This chapter provides a comprehensive review of a range of relevant sources of information on the Internet and its impact on sports organisations. Whilst the emphasis is on empirical studies including journal publications and books, other sources including popular literature, the World Wide Web, statistical bodies and government departments have all provided relevant data that has been reviewed to ensure a broad based literature overview.

Even a cursory review of the literature covering the Internet reveals a prodigious breadth of topics. This review ranges from the birth of the Internet and the World Wide Web, to specific strategic methods for utilising its power for competitive advantage. For a topic on which the literature is under-developed, the propensity for sports to be referred to during Internet commentary is striking, an issue explored further during the course of this chapter.

In addition to its affinity with sport, the literature also recognises the sentiment from some quarters, that the promises of Internet pioneers are failing to materialise (Bharadwaj, 2000; Roepke, Agarwal, & Ferratt, 2000; Shiller, 2000). The demise of Internet based businesses such as "Scape" and the many other victims of recent world stock market 'dot com' purges centres around a rising theme: potential versus
realised CA. The perceptions of managers toward the Internet and the effect of these perceptions on strategy formulation are thoroughly covered in this chapter.

Also central to this section of the thesis is further development in the understanding of the importance of this type of research, and the magnitude of the opportunities that the Internet presents to sporting organisations. Opportunities that would scarcely have been in the minds of even the most visionary sport managers and volunteers some forty years ago. Further, although this research is Australian-based, this chapter provides a world-view reflective of the Internet's global network, with a comprehensive, English language based, literature review.

2.2 Internet Background

The Internet was initially developed as a United States Defense Department project originating from a concept proposed by Massachusetts Institute of Technology professor J.C.R. Licklider in 1962 (Caskey, 1998). Designed as an experimental communication network capable of withstanding various forms of line attack, the project was known as the ARPANET (Advanced Research Projects Agency Network). Given the vulnerability of networks at the time, the system was designed to shift the responsibility of ensuring successful transmission of communication from the network to the computer (Standing, 2000).

Use of ARPANET was limited to a small number of universities as an inexpensive and convenient communication tool with other universities, until 1982 when networking protocol was developed that enabled the world's computer networks to be linked. The ARPANET was subsequently phased out, leaving behind the world's largest computer network (Levine & Baroudi, 1994), known as the Internet.

2.2.1 Internet Development in Australia

In Australia, work on various protocol and data exchange systems began in the early 1980s at the University of Sydney (Goodheart & Crawford, 1995). In 1990 the vice-
chancellor administered university-funding body (the AVCC), started funding the Australian Academic and Research Network (AARNet). This network connected Australian universities and other higher education institutions, and included Australia’s first widely accessible Internet link to the United States via satellite from Melbourne University to NASA JPL in Mountain View California (Goodheart & Crawford, 1995).

Also critical to the successful integration of the Internet into Australian culture was the 1994 Labor government’s “Creative Nation” policy, which included an AUS$100 million commitment to the promotion and development of multimedia technologies and applications (Petre & Harrington, 1996).

2.2.2 The World Wide Web

The World Wide Web was developed in 1989, when Hypertext Markup Language was created at the European Laboratory for Particle Physics (CERN) in Geneva (OECD, 1999; Standing, 2000). This technology, along with other protocols including Hypertext Transfer Protocol (HTTP), enabled programmers to create ‘pages’, and facilitated the transmission of words, graphics and sound, which could be linked.

In 1991, commercial restrictions on the Internet were lifted, and by 1994 ‘browsers’ such as Netscape were developed that effectively scanned the Web for sites as requested by the user, creating an effective and easy to use ‘point and click’ process (Caskey, 1998; Standing, 2000).

2.2.3 The Internet Opportunity

Tectonic shifts, revolutionary changes, a new paradigm, a tsunami of transformation! According to Tapscott (1996), these are all examples of an attempt by business leaders, academics and journalists to characterise the ‘new world’ we are entering. Tapscott’s description of a new world (dis)order created by the digital revolution is
itself part of the inexhaustible superlatives attached to the Internet opportunity. Whilst superlatives are to be expected for any trend where calculable benefits are difficult to judge, the growing statistics available to explicate the Internet phenomenon are irrefutable.

It is also worth noting that although much of the discussion regarding Internet opportunities are inevitably drawn to financial rewards, there is growing acknowledgement of the many other elements of CA that can be affected by the Internet (Lanctot & Swan, 2000). According to Janssen and Sol, “electronic relationships with suppliers and customers can be regarded as a potential source of competitive advantage” (2000:407).

Hasan and Tibbitts (2000) are similarly aware of the many measures of CA, stating in their review of the strategic management of electronic commerce that, “much corporate wealth is now being accumulated through non-financial means so that it is important to include intangible assets, often referred to as intellectual, human, social, or relational capital, in company reports” (2000:439). Simeon (1999) provides an excellent summary of the Web site based Internet opportunity:

The Internet can impact profitability in a number of ways. It can reduce the communication and distribution costs behind many types of commercial transactions. In addition, based on the organisation’s ability to attract customers (marketability) to its site, revenues can be generated from advertisers or from online transactions. The cost reduction and income generating potential of the Internet are two very attractive benefits for those establishing commercial Web sites (1999:301).

In keeping with this holistic view of the Internet opportunity, Domegan (1996) states that “the strategic use of information technology, as part of a firm’s corporate strategy, can result in significant competitive advantages e.g. added value-base customer supplier relationships, innovative distribution channels, new products and markets” (1996:52). Similarly, Grönroos (1995) identifies an increasing emphasis on relationship marketing amongst service firms, highlighting the importance of developing personal relationships with customers that ultimately impact on economic
performance. Grönroos (1995) emphasises the role that IS can play in achieving this objective, as does Bitner (1995) who identifies technology, and in particular online interaction, as a critical element of relationship building.

According to Sheth and Parvatiyar (1995) “technological advances are making it possible and affordable for marketers to engage in and maintain relationships with customers” (1995:265). Organisations that have success in fostering these relationships can create CA through numerous channels, with the importance of relationship building through the Internet for CA explored fully later in this chapter, within the review of online communities.

In short, the CA opportunities provided by the Internet are certainly both many and varied, and present themselves throughout the gamut of organisational activities in both financial and non-financial forms.

2.3 Online Commerce in Australia

Based largely on research conducted by the Commonwealth of Australia’s Department of Foreign Affairs and Trade between 1997 and 1999, this section of the thesis attempts to provide a clear indication of both current usage and applications of online trade strategies in Australia.

In 1997 the Australian government released a report entitled ‘Putting Australia on the New Silk Road: The Role of Trade Policy in Advancing Electronic Commerce’. This book became a series with the subsequent development of two further pieces of research entitled ‘Driving Forces on the New Silk Road’ (1999), and ‘Creating a Clearway on the New Silk Road’ (1999b).

The ‘Silk Road Series’ (SRS) uses a comprehensive methodology including a survey of 130 Australian businesses, state governments and community groups regarding the Internet as an export tool, roundtable discussions with almost 500 people in all Australian capital cities and some regional centres, with subsequent digital dialogue; and more than fifty case studies. In addition, ready access to government
departments including Austrade, the Australian Bureau of Statistics, the Department of Industry, Science and Technology and the National Office of Information Economy, make this research stand out in terms of breadth and rigour.

Having reviewed the SRS (1997, 1999, 1999b), and because such an abundance of estimates (with varying degrees of credibility) regarding past and projected electronic commerce data are prolific in the literature, the decision was made to use the SRS as the primary source of background statistical data for online commerce in Australia (2.2). Many of the other data sources used here are secondary sources obtained from the SRS, and subsequently reviewed, and cited accordingly.

2.3.1 Indicators of Australian Electronic Enablement

A number of indicators unique to electronic commerce are used by the SRS (1999) to describe an online environment's relative strength both domestically and internationally. The SRS (1999) identify broad categories of these indicators including teledensity, PC Density, Internet access costs, growth in Internet hosts, Internet use, domain name registration and number of secure web servers. Each of these categories provides a general intimation of the evolution of Internet capacity and uptake by the Australian population.

According to the SRS (1999), Australia has an emerging comparative advantage in online trading, with excellent results in each of these measures. The number of Internet hosts per person – a measure of the number of computers connected to the Internet and a loose indicator of commercial online activity – has increased steadily in each of the past three years, as has the number of Internet Service Providers (ISP's) and level of Internet subscriptions. In addition, the SRS (1999) believes around one fifth of Australian households are now connected to the Internet, and about one third of the adult population has used it.

The SRS (1999) also make a number of bold statements concerning the impact of organisational size on electronic commerce uptake. The study defined four organisational sizes based on number of employees: micro (1-4), small (5-19),
medium (20-199), and large (200+). They consequently determined that "firm size appears to be the single biggest determinant of how electronic commerce is incorporated into the core business strategies of firms and organisations" (1999:23).

One key difference in Internet strategy attributed to size by the SRS (1999) is the relative importance of back office integration with the Internet. The authors believe that micro, small and medium sized firms place less importance on back office integration and more on expanding market reach, creating business networks and gathering and exchanging information. Conversely, large firms pursue Internet mechanisms for increasing back office efficiency, as well as goals including the integration of external and internal operations, and increased efficiency along the value chain.

In order to provide some understanding of both the existing status of electronic commerce in Australia and the potential of the Internet, a selection of the figures supporting the SRS findings are shown, and described, below. As stated the abundance of estimates on electronic commerce and the credibility and relevance of the SRS to this research supported its use.

**Figure 2.1: PC Penetration in Selected Countries**

![Graph showing PC penetration in selected countries](image)

*From: International Telecommunications Union, 1998.*

Figure 2.1 illustrates the depth of PC Penetration in Australia, with 31% of households in 1998 possessing a PC. Second only to the United States in this measure, Australia is well positioned in global terms, for Internet commerce. This
comparatively high reach is in part facilitated by the congestion of a large percentage of the Australian population in major cities.

**Figure 2.2: Internet Host Density in Selected Countries, June 1998**

![Bar chart showing internet host density in selected countries, June 1998](image)


Figure 2.2 shows the Internet host density in Australia in June 1998 at 4 per 100 people, on par with United States statistics. Host density indicates corporate activity in hosting businesses, with Australia’s sixth ranking a solid position. This statistic can impact on competition and pricing, and ultimately has implications for both Internet access and usage.

**Figure 2.3: Internet Use Across Selected Countries**

![Bar chart showing percentage of regular Internet users](image)

*From: NUA, 1998.*
Figure 2.3 indicates Australians were significant users of the Internet in 1998. Although behind Finland, Norway, Canada and the U.S.A., Australians had a higher percentage (18.5%) of regular users than many other developed countries, including most European and Asian nations.

**Figure 2.4: Growth in Australian Internet Host Penetration**


Figure 2.4 demonstrates the significant increase in Internet host penetration since 1995, rising from less than 1 percent to 4 percent in June 1998. This new figure (4%) put Australia sixth amongst the selected countries' displayed in Figure 2.2.

**Figure 2.5: Growth in ISP's in Australia**

Figure 2.5 shows the number of ISP’s has grown dramatically since 1995, with approximately 650 ISP’s in 1998.

**Figure 2.6: Growth in Internet Subscriptions in Australia**

From: Paul Budde Communications, 1998

Figure 2.6 shows the growth in Internet subscriptions in Australia since 1991, with the projection that in 2006 there will be approximately six million subscriptions. Both Figure 2.5 and Figure 2.6 indicate a clear trend towards the growing use of the Internet in Australia, auguring well for electronic commerce.

**Figure 2.7: Household Use Of Information Technology in Australia**

Figure 2.7 compares the Australian household use of mobile phones, PC's, people over 18 that have tried the Internet, and households with Internet access. The results show that in 1998 almost one in five households had Internet access. Although this is significant, it also illustrates the growth opportunities still open to the Internet.

Figure 2.8: Growth in Online Shopping in Australia

![Graph showing growth in online shopping in Australia from February to August 1998.]


Figure 2.8 indicates Australians are developing a growing propensity to shop online, with a marked increase in online shopping in 1998 alone.

Figure 2.9: Australian Business Computer and Internet Penetration

![Graph showing the percentage of use of Internet and computer by business size.]

Figure 2.9 is particularly insightful, with less than 20% of micro and small businesses using the Internet, compared to 85% of large businesses. This is a curious situation given the relatively small cost of Internet access, and indicates that smaller organisations may not see any benefit in Internet applications.

Figure 2.10: Australian Business Internet Use


Figure 2.10 examines the uses of the Internet amongst Australian businesses of various sizes, with email and information gathering being the most popular use amongst all sized businesses. The lack of web sites, data transfer and marketing amongst all businesses, and small business in particular, indicates there is enormous scope for increased Internet use.
Figure 2.11: Most Frequently Accessed Australian Web Sites by Type

Note: Based on analysis of the top 50 most frequently accessed Internet sites in the .au Domain.

Figure 2.11 illustrates the enormous online potential for the sporting industry, with frequent access to sporting and entertainment web sites by Australians. Given the vast range of information and services available online, and the comparatively small size of the sporting industry, Figure 2.11 demonstrates the propensity for sports enthusiasts to take advantage of the medium. The inherent strengths and compatibility of the Internet and sport are discussed in more detail later in this chapter.

Figure 2.12: Projected Electronic Commerce Revenues in Australia

Considering the results of Figure 2.11, the magnitude of the data contained in Figure 2.12 is startling. With online electronic commerce revenues in Australian headed towards $20 billion annually, the enormity of the financial opportunity available to the sporting industry is stunning.

The statistics described above provide tangible evidence of the growing presence of the Internet in Australia, and more importantly, to its enormous potential. Although much of the data relates to 1998, there are clear trends evident that are supported by numerous projections, providing a launching pad for the rest of this chapter.

By confirming the depth of Australia’s electronic enablement, it can be reasonably assumed that the demand for goods and services delivered electronically will continue to rise until it reaches a point where, according to the SRS “more demand drives more online content and more discerning demand encourages improvements in product and service quality in a virtuous, self-sustaining and quite familiar cycle of development” (1999:34). In other words, the Internet is quickly approaching a critical mass in Australia, and internationally. With this in mind, an examination of the specific impact of the Internet on sport can now be conducted.

2.4 Online Commerce in Sport

Having established the awesome and ever-growing presence of global electronic commerce, the question facing the sporting industry is how to corner its share of potential online revenue, and improve the quality of existing services. With the capacity of the Internet to deliver additional and previously unknown services and experiences to sports consumers, and with the imminent expansion of broadband cabling (facilitating high quality transmissions), the medium may well be touted as critical to future earnings. According to United States National Football League commissioner Paul Tagliabue (Goodman, 2000; Wilner, 2000) the Internet will be as important in the first half of this century as television was in the second half of the 1900s.
This growing union between sport and the Internet is identified by the SRS, with the observation that entertainment, an industry whose borders have increasingly blurred with sport, is developing a strong online presence. According to the SRS:

The bulk of Australia's business-to-consumer online trade is in intangible services like media content...strong trades also are developing in gaming and gambling, travel, entertainment, and software which can be supplied instantly through the Internet and often more cheaply than in traditional retail outlets (1999:6).

This section of the literature unveils a range of evidence that sport not only possesses the characteristics being exploited by the industries identified by the SRS, but also a bevy of unique features that lends the sporting industry to capitalise upon the inherent advantages of the Internet.

Sports related web sites are already making a significant impact online. In 1999, Church (2000) reported revenues from advertising on sports related sites to be US$612 million. This figure pales in comparison to her projections of US$6.27 billion for advertising through the same channels in 2005. Similarly notable estimates were made for 2005 sales of online sport merchandise (US$5.8 billion), and ticketing sales (US$2.9 billion).

The major cyber issue facing sports business leaders now, is how to harness the power of electronic commerce. Although not specifically addressed in this thesis, the impact of the Internet on sports broadcasting is monumental, affecting the online sports industry in its entirety. Indeed, according to Pratt (1998:167), the impact of the Internet on sports communication is "absolute". Briefly stated, as high quality Internet broadcasts with interactive capacity increasingly challenges televisions' monopoly of event vision, the flow of consumers through sporting 'dot coms' will continue to multiply. Whilst Internet broadcasting rights will be a massive revenue source in themselves, the online success of sporting organisations depends largely on their ability to tap into the growing flow of Internet traffic with profitable revenue strategies encompassing a broad range of 'e-products'.
As the literature surrounding electronic commerce has expanded, a number of recurring themes have emerged regarding the compatibility of various industries and the Internet. As with the wider business community, the strategic use of electronic commerce by the sporting industry is in its infancy, however anecdotal evidence suggests that the business of sport possesses a number of inherent qualities that might provide leverage in developing a profitable Internet model.

Boasting some of the most popular and well-trafficked web sites (Caskey & Delpy, 1999) and with remarkably similar demographics between web users and sports fans (Delpy & Bosetti, 1998), the sporting industry appears to have an excellent platform from which to launch an aggressive assault on Internet activities. Sporting enthusiasts also present many of the key attributes associated with the development of online communities, a key strategy for online success discussed later in this chapter. Further, there is evidence of a growing convergence between the multi billion dollar television industry (in which sport is a major player) and the Internet, in the form of Netcasting (Sacharow, 1997; Turner, 1999). Although Australian data is not currently available, Table 2.1 below illustrates the demographic similarities between U.S. Internet users and sports fans.

<table>
<thead>
<tr>
<th></th>
<th>Internet User (Hermes, 1996)</th>
<th>Sports Fan (Simmons Market Research Bureau, 1997)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex – Male</strong></td>
<td>70%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Sex – Female</strong></td>
<td>30%</td>
<td>36%</td>
</tr>
<tr>
<td><strong>Average Age</strong></td>
<td>32.7</td>
<td>34</td>
</tr>
<tr>
<td><strong>Median Income</strong></td>
<td>US$50,000–US$60,000</td>
<td>US$50,000+</td>
</tr>
</tbody>
</table>

These figures are supported by Church (2000) who identifies a number of key factors contributing to the rising revenue potential of sports sites. According to Church (2000), the typical online sports visitor has a higher net-worth and propensity to buy on-line compared to visitors of other sites. In addition, the 'stickiness' of sports sites, or their ability to hold a visitor for longer, makes them more attractive to advertisers and sponsors, the growing popularity of online gambling, and the power of major sports to attract global audiences, are contributing to their success.

2.4.1 Australian Sport Delivery Systems

Australians’ love affair with sport can hardly be understated. Major sporting achievements regularly punctuate, and in many ways help define the country's broader history and national conscience. Pharlap, the 1956 Melbourne Olympics, Sir Donald Bradman, the 1983 America's Cup victory, and now the Sydney 2000 Olympics, are eminent, but far from exhaustive examples of fabled Australian sporting icons. The high levels of participation and spectatorship described earlier combine with this tradition of success at the elite level, to further imbue sport in Australian culture. Australia’s unique attachment to sport is also mirrored by its distinctive delivery system.

Using a club-based system, Australian sport has always catered for the masses (Shilbury & Deane, 2001). With developments such as the Australian Institute of Sport (and its subsequent decentralisation), the growing role of state and national sporting organisations, funding programs for elite sports, and a growing corporate presence, Australia has created a globally envied sporting system that was showcased at the Sydney Olympics with stunning results. Notwithstanding this success, sporting industry leaders and relevant governmental departments are confronting numerous management challenges presented by the dynamic nature of modern sport.

Two recent reports compiled in response to widespread concerns about the future of the Australian sporting industry stand out. The 1997 Federal Government commissioned the Standing Committee on Recreation and Sport (SCORS) working party report, and a subsequently commissioned 1999 Federal Government “Shaping
Up" report by the Sport 2000 Task Force (1999), provide an examination of current sport management issues and recommendations for the future. These reports clearly highlight the real threats to Australian sport, and provide recommendations for the maintenance and improvement of sports delivery systems early in the new millenium.

Some of the key issues raised by the SCORS report (1997) include the identification of several stumbling blocks to successful sports delivery, such as "disunity within sports, ineffective governance, lack of shared national leadership, poor communication, duplication of resources and failure to achieve economies of scale" (1997:1). The Sport 2000 Task Force (1999) also provides an insight into current and future issues for Australian sport delivery, and identifies the fact that "Australian sport has generally matured into a more sophisticated and complex industry" (1999:73).

This changing nature of sport is paralleled by the emergence of the Internet. As a dynamic and powerful business tool, the Internet should not be considered as another contributor to the 'white waters' jolting modern sport, but as a technological breakthrough capable of providing invaluable service across the value chain - a lifeline in the turbulence!

Shaping Up (1999) concurs with this description of the inherent qualities of the Internet, specifically recommending the promotion of the medium as a business tool for the sport and recreation industry to utilise. Recommendation 13 of the report reads:

The Task Force recommends that additional funding be provided to enhance management systems, improve the collection and analysis of statistics, facilitate adoption of information technology (e.g. SportNet) and provide grants for innovative research and development projects (1999:31).

The authors promote the use of not only SportNet (an online service assisting with improved business processes, membership services, communication and Internet based revenue), but new technology and the Internet in general. The report goes on
to recommend the development of a world wide Internet gaming system and national football tipping pools, with profits to be hypothecated to sport. Whilst the opportunities presented by the Internet go far beyond these recommendations, it is evident that for sport to progress satisfactorily in the 21st century, the Internet needs to be woven into the fabric of the Australian sports delivery system. Also evident in the literature is a growing view that the Internet should also be woven into traditional strategic theories and tools.

2.5 Theoretical Underpinnings of the Research

It is worthwhile at this point to restate secondary objective 1 of this report:

- To develop a new generic conceptual business activity model to form the framework of the analysis and guide the research.

The process of forming that model begins here, with a review of Porter's value chain (1985). The value chain is a widely used tool for assessing business activities and identifying CA (Armstrong & Sambamurthy, 1999; Bickerton et al., 1998; Boynton, Zmud, & Jacobs, 1994; Brynjolfsson & Hitt, 1996; Cooper & Zmud, 1990; Shilbury, 1994; Trice & Treacy, 1986), and becomes the centrepiece of this study’s model. As such it is critical to the research.

2.5.1 The Value Chain

Porter is particular in his view of the strategic planning process when he states "given the pivotal role of competitive advantage in superior performance, the centerpiece of a firm’s strategic plan should be its generic strategy" (1985:25). According to Porter (1985) therefore, there are a number of strategically important activities within an organisation that can be systematically reviewed to assist in the search for CA. Porter provides a tool that can be used to undertake this review known as the value chain, with the process being underpinned by the premise that
"competitive advantage cannot be understood by looking at a firm as a whole" (1985:33).

Prior to a more thorough examination of the value chain and its use in assessing CA from IT, a brief statement acknowledging its application by a number of sources assessing IT is worthwhile. To this end, Armstrong and Sambamurthy's statement that "information technologies must become a routinised element of a firms' value-chain activities before they can exhibit any significant business value" (1999:305), is a widely shared view (Boynton et al., 1994; Brynjolfsson & Hitt, 1996; Cooper & Zmud, 1990; Trice & Treacy, 1986), that succinctly leads into a deeper analysis of the concept. Having provided an insight into the ultimate application of Porter's model in this research, a more thorough investigation of the value chain can occur.

The value chain comprises two broad categories known as primary and support activities. Collectively the nine value activities contained in these two categories are described by Porter as the "building blocks of competitive advantage" (1985:38), with an organisation's performance in each determining competitive advantage. This analysis then, can provide an organisation with invaluable information in the strategy formulation process. Porter (1985) provides the following descriptions of the value activities, noting that these will vary with industry and strategy. In addition, a series of sport examples in each activity, taken from Shilbury (1994), is included to illustrate the relationship:

**Primary Activities**

**Inbound logistics:** Activities associated with receiving, storing, and disseminating inputs to the product, such as material handling, warehousing, inventory control, vehicle scheduling, and return to suppliers e.g. receiving, storing and interpreting player information.

**Operations:** Activities associated with transforming inputs into the final product form, such as machining, packaging,
assembly, equipment maintenance, testing, printing, and facility operations e.g. training schedules, match performance.

**Outbound Logistics:** Activities associated with collecting, storing, and physically distributing the product to buyers, such as finished goods warehousing, material handling, delivery vehicle operation, order processing, and scheduling e.g. match day, production and consumption, win/loss.

**Marketing and Sales:** Activities associated with providing a means by which buyers can purchase the product and inducing them to do so, such as advertising, promotion, sales force, quoting, channel selection, channel relations, and pricing e.g. corporate communication, membership communication and promotion, advertising, fund raising.

**Service:** Activities associated with providing service to enhance or maintain the value of the product, such as installation, repair, training, parts supply, and product adjustment e.g. general staff, marketing function, facility staff, social club staff.

**Support Activities**

**Procurement:** Refers to the function of purchasing inputs used in the firm's value chain, not to the purchased inputs themselves e.g. player rules/draft, materials, media, membership/sponsorship attendance, food and beverage, gaming supplies, communication.
Technology Development: Every value activity embodies technology, be it know-how, procedures, or technology embodied in process equipment e.g. talent identification base, training programs/methods, market research, promotional literature, service culture and quality.

H.R. Management: Consists of activities involved in the recruiting, hiring, training, development, and compensation of all types of personnel e.g. volunteer gaining/training/retaining, coaching staff, casual staff, recruiting.

Firm Infrastructure: Consists of a number of activities including general management, planning, finance, accounting, legal, government affairs, and quality management. Infrastructure, unlike other support activities, usually supports the entire chain and not individual activities e.g. firm/league infrastructure.

It is interesting to note Porter's emphasis on technology in developing competitive advantage. As a support activity, according to Porter, technology development has an influence on the entire organisation via both its association with each of the primary and support activities, and, through its relation to the product and its features, to the entire chain. In addition, the competitive implications of technologies is the only aspect of the value chain additionally assessed by Porter, with a full chapter of his (1985) work devoted to technology and competitive advantage. Further, Porter frequently highlights the importance of technology when considering attacking an industry leader.

In his specific assessment of technology and competitive advantage, Porter states that "technological change is one of the principal drivers of competition" (1985:164). Given the importance placed on technology by Porter prior to the development of electronic commerce, two things may be surmised. Firstly, the introduction of Internet based activities would further strengthen technology's relative importance in
his generic model. Secondly, the massive impact that this type of technology is having confirms its original status in the value chain, and is also an endorsement of the model’s prescience.

The use of Porter’s value chain in assessing strategic planning in sport has already been established. Shilbury (1994) for example, successfully incorporated the model into his assessment of strategic planning practices amongst Australian Football League clubs. Miller (1997) also espoused the value chain as a means for sport business to “visualize where value (i.e. differentiation or a lower cost structure) can be passed on to the consumer” (1997:31). With this in mind, the value chain was adopted in this study as the core of the theoretical model used in this research.

Having identified the value chain’s position at the heart of this study’s theoretical underpinnings, the increasing consideration in the literature of the impact of the Internet on the model is also reviewed here (Bickerton et al., 1998; Johnston & Mak, 2000; SRS, 1999; Tapscott, 1996; Ware et al., 1998; Westland & Clark, 2000). The central theme proposed by these authors is that the Internet impacts upon the value chain to such an extent that a modification or expansion of the model is justified. This is consistent with the position ultimately taken in this research.

Bickerton et al. (1998) recommend the use of Porter’s value chain for organisational assessment of the business case for implementing what they describe as an intuitive and natural internal development; the Internet. The authors propose an expanded version of the generic model that specifically adds the Internet to the identified activities, rather than as a constituent technology. This conceptual relationship is shown in Figure 2.13.
Figure 2.13: Expanded Value Chain


Figure 2.13 clearly shows a broad band representing the Internet surrounding Porter's value chain. Bickerton et al. (1998) justify the addition of the Internet as "an external tool that can support all internal activities and increase the overall margin and competitive advantage" (1998:39), by pointing out that as Porter assumes every firm is striving towards a competitive advantage, a supporting agent that contributes to that goal can be considered in conjunction with the original assessment tool.

Further justification for both the use of Porter's generic analysis, and its expansion to cover Internet technology, is provided by the authors with a description of the influence of the Internet on each of the primary activities identified by Porter, all of which are applicable within the sporting industry. The influences were summarised in Table 2.2.
### Table 2.2: Example Assessment of the Business Case for Integrating Internet Technology within Primary Activities

<table>
<thead>
<tr>
<th>Level of internal integration with the Internet</th>
<th>Inbound logistics</th>
<th>Operations</th>
<th>Outbound logistics</th>
<th>Sales and marketing</th>
<th>Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of email</td>
<td>Fast supplier contact which is self-documenting and consistent</td>
<td>Faster communication with client and sales personnel</td>
<td>Delivery of report, product or software to end client</td>
<td>Direct, easy and cheap communication channel to customers</td>
<td>Direct communication channel to customers</td>
</tr>
<tr>
<td>Implementation of Internet access through a browser</td>
<td>Identifying the best methods of product sourcing</td>
<td>Increases the knowledge-based element of the product by access to online knowledge sources</td>
<td>Used to search for potential new distribution agents or channel</td>
<td>Good prospecting system. Effective and cost-effective resource to upskill team on the market competitors</td>
<td>Easy access to competitor and market information</td>
</tr>
<tr>
<td>Access to newsgroups on the Internet</td>
<td>Widening our tendering process and obtaining free advice</td>
<td>Maintenance of operational expertise and equipment</td>
<td>Used to search for potential new distribution agents or channel</td>
<td>Good prospecting system and opportunity for sales people to network</td>
<td>Access to newsgroups to aid with solving customer queries</td>
</tr>
</tbody>
</table>


Table 2.2 presents significant opportunities for organisations integrating the Internet into primary business activities. Bickerton et al. (1998) propose that supporting the primary activities of a business is the main case for integrating Internet technology, and recommend that organisations plot perceived benefits on a similar grid, as part of the strategic process.

Johnston and Mak (2000) propose that we are entering a second stage of electronic data interchange, with diverse new Internet products, a changing role for intermediaries, and *de jure* message standards. The authors also extend their observations to Porter’s value chain, suggesting that “it would appear that a new era of supply-chain electronic commerce is beginning, catalysed by the availability of the Internet as an alternative digital document distribution channel” (2000:52). Too
and Too (2000) concur, stating "the Internet is a technology that can make a significant contribution to a company's value chain" (2000:108).

Westland and Clark (2000) adapt the value chain for online strategy analysis, describing the process as a form of Business Process Reengineering (BPR), popularised in manufacturing by Hammer (1993). This process is defined by the authors as "examining (the) value chain to understand how processes can be changed or augmented using information technology to improve efficiency, reduce cycle time, and improve services provided to customers" (2000:141). Central to Westland and Clark's analysis is their interest in "the myriad ways that the Web's capabilities can be made to support, alter, and expand the ways we do business - the business models that underlie commerce in the late 20th century" (2000:ix).

Ware et al. (1998) are similarly supportive of the value chain as the starting point in building a web commerce strategy based on its ability to locate the company in its network of relationships. The authors however go further in their observations of the impact of the Internet when using the model in its pure form, identifying three limitations to this approach that necessitate an improved prototype. The limitations of the value chain identified by Ware et al. (1998) are described in summary below:

- Focussing on activities undermines the importance of continuing and shifting relationships among the entities engaging in these activities.
- A thorough description of the current operations of most companies would need to go beyond the linear nature of the value chain. Recognising the nonlinear nature of modern 'constellations of relationships' both with external organisations and even within each entity of the value chain, creates opportunities for exploiting existing relationships in order to build new and profitable ones.
- Relationships are not built on the sum of the value chain activities that a company shares with a given entity. The Web provides support for the fluidity of relationships between businesses with complementary capabilities, enabling organisations to readily augment the core competencies described by Porter.
The limitations identified by Ware et al. (1998), support an augmentation of the value chain to properly recognise the Internet. Tapscott (1996) also provides an analysis of the value chain and its widely accepted wisdom for both internal and external operations. Observing that the value chain was conceived in an era where organisations exchanged funds, information, and knowledge through physical means, he observes that new technology means these exchanges are now often virtual. According to Tapscott:

The result of this shift from physical to virtual does not simply reduce costs, speed up communications, or provide players with more timely information, although that’s all true. Rather, when information exchange becomes electronic, a world of subtle and not so subtle changes in the nature of human and organisational communication occurs (1996:86).

Tapscott (1996) goes on to develop this theory, suggesting that this change and its subsequent effect of enabling new kinds of relationships between organisations and people, transforms the value chain, into the value network. Further, he concurs with Ware et al. (1998), as do Hsiao and Ormerod (1998), stating that the provision of value is not chained in a static, or linear way, but is generated through an ever-changing open network. Tapscott also adds that new technology enables organisations to develop from value-added, to value-generative, emphasising the impact of the digital economy on the evolution of value theory.

At this point, two decisions critical to the development of this study’s model for analysis should be highlighted. Firstly, Porter’s (1985) value chain is an appropriate base for such a model, and secondly, some adaptation of the value chain is required to adequately reflect the impact of the Internet on business activities. Whilst this position has been determined in regards to this research, some recognition of Porter’s view on these and related issues is prudent, prior to an examination of the specific adaptations that were made to his model.

With this in mind, it should be noted that perhaps an equally compelling argument could be made that Porter’s model provides room to adequately incorporate the Internet within the generic model. Porter, as noted earlier, does indeed emphasisc
the impact of technology throughout his description of the value chain. He notes its power and its pervasive impact on the value chain, and indicates that support activities (technology included), can be associated with specific primary activities, as well as support the entire chain. Porter however, specifically states that “technology strategy is only one element of overall competitive strategy, and must be consistent with and reinforced by choices in other value activities” (1985:176). As suggested by Tapscott (1996) and Ware et al. (1998), it is this statement that is flawed, albeit by a medium which could not have been foreseen in 1985.

Porter’s recent contribution to Internet strategy literature is perhaps more relevant. While evaluating the impact of the Internet on organisational strategy, Porter (2001) presents mixed feelings towards the Internet. Despite acknowledging its importance as a new technology and emphasising the role of strategy in its utilisation, Porter provides an at times dour view of the medium in terms of its impact on organisational CA, particularly its impact on industry structure. Porter (2001) also reviews the impact of the Internet on the value chain, and addresses the position of the Internet within it. Both these issues are now considered.

Porter (2001) recognises the enormous impact of the Internet as a new technology. He also highlights the importance of distinct Internet strategies. Porter, however, stresses the view that the time has come to take a clearer view of the Internet without rhetoric about a “new economy”, (perhaps as a message to “new value chain” theorists), and examines the impact of the Internet on the value chain. Although Porter acknowledges that the Internet “will replace certain elements of industry value chains” (2001:73), he maintains that the complementary nature of the Internet does not warrant any adaptation to the value chain. He argues that the power of the Internet in the value chain should be kept in perspective, and without neglecting the importance of conventional factors. In Porter’s (2001) view, therefore, his famous value chain requires no modification for the new millenium.

A major thrust of Porter’s recent (2001) article is his view that the Internet has a primarily negative impact on industry structure. Utilising his five forces analysis, Porter concludes that:
While deploying the Internet can expand the market, then, doing so often comes at the expense of average profitability. The great paradox of the Internet is that its very benefits – making information widely available; reducing the difficulty of purchasing, marketing, and distribution; allowing buyers and sellers to find and transact business with one another more easily – also make it more difficult for companies to capture those benefits as profits (2001:66).

Whether there is merit to the conclusion that the Internet, through the empowerment of buyers or reduced barriers to entry, is detrimental to industry structure is questionable. Certainly, many of the unique aspects of the sporting product and its customers, make the observation less valid to the sports industry, if at all. For example, the unique nature of competitive strategy issues such as ‘rivalry’ and ‘threat’ in sport businesses, impacts upon the way that industry structure should be considered by these organisations. These issues are considered in depth later in this chapter. Further, Porter’s own observation that companies have no choice but to deploy the Internet if they want to stay competitive goes some way to repudiate the notion. This fact, also according to Porter (2001), emphasises the importance of strategy in an effort to obtain CA. Porter highlights this, and summarises the crux of his contribution, stating that:

Many have argued that the Internet renders strategy obsolete. In reality, the opposite is true. Because the Internet tends to weaken industry profitability without providing proprietary operational advantages, it is more important than ever for companies to distinguish themselves through strategy. The winners will be those that view the Internet as a compliment to, not a cannibal of, traditional ways of competing (2001:63).

In terms of the applicability of the value chain in its traditional form, Porter’s admission that the Internet replaces certain elements of industry value chains is pivotal. Regardless of the rarity of the complete cannibalisation identified by Porter (2001), or an acknowledgement that the Internet is generally considered complementary rather than cannibalistic, the fact that an organisation or an industry can now bypass or substitute any element of the value chain via the Internet, warrants a specific adaptation of the generic model.
While clearly favouring organisational strategies based on traditional theories that incorporate the Internet, Porter (2001) makes a number of statements regarding “the end of the new economy” that are perhaps inconsistent. For example, Porter (2001) recognises that the Internet is capable of “tying a company’s activities together in a more distinctive system”, but also that companies will be able to “deploy Internet technology to reconfigure traditional activities” (2001:78).

Critically however, Porter (2001) provides a graphical display of the prominent applications of the Internet in the value chain that provides a comprehensive list of Internet applications on both primary and support activities. Porter (1985) recognises the existence of linkages between value activities and the systems nature of an organisation with dotted lines on his illustration of the value chain. This visual element of the generic chain and the description of linkages between various activities however, does not adequately incorporate the ability of the Internet to permeate and alter the chain.

In short, even though Internet technologies are no different to other technologies in their impact on the traditional value chain, the Internet itself should not be considered a new technology. The Internet is a new and previously unanticipated entity that facilitates technological linkages throughout the entire value chain. As such, it warrants greater, specific recognition in the model. Given Porter’s reference to the Internet’s ability to alter organisational systems and traditional activities, and growing arguments for non-linear models that recognise relationship constellations, a model that finds a middle ground between rhetoric and traditional measures is preferred here.

The Internet, needs to be consistent with overall strategy in other value activities, and is a more powerful tool when considered as not just a single element of the chain, but as an all-encompassing medium. Porter’s value chain does recognise technology as a support activity, appropriate for many of the specific tools created by the Internet, such as online payments. However it does not fully anticipate the ability of the Internet to become integral to each aspect of the value chain. Therefore, defining technology as a single element of the value chain is appropriate, but including the Internet in this element is not. The crux of this discussion then is not that any
element of Porter's model is incorrect, but that the Internet has provided a new strategic tool that, due to its ubiquitous nature, does not fit exclusively into any of its activities.

In summary, there are two common literature threads that consider the impact of the Internet on Porter's value chain. Firstly they all clearly endorse the use of Porter's value chain for assessing organisational Internet strategies and application. Secondly, they each note (in varying degrees) that the impact of the Internet is, or will be, significant enough to warrant specific adaptations to the generic model. From this platform, a review of IT and CA is essential to the further development of this study's model.

2.5.2 Competitive Advantage Provided by an Information Technology Application (CAPITA)

Having determined that an expanded version of the value chain will be utilised as the theoretical framework of this analysis, the specific adaptations to be made must also stem from the literature. To this end, a review of IT and CA is undertaken here, focussing on Sethi and King's (1994) CAPITA (Competitive Advantage Provided by an Information Technology Application) construct. Although research into IT evaluation measures is growing, the need to assess the strategic role of technology and its impact on CA is a new requirement emerging from the literature (King, Grover & Hufnagel, 1986; Sethi & King (1994).

The work of Sethi and King (1994) has been pivotal in building this field, with the authors identifying the importance of this research to senior management who face increasing scrutiny in all investment areas, a position supported by Ball and Harris (1982), Brancheau and Wetherbe (1987), and Dickson, Leitheiser, Wetherbe, and Nechis (1984).

Sethi and King (1994) build on their earlier (1991) work to identify seven dimensions of their CAPITA construct. The importance of Porter (1985) to Sethi and King (1994) is clearly evident with two dimensions based entirely on the value
chain. All seven dimensions with Sethi and King's (1994) descriptions are now provided. An expanded descriptions of the dimensions occurs in chapter 3, as they apply directly to the instrument used for data collection:

**Capita Dimensions**

*Primary Activity Efficiency:* Consists of the effect of the IT application on the cost of the following: inbound logistics (receiving, storing, and disseminating inputs to the product), operations (transforming inputs into the final product), outbound logistics (collecting, storing, and distributing the final product to customers), and service (enhancing or maintaining product value).

*Support Activity Efficiency:* Comprised of the impact of the IT application on the cost of the following: human resource management (recruiting, hiring, development, and compensation of personnel), firm infrastructure (general management, planning, finance, accounting, legal, government affairs, and quality management), and coordination of different activities.

*Resource Management Functionality:* Measures how well the IT application assists its primary users in meeting the following needs related to a resource: monitor utilisation, upgrade, transfer or dispose, and account for. This dimension is a measure of the extent to which the IT application leverages post-acquisition activities for CA.

*Resource Acquisition Functionality:* Consists of the IT application’s impact on the acquisition phase of the resource life cycle. Specifically, this dimension measures the impact of
the IT application on users' ability to order a resource, acquire it, and verify its acceptability.

**Threat:**

Consists of the impact of the IT application on the following six items: (1) the firm's ability to evaluate and choose from alternative suppliers (supplier selection) (2) its switching costs (3) its ability to threaten vertical integration (both forward and backward) (4) its ability to evaluate and choose alternate customers (customer selection) (5) customers' cost of locating alternative suppliers (6) customers' switching costs.

**Preemptiveness:**

Consists of four items: the extent to which the IT application provides unique access to channels (brokers, distributors, and retailers), forces competitors to adopt less favourable market postures, influences the development of industry standards and practices, and offers barriers against imitation such as patents, copyrights, and trade secrets.

**Synergy:**

A function of the application's alignment with the firm's business strategy, marketing policies and practices, ability to continuously innovate and enhance the application, technical expertise, and top management support for the application.

Describing CAPITA as "the basis of a preliminary multidimensional measure or index of CA" (1994:1616), Sethi and King (1994) identify the benefits of such a tool including its ability to obtain organisational profiles along the seven dimensions that would be useful to practitioners for "demonstrating, or at least elucidating the benefits of an existing IT" (1994:1617. They further illuminate the strategic role of
IT, the diverse measures of CA, and the benefits of organisational dimensional profiles, stating in regards to these profile assessments:

Such assessments are currently based on "gut feeling", unrealistic assumptions regarding the application’s contribution to the company’s bottom line, or a disregard for benefits such as reduced overhead, higher switching costs and other benefits to entry, and increased product differentiation (1994,1617).

Sethi and King’s (1994) research is utilised in this study in two ways. Firstly, the seven dimensions of CAPITA, which are effectively the elements of CA provided through IT and facilitated by the Internet, are added to the value chain to form this study’s Business Activity Model. Thus the generic conceptual model includes the value chain at its core, and, as proposed by authors such as Bickerton et al. (1998), expands it to include Sethi and King’s (1994) dimensions of CAPITA as the CA activities related to the Internet.

Secondly, the 29 measures of CAPITA are included in the data collection instrument, thus paving the way for important dimensional comparisons, and specifically, secondary objective 2: to test the impact of the generic Business Activity Model on the sport industry, and identify key areas of CA through the Internet for sport. This is achieved by replicating Sethi and King’s (1994) factor analysis methods on the 29 measures, to identify any differences in dimensional emphasis when using a sport organisation population. This process is further described in chapter 3.

2.5.3 The new Business Activity Model

To summarise, Porter’s value chain forms the core of the Business Activity Model. The value chain was designed in 1985 to represent every activity that a firm performs in order to illuminate CA opportunities. The evolution of the Internet has necessitated an expansion of the value chain, and to this end, Sethi and King’s (1994) seven dimensions of CA facilitated by the Internet have been added to create the new Business Activity Model shown in Figure 2.14.
Porter’s (1985) observation that “competitive advantage cannot be understood by looking at a firm as a whole (and that) a systematic way of examining all the activities a firm performs and how they interact is necessary for analyzing the sources of competitive advantage” (1985:33) is not in dispute. Equally important however, is recognition that not only is the Internet inadequately contained in the 1985, pre-Internet generic value chain, but that it is not in fact a technology in itself, but a new business channel that is clearly sophisticated enough to warrant inclusion in a holistic business activity model. Therefore, in order to fulfill Porter’s call for a systematic examination of all business activities, the Internet and its dimensions are included in the new model. Porter also states that “identifying value activities requires the isolation of activities that are technologically and strategically distinct” (1985:39). The Internet is a new and distinct business channel.

Sethi and King (1994) both identify and operationalise the seven key dimensions of CAPITA. Designed to evaluate IT applications, these dimensions are equally applicable to the Internet itself as the application’s channel. In other words, just as primary activities are divided into five key areas, the Internet is divided into seven.

Dotted lines play an important part in the Business Activity Model. The dotted lines between support activity efficiency and the original support activities reflect the fact that this dimension of CA through the Internet pertains directly to those traditional
activities. The dotted lines between primary activity efficiency and the original primary activities serve the same function. Dotted lines also separate the remaining CA dimensions of the Internet from the original value chain, reflecting the fact that although distinct, they can impact upon any of the traditional business activities.

This study’s conceptualisation of the generic Business Activity Model fulfils secondary objective 1 of the research. This model now forms the framework of the analysis, and guides the research. As stated, the method for testing the application of the Business Activity Model on the sport industry is outlined in chapter 3. The next step in this chapter is to identify prominent literature based theories relating to the strategic use and overall viability of the Internet (secondary objective 4) to support the gap analysis.

2.6 Internet Literature Themes

A comprehensive review of the literature revealed seven themes of particular significance to this study. Each of these themes is directly related to Internet practices, with three pertaining to strategic theory - leadership, management perceptions and IT assimilation theory - and four relating to practical applications for organisations wishing to increase CA through IT - Internet vision statements, Internet project teams, partnerships and alliances and online communities. The theories proposed by the literature in these areas provided the anchor for a gap analysis with existing practice and are shown in Figure 2.15.
A detailed review of each of themes is now conducted, beginning with the concept of leadership.

2.6.1 Leadership in the Digital Economy

A member of the management functions family of planning, organising, leading and controlling, leadership is critical during the introduction of a new component of an organisation’s value chain. Chelladurai notes that “all definitions of leadership emphasise that it is a behavioral process aimed at influencing members to work toward achieving the group’s goals” (1999:160). Robbins, Bergman, Stagg, and Coulter define leadership as “the ability to influence a group towards the achievement of goals” (2000:593).

The apparent simplicity of the attribute tends to both understate its availability in a quality form, and belie the importance of the skill. Interestingly, sport regularly provides some of the clearest examples of the immeasurable value of quality leadership, with sporting team captains lauded for their contribution above and
beyond their personal performances. These athletes often possess several of the six traits associated with leadership in any organisation: drive, the desire to lead, honesty and integrity, self-confidence, intelligence and job-relevant knowledge (Kirkpatrick & Locke, 1991).

Leadership in the ‘digital estate’ is increasingly being considered by online strategy authors (Day, 1997; El Sawy, Malhotra, Gosain, & Young, 1999; Judson & Kelly, 1999; Khandpur & Wevers, 1998; Rosen, 2000; Schulman & Smith, 1997; Tapscott, 1996; Too & Too, 2000; Ware et al., 1998). According to Judson and Kelly (1999), within the framework of a new medium and unpredictable customer responses, three elements are central to on-line success:

1) Willingness to commit the resources, including money, talent, and executive-level interest, necessary to make the Web a valuable part of the revenue mix;

2) An overriding interest in experimentation, leading to the following practical necessities – success measuring techniques (e.g. hits/sales), goal setting (to be discussed later) and varying alternatives (constant experimentation);

3) Ability to respond quickly to anything learnt.

Given that there is a general consensus that these areas of consideration are crucial, each element raises a number of critical strategic issues. Clearly leadership is pivotal in the first element raised by Judson and Kelly (1999), which includes executive level interest/support. Judson and Kelly expel any doubt of their view of leadership further into his analysis of on-line “battle plans” when they state, “first and foremost, top leadership must be supportive of the initiative. If a company’s leader doesn’t stand firmly behind the effort, then talented people will shy away from participating and budgets will inevitably be too slim” (1999:163).

Judson and Kelly are by no means alone in their assessment. Khandpur and Wevers (1998) for example, are equally focused on the importance of leadership for the introduction of sales force automation, condemning online ventures to failure without
executive sponsorship. Likewise, Tapscott (1996) compares a CEO resisting business transformation to a straightjacket on a company’s online efforts, as opposed to a CEO who stewards Internet leadership, who is capable of “spring-boarding” an enterprise into transformation. Ware et al. (1998) also argue that on-line success depends upon executive level leadership, and suggest that ideally “senior management would actively lead the efforts to build a Web-based business, would be actively involved in strategy formulation, would review and approve the business plans, and would regularly monitor progress” (1998:374).

Of course, the propensity of a manager to lead confidently and effectively is strongly linked to that manager’s own belief in the success of his or her proposals. Full conviction in a cause such as the commitment of resources to a web site, is critical to managers’ leadership ability. The issue of leadership therefore, can become most dependent on the perceptions managers have of the merits of online commerce for their organisations.

2.6.2 Managers Perception of Online Commerce and the Impact on Strategy Implementation

Whilst a compelling range of statistics has been provided supporting the supposition that the Internet is both fledgling and uniquely capable of exponential growth, it is important to note that contrasting opinions on the impact that electronic commerce will have on business and the wider community do exist. Management of sporting organisations, like all businesses, may vary in their attitude to Internet commerce and its ability to produce tangible results. According to Roepke et al., “although IT leaders might recognise and value the competitive potential of information technology, such a sentiment is not necessarily widely shared by business leaders” (2000:329). There is a perception that many organisations initially adopted a Web presence out of fear that they might be left behind, or as a fashion statement (Bell & Tang, 1998; Martin, 1997; SRS 1999).

Although naturally there are a number of risks associated with implementing strategy based on joining a bandwagon, this observation can not of course eliminate the
reality that the initial uptake of every major contemporary technological development (e.g. telecommunication, radio, television) resembled a bandwagon approach to strategy. Bullis (1999) identifies growing concern amongst a number of South East Asian countries, based on the fears that companies are not jumping on the Internet bandwagon. Government incentives in Malaysia, for example, are failing to entice significant investment in Internet based strategies, as “firms are leery of the Net because they have encountered (or more likely, have heard about others encountering) disappointing results from their Web pages” (1999:140).

Warranted or not, clearly skepticism exists in varying degrees amongst some business leaders, however there is no doubt that the Internet has already been a revolution in some aspects of its implementation. The almost instantaneous integration of e-mail into our society for example has been phenomenal. Again however, it would be remiss to fail to acknowledge that an element of Internet skepticism has arisen in some quarters. Bharadwaj (2000) highlights a concept dubbed the “productivity paradox” identified by Brynjolfsson (1993), Brynjolfsson and Hitt (1993, 1996b), and Hitt and Brynjolfsson (1996), which means that “the controversy over the business value of computer investments continues to rage even in the face of more encouraging evidence about payoffs from IT” (2000:170).

Cronin (1996) likened the atmosphere of early electronic commerce to a gold-rush, and, given the date of publication, provides a relatively ‘historic’ view of Internet potential. He observed that although “the return on early investments may take years to materialise...overall forecasts for electronic commerce are sanguine” (1996:172). Some organisations however, including existing site proprietors who are hesitant to commit additional resources without ‘evidence’ of profitable web sites, have become disillusioned with this industry analysis, a sentiment echoed by recent Wall Street investor chagrin.

Shiller (2000) in his recently released United States stock-market review Irrational Exuberance takes a swipe at the Internet, speculating that the economic impact of the medium may be far less dramatic than expected, and that “as time goes on the Internet may seem less and less a symbol of the promise of new technology, and more and more like a phone book” (2000:206). The SRS also found after its
examination of Australian businesses’ that some organisations appear hesitant to fully commit to the Internet. The SRS description of Australian organisational caution however is perhaps more perceptive of the Australian online landscape:

To some firms, using the Internet and setting up a web page is like a fashion statement. It announces they are technologically aware, even if they are not inclined to become deeply involved in online business, at least at the moment. To many firms, however, the Internet and converging technologies are supporting new business models and approaches – or variations of them – to achieve core objectives, and are integral to the way they do business (1999:23).

The SRS description of organisational hesitancy is less a comment of opposing views, as it is an insight into a developing mindset. As such, this observation is perhaps more clear-sighted in its evaluation of the state of online perceptions (or even more accurately their senior managers and Board’s), than has been presented to this point. It is also possible that some managers have been put off Internet investments because it simply appears too daunting. El Sawy et al. (1999) agree with Brown and Eisenhardt’s (1998) observation that the current business environment contains strategic discontinuities which mean “enterprises have to compete on the edge of chaos where success and value creation are based on the execution of continual reinvention” (1999:307). It is little wonder therefore, that some organisations have hesitated to commit themselves fully to a confusing and constantly changing new technology, preferring instead to maintain traditional value paths.

Of course both supporters and critics of the Internet will be able to assess its impact over time. To date however, the sheer weight of investment in on-line systems throughout the world (and the bulk of the literature) indicates that the majority of business leaders believe that the Internet will be a pivotal aspect of organisational strategy in the short term at least. Perhaps the best description of the current state of affairs for online commerce in the Australian sporting industry at least, would be ‘cautiously preceding’, a position not unlike that described by the SRS (1999) for the wider Australian market:
Australian firms and organisations of all sizes make increasing use of the Internet and use has become routine in large enterprises. More sophisticated electronic commerce applications are being used and survey evidence suggests this trend will quicken during 1999. However, as in most developed countries, most firms and organisations still have not reached the point where the Internet is accepted as a key tool to achieve core business objectives (1999:5).

Yet another complicating factor in developing an understanding of sports leaders' perceptions of the Internet was raised earlier during discussion of the impact of the medium on league-based clubs. In these cases 'cautiously preceding' may in fact be based on a highly optimistic view of potential Internet power, rather than apprehension. These issues provide further credence to the importance of further research into managerial perceptions of Internet strategy.

More important to strategists than the debate on the possible future of the Internet for business however, is the impact that executive perceptions are having on current practices. The purpose of this section of the literature review is not to curb debate on the future of the Internet, but rather to point out that leadership theories generally concur that without a full commitment from organisational executives, even the most sound venture may encounter potentially fatal complications (Judson & Kelly, 1999; Khandpur & Wevers, 1998; Tapscott, 1996; Ware et al., 1998). If we accept that leadership is indeed critical to strategy implementation, executive perceptions are therefore inextricably linked to outcomes in that the leadership traits described earlier are unlikely to emanate from an executive lacking total conviction to the cause.

The upshot of this deliberation therefore, is that the key players within sporting organisations, should they wish to follow conventional wisdom on leadership theory, need to reconcile their convictions and determine with clarity the path their organisations will take with regards to on-line commerce. Whilst understandable at its inception, organisational Internet theories based on avoiding any formal Internet policy making decisions and remaining conspicuous by their absence for example, may no longer be viable. With this in mind, organisations may wish to consider the value of the web strategies reviewed below.
2.6.3 Information Technology Assimilation Theory

Since commercial use of the Internet began in 1994, estimates of total commerce and usage statistics have been continually revised to keep up with exponential growth. Suffice to say however that the opportunity to obtain a strategic advantage in terms of improved operations and a portion of the billions of dollars in cyber cash now circulating, has led most organisations to develop some sort of Internet presence. Having established that presence, generally through a web site, organisations are increasingly seeking to leveragethe greatest amount of CA possible. One growing element of the literature in the area of organisational IT strategy is the concept of assimilating IT across a businesses' entire operations. In endeavoring to develop new ways of creating value through their web sites, sport managers should consider the advantages of this strategy proposed by the literature.

A critical component of IT strategy gaining considerable credence, is the concept of merging IT strategies with the primary strategic thrust of the firm (Raghunathan & Raghunathan, 1994), and incorporating IT into the entire spectrum of organisational activities. The emergence of the electronic economy has provided a business environment where IT's permeate every aspect of an organisation.

This understanding affects both organisational strategies, and the measurement of strategic effectiveness. IT applications such as organisational web sites have the ability to create value for sports businesses in ways which according to El Sawy et al. (1999), have created a shift in business planning from conventional strategy to value innovation. El Sawy et al. (1999) provide a medieval poem to illustrate both their view of the nature of the world wide web, and how it should be strategically considered by organisations wishing to capitalise on its inherent strengths:
Much like a subtle spider which doth sit
In middle of her web, which spreadeth wide;
If aught do touch the utmost thread of it,
She feels it instantly on every side.

Sir John Davies,
The Immortality of the Soul

Perhaps the first attempt at romanticising IT, this captivating web parallel both elucidates the intrinsic character of the world wide web, and provides IT specialists with a welcome new perspective of their profession.

In the future, successful IT strategies will be based on this understanding of the world wide web and assimilate IT applications like their web sites into the fabric of their operations. Armstrong and Sambamurthy (1999) cite a number of authors (DeLone & McLean, 1992; Jarvenpaa & Ives, 1991; Mahmood & Soon, 1991; Sethi & King, 1994) who concur with their contention that the assimilation of IT is perhaps the core component of IT strategy in contemporary organisations. They state:

IT assimilation refers to the success achieved by firms in utilising the capabilities of IT to enhance their business performance. Not only does it refer to the extent to which IT has been infused into specific business activities, but also how effectively IT is enabling the conduct of those activities relative to rivals (1999:305).

The concept of incorporating IT into the fabric of organisational strategy is a theory gaining momentum, and is discussed further in chapter 3. In terms of this research, and its focus on evaluating CA, an understanding of this issue provides two benefits. Not only is it insightful to gain a greater understanding of the strategies being considered by organisations when setting up a web site, it also provides added weight to the adoption of a measurement technique that accounts for every element of CA. Sporting organisations’ web sites are an example of an IT application, the value of which should be considered in an all-encompassing way, both during strategic planning, and when assessing its effect on CA.
Following this observation, four further practical web site strategy options have emerged from a review of the literature; Internet vision/mission communication, Internet project teams, IT partnerships and alliance development, and online community development. Each of these elements of online strategy and its ramifications for sporting organisations are now fully considered.

2.6.4 Internet Vision Statements

If the components of the Business Activity Model are considered the building blocks of strategic development, then defining organisational goals and objectives are surely the cornerstones of that process.

Most contemporary businesses now have an organisational vision statement. Promoted heavily in the latter part of the twentieth century, the vision statement has become the commonly held official focal point for organisational culture, and sporting organisations have been no exception. Under consideration here is whether the all-pervading nature of the Internet and its capacity to reform the way organisations operate in every element of the value chain, both warrants the establishment of a supporting vision statement, and indeed whether developing and promoting this document is a worthwhile exercise in itself.


According to Bishop "when you can imagine many possible futures ahead of you, it's hard to decide which one you want to realise" (1998:71). Bishop subsequently states that the establishment of a digital vision is a critical tool in achieving on-line business objectives through its ability to focus organisational activities. Asking yourself: "What are we really trying to achieve anyway?" is, according to Bishop
the starting point for developing a digital vision, who also supports the use of short, medium and long term goals.

Even at a national level (or perhaps even more so), the need for a vision statement is unmistakable. During the round table discussions conducted during 1997 and 1998 as part of the SRS (1999), Australian businesses called for the Government to develop and articulate a clear national vision for online trade. Identified by the Commonwealth as one of the key points to arise from the roundtable discussions and electronic dialogues, the call from business itself for an overall vision statement for the country presumably indicates that those same organisations recognise the importance of such a statement within their organisations.

Standing (2000) believes that “an effective strategic plan that has been properly communicated has the potential to radically improve the fortunes of a business” (2000:72). He goes on to explain the specific elements that he believes a technological vision statement should contain:

…the management information systems (MIS) function of the organisation should develop its own strategic plan that supports the corporate plan. This will cover its own mission and strategic directions, and identify opportunities and threats. The MIS strategic plan’s main thrust is to develop and explain the information architecture that will provide the best return for the organisation. The information architecture defines the data, processes, information, organisational network, and stakeholders. Information technology (IT) trends and opportunities are explained. The technology required to support the business aims of the organisation is defined (2000:74).

As with the review of managerial perceptions, it is prudent here to clearly state the intention of this part of the literature review. Whilst an understanding of the types of strategies organisations might pursue with regards to the Internet is important, this section of the literature review is aimed at considering how strategic decisions are communicated, and if indeed there is a consensus on the benefits of communicating strategy. This thesis supports the use of the Business Activity Model in establishing organisational strategy, an analysis that is likely to identify electronic commerce opportunities in varying degrees. At this point however, the literature has already
established that whatever the extent of the organisation’s commitment, leadership is crucial. At issue here is a suggested method of focussing organisational goals and assisting leaders to accomplish their task; a quality that an official vision statement appears to possess.

Armstrong and Sambamurthy (1999) believe that communicating a strategic IT vision is emerging as a significant factor, and cite Schein’s (1992) description of IT visions as evoking organisational images of the role that IT will play in the firms’ business activities and competitive strategies. Hasan and Tibbits also acknowledge the role of developing and clearly expressing electronic commerce objectives when they note that “ideally, a shared understanding of the organisation’s vision is created and the business strategy is communicated to the organisation as a whole” (2000:440).

A common understanding of the role of information systems within an organisation is considered by Teo and Too (2000) as critical “in order to develop appropriate strategies and plans for effectively deploying and managing the use of the Internet” (2000:105). The authors provide the following example:

For example, if a firm’s top management and its IS planners have different views of the role of IS, it may not be appropriate for the IS personnel to aggressively champion new Internet-based technology (IT) applications that require substantial investments, because such applications may not be congruent with management’s view on how the company should compete...Without a unified understanding of information systems, business and IS strategies are less likely to be congruent, thereby reducing synergy and wasting resources (2000:105).

The application of vision statements is extended by Rosen (2000) with her recommendation that goals be not only clearly stated, but also specific and measurable. Abdel-Hamid, Sengupta, and Swett (1999:532) also cite the “important and ubiquitous role” of goals in software projects. Similarly enthusiastic about measuring goals, Masic and Johnson state that “to truly value a Web site...measurable objectives need to be defined, which are tied to an organisation’s business objectives, and then these need to be accurately assessed” (1999:383).
The notion of measuring return on investment (ROI) is certainly not new in business. Even though the unique nature of the Internet enables it to elevate an organisation in an all-encompassing and sometimes intangible way, sporting organisations should not be afraid to apply traditional balance sheet measures of success to their on-line commitment. Levinson and Rubin believe that specific, measurable goals will help to stop companies “flossing around in cyberspace because their goals aren’t focussed enough” (1995:214).

The use of an on-going, quantified, cost savings analysis to justify in real terms the investment made in Internet development is also promoted by Bickerton et al. (1998). This type of analysis could certainly be applied to a sporting organisation, and would be enhanced with the addition of income statistics such as merchandise revenues, ticket sales or advertising etc., and equally with cost savings. These savings may include reduced communication expenses, and the concept of disintermediation, identified by Standing as encompassing the process by which ‘middlemen’ companies are being “bypassed by the Internet revolution as more companies that create the goods and services interact directly with the consumer without the aid of intermediaries” (2000:4).

Having established the thrust of the literature, the two main issues to emanate from this aspect of investigation are therefore whether sporting organisations are using digital vision statements, and if so are they measurable? Khandpur and Wevers provide a succinct assessment of both stating that to be successful “you and everyone else in your organisation must have a clear and shared understanding of the purpose of the solution… and the measures of success of the solution once it is implemented” (1998:230).

A further advantage of vision statements not yet covered is the potential to unearth valuable human resources through the communication of goals. According to Judson and Kelly, “with clear priorities, the appropriate people in an organisation can focus their energies” (1999:83). Similarly, Schulman and Smith believe “making a clear statement of intent often prompts experienced individuals to come forward. You may locate internal resources you did not know existed” (1997:24). This potential
opportunity both further supports the use of vision statements, and leads to the next element of on-line strategy, the concept of building project teams.

2.6.5 Internet Project Teams

The second practical theme to emerge from the literature is the development of project teams as drivers of online strategy. Organisational use of teams has increased significantly in the last ten years following academic research that posited its advantages, even prior to the introduction of a functional World Wide Web. Drucker (1988) was one such supporter, suggesting at the time that “traditional departments will serve as guardians of standards, as centres for training and the assignment of specialists; they won’t be where the work gets done. That will happen largely in task-focused teams” (1988:47).

The team-based philosophy is perhaps even more relevant in the digital age. Tapscott (1996) is another supporter of team based approaches, particularly in the digital economy. Espousing the inherent capabilities of the Internet and its suitability to team based strategies, he captures much of what is exciting about the medium:

...because of the power and capacity of the new media to open dramatically the channels for human communication and collaboration within an office, across geography, and across time, knowledge work is becoming collaborative work, taking place in teams on high capacity networks (1996:79).

Tapscott (1996) goes on to illustrate the impact of new technology on traditional management strategy theory, including Porter’s value chain model, suggesting along with Bickerton et al. (1998), Johnston and Mak (2000), Hsiao and Ormerod (1998), Ware et al. (1998) and Westland and Clark (2000), that the impact of electronic commerce has changed the way the value chain should be interpreted. The Internet phenomenon is increasingly being considered powerful enough to constitute the first significant force to collide with Porter’s long-standing generic model, at least to the extent that it creates new ways to interpret the mantra. Whilst this issue is explored in
greater depth in chapter 3, suffice to say at this point that teams are an accepted strategic tool, and that new technology both facilitates teamwork and is itself conducive to development under teamwork.

A number of authors highlight the benefits of developing project teams specifically for Internet development, including Bickerton et al. (1998), Hsiao and Ormerod (1998), Khandpur and Wevers (1998), Schulman and Smith (1997), Standing (2000) and Ware et al. (1998), who also highlight the importance of appointing a suitable team leader, and the appropriate empowerment of the group. Hsiao and Ormerod succinctly express the feeling of this group of authors noting that "new processes are often supported by empowered project teams organised around customers and facilitated by IT" (1998:26).

Bharadwaj (2000), Roepke et al. (2000) and Abdel-Hamid et al. (1999) provide research that extends the project team theory to the importance of incorporating both IT and managerial skills into a project team. Bharadwaj (2000) cites evidence that the critical dimensions of human IT resources are both technical skills (such as programming and design), and managerial IT skills (which include coordination and interaction with user community, and project and leadership skills). Roepke et al. (2000) also reinforce the need to provide both elements in a project team in order to align IT resources with organisational strategy, a theme that correlates with the Abdel-Hamid et al. (1999) study of the impact of goals on software project management. This research provided evidence of the importance of goals on project team performance (covered under vision statements), and also identified the need to allocate both development and quality assurance responsibilities within the team.

The conclusion that can be drawn from the above three pieces of work, is that for a project team to be successful it must have a synthesis of human capital with both IT and management expertise. With the growing financial importance placed on the Internet by sporting organisations, it appears likely that dedicated IT executives, as part of Internet project teams that have board level representation, may soon be considered crucial for professional Australian sporting organisations.
Interestingly, for sporting organisations built around a team product in particular, project teams may in fact blend very easily into organisational cultures. Also worth considering given the earlier discussion of partnerships and alliances is the potential of inter-club or inter-sport project teams. Certainly an investigation into the use of project teams for Internet development by sporting organisations is warranted, as is the development of strategic partnerships and alliances, discussed below.

2.6.6 Partnerships and Alliances

Porter (1985) recognises the benefits of alliances in organisational strategy throughout his development of generic business models, arguing that “coalitions are ways of broadening scope without broadening the firm, by contracting with an independent firm to perform value activities” (1985:57). According to Porter the benefits of strategic alliances also include “the sharing of activities without the need to enter new industries...(and) are also a means of gaining the cost or differentiation advantages of vertical linkages without actual integration” (1985:57).

Stuart (2000) claims that bringing together complimentary assets, defraying costs, and sharing risks as salient among the incentives to form an alliance. Finally, despite the fact that there is a perception that Internet technologies are easily replicable (Ware et al. 1998), Westland and Clark (2000:145) believe that “(IT) systems that create linkages and interdependencies outside of a single organisation can often shift the balance of power in an industry in ways that can become difficult for competitors to duplicate or overcome”.

The use of strategic alliances both on and offline is indeed an accepted strategy for business development undertaken by many organisations (Bishop, 1998; Chung, Singh, & LeC, 2000; Inkpen, 2000; Hannan & Freeman, 1977; Hasan & Tibbits, 2000; Hsiao & Ormerod, 1998; Podolny, 1993; Porter, 1985; Schwartz, 1997; Stuart, 2000; Ware et al., 1998; Westland & Clark, 2000). Although some analysis is made here of traditional alliances, this thesis primarily addresses the issue of online strategic alliances between associated sporting organisations, particularly those that
are members of a central league or association, an issue that is somewhat paradoxical.

A number of authors, including Sloane (1971), Dabsheck (1975) and Stewart (1984), and more recently Stewart and Smith (1999) have noted the peculiar economies of sport, in which the mutual interdependencies of competing teams requires organisations to have some level of co-operation to ensure a stable environment. In other words, the competitive lines typically drawn for many organisations are blurred by the unique nature of sport. Indeed, management models assessing competitive strategy, including Porter’s ‘five forces’ (1985), highlight the special circumstances of sport, particularly in the assessment of ‘rivalry’.

A number of online commentators including Martin (1997), and Judson and Kelly (1999), identify both the benefits of strategic online alliances, and the Internet’s intrinsic suitability to such arrangements. Most of the author’s notes pertain to the overall business community, but Martin (1997) makes the following observation regarding the creation of alliances in the Digital Estate, which are of particular interest considering the sporting rivalries previously mentioned:

In addition to scale, there are a number of reasons that companies in the Digital Estate partner with one another. Technology is a prime motive, as are brand enhancement and superior content. Many of the largest companies that are traditional competitors are curbing their competitive instincts to build a viable infrastructure and to push through advantageous standards for the future (1997:157).

Irrespective of the peculiar economies of sport recognised earlier that add some complexities to the formation of partnerships, much of the alliance literature suggests that organisations competing in both product and location are better suited to cooperative practices. In describing the benefits of alliances amongst organisations in terms of partner scope, Inkpen states “very often the greatest alliance learning opportunities, i.e. private benefits, are created when there is a virtual overlap in alliance and partner product and geographic markets” (2000:776).
Hasan and Tibbits identify the ability of electronic commerce to enable interdependent relationships with a range of entities external to the company, including "not only suppliers, but also partnership(s) with other companies that could be close competitors or in a different industry altogether" (2000:449). Ware et al. (1998) and El Sawy et al. (1999) are similarly supportive of online alliances, including those with traditional rivals. Ware et al. identify the development of partnerships and alliances as a critical principle of online success, and provide an excellent overview of alliance strategy theory. They argue that:

In order to be competitive, companies cannot be completely isolated, but must form constellations of relationships (even with competitors). The formation of these constellations helps companies bring together the core competencies and capabilities for capitalising on opportunities. Moreover, it reduces the risk normally involved in going after opportunities. A company’s ability to bring together the players to form these relationships is a distinct advantage in this emerging economy (1998:11).

For sporting organisations there is increasing evidence to support a combined approach to electronic commerce. When United States company Starwave launched its SportsZone site, a number of well known brands were already competing for the online sports information market including Sports Illustrated and USA Today (Schwartz, 1997). The decision to enter into a partnership with ESPN’s cable sports channel provided Starwave with the opportunity to not only share content but to brand the Web site with a famous name. The resultant credibility and awareness afforded to ESPN SportsZone contributed to its spectacular debut, and provides an example of successful alliance strategy.

Chung et al. (2000) also supports the notion that an alliance is likely to be successful when complementary skills exist, and adds that firms are drawn to partners with similar status for three reasons; social interaction, competitive isomorphism, and equitable distribution. These are described below in more detail:
Social Interaction: The status of partners is critical in the consumer’s perception of quality. According to Podolny (1993) when the quality of an output is ambiguous, the status of a firm and the quality of its outputs as perceived by others are dependent on the status of other firms with whom the focal firm interacts. For sporting organisations the strong brand awareness associated with well known leagues or events is particularly relevant here, providing the opportunity according to Stuart, to “fortify producers reputation” (2000:808).

Competitive Isomorphism: Hannan and Freeman (1977) conclude that firms with similar status are likely to have similar or comparable operating systems and practices. Again, the unique culture of sport means that in many instances on field competitors may in fact be the best off field partners.

Equitable Distribution: Simply stated, firms of similar status are more likely to display fairness and commitment in sharing both the costs and benefits of an alliance.

Having established that competing industries are well suited to the development of strategic alliances, it is also important to note that these alliances and partnerships should not be considered limited to league-associated sports, professional sports, or high profile sports. National and state sporting bodies, amateur sports and participation based activities, as well as organisations with commercial links to sport including information, apparel and gambling businesses might also consider the benefits of partnering. In addition, agreements need not apply only to cooperation between associated sporting organisations. Strategic alliances, according to Judson, can benefit all parties on every aspect of Internet operations, and “take companies a great distance in providing a total solution” (1999:142).
To further demonstrate the opportunities that online partnership and alliances can present, three sporting examples are reviewed here. The first example is that of the United States National Football League, and its efforts to present a united online front. The second examines The Sydney Organising Committee for the Olympic Games' use of its web site, derived from a SRS (1999) pre-Olympic case study. The third looks at the Internet activities of the Australian Football League (A.F.L.). Together, these examples provide both a window into the opportunities for online partnerships and alliances for the sporting industry, as well as an intriguing insight into a cutting edge application of the Internet both in Australia and the United States.

The United States National Football League (N.F.L.)

An excellent example of a strategic alliance can be seen in recent developments within the N.F.L. In March 2000 the N.F.L.’s 31 owners agreed to pool their resources and split revenues from the N.F.L.’s web site for the following two years (Wilner, 2000). According to Wilner it was a "monumental victory" (2000:28) for the N.F.L., with the alliance strategy enabling enormous synergies. For example, one hosting fee, one programming team, and one design budget are now split between 31 teams, as are all expenses associated with the site.

Crucially, the alliance also means that 31 Internet marketing budgets can now be pooled to promote one central location at which each team has an individual site. The league site is now the platform for numerous marketing initiatives including a CD-rom coaching program aimed at assisting athletic directors to teach the fundamentals of the sport, and serves as the N.F.L.’s window to its international audience.

Given the famously disparate reputation of owners within the league, this partnership, allowing each team to run its own site and keep local advertising with all national revenue shared, was a significant development.
The Cyber Olympics – Sydney 2000

The Sydney 2000 Olympics showcased a variety of Australia’s sporting talent, both on and off the field, to an immense and expectant international audience. They were not disappointed. SOCOG’s spectacular delivery of the world’s highest profile event showcased every element of the country’s array of assets, in particular its professional sport management capabilities and world class venues. Central to the completion of SOCOG’s objectives, both internally and in the provision of information to consumers, was its use of electronic commerce.

The digital preludes to Sydney, the 1998 Nagano Olympic Winter Games and the 1996 Atlanta Olympics provided an ominous indication of what SOCOG’s cyber planners could expect. Atlanta’s official web site registered 187 million hits during the event. Two years later the Nagano site, with 650 million event hits (including a peak of 103,429 hits per minute!) prompted some commentators to suggest that it was the first occasion where TV and the Internet went head-to-head, and the Internet was the winner.

Pivotal to SOCOG’s operations was an all-encompassing Internet strategy based largely upon a number of critical partnerships and alliances designed to tackle the phenomenal logistics of an event catering for more than 5,000 officials, 15,000 accredited media staff and 10,200 athletes. Some specific examples of the Internet’s application by SOCOG during the event, and the partnerships employed, include:

Info2000: Developed by IBM, this intranet service was available only to the Olympic ‘family’ of athletes, media, sponsors and officials during the games.

Athena: A comprehensive approved information Intranet for SOCOG staff developed by Lotus Consulting.
Infopoint: A joint program with IBM consisting of a network of touch-screen multimedia kiosks located in public places all over Australia, such as libraries and shopping centres, providing free information to the public. Also involved in this project were Sydney firm Brainwave Interactive and Lotus Consulting.

By November 2000 it became clear that SOCOG and the IOC had risen to the challenges of the Internet and its borderless nature. Olympic sponsors, tourism organisations, government agencies and the media all played a part in both contributing to, and benefiting from, the most sophisticated and popular web site ever established, sporting or otherwise. New online relationships among the Olympic 'family' have been created, and new business models and modes of operation have been successfully tested, demonstrating the power of the Internet. SOCOG, and a host of Australian enterprises were at the forefront of this push deeper into cyberspace.

The Australian Football League (A.F.L.)

In the year 2000, in comparison with the United States N.F.L. example, the premier Australian sporting league, the A.F.L. and its member clubs, presented an extremely fragmented position in regards to the Internet. Whilst individual clubs had a presence on the official league site through generic club links, each of the individual clubs also maintained their own sites.

The A.F.L. was roundly criticised for its initial failure to 'tie up' Internet rights, providing private companies such as Sportview (with stakeholders including Eddie McGuire, Steve Vizard, Stuart Simson and Microsoft co-founder Paul Allen) with an enormous opportunity. Sportview represented five of the league's sixteen clubs, with each of the remaining eleven clubs also dealing with a private ISP. The Sportview deal delivered it 65% of all club revenues, and meant that the A.F.L. could not sell any exclusive Internet package without either granting Sportview equity, or buying them out, which could cost tens of millions of dollars (Lyons, 2000).
By 2002, the A.F.L. had moved to better align its member clubs, albeit at a cost. A five-year Internet rights contract for a reported AUS$30 million was negotiated with telecommunications company ‘Telstra’, with all of the Sportsview contracted clubs disengaging those contracts for undisclosed sums. One club still remains outside the A.F.L. banner with a rival network, and the exact detail of the agreement with the other fifteen clubs are not public, however on the surface the A.F.L. now appears to present a more united approach to Internet opportunities.

The A.F.L. is not alone as a league struggling to come to terms with its member clubs on Internet issues. A lack of a combined approach to growing the Internet business is evident throughout Australia’s major sporting leagues, including the A.F.L., the N.R.L., N.S.L., and the N.B.L. Individual sporting clubs appear to be developing Internet strategies that do not include the traditional league based partnership approaches to issues such as television rights. This departure from alliance strategy is certainly not consistent with the literature regarding successful Internet strategies, and clearly indicates underlying problems in the relationships between the leagues and their clubs. Even a basic analysis of current Internet practice reveals numerous inefficiencies regarding economies of scale. In addition, the missed opportunity in terms of brand leverage is perplexing, given that for the A.F.L., for example, the development of that brand appears to have been a key strategic focus.

It is worth noting, of course, that individual clubs must surely plan their organisational approach to the Internet, based on their perceptions of optimum CA. In this respect Australia’s most prominent sporting clubs appear at this stage to be unwilling to relinquish their individual rights to the Internet. This is a reflection of many organisations’ recognition of the massive future importance of the Internet, and is an issue which may impact upon the full realisation of that potential, should a partnership based strategy fail to develop.

The peculiar interdependencies of sport have already been noted. Clubs participating in league based competitions therefore need to consider strategy on two levels (club and league), and should develop a combined approach to leveraging resources.
According to Teo and Too, “management and the IS personnel need to agree on the role of IS if the firm is to develop strategies that effectively leverage the potential of the Internet” (2000:105). This observation of internal organisational resolution applies equally to league/head-office based organisations.

Having discussed vision statements, the development of Internet project teams, and strategic alliances, another sporting cultural issue that lends itself to website strategy is the loyal affiliation of supporters to teams. Sport enthusiasts’ natural tendency to form tight groups puts sporting organisations in a unique position to develop and capitalise upon online communities.

2.6.7 Online Communities

Digital communities are the Internet version of the loyal audiences eagerly sought after by newspapers, trade publications, interest-based magazines, and television stations. The ability to hold an audience is crucial to success in these businesses, with product sales and advertising revenue inexplicably tied to consumer numbers. The development of loyal communities has been identified as just as critical in developing successful Internet operations (Bickerton et al., 1998; Bishop, 1998; El Sawy et al., 1999; Haynes, Becherer & Helms, 1998; Janal, 2000; Judson & Kelly, 1999; Levinson & Rubin, 1995; Martin, 1997; May, 2000; SRS, 1999; Standing, 2000; Wang, Head, & Archer, 2000; Ware et al., 1998).

Judson and Kelly describe the idea of Internet communities as “a place where product enthusiasts can gather and discuss aspects of the product they enjoy... (giving) enthusiasts an even stronger feeling that they are connected to the product, and that they are not alone in their interest in the product” (1999:154). Janal defines community as “a group of like-minded people who band together for frequent interaction because it is mutually beneficial and provides a sense of safety and a sense of identity” (2000:233).

Similarly, Martin (1997:44) believes that “digital communities are the future lifeblood of the net”, and Wang et al. believe that the notable and unique
characteristics of the Web are providing an opportunity for “building relationships (that) may often prove to be an effective means of improving long-term profit” (2000:376). The ‘culture’ of sport provides its businesses with an arguably unequalled head start in this element of online success, emphasising the importance of a thorough understanding of the growing online community research.

Online communities are indeed a primary focus in electronic commerce literature, particularly in the marketing genre. An understanding of the demographics of the Internet would provide a key to a new advertising world with unheard of opportunities, however this type of research is proving difficult to fulfill. The creation of online communities meanwhile, takes a backdoor approach to this task by attracting people based on their interests and attempting to provide congruence through community building techniques such as online chat groups and net memberships.

Levinson and Rubin (1995), provide an early exultation of the importance of building online relationships, a resource they believe is capable of leading to additional sales, repeat sales and increased profits. The authors also examine the principles (as opposed to methods) of building online communities, which they list as:

- Giving customers an emotional stake in your business (arousing curiosity, empathy, or excitement),
- Multiplying the number of times they contact you,
- Increasing the quality of each contact.

El Sawy et al. also observe that “small companies are using the Internet to build interactive relationships with customers and suppliers” (1999:307).

The advantages of a large and loyal community based on an organisation’s product are substantial, with increases in revenue associated with its primary and associated products, the creation of a new demographic attractive to sponsors, and the development of a group of human advertisements for a business among them.

Bishop (1998) concurs with this evaluation, promoting organisational strategy that
both expands and enhances the richness of customer databases. Bishop adds, “as it becomes larger and more useful, (customer databases) will help increase sales and, if appropriate, can become an asset you can sell or rent to other organisations” (1998:77).

Generally, media companies and marketers view the aggregation of audiences as either geographic or ‘special interest’, and in both cases consumers have little influence (except in massive numbers) over content (Martin, 1997). The interactive nature of the Internet however, allows consumers to surf through the massive and diverse content available on the web, captive to neither geography nor editor bias, and in fact empowers them to create their own content. This paradigm shift from distributor to consumer has challenged companies to unlearn traditional models of community building in other media (Wang et al., 2000). Janal (2000), makes the same observation:

The most powerful paradigm shift in online advertising is that the advertiser is adopting the role of the magazine publisher and becoming responsible for creating content. Because the hard sell and overt advertising tend to put off an audience burned out from commercials, advertisers can gain influence by creating a sense of community and an experience for their target audiences (2000:241).

Schwartz (1997) also comments on the deconstruction of marketing control whereby traditionally conveyed, intrusive advertisements are reversed on the web, where the consumer has “complete control over what messages they choose to interact with and how” (1997:57). A further, pithy, observation from Schwartz encompassing the new psychology required by online advertisers attempting to lure cyber purchases, is that there should be “less manipulation, more p2p negotiation” (1997:62).

While the Internet does indeed alter the way organisations and marketers reach their customers, it is also demonstrating its ability to provide new channels for achieving this objective. Online communities are a natural evolution from a medium built upon networks - both technical and human. Simeon observes that “many commercial Web sites have moved from providing basic company and product information to becoming an integral part of product and service launch strategies” (1999:298). She
goes on to identify some of the dynamic Web site features capable of developing online communities, including bulletin boards, chat rooms and audio and video capabilities (1999).

Ware et al. (1998) continually stresses the importance of developing online communities, a strategy they believe is uniquely suited to the web’s core competencies. Taking advantage of the web’s unique characteristics and capabilities to deepen your relationships with customers, suppliers, and business partners is a key component in the author’s guidelines for successful Web-based businesses. The following extract leaves no doubt about their position:

We have repeated over and over that Web is about relationships. It helps you reach new customers on a global basis, but more importantly it enables you to customise your information, products, and services to each individual customer (whether that customer is another organisation or an individual). The Web enables you to reach out proactively to customers, to engage in interactive dialog with them, to build communities of interest with and among them, and to learn from them. Failure to take advantage of these capabilities amounts to ignoring the core strengths of the Web (1998:372).

Providing customers with a forum to ‘meet’ like-minded individuals, and encouraging and supporting conversation, is crucial in the development of an online community that according to Judson and Kelly “may spur sales of high-margin peripheral items related to the product” (1999:154). This process is somewhat easier when the product around which the community is being built is highly involved. What industry could assert to be making the leap into cyber community building with a product generating higher levels of consumer passion, and desire to be associated with the product, than sport? Indeed, the SRS (1999), having specifically researched Australian businesses, states that creating a sense of community is both an important part of success, and a method well suited to a range of shared interests including sport.

Further exploration of online communities reveals that when assessing or describing an online community, e-commerce authors invariably provide sporting examples to illustrate their point. Martin (1997) uses ski clubs, tennis and athletics, Judson and
Kelly (1999) sports and fitness, Janal (2000) Reebok, and Standing (2000:82) goes further to point out that “while community building is not suited to every company and product, a soccer club with a large supporter base (for example), may find it worthwhile to develop an online community”. The senses of belonging and ownership associated with the sporting culture fit snugly into the ‘community building formula’ provided by the literature.

Wang et al. (2000) provide their own three stage process of online relationship-building which includes:

1. Initial investigation
2. Full-range communication
3. Relationship network creation

This process is of particular interest to sporting organisations given that they will generally be able to begin at the third stage of the process, having in most instances already accomplished a relationship with their customers outside of the online environment. Wang et al. go on to state that “currently, brick-and-mortar companies that have an established, commonly recognised brand with a built-in trust factor are proving to be the most successful in the electronic marketplace” (2000:384). These inherent advantages for the sporting industry in creating on-line communities through their web sites certainly auger well for organisations that choose to include their development as part of their on-line strategies.

The potential for sporting organisations to generate significant revenue through e-commerce may well be defined to a large degree by its ability to build communities that are hungry for their products, and attract zealous sponsors. Australian business observers may well be pondering why sports such as Australian rules football, with combined official memberships in excess of 350,000 are not actively pursuing this strategy. Nevertheless, sport’s natural affinity with ‘membership’ may well be the key to unlocking a substantial element of online success; the Internet community.
Having reviewed the seven themes to emanate from the literature and form one bookend of the gap analysis (secondary objective 4), the literature facilitating the examination of variations between the Australian sample and their United States counterparts (secondary objective 5) will now be reviewed.

2.7 Macro Analysis Tool

Secondary objective 5 calls for an examination of variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible with their United States counterparts (macro analysis). This section of chapter 2 pertains to the tool utilised for the macro element of secondary objective 5, that being Caskey (1998), with the micro level comparisons made after data collection.

Wilner (2000) identifies the United States based National Football League (N.F.L.) as a pioneering professional team sports league, citing its commissioners' view that the web is as important to contemporary N.F.L. teams as network television and its revenues were for teams in the 1960's. As stated earlier in this chapter, Goodman (2000) recognises the N.F.L.'s position on web strategy, and also identifies the massive size of the United States sporting industry, and the leading position of other United States league based professional team sports in many aspects of web strategy.

As a major component of global sports, and with arguably a benchmarking position in relation to many aspects of Internet strategy, the United States based organisations therefore provide insightful opportunities for comparison with Australian sporting organisation strategies. Caskey (1998) investigates a variety of web orientated issues amongst professional United States sporting organisations, including the attitudes of sport administrators to the use and viability of their web sites. Caskey's (1998) findings are therefore particularly relevant to this research, and four questions from the Caskey (1998) instrument were included in the instrument used in this research, enabling direct result comparison. The methodology underpinning the use of both Caskey (1998), and Sethi and King (1994), is covered in detail in chapter 3, while
Caskey’s (1998) results are examined in comparison to those acquired in this research, in chapter 5.

2.8 Conclusion

This chapter has reviewed a comprehensive range of information sources in order to achieve a number of functions. Initially, a range of background information was provided in order to frame both the development of the Internet, and this research. Having done this, the theoretical underpinnings of the research were developed, culminating in the creation of the Business Activity Model. This generic model was conceptualised after an exhaustive review of literature, and using in particular the work of Porter (1985) and Sethi and King (1994).

The seven themes that emerged from the literature are founded on a thorough understanding of the Business Activity Model, and provide theoretical guidelines for sporting organisations attempting to achieve optimal CA through the Internet. As demonstrated, past research in areas such as leadership, IT applications and teamwork theories, can be interpreted from the unique perspective of the sporting industry, resulting in the opportunity to compare theory and practice.

Leadership and the perception of online commerce by sport managers are strongly linked to each other, and to organisational Internet strategy. These streams of the literature impact on Internet policy in a variety of ways, including the commitment of financial and human resources, the alignment of web strategy with wider business strategies, and the vigour with which organisations pursue other ways of increasing CA. In effect, these two elements are the drivers of Internet strategy. As such, they impact upon each of the subsequent themes discussed, including cyber strategies for sport.

The central tenet of the cyber strategy for sport theme is the ability of organisations to assimilate IT with their entire business. The extent to which IT’s permeate every aspect of an organisation. The assimilation principle is considered the core component of IT strategy in contemporary organisations (Armstrong &
Sambamurthy, 1999; DeLone & McLean, 1992; Jarvenpaa & Ives, 1991; Mahmood & Soon, 1991; Sethi & King, 1994), and is linked to four further themes: Internet vision statements, Internet project teams, partnerships and alliances, and online communities.

The power of the Internet as a tool for increasing CA has seen a number of authors conclude that it warrants both an independent vision statement (Bayne, 1997; Bickerton, et al., 1998; Bishop, 1998; Hasan & Tibbits, 2000; Khandpur & Wevers, 1998; Levinson & Rubin, 1995; Martin, 1997; Rosen, 2000; Schulman & Smith, 1997; Standing, 2000), and a specific project team (Bickerton et al., 1998; Hsiao & Ormerod, 1998; Khandpur & Wevers, 1998; Schulman & Smith, 1997; Standing, 2000; Ware et al., 1998). These two practical recommendations for increasing CA in the digital estate serve to, among other things, focus organisational objectives and facilitate appropriate IT strategy.

Two further elements of IT strategy for sporting organisations emerging from the literature are partnership and alliance opportunities, and the importance of building online communities. Long seen as a viable tactic in the wider corporate community (Porter, 1985), partnering and alliance strategies are being increasingly considered for online operations, particularly in the sporting industry where the traditional concept of rivalry is blurred. Australian sporting organisations, however, appear reluctant to commit themselves to the combined approach to web strategy demonstrated by United States league based professional sports.

The concept of building online communities is another key source of CA. It is in this element of IT strategy that sporting organisations globally possess an inherent advantage over other industries. The high involvement characteristics of the sporting product are intrinsically suited to the development of online communities, and provide ideal opportunities for sporting organisations to leverage the strengths of the Internet. Each of these seven elements have strategic ramifications or practical manifestations that can be implemented by visionary sporting organisations. These practices represent the most current theories on increasing CA via the Internet.
Understanding Internet strategy theory is an important part of improving CA for Australian sporting organisations. Secondary objectives 1 and 4 of this research were addressed in the course of this chapter, with chapter 3: Methodology, seeking to set the scene for the collection of appropriate data to further fulfil secondary objective 4, and ultimately the primary objective.
CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter outlines the data gathering procedures employed in order to achieve the study's primary objective. The importance of evaluating and investigating the influence of electronic commerce on the sporting industry and organisational strategy was established in chapter 2. Additionally, the Business Activity Model that underpins the study (secondary objective 1) was conceptualised, and prominent Internet literature required to conduct a gap analysis (secondary objective 4) was collated. Data is required to test the impact of the Business Activity Model on the sport industry, and to identify the Internet practices of the sample. Additionally, data gathering procedures were designed to provide the capacity to examine variations amongst the A.F.L., N.B.L., N.R.L. and N.S.L. sample, and with their United States counterparts.

The survey utilised in this research incorporated questions from two previously used instruments, along with seven additional questions based on literature prevalence. Specifically, parts of instruments designed by Sethi and King (1994) and Caskey (1998) constituted two elements of the survey, and the additional questions, designed to consider the impact of the issues identified in the literature, a third element. These three elements are referred to as the methodological research stream. The survey was then customised for the Australian sporting context through minor changes to the original wording and the incorporation of specific sport examples, which could be easily understood by respondents.

A comprehensive review of the methodological research stream that constituted the final survey is undertaken later in this chapter. Prior to a thorough review of the instrument however, it is worthwhile at this point to revisit the objectives of the research proposed earlier, to facilitate an assessment of the entire methodology.
3.1.1 Research Problem

The literature review conducted in chapter 2 resulted in the identification of a number of themes that impact upon Australian sport and the acquisition of CA through the Internet. Although literature regarding the areas of sport management, the Internet, and CA are specifically available, information and data examining the interaction of these three elements is significantly less plentiful. With sporting organisations facing increasing financial pressure, in concert with Australia’s ever-increasing electronic enablement, the need to investigate methods for efficiently extracting CA from sporting web sites is critical.

The purpose of this study therefore is framed by the recognised potential of electronic commerce, and the search for effective strategies to exploit that potential, and manifesting in the form of the research problem stated in chapter 1. This problem led to the development of the specific study aims outlined below.

Primary Objective:

The primary objective of this research is to identify competitive advantage opportunities and strategies for Australian professional sport organisations via the Internet, and to propose practical recommendations for improved performance.

Secondary Objectives:

1. To develop a new generic conceptual business activity model to form the framework of the analysis and guide the research;

2. To test the application of the generic Business Activity Model on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations;
3. To establish the Internet practices of Australian professional sporting organisations contained in the sample;

4. To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).

With these objectives in mind, the survey's methodological research stream is reviewed below. The remainder of this chapter describes the specific research protocols engaged to most effectively meet the previously stated objectives.

3.2 Survey Methodological Research Stream

The methodology surrounding the research of Sethi and King (1991, 1994), Caskey (1998), and the literature review process, that constitute the questionnaire in this study, has been termed the survey methodological research stream and is reviewed here. As such, this section of chapter 3 outlines the method behind the three elements of research that constitute the survey.

Having established both the unique effects of the Internet on business, and literature support for the Business Activity Model as a vehicle for assessing the strategic role and impact of the Internet, a survey that conceptualised and incorporated these elements was critical. To this end, an instrument designed by Sethi and King (1994) to assess the extent to which an information technology application provides competitive advantage – a tool based heavily on Porter's value chain - was adapted for this study.
The Sethi and King measures were complemented by the addition of four relevant questions from Caskey's (1998) investigation of sports web sites, as well as seven new questions based on this study's literature review, in combination with the unique nature of the Australian sporting industry. The resultant questionnaire therefore, was considered an ideal synergy of extensively tested IT measures (Sethi & King, 1994), CA and value chain theories (Porter, 1985), and a previous empirical study (Caskey, 1998), suited to the differentiated environment of this study's population.

The process of integrating each aspect considered important in the attainment of this study's objectives resulted in a 26 question survey. The surveys' methodological research streams are reviewed here according to their origin, and therefore fall into one of the three categories: Sethi and King (1991, 1994), Caskey (1998), or a third series of questions formulated as a result of the literature review. This third series of questions was based on a number of thematic commonalities identified in chapter 2 of this study. The frequency of appearance in the literature justified the formulation and inclusion of these supplemental questions.

3.2.1 Section 1: Sethi and King (1991; 1994)

The core of the survey is based on measures developed by Sethi and King (1991, 1994) to assess the extent to which an information technology application provides CA. Sethi and King (1994) conducted a factor analysis on their data and identified seven dimensions of CA available through applications such as web sites. These seven dimensions were incorporated into the Internet component of the Business Activity Model. By using Sethi and King's 29 question survey in this study (questions 2, 3, and 4 comprise the 29 measures) and by conducting both a confirmatory and an exploratory factor analysis on the data, secondary objective 2 of this research can be further explored. The primary use of this section of the survey then, is to review the application of the seven Internet dimensions contained in the generic Business Activity Model on the sport industry, and identify key areas of CA via the Internet for sport. This is achieved by replicating Sethi and King's factor analysis.
The work of Sethi and King has been pivotal in the development of research methodologies in the field of information systems, with the authors pioneering measures to address the issues plaguing the field. In introducing their objectives they state:

Many efforts have been made to define and distinguish IS from other disciplines...However, the field is still criticised for a lack of theories...the absence of a paradigm...and for being an eclectic collection of diverse fields (1991:455).

An initial attempt by Sethi and King (1991) to develop measures which begin to address these limitations resulted in the definition and operationalisation of the construct “competitive advantage from an information technology application” (CAITA). Also known as a theoretical construct, a construct has been defined as an abstract entity which represents a ‘true’, nonobservational state or nature of a phenomenon (Bagozzi & Fornell, 1982). A broad constitutive definition of the subsequent (1994) construct acronym “competitive advantage provided by an information technology application” (CAPITA) was adopted: CAPITA refers to “benefits accruing to a firm, in terms of changes in the firm’s competitive position, that are caused by a single IT application” (1994:1604).

Sethi and King therefore designed their questions to be generic in order to enable the user to determine the IT application to be investigated. In this study, that IT application was the sporting organisational web site, with a number of questions also investigating the overall impact of the Internet itself on the organisation. The construct and its subsequent measurements therefore, were ideal for the purpose of this study, with the Internet falling neatly into the construct’s definition.

The CAPITA construct was, according to Sethi and King, rooted in several different concepts, as shown below:

- Competitive efficiency; the impact of an IT application on enterprise level performance (Bakos & Treacy, 1986);
- Business value; impact on profitability, market share, and market size (Berger, Kobelius, & Sutherland, 1988);

- Operational efficiency; impact on intermediate operating costs (Banker & Kauffman, 1988);

- Management productivity; impact on return-on-management (Strassman, 1988);

- Competitive forces; impact on buyers, suppliers, substitute products, new entrants, and rivalry (Porter, 1990);

- Strategic thrusts; impact on differentiation, cost, innovation, growth, and alliance (Wiseman & MacMillan, 1984);

- Value activities; impact on technology and economically distinct organisational activities (Porter & Millar, 1985);

- Customer resource life cycle; impact on activities undertaken by customers to acquire a resource (Ives & Learmonth, 1984).

Sethi and King specify that these different concepts signify “two fundamental approaches to the measurement of competitive advantage” (1994:1602), an outcome approach, and a trait approach. Sethi and King adopted the trait approach, (reflected in concepts such as competitive forces, strategic thrusts, value activities, and customer resource life cycle), which is an application of the broader systems resource model. This model defines effectiveness as the attainment of a normative state and advocates the measurement of “means” (Hamilton & Chervany, 1981).

Whilst Sethi and King acknowledge the advantages and limitations of each measurement option, the trait approach was ultimately adopted due to its suitability for theory construction, which was considered critical to the field at the time of the study. Sethi and King do however acknowledge the importance of both approaches,
observing that "nonetheless, (their) results must be compared with those of the outcome approach in the future" (1994:1603). This comparison is, to some extent, undertaken in this study with the addition of the Caskey (1998) instrument, discussed later in this chapter. Nevertheless, this research is principally trait-based.

Having adopted the trait approach to CA measurement, the impact of IT (the major factor circumscribing the domain of CAPITA) was examined. According to Bakos and Treacy (1986), there are three levels for studying IT's impact: internal strategy (effect on the efficiency and effectiveness of organisational structures and processes so as to achieve goals and objectives); competitive strategy (effect on the ability to outmanoeuvre competitors in the industry in which the organisation does business); and business portfolio strategy (effect on which industries to compete in and how to position the organisation in these industries). CAPITA was defined by Sethi and King at the level of competitive strategy, the level of organisations competing in an industry, based on Porter's (1980) description of competitive advantage being most directly manifested at this level.

In deriving a CAPITA model (1994), the authors subjected their research (both 1991 and 1994) to extensive scrutiny, with the rigorous testing subjected to the model providing excellent credibility for the authors, and subsequent users of their findings. The study was based on Churchill's (1979) guidelines for developing measures that have desirable reliability and validity properties, and followed a modified version of the eight-step procedure recommended. This procedure, along with a brief description of the steps taken by Sethi and King to achieve them, is shown below:

1) Specify the domain of the construct:

   • CAPITA refers to benefits accruing to a firm, in terms of changes in the firm's competitive position, that are caused by a single IT application.
2) **Generate a sample of items:**

An assessment of the uniqueness and similarities between benefits concepts resulted in the delineation of five distinct types of benefits from an IT application.

- **Efficiency**
  (McFarlan, 1984; Bakos & Treacy, 1986; Bakos, 1987; Synnott, 1987)

- **Functionality**
  (Porter, 1980; Ives & Learmonth, 1984; Clemons & Kimbrough, 1986; Parsons, 1983; McFarlan, 1984; Bakos & Treacy, 1986; Bakos 1987)

- **Threat**
  (Parsons, 1983; Bakos & Treacy, 1986; Bakos, 1987)

- **Preemptiveness**
  (MacMillan, 1983; Clemons, 1986; Clemons & Knez, 1988; Bakos 1987)

- **Synergy**
  (King et al., 1986; Information Week, 1987; Clemons, 1989)

The content validity of these proposed dimensions was justified by correspondence with CA models proposed in the literature, including Porter’s (1985) three themes (low cost, differentiation and sustainability) characterising CA.

3) **Collect data:**

- **Empirical verification of construct using questionnaire responses of 769 companies, with each dimension measured with questions on a seven-point likert scale**

- **Respondents asked to describe system with most significant impact on the firm’s competitive position, with anecdotes provided to help users**
  (Rackoff, Wiseman, & Ullrich, 1985; Gongla, Sakamoto, Back-Hock, Goldweic, Ramos, Sprowls, & Kim, 1989; King et al., 1986)
Pilot testing was conducted

4) **Purify measures:**

The authors followed a subset of criteria considered important for the assessment of operational measurement properties: unidimensionality and convergent validity, reliability, discriminant validity, nomological (i.e., predictive) validity (Peter 1981, Venkatraman 1989). The following tests were conducted, resulting in seven dimensions that satisfied the unidimensionality and convergent validity criteria;

- Confirmatory factor analysis (with two-phase “piecewise model fitting” modifications)
- LISREL 7 (Jöreskog and Sorbom 1989) model evaluation, using the two equations below:

(i) \[ X = \Lambda \xi + \delta \]

Where \( X \) is a vector of \( q \) observed variables, \( \xi \) a vector of \( n \ (n < q) \) common factors, \( \delta \) a vector of unique factors (error terms), and \( \Lambda \) is a \( q \times n \) matrix of factor loadings.

(ii) \[ \Sigma = \Lambda \phi \Lambda' + \varphi \]

Where \( \phi \) is the matrix of intercorrelations among the common factors and \( \varphi \) is a diagonal matrix of error variance (\( \delta^2 \)) for the measures.

- Kolomogorov D Statistic test of population distribution
- PRELIS (Jöreskog and Sorbom 1986) calculation of polychoric correlation coefficients

93
5) **Collect new data:**

6) **Assess reliability:**

Sethi and King followed Werts, Linn and Joreskog (1974) as illustrated by Bagozzi (1981), and using the composite reliability \( (\rho_c) \) of \( n \) measures of a dimension \( A \) may be defined in terms of \( \lambda_i \), the factor loading of item \( i \), as follows:

\[
\rho_c = \left( \sum_{i=1}^{n} \lambda_i \right)^2 \frac{\text{Variance (A)}}{\left( \sum_{i=1}^{n} \lambda_i \right)^2 + \text{Variance (A)} + \theta_\delta}
\]

7) **Assess validity:**

- Discriminant validity tested following Venkatraman (1989)
- Predictive validity assessed by its relationship to effectiveness (a dimension comprising three indicators satisfying the criteria for unidimensionality, convergent validity, and reliability). The structural equation model for this analysis is written as:

\[
\eta = \Gamma \xi + \zeta
\]

Where \( \eta \) is the endogenous theoretical construct (i.e. effectiveness), \( \Gamma \) is the matrix of structural coefficients (\( y \)) relating the exogenous theoretical construct (i.e., CAPITA dimensions) to \( \eta \), and \( \zeta \) is the residuals of \( \eta \).

8) **Develop norms:**

- Seven dimensions and 29 measures satisfy all previous measurement criteria
• The fit of the model was satisfactory based on the criteria of RMSR, $\chi^2 / df$, and the significance of item loadings
• CAPITA dimensions are positively correlated

Having completed the rigorous research program prescribed by Churchill (1979), Sethi and King were able to define seven dimensions for the measurement of key traits or attributes that characterise competitive advantage. These dimensions and their relationship to competitive advantage are explained below, along with the brief descriptions and theoretical background provided by Sethi and King (1994).

It should be noted that the efficiency dimension was found to comprise two dimensions: ‘Primary Activity Efficiency’ and ‘Support Activity Efficiency’, corresponding with the results of Lind and Zmud (1991), who found that IT support of value chain activities encompasses two components, namely the impact on primary activities and the impact on support activities. In addition, the functionality trait also consisted of two dimensions: ‘Resource Management Functionality’ and ‘Resource Acquisition Functionality’. These realisations explain the extent of the hypothesised five dimensional CAPITA model to the final seven dimensional model.

**Primary Activity Efficiency**

Factor 1 consists of the effect of the IT (the Internet) on the cost of the following: inbound logistics, operations, outbound logistics, and service. All four are primary value chain activities (thus the label for the factor provided by Sethi and King, and its position in the Business Activity Model). In general, primary activities are those which involve the “physical creation of the product and its sale and transfer to the buyer as well as after sale service” (Porter, 1985:18).

Sethi and King (1994) noted that their results suggested that reducing the cost of activities concerned with the physical creation, distribution, and service of the product is an especially powerful source of CA. On the other hand, reducing the cost of marketing and sales, the remaining primary activity, may directly affect the
quality of the offering provided to customers, thus compromising any benefits or competitive advantage resulting from reduced costs.

**Support Activity Efficiency**

Factor 2 is comprised of the impact of the IT application on the cost of the following: human resource management, firm infrastructure, and coordination of different activities. Since all three pertain to support value chain activities, which help sustain primary activities, the factor was called ‘Support Activity Efficiency’ by the authors, and has been positioned accordingly in the Business Activity Model. According to Sethi and King (1994), the relationship of the above items to CA may be attributed to the fact that few firms understand their significance. Lowering their costs may provide a cost advantage relative to competitors who are unaware of this potential.

This awareness is described by Porter (1985) (and cited in Sethi and King, 1996) as follows: “the cumulative costs of human resource management are rarely well understood” (1985:42); “Firm infrastructure is sometimes viewed only as ‘overhead’” (1985:43); and linkages within the value chain “are often subtle and go unrecognised” (1985:50). This difficulty in recognising the costs of support activities, represents a powerful source of CA for organisations that are able to understand the dimension.

**Resource Management Functionality**

Factor 3 measures how well the IT application assists its primary users in meeting the following needs related to a resource: monitor utilisation, upgrade, transfer or dispose, and account for. These activities correspond to the end stages of the resource life cycle (Ives & Learmonth, 1984). Since these stages are concerned with the post-acquisition management of the resource, Sethi and King called the factor ‘Resource Management Functionality’.
Post-acquisition support is increasingly being emphasised as a notable source of CA. Sethi and King note for instance, Ives and Vitale’s (1988) description of the potential for competitive repositioning by using applications of IT in the maintenance process. Similarly, Culnan (1989) stresses the key role of service in differentiating a firm from competitors. This dimension is therefore a measure of the extent to which the IT application leverages post-acquisition activities for CA.

Resource Acquisition Functionality

Called ‘Resource Acquisition Functionality’, Factor 4 consists of the IT application’s impact on the acquisition phase of the resource life cycle. Specifically, this dimension measures the impact of the IT application on users’ ability to order a resource, acquire it, and verify its acceptability. Applications that support these user needs, unlike those for post-acquisition management, are perhaps the best known examples of strategic IT applications. Sethi and King use as examples American Airlines’ and United Airlines’ reservation systems (which can be readily compared to a sports ticketing system), and American Hospital Supply’s and McKesson Pharmaceuticals’ order-entry system (Business Week, 1987; Forbes 1985). The popularity and significance of resource acquisition support as a source of CA is reflected by this dimension.

Threat

Factor 5, ‘threat’, consists of the impact of the IT application on the following six items, as identified by Sethi and King: (1) the firm’s ability to evaluate and choose from alternate suppliers (supplier selection) (2) its switching costs (3) its ability to threaten vertical integration (both forward and backward) (4) its ability to evaluate and choose alternate customers (customer selection) (5) customers’ cost of locating alternate suppliers (6) customer’s switching costs.

IT applications that reduce a firm’s switching costs and facilitate supplier selection and backward integration reduce the bargaining power of suppliers. Analogously,
applications that assist in forward integration and customer selection and increase customer's search-related and switching costs diminish the bargaining power of customers. These effects enable a firm to retain more of the value it creates rather than competing it to suppliers or buyers (Porter, 1985), thus creating CA.

Preemptiveness

The sixth factor identified by Sethi and King, 'preemptiveness', consists of four items: the extent to which the IT application provides unique access to channels (brokers, distributors, and retailers), forces competitors to adopt less favorable market postures, influences the development of industry standards and practices, and offers barriers against imitation such as patents, copyrights, and trade secrets. Through providing favorable access to channels and market position, setting industry standards, and erecting institutional barriers, the IT application translates its technological lead into first-mover advantages that persist even if the technology gap closes (Porter, 1985). The results also encourage a pursuit of legal mechanisms to protect IT applications even though such barriers can be 'invented around' at modest cost, and the legal requirements for upholding their validity or proving their infringement are high (Teece, 1986).

Synergy

According to Sethi and King (1994) Factor 7, 'synergy', is a function of the application's alignment with the firm's business strategy, marketing policies and practices, ability to continuously innovate and enhance the application, technical expertise, and top management support for the application. The salience of these items is that while alignment makes it difficult for competitors to benefit from copying the application (Clemons & Row, 1987), continual innovation makes copying itself difficult. However, enhancements require technical expertise and, more importantly, top management support to guarantee the commitment of adequate financial and organisational resources for the IT application (Information Week,
Thus, Sethi and King believe 'synergy' represents an exploitation of the firm's uniqueness by the IT application that competitors cannot benefit from or copy.

Section 1: Final Comments

Sethi and King noted that because examples of strategic IT applications can help users draw analogies (Rackoff et al., 1985; Gongla et al. 1989), it was in their interest to provide a small anecdote as in King et al., (1986). However, as the application being assessed by respondents in the Sethi and King (1994) study varied, the questions needed to be framed with anecdotes that took into account the broad spectrum of IT applications. Unlike in the Sethi and King (1994) sample, this thesis has the additional benefit of being able to choose the IT application to be considered by the respondent (the web site), ensuring a consistent application was being examined. This advantage, combined with the provision of specific sporting anecdotes as in Shilbury (1994), limits confusion.

A variety of useful implications stem from the findings of Sethi and King (1994), including the ability to compute an overall score for each dimension. Sethi and King contest:

A profile along the seven dimensions would be useful to practitioners for demonstrating, or at least elucidating, the benefits of an existing IT application. Such assessments are currently based on "gut feeling" (Parsons 1983), unrealistic assumptions regarding the application's contribution to the company's bottom line, or a disregard for benefits such as reduced overhead, higher switching costs and other barriers to entry, and increased product differentiation (Johnston & Vitale, 1988) (1994:1617).

Critically, the survey utilised by Sethi and King (1994) provides an ideal fit for secondary objective 2 of this study – to test the application of the generic Business Activity Model on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations. The original survey resulted in the identification of the seven Internet dimensions contained in the Business Activity Model, and was
both interested in measuring the CA provided by IT, and remained closely associated with Porter’s strategic theories, making it an excellent instrument for the purposes of this research. Finally, Sethi and Kings’ efforts to create an academically sound measurement vehicle resulted in a well-researched and rigorously tested instrument that is an excellent basis for a refined questionnaire specifically customised for the sport marketplace.

3.2.2 Section 2: Caskey (1998)

As mentioned earlier, Sethi and King adopted a trait approach to the measurement of CA, calling for comparison with results from an outcome approach in the future. The Caskey (1998) study of the use and viability of the world wide web as a profitable tool for marketing sports adopts this approach with a number of its questions, four of which have been included in this study’s survey. Those being:

1. Please rank the site goals for your web site.
2. Does your site currently offer fantasy sports participation?
3. With the current web user base and technology, do you believe that sites offering sports content are currently capable of turning a profit on the Internet?
4. Is profitability a current goal of your site?

As Caskey’s (1998) results are available, the inclusion of these four questions allows for the comparisons to achieve the macro element of secondary objective 5: To examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).

The outcome approach is reflected in concepts such as competitive efficiency, business value, and management productivity, not covered under the trait approach. Sethi and King highlight some of the limitations of this approach while acknowledging both its use in measuring IT impact, and in the broader area of organisational effectiveness research. The survey used in this research provided an
excellent opportunity to incorporate both approaches to CA measurement, and additionally in the case of the Caskey questions, to also conduct some degree of cross study comparisons.

The Caskey (1998) instrument was distributed to the proprietors of 158 sports websites with a view to determining (amongst other things) both how much money was being spent and earned by web sites offering sports content, and how much was being spent on promotion and marketing. In addition, the view of management of these organisations towards the overall view of profitability was assessed. A range of proprietors, in addition to professional sporting club sites, were surveyed by Caskey. Of the population, 106 or (67%), were sports team or league sites, and in each of the four questions adopted, the results were displayed according to site type, enabling cross study analysis.

Caskey refers to 26 respondents (58% of the respondents) who identified themselves as team/league sites, as opposed to the content sites and commerce sites that constituted the remainder of the sample. A full list of the respondents, taken from Caskey’s study, is shown in Table 3.1. Although 29 respondents are listed in the table as team/league sites, as stated, all results refer to 26 respondents. Caskey’s error appears to be the inclusion in this table of three organisations not represented in the results. It is unclear which three organisations were omitted.
Table 3.1 Caskey (1998) Sample

<table>
<thead>
<tr>
<th>No.</th>
<th>Team/League</th>
<th>Web Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*Anaheim Angels</td>
<td><a href="http://www.angelsbaseball.com/">www.angelsbaseball.com/</a>*</td>
</tr>
<tr>
<td>2</td>
<td>*Anaheim Mighty Ducks</td>
<td><a href="http://www.mightyducks.com">www.mightyducks.com</a></td>
</tr>
<tr>
<td>3</td>
<td>*Big East</td>
<td><a href="http://www.bigeast.org">www.bigeast.org</a></td>
</tr>
<tr>
<td>4</td>
<td>*Big Sky</td>
<td><a href="http://www.bigskyconf.com">www.bigskyconf.com</a></td>
</tr>
<tr>
<td>5</td>
<td>*Boston Bruins</td>
<td><a href="http://www.bostonbruins.com">www.bostonbruins.com</a></td>
</tr>
<tr>
<td>6</td>
<td>*Calgary Flames</td>
<td><a href="http://www.calgaryflames.com">www.calgaryflames.com</a></td>
</tr>
<tr>
<td>7</td>
<td>*Chicago White Sox</td>
<td><a href="http://www.chisox.com">www.chisox.com</a></td>
</tr>
<tr>
<td>8</td>
<td>*Colorado Avalanche</td>
<td><a href="http://www.coloradoavalanche.com">www.coloradoavalanche.com</a></td>
</tr>
<tr>
<td>9</td>
<td>*Colorado Rockies</td>
<td><a href="http://www.coloradorockies.com">www.coloradorockies.com</a></td>
</tr>
<tr>
<td>10</td>
<td>*Conference USA</td>
<td><a href="http://www.c-usa.org">www.c-usa.org</a></td>
</tr>
<tr>
<td>11</td>
<td>*Dallas Burn</td>
<td><a href="http://www.burnsoccer.com">www.burnsoccer.com</a></td>
</tr>
<tr>
<td>12</td>
<td>*DC United</td>
<td><a href="http://www.dcunited.com">www.dcunited.com</a></td>
</tr>
<tr>
<td>13</td>
<td>*ECHL</td>
<td><a href="http://www.echl.org">www.echl.org</a></td>
</tr>
<tr>
<td>14</td>
<td>*Edmonton Oilers</td>
<td><a href="http://www.edmontnoilers.com">www.edmontnoilers.com</a></td>
</tr>
<tr>
<td>15</td>
<td>*Florida Panthers</td>
<td><a href="http://www.flpanthers.com">www.flpanthers.com</a></td>
</tr>
<tr>
<td>16</td>
<td>*Houston Astros</td>
<td><a href="http://www.astros.com">www.astros.com</a></td>
</tr>
<tr>
<td>17</td>
<td>*Los Angeles Dodgers</td>
<td><a href="http://www.dodgers.com">www.dodgers.com</a></td>
</tr>
<tr>
<td>18</td>
<td>*Los Angeles Galaxy</td>
<td><a href="http://www.lagalaxy.com">www.lagalaxy.com</a></td>
</tr>
<tr>
<td>19</td>
<td>*Miami Dolphins</td>
<td>dolphinsendedzone.com</td>
</tr>
<tr>
<td>20</td>
<td>*NCAA</td>
<td><a href="http://www.ncaa.org">www.ncaa.org</a></td>
</tr>
<tr>
<td>21</td>
<td>*Oakland Athletics</td>
<td><a href="http://www.oaklandathletics.com">www.oaklandathletics.com</a></td>
</tr>
<tr>
<td>22</td>
<td>*Oakland Raiders</td>
<td><a href="http://www.raiders.com">www.raiders.com</a></td>
</tr>
<tr>
<td>23</td>
<td>*PAC 10</td>
<td><a href="http://www.pac-10.org">www.pac-10.org</a></td>
</tr>
<tr>
<td>24</td>
<td>*Philadelphia Phillies</td>
<td><a href="http://www.phillies.com">www.phillies.com</a></td>
</tr>
<tr>
<td>25</td>
<td>*Pittsburgh Pirates</td>
<td><a href="http://www.pirateball.com">www.pirateball.com</a></td>
</tr>
<tr>
<td>26</td>
<td>*San Francisco Giants</td>
<td><a href="http://www.sfgiants.com">www.sfgiants.com</a></td>
</tr>
<tr>
<td>27</td>
<td>*Texas Rangers</td>
<td><a href="http://www.texasrangers.com">www.texasrangers.com</a></td>
</tr>
<tr>
<td>28</td>
<td>*The Olympic Movement</td>
<td><a href="http://www.olympic.org">www.olympic.org</a></td>
</tr>
<tr>
<td>29</td>
<td>*WAC</td>
<td><a href="http://www.wac.org">www.wac.org</a></td>
</tr>
</tbody>
</table>


Caskey generally displayed results that were controlled for site type, providing the opportunity to make direct comparison between Australian professional sporting...
team sites and their United States counterparts. It should be noted that while the Caskey category includes the NCAA site which technically services amateur sport, the lack of player payments is the only difference for these organisations that operate in a highly professional environment, and control budgets far in excess of Australian professional clubs. With this in mind their inclusion may be justified for this research. Further, the Caskey (1998) results displayed or referred to in this chapter will relate to the team/league sites presented in Table 3.1.

3.2.3 Section 3: Questions Based on Literature Prevalence

A further extension was made to the Sethi and King/Caskey instruments with the addition of another seven questions. These questions were based on the literature review, and recognition of both the unique nature of Australian sport, its delivery in general, and current developments in relation to the Internet strategies of Australian sporting organisations. Specifically, these questions provide for secondary objective 4: To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample. The results of these questions, along with the literature review, provide the anchors of a gap analysis between online strategy theory, and the practices of the Australian professional sporting organisation populations determined in this research.

The seven survey questions based on the literature review were 8, 9, 10, 11, 12, 25 and 26. A full version of all questions can be found in Appendix 1, however Table 3.2 displays these seven literature based questions, along with their origin.
<table>
<thead>
<tr>
<th>No.</th>
<th>Question</th>
<th>Origin/Literature Prevalance</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Does your organisation support a league based, generic site, model for web sites within your competition, or individual, club run sites?</td>
<td>Evans, 2000; Wilner, 2000.</td>
</tr>
<tr>
<td>9</td>
<td>Has your organisation established any partnerships/alliances with any commercial organisations that are leveraged, promoted or exposed through the web site?</td>
<td>Bishop, 1998; Chung et al., 2000; El Savy et al., 1999; Hanman and Freeman, 1977; Hasan and Tibbits, 2000; Hsiao and Ormerod, 1998; Inkpen, 2000; Jusdon and Kelly, 1999; Martin, 1997; Podolny, 1993; Porter, 1985; Schwartz, 1997; Stuart, 2000; Ware et al., 1998; Westland and Clark, 2000.</td>
</tr>
<tr>
<td>11</td>
<td>Does your organisation have a formal Internet or web site project team?</td>
<td>Abdel-Hamid et al., 1999; Bharadwaj, 2000; Bickerton et al., 1998; Drucker, 1988; Hsiao and Ormerod, 1998; Johnston and Mak, 2000; Khandpur and Wevers, 1998; Roepke et al., 2000; Schulman and Smith, 1997; Standing, 2000; Tapscott, 1996; Ware et al., 1998; Westland and Clark, 2000.</td>
</tr>
<tr>
<td>12</td>
<td>Please check which, if any, of the following web site components your organisation utilises (fan forums/chat rooms, feedback provision, online memberships, online chat with players, question and answer).</td>
<td>Haynes, Becherer and Holmes, 1998; Bickerton et al., 1998; Bishop, 1998; El Savy et al., 1999; Janal, 2000; Judson, 1999; Levinson and Rubin, 1995; Martin, 1997; May, 2000; Schwartz, 1997; Simeon, 1999; SRS, 1999; Standing, 2000; Wang et al., 2000; Ware et al., 1998.</td>
</tr>
<tr>
<td>25</td>
<td>What is the approximate annual gross revenue of your organisation?</td>
<td>Demographics</td>
</tr>
<tr>
<td>26</td>
<td>Approximately how many employees work in your organisation?</td>
<td>Demographics</td>
</tr>
</tbody>
</table>
### 3.3 Research Sample and Instruments

The instrumentation phase of the research included the identification of an appropriate research population and sample, and the acknowledgement of various assumptions and limitations. Each of these study areas is addressed in the following section.

#### 3.3.1 Population

The population for this study included the fifty-five teams that compete in Australia's four premier sporting leagues: the Australian Football League (AFL) with sixteen teams, the National Rugby League (NRL) with fourteen teams, the National Basketball League (NBL) with eleven teams, and the National Soccer League (NSL) with fourteen teams. A full list of the population is provided in Table 3.3.

<table>
<thead>
<tr>
<th>No.</th>
<th>AFL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adelaide Crows</td>
<td>Adelaide 36ers</td>
<td>Auckland Warriors</td>
<td>Adelaide City Force</td>
</tr>
<tr>
<td>2</td>
<td>Brisbane Lions</td>
<td>Brisbane Bullets</td>
<td>Brisbane Broncos</td>
<td>Brisbane Strikers</td>
</tr>
<tr>
<td>3</td>
<td>Carlton Blues</td>
<td>Cairns Taipans</td>
<td>Canberra Raiders</td>
<td>Canberra Cosmos</td>
</tr>
<tr>
<td>4</td>
<td>Collingwood Magpies</td>
<td>Canberra Cannons</td>
<td>Canterbury Bulldogs</td>
<td>Gippsland Falcons</td>
</tr>
<tr>
<td>5</td>
<td>Essendon Bombers</td>
<td>Melbourne Tigers</td>
<td>Cronulla Sharks</td>
<td>Marconi Fairfield</td>
</tr>
<tr>
<td>6</td>
<td>Fremantle Dockers</td>
<td>Perth Wildcats</td>
<td>Melbourne Storm</td>
<td>Melbourne Knights</td>
</tr>
<tr>
<td>7</td>
<td>Geelong Cats</td>
<td>Sydney Kings</td>
<td>Newcastle Knights</td>
<td>Newcastle United</td>
</tr>
<tr>
<td>8</td>
<td>Hawthorn Hawks</td>
<td>Townsville Suns</td>
<td>Northern Eagles</td>
<td>Northern Spirit</td>
</tr>
<tr>
<td>9</td>
<td>Melbourne Demons</td>
<td>Victoria Titans</td>
<td>North Queensland Cowboys</td>
<td>N.Z. Football Kings</td>
</tr>
<tr>
<td>10</td>
<td>Northern Kangaroos</td>
<td>West Sydney Razorbacks</td>
<td>Parramatta Eels</td>
<td>Parramatta Power</td>
</tr>
<tr>
<td>11</td>
<td>Port Adelaide Power</td>
<td>Wollongong Hawks</td>
<td>Penrith Panthers</td>
<td>Perth Glory</td>
</tr>
<tr>
<td>12</td>
<td>Richmond Tigers</td>
<td></td>
<td>St. George Illawarra Dragons</td>
<td>South Melbourne</td>
</tr>
<tr>
<td>13</td>
<td>St. Kilda Saints</td>
<td></td>
<td>Sydney City Roosters</td>
<td>Sydney Olympic</td>
</tr>
<tr>
<td>14</td>
<td>Sydney Swans</td>
<td></td>
<td>Wests Tigers</td>
<td>Sydney United</td>
</tr>
<tr>
<td>15</td>
<td>West Coast Eagles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Western Bulldogs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
These four leagues dominate professional team sport in Australia, and are the most likely to have both the resources and the need to develop successful Internet strategies. With the largest operating budgets, greatest exposure and attendance, and with large participation numbers within semi-professional, non-professional and junior ranks, these leagues are the benchmark for sporting organisations in Australia. As such these leagues were an ideal population in order to achieve the primary objective of this research.

3.3.2 Sample

With ongoing issues regarding internet control among leagues and teams in some of the sporting codes, and given that the initial population was limited to the pinnacle of Australian professional sport, the decision was made to include all 55 teams participating in the A.F.L., N.B.L., N.R.L. and N.S.L. These organisations represent the major constituent of Australian professional sport organisations with the human resources and budgets capable of applying this study's findings.

According to Speed (1999), the validity of a sample is established by the relationship between sample and population. Given the entire population was included in the sample, on Speed's (1999) measure, this sample has excellent validity. The technical limitations of the sample size are acknowledged later, however the 87% participation rate achieved in this research is approaching census status, or 100% population.

Whilst some studies, including Caskey (1998), argue that all relevant information on professional sporting teams can be obtained through an investigation of a generic league site, the unique (and tumultuous) state of online strategy amongst Australian sporting organisations warrants deeper investigation.

One extraordinary fact that illustrates the turbulent nature of Internet applications in Australian sport is that although all 55 teams have a generically styled web site attached to a league web site, many teams also maintain an independent web site, outside of the official league presence. Further, ongoing public debate over Internet rights between the AFL and a number of its high profile member teams has
highlighted a disunited approach to Internet strategy. This disunity may indeed be a pre-cursor to some level of league/club conflict over online revenues throughout the population of this study, and indicates the importance placed on the medium by all parties. As a result, it was determined that this study would include the entire population in the active sample.

3.3.3 Assumptions

Given the knowledge that there is an organisational web site for each of the clubs identified in the sample, this study was reliant on both a suitable staff member being identified, and a willingness to participate as a respondent. The research commenced under the assumption that this would be the case, with the process utilised to identify the appropriate staff member outlined later in this chapter under ‘data collection’.

3.3.4 Limitations

A number of limitations to the study are acknowledged. These limitations stem from the modified research instrument and the population size, and generic limitations associated with quantitative data collection techniques. In addition, it is prudent to note that differences in club structures, culture, financial circumstances and indeed sporting codes, means that the results are not necessarily generalisable to every club, or indeed the wider Australian sporting industry. Having said this, every effort was made to include league based comparisons in order to identify any differences, and fulfil the micro element of secondary objective 5.

This research is principally trait-based. The principle advantage of this approach, identified by Sethi and King (1994), is that “it provide(s) insights into how and why IT affects CA” (1994:1603). The trait approach does however possess limitations, such as a lack of guidance in the selection of attributes. Alternative measurement approaches, such as ‘outcomes’, also have advantages and limitations. An outcome approach has been used in past studies measuring IT impact (e.g., Weill & Olsen, 1989; Cron & Sobol, 1983), however the variables are very aggregate, and thus
insensitive to the effects of a single IT application, and they provide little help in understanding ‘how’ IT affects CA (Crowston & Tracaya, 1986). The inherent limitations of trait-based measures are nonetheless acknowledged.

The limitation associated with a modified instrument is that many of the original questions were designed with different aims than those of this study. Whilst this is a valid observation, in this case it should be noted that the two merged surveys were specifically identified as fitting the requirements of this study. The Caskey (1998) instrument was certainly designed with very similar objectives, and is also directed at sporting organisations. The Sethi and King (1994) instrument was not only focussed on the provision of organisational CA from IT applications, but from the perspective of this research and the credibility of its instrument, it does enjoy the additional rigours of being designed as a generic, theoretical measurement tool. According to Sethi and King, their “primary objective (was) to provide the measures and underpinnings for a program of research on IT impact assessment” (1994:1618). In this respect it was ideally suited to this research.

The issue of sample size and the limitations associated with all quantitative data collection methods are also acknowledged. Although the population was limited to 55 organisations, it should be noted that this population not only represented an extremely significant component of Australian professional sporting clubs, it was undiminished as a result of direct piloting or sampling restrictions. An 87% response rate in the study provided an excellent basis for data analysis. The population size was, nonetheless, not ideal for the technical purposes of factor analysis, however this element of the research was not pivotal to the primary objective of the study.

Two further limitations that need to be acknowledged are the fact that only one person from each organisation completed the survey, and that the instrument was vulnerable to mis-interpretation or even dishonesty. The first limitation was overcome to some extent by sending the questionnaire in advance, allowing the respondent to consult colleagues on any contentious questions. The second limitation was also managed to some extent. Although dishonesty could not be controlled, the possibility of mis-interpretation was reduced using specific examples.
in the survey itself, and the use of telephone interviews as opposed to mail returned surveys.

Finally, although a pilot study was not undertaken due to the rigours of the instrument and the population size, a pre-test of an initial survey was conducted using an expert panel to finalise the study instrument. The panel of five comprised sport management and statistical academics, and a non-participating industry representative from the N.B.L. league office. Each panel member was asked to review and complete the survey, and subsequently interviewcd, and requested to identify any difficulties or ambiguities experienced. The instrument was subsequently revised to cater for justifiable recommendations.

3.3.5 Data Collection

In order to ascertain the most appropriate individual to complete the survey within each organisation, an initial telephone contact was made with each club. As with the Sethi and King (1994) data collection procedure, target respondents were “top information systems executives” (1994:1608). In this case, respondents typically held positions such as ‘Communication Manager’ within their sporting club. Sethi and King also cite a number of other studies to have relied on top information systems executives to gather data regarding IT-related factors (Tavakolian, 1989; Vitale, Ives, & Beath, 1986; Zmud, Boynton, & Jacobs, 1987).

Where an organisation did not have a dedicated IT (or communications) executive, further probing for the person considered to have the highest level of influence on IT strategy decisions was conducted. In every instance an appropriate respondent was identified and spoken to directly in order to make them aware of the imminent arrival of the questionnaire and its purpose. Importantly, all respondents held managerial positions and had access to organisational strategy developments, rather than employees with technical expertise.

Although the use of multiple respondents would have been ideal in order to eliminate some biases and inaccuracies, as well as enrich the data, the possibility of this
process reducing the response rate to a critical level, combined with resource restrictions, prohibited this. Further, although an electronically administered survey was considered, especially in light of the nature of the research, the telephone-administered survey was considered superior in this instance. The trait-based nature of the survey meant a consistent interpretation of the questions was important, and this was most easily facilitated with oral clarification where required. Additionally, the ability to ensure there was no missing or unusable data to further reduce the response rate was imperative.

3.3.6 Data Analysis and Interpretation

The data collected via the described method received intense scrutiny using a variety of data analysis techniques. Initially, descriptive statistics were presented through a series of tables and graphs, including means, standard deviations and summated scales. The data were also put into the SPSS statistical software package, and underwent a series of confirmatory and exploratory factor analyses in order to make comparisons with the findings of Sethi and King (1994), and explore issues surrounding the nature of the sporting industry and the generic Business Activity Model (secondary objective 2).

It is important to emphasise the dual nature of the Sethi and King (1994) research. The authors undertook both the development and testing of their CAPITA model on the same data set, requiring them to initially undertake a LISREL based confirmatory factor analysis of their theoretically proposed dimensions, and subsequently a factor analysis to test the model. In other words they developed and validated a construct, then tested that construct on the same data. Although acknowledged as a limitation in their research, this in fact provides the opportunity to accurately replicate both stages of this process in this research.

Sethi and King (1994) utilise a theory review to develop the CAPITA construct. It is reasonable to assume that given the task of reviewing literature specifically addressing the sporting industry, as undertaken in chapter 2, the theoretical construct may well have been different. The first stage of this research therefore was to
constrict this sample data to the hypothesised construct, and evaluate the fit. Given the poor fit, it was clear that the dimensions of CA provided by an IT application have a different emphasis for sporting organisations than the wider business community. The logical secondary process then, was to simulate the second stage of Sethi and King’s (1994) research, and undertake an exploratory factor analysis on the sporting industry data in order to evaluate if the key CA dimensions are effected.

An overview of the data analysis and interpretation process is clearly demonstrated in Table 3.4 below:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Analysis</th>
<th>Purpose</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Descriptive Statistics</td>
<td>General Interpretation.</td>
<td>SPSS</td>
</tr>
<tr>
<td>2.1 to 4.7</td>
<td>Summed Scales</td>
<td>League ranking across CAPITA dimensions.</td>
<td>SPSS</td>
</tr>
<tr>
<td>2.1 to 4.7</td>
<td>Structural Equation Modeling (Confirmatory Factor Analysis)</td>
<td>Establish if unique sport industry and specific IT application constitutes different dimensional emphasis in the Internet component of the business activity model.</td>
<td>AMOS via SPSS</td>
</tr>
<tr>
<td>2.1 to 4.7</td>
<td>Exploratory Factor Analysis</td>
<td>Investigate identified dimensional differences and identify key areas of CA through the Internet for sport.</td>
<td>SPSS with VARIMAX rotation</td>
</tr>
</tbody>
</table>

As stated, initially descriptive statistics and summed scales were generated. Confirmatory factor analysis was then performed on the 29 CAPITA measures, with a view to comparing the dimensions proposed by Sethi and King (1994) following their review of 185 United States manufacturing and service companies. Due to the prior research conducted by Sethi and King (1994) there was strong theoretical support for their hypothesised structure. However, given the many unique elements of the sporting industry identified by the literature, an investigation of any potential industry impact was pertinent. In addition, Sethi and King’s (1994) inclusion of
numerous questions catering for a variety of IT applications not relevant to this research, further supported a confirmatory analysis. Finally, Sethi and King (1994) themselves call for the replication and refinement of the CAPITA measures, stating:

Alternative measures of CAPITA must be formulated and compared with the results of this study to clarify the theoretical foundations of this construct. Also, the latent-structure model developed here requires validation on another data set. This is particularly critical because the model was developed as well as tested using the same data set (1994:1618).

With these issues in mind, confirmatory factor analysis was considered appropriate (Hair, Anderson, Tatham, & Black, 1998; Holmes-Smith & Rowe, 1994). An advanced data analysis technique, Structural Equation Modeling (SEM) is an extension of factor analysis and other multivariate techniques that encompasses a number of models and is known by a variety of names including confirmatory factor analysis.

SEM has emerged as integral tool in both managerial and academic research (Austin & Calderon, 1996; Bentler, 1980, 1986; Blalock, 1985; Breckler, 1990; Duncan, 1975; Fassinger, 1987; Goldberger & Duncan, 1973; James, Muliak & Brett, 1982; Hair et al., 1998; Jöreskog, 1970; Long, 1983; Neale, Heath, Kewitt, Eaves & Walker, 1989; Tremblay & Gardner, 1996), that overcomes their common limitation; the inability to examine more than a single relationship at a time. Importantly, SEM is also used as a means of estimating other multivariate models including principle components (Dolan, 1996; Hair et al., 1998).

According to Hair et al. (1998) the reasons for the attractiveness of SEM are twofold: (1) it provides a straightforward method of dealing with multiple relationships simultaneously while providing statistical efficiency, and (2) its ability to assess the relationships comprehensively and provide a transition from exploratory to confirmatory analysis. It is the second of these two advantages that makes it particularly appealing for this research.
The basic formulation of SEM in equation form is:

\[
\begin{align*}
Y_1 &= X_{11} + X_{12} + X_{13} + \ldots + X_{1n} \\
Y_2 &= X_{21} + X_{22} + X_{23} + \ldots + X_{2n} \\
Y_m &= X_{m1} + X_{m2} + X_{m3} + \ldots X_{mn} \\
&\text{(metric)} \quad \text{(metric, nonmetric)}
\end{align*}
\]

The AMOS (SPSS) statistical package software was chosen to perform the confirmatory factor analysis, a program that has gained increased popularity and has been compared to LISREL (Arbuckle, 1994; Arbuckle & Wothke, 1999; Hox, 1995), the program utilised by Sethi and King (1994). Due to the sample size and nonnormality issues, the 'unweighted least squares estimation' (ULS) method was determined to be the most appropriate data interpretation technique.

Although the minimum sample size for structural equation modelling is typically considered to be 100 (Hair et al., 1998), there are numerous examples of research where smaller sample sizes were deemed appropriate for these data analysis techniques. Agus (2001) for example employs structural equation modelling on a sample of 30, and provides some justification for the statistical inferences drawn given that the sample approaches a census of the population (Seber & Wild, 1989; Boomsma, 1983). Further examples of research using structural equation modelling on smaller sample sizes include Saenz, Marcoulides, Junn, and Young (1999) (n=30), Mak (2001) (n=64), and Peterson, Frayer, and Scannell (2000) (n=73). A sporting example of the use of structural equation modelling on a smaller sample size can be found in Goudas and Biddle (1995) where n=40.

The sample is not impacted by missing data, and equally critical, two other techniques (maximum likelihood and Scale free least squares) were also tested. The results of these trials, whilst not displayed, were more critical of the Sethi and King (1994) model than those generated by the ULS technique, confirming the results presented later in chapter 4. Both the Sethi and King (1994) study and this research are therefore well suited to the purposes of structural equation modeling.
Having identified dimensional differences, further investigation was required. A multivariate statistical technique, factor analysis, has found increased use during the past decade in all fields of business-related research (Boyd, Westfall, & Stasch, 1989; Hair et al., 1998; Thomas & Nelson, 1985). The technique was employed in this study following the confirmatory factor analysis that indicated the proposed structure was inappropriate to this study's sample.

The SPSS statistical program was also used for the factor analysis, with the varimax orthogonal rotation method selected to present the simplest factor matrix columns. The use of factor analysis by Sethi and King (1994) in their study added crucial weight to its inclusion in this research. In short, this study attempted to replicate both the instrument and data analysis techniques used by Sethi and King (1994) wherever possible. To this end, their hypothesised dimensions were tested on this sample using AMOS, a technique very similar to the LISREL program used in the original study. Having established dimensional differences, factor analysis was undertaken as in the original study.

A complete description of specific data manipulations undertaken occurs during the results (chapter 4) and discussion and implications (chapter 5) sections of this research.

3.4 Conclusion

This chapter has fully outlined the data collection procedures employed in order to achieve the study's primary objective. The methodological research stream surrounding the three elements of the survey – Sethi and King (1994), Caskey (1998), and the literature review – has been defined, and the research population/sample described. Additionally, the study assumptions, limitations, and data collection, analysis and interpretation methods were outlined. Having established the methodology, the results of this process are presented in chapter 4.
CHAPTER 4: RESULTS

4.1 Introduction

Having fully outlined the methodology for data collection in chapter 3, the purpose of this chapter is to present the results of that process. Throughout the course of this chapter the results for every question asked in the survey will be provided in summary format.

The data is displayed in a variety of tabular and graphical forms, with both clarity of information and a visually appealing graphics being the paramount considerations in determining the appropriate format for each question (Evans, 1995; Page & Meyer, 2000; Spatz & Johnston, 1989; Thomas & Nelson, 1985). The analysis techniques applied to data obtained from the participating organisations include descriptive statistics, such as means, standard deviations and summated scales, and both confirmatory and exploratory factor analyses.

In brief, data is arranged according to the concept of providing a “compact, usable form”, as described by Levin and Rubin (1994:13). In some sections of the chapter, this has meant presenting a set of questions together for comparison in keeping with Page and Meyer’s call to where appropriate “create a table or figure that summarises a set of results, or compares different groups on a number of items” (2000:254). For example, whilst the questionnaire consisted of 26 core questions, questions 2, 3 and 4 comprised 29 sub-questions relating to the CAPITA measures of CA devised by Sethi and King (1994). The results of each of these three questions are shown in separate tables. Similarly, questions 5-12 all relate to “web site details” as seen on the questionnaire, with six of these eight questions calling for a ‘yes’ or ‘no’ response. Consequently, these six questions are also presented together. As with all instances of this type of summary, an explanation of what data the table or graph includes is clearly stated.

Further to the recommendations of Page and Meyer (2000), a brief summary of the type of analysis used, along with observations of critical findings or significant results, is also provided in chapter 4. It should be noted however, that although some
major observations or themes are at times identified, the primary purpose of this chapter is purely the presentation of results. A comprehensive discussion of these results and their implications is contained in chapter 5, with conclusions drawn in chapter 6.

4.2 Respondents' Profile

A total of 48 of the 55 clubs (87%) in the population participated in the research, with a relatively even spread across the leagues, as shown in Table 4.1 below:

<table>
<thead>
<tr>
<th>LEAGUE</th>
<th>TOTAL CLUBS</th>
<th>PARTICIPANTS</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.F.L.</td>
<td>16</td>
<td>13</td>
<td>81%</td>
</tr>
<tr>
<td>N.B.L.</td>
<td>11</td>
<td>10</td>
<td>91%</td>
</tr>
<tr>
<td>N.R.L.</td>
<td>14</td>
<td>13</td>
<td>93%</td>
</tr>
<tr>
<td>N.S.L.</td>
<td>14</td>
<td>12</td>
<td>86%</td>
</tr>
</tbody>
</table>

4.3 Descriptive Statistics

Results for each of the survey questions are now presented below using the data presentation concepts and descriptive statistics outlined in the introduction.

Question 1: Please rank the following site goals from most important (1) to least important (5) for your web site.

Having asked respondents to rank their organisational site goals, the total scores for each response were calculated by reversing the ranking, i.e. the most important response received 5 points and the least important 1, for 15 total points per respondent. Figure 4.1 provides a graphical representation of the percentage totals for each response, based on those calculations. Shown across leagues, the percentages illustrate the importance of each of the web site goals in the individual leagues.
Figure 4.1: Overall Goal Importance 1

Figure 4.1 displays reasonably consistent site goal rankings across the leagues.

Figure 4.2, provides the same graphical representation of the importance of each site goal, but across the entire sample. The same method of summing scores to generate weighted percentages used in Figure 4.1 was used.

Figure 4.2: Overall Goal Importance 2

The most important web site goal for the respondents was ‘Offering information’, representing 31% of all goals.
Questions 2, 3 and 4:
CAPITA Dimensions

Table 4.2, 4.3, and 4.4 show the means, standard deviations and summated scales, with a breakdown of leagues, for the 29 CAPITA items. As noted in the introduction, these 29 measures are assessed in three multi-part questions. The results of these three questions are displayed in the three separate tables. Each of the questions required a response along a seven point likert scale as shown.

Question 2:
The following statements describe potential features of a web site. Please indicate the extent to which you disagree or agree with the following statements in regard to your organisations’ web site (by circling the appropriate number as indicated in the key below).

2. Moderately disagree 5. Somewhat agree 7. Strongly agree
3. Somewhat disagree

<table>
<thead>
<tr>
<th>Question</th>
<th>AFL Mean</th>
<th>AFL SD</th>
<th>AFL n</th>
<th>NBL Mean</th>
<th>NBL SD</th>
<th>NBL n</th>
<th>NRL Mean</th>
<th>NRL SD</th>
<th>NRL n</th>
<th>NSL Mean</th>
<th>NSL SD</th>
<th>NSL n</th>
<th>Total Mean</th>
<th>Total SD</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2.1 Web Site Aligned With Business Strategy</td>
<td>5.00</td>
<td>1.47</td>
<td>13</td>
<td>4.50</td>
<td>1.58</td>
<td>10</td>
<td>5.23</td>
<td>1.69</td>
<td>13</td>
<td>5.17</td>
<td>0.94</td>
<td>12</td>
<td>5.00</td>
<td>1.43</td>
<td>48</td>
</tr>
<tr>
<td>Q2.2 Web Site Aligned With Marketing Policies</td>
<td>5.08</td>
<td>1.38</td>
<td>13</td>
<td>4.70</td>
<td>1.42</td>
<td>10</td>
<td>5.54</td>
<td>1.05</td>
<td>13</td>
<td>5.50</td>
<td>1.38</td>
<td>12</td>
<td>5.23</td>
<td>1.31</td>
<td>48</td>
</tr>
<tr>
<td>Q2.3 Org. Has Technical Expertise</td>
<td>3.77</td>
<td>1.30</td>
<td>13</td>
<td>3.00</td>
<td>1.83</td>
<td>10</td>
<td>3.85</td>
<td>1.91</td>
<td>13</td>
<td>4.33</td>
<td>2.10</td>
<td>12</td>
<td>3.77</td>
<td>1.80</td>
<td>48</td>
</tr>
<tr>
<td>Q2.4 Top Management Involved</td>
<td>4.92</td>
<td>1.89</td>
<td>13</td>
<td>4.50</td>
<td>1.51</td>
<td>10</td>
<td>5.54</td>
<td>1.71</td>
<td>13</td>
<td>6.00</td>
<td>1.35</td>
<td>12</td>
<td>5.27</td>
<td>1.69</td>
<td>48</td>
</tr>
<tr>
<td>Q2.5 Web Site Provides Access To Channels</td>
<td>4.15</td>
<td>1.52</td>
<td>13</td>
<td>3.80</td>
<td>2.20</td>
<td>10</td>
<td>5.62</td>
<td>1.56</td>
<td>13</td>
<td>3.75</td>
<td>1.96</td>
<td>12</td>
<td>4.38</td>
<td>1.91</td>
<td>48</td>
</tr>
<tr>
<td>Q2.6 Web Site Market Positioning</td>
<td>3.15</td>
<td>1.14</td>
<td>13</td>
<td>2.50</td>
<td>1.65</td>
<td>10</td>
<td>4.38</td>
<td>1.76</td>
<td>13</td>
<td>3.67</td>
<td>0.98</td>
<td>12</td>
<td>3.48</td>
<td>1.53</td>
<td>48</td>
</tr>
<tr>
<td>Q2.7 Web Site Protected From Infiltration</td>
<td>4.38</td>
<td>2.02</td>
<td>13</td>
<td>4.70</td>
<td>2.31</td>
<td>10</td>
<td>4.69</td>
<td>1.84</td>
<td>13</td>
<td>4.67</td>
<td>1.92</td>
<td>12</td>
<td>4.60</td>
<td>1.95</td>
<td>48</td>
</tr>
<tr>
<td>Q2.8 Web Site Has Influenced Technical Standards</td>
<td>3.69</td>
<td>0.95</td>
<td>13</td>
<td>3.20</td>
<td>2.53</td>
<td>10</td>
<td>4.08</td>
<td>2.10</td>
<td>13</td>
<td>3.33</td>
<td>2.23</td>
<td>12</td>
<td>3.60</td>
<td>1.97</td>
<td>48</td>
</tr>
<tr>
<td>Q2.9 Org. Has Capability To Innovate</td>
<td>4.77</td>
<td>1.74</td>
<td>13</td>
<td>4.90</td>
<td>1.91</td>
<td>10</td>
<td>5.69</td>
<td>1.11</td>
<td>13</td>
<td>5.83</td>
<td>1.40</td>
<td>12</td>
<td>5.31</td>
<td>1.57</td>
<td>48</td>
</tr>
</tbody>
</table>
Table 4.2 presents the descriptive statistics for question 2, the ‘features of the website’, and reveals some interesting findings. For example, the mean score of 5.0 across leagues for question 2.1, or ‘somewhat agree’ is certainly not a strong alignment, with the 5.23 alignment of marketing policies (q.2.2) being only slightly improved. There is strong literature support outlined in chapter 5 for linking the results of question 2.4, the involvement and support of top management in the website, with these results. Both the N.R.L. and the N.S.L. had higher executive level support (5.54 and 6.00 respectively), and correspondingly higher alignments with both business strategy and marketing policies.

Question 2.8 provided the second lowest mean score across leagues with 3.60, or below ‘neutral’, however it also captured the highest standard deviation across leagues, peaking in the N.B.L. with a standard deviation of 2.53. The implications of these and the other results are further explored in chapter 5.

**Question 3:**
Organisations perform numerous activities such as buying inputs, choosing suppliers, converting inputs into outputs, selling, and advertising. Please describe the impact of the Internet (including e-mail, hyperlinks and the website) on your organisation, by specifying the extent to which the Internet has increased or decreased the following:

1. Greatly increased
2. Moderately increased
3. Somewhat increased
4. No change
5. Somewhat decreased
6. Moderately decreased
7. Greatly decreased

<table>
<thead>
<tr>
<th>Question</th>
<th>AFL Mean</th>
<th>AFL SD</th>
<th>AFL n</th>
<th>NBL Mean</th>
<th>NBL SD</th>
<th>NBL n</th>
<th>NRL Mean</th>
<th>NRL SD</th>
<th>NRL n</th>
<th>NSL Mean</th>
<th>NSL SD</th>
<th>NSL n</th>
<th>Total Mean</th>
<th>Total SD</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3.1 Impact On Cost Of Receiving/Storing Data</td>
<td>4.46</td>
<td>1.45</td>
<td>13</td>
<td>4.70</td>
<td>1.42</td>
<td>10</td>
<td>4.31</td>
<td>1.18</td>
<td>13</td>
<td>4.08</td>
<td>0.67</td>
<td>12</td>
<td>4.38</td>
<td>1.20</td>
<td>48</td>
</tr>
<tr>
<td>Q3.2 Impact On Cost Of Transforming Inputs</td>
<td>4.23</td>
<td>1.01</td>
<td>13</td>
<td>4.50</td>
<td>1.18</td>
<td>10</td>
<td>4.15</td>
<td>0.90</td>
<td>13</td>
<td>4.50</td>
<td>0.67</td>
<td>12</td>
<td>4.33</td>
<td>0.93</td>
<td>48</td>
</tr>
<tr>
<td>Q3.3 Impact On Cost Of Collecting/Storing Products</td>
<td>4.31</td>
<td>1.32</td>
<td>13</td>
<td>4.90</td>
<td>1.37</td>
<td>10</td>
<td>4.15</td>
<td>1.72</td>
<td>13</td>
<td>4.33</td>
<td>0.98</td>
<td>12</td>
<td>4.40</td>
<td>1.36</td>
<td>48</td>
</tr>
<tr>
<td>Q3.4 Impact On Cost Of Providing</td>
<td>4.00</td>
<td>1.68</td>
<td>13</td>
<td>5.10</td>
<td>1.20</td>
<td>10</td>
<td>3.92</td>
<td>1.75</td>
<td>13</td>
<td>5.17</td>
<td>0.94</td>
<td>12</td>
<td>4.50</td>
<td>1.53</td>
<td>48</td>
</tr>
</tbody>
</table>

119
Five questions in this series required a reversal of scales (questions 3.9, 3.10, 3.11, 3.12, and 3.13) due to a change in the line of questioning, with these scores including those reversals. Specifically, because a lower score on these questions represented a better result for the organisation, the results were reversed to comply with the rest of the series, for simpler analysis. Questions 3.9, 3.10 and 3.11 measure organisational abilities that can be increased, whilst questions 3.12 and 3.13 measure customer switching costs that if increased represent CA.

Many of the mean response totals for these questions fell closely to the ‘no change’ response, indicating the organisations felt that many of these particular Internet applications had never had great impact on their operations. Again, given that the literature suggests IT applications should ‘permeate’ an organisation, the implications of these responses is closely examined in chapter 5.
Also of interest in Table 4.3 is the emergence of a number of negative impact scores, i.e. the Internet has increased organisational costs or reduced switching costs. For example, N.R.L. clubs indicated a negative impact of the Internet in questions 3.4, 3.5, 3.8, 3.12 and 3.13. An examination of these and other results in Table 4.3 is conducted in chapter 5.

Question 4:
Please describe how your web site has decreased or increased the ability of your customers (members, supporters or the public) to perform the following tasks:

1. Greatly increased
2. Moderately increased
3. Somewhat increased
4. No change
5. Somewhat decreased
6. Moderately decreased
7. Greatly decreased

Table 4.4: Impact of the Web Site on Users

<table>
<thead>
<tr>
<th>Question</th>
<th>AFL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Q4.1 Ability Of Customers To Order Product</td>
<td>2.31</td>
<td>1.18</td>
<td>13</td>
<td>2.00</td>
<td>1.15</td>
</tr>
<tr>
<td>Q4.2 Ability Of Customers To Acquire Product</td>
<td>2.38</td>
<td>1.12</td>
<td>13</td>
<td>2.20</td>
<td>1.32</td>
</tr>
<tr>
<td>Q4.3 Ability Of Customers To Verify Product</td>
<td>2.38</td>
<td>1.26</td>
<td>13</td>
<td>2.10</td>
<td>1.10</td>
</tr>
<tr>
<td>Q4.4 Ability Of Customers To Monitor Team</td>
<td>1.69</td>
<td>1.38</td>
<td>13</td>
<td>1.40</td>
<td>0.52</td>
</tr>
<tr>
<td>Q4.5 Ability Of Customers To Upgrade Products</td>
<td>2.92</td>
<td>0.95</td>
<td>13</td>
<td>3.20</td>
<td>1.23</td>
</tr>
<tr>
<td>Q4.6 Ability Of Customers To Transfer Products</td>
<td>3.62</td>
<td>0.65</td>
<td>13</td>
<td>3.20</td>
<td>1.23</td>
</tr>
<tr>
<td>Q4.7 Ability Of Customers To Evaluate Performance</td>
<td>1.69</td>
<td>0.95</td>
<td>13</td>
<td>1.60</td>
<td>1.07</td>
</tr>
</tbody>
</table>

Table 4.4 displays the results of the seven questions examining the impact of the Internet on users. Later questions in this survey (see question 14 and question 15) indicate that in relation to web sites, customer applications are clearly the focus of the organisations sampled. This is reflected in the consistently positive results shown
in Table 4.4, particularly in relation to information transmission questions such as questions 4.4 and 4.7. A full examination of these results, and a review of differences across leagues, is conducted in chapter 5.

### 4.4 Summed Scales

**Table 4.5: Summed Scales**

<table>
<thead>
<tr>
<th>Section</th>
<th>AFL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUM1 Summed Scale Q2.1 To Q4.7</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>SUM2 Summed Scale Q3.1 To Q4.7</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>110.85</td>
<td>12.63</td>
<td>13</td>
<td>109.40</td>
<td>13.07</td>
</tr>
<tr>
<td></td>
<td>71.92</td>
<td>10.80</td>
<td>13</td>
<td>73.60</td>
<td>2.95</td>
</tr>
</tbody>
</table>

Table 4.5 firstly shows the summated scores to all the 29 CAPITA dimension questions (SUM1), and secondly, the summated scores results for all the CAPITA dimension questions pertaining to the actual impact of the Internet and web sites on the participating organisations (SUM2). In other words, it removes question 2 measures. As reverse scoring has been conducted where applicable, these summed scores provide an informal ranking of leagues in terms of CA through their web sites and the Internet, with higher scores representing higher CA.

The order that leagues rank changes in the two scores, as shown in Table 4.6 below. The implications of these results are discussed in detail in chapter 5.

**Table 4.6: Summed Scale Rankings**

<table>
<thead>
<tr>
<th>RANK</th>
<th>SUM1</th>
<th>SUM2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N.S.L.</td>
<td>N.S.L.</td>
</tr>
<tr>
<td>2</td>
<td>N.R.L.</td>
<td>N.B.L.</td>
</tr>
<tr>
<td>3</td>
<td>A.F.L.</td>
<td>A.F.L.</td>
</tr>
<tr>
<td>4</td>
<td>N.B.L.</td>
<td>N.R.L.</td>
</tr>
</tbody>
</table>

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4.5 **Web Site Details**

Questions 5-12:

Questions 5-12 asked respondents to provide details on their organisation's web site. As described in the introduction, results are displayed across three tables, with the question numbers indicated. Initially, responses to questions 5, 6, 7, 9, 10 and 11 are displayed, with results shown according to league, followed by the overall totals.

**Table 4.7: Web Site Details**

<table>
<thead>
<tr>
<th>Qn. No.</th>
<th>Question</th>
<th>AFL %</th>
<th>NBL %</th>
<th>NRL %</th>
<th>NSL %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Fantasy Sports Participation? Y/N</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Web Sites Currently Capable Of Profit? Y/N</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>7</td>
<td>Profitability A Goal? Y/N</td>
<td>8</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>9</td>
<td>Partnerships/Alliances On Web Site? Y/N</td>
<td>10</td>
<td>6</td>
<td>11</td>
<td>8</td>
<td>35</td>
</tr>
<tr>
<td>10</td>
<td>Formal Vision/Objectives Statement? Y/N</td>
<td>8</td>
<td>3</td>
<td>7</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>11</td>
<td>Formal Internet/Web Site Project Team? Y/N</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>n</td>
<td></td>
<td>13</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 4.7 presents the results of questions 5, 6, 7, 9, 10 and 11. As shown, 72.92% of the sample have established some type of partnership or alliance that has been promoted or exposed through the Internet, but only 6.25% of clubs have implemented a fantasy sports competition. Table 4.7 also provides some interesting results when comparing amongst the leagues. For example, 91.67% of N.S.L. clubs believe that with the current web user base and technology, sites offering sports content are capable of turning a profit on the Internet, however only 41.67% of those same clubs cite profitability as a current goal of their sites. These issues are further explored in chapter 5.

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Question 8:
Does your organisation support a league based, generic site, model for web sites within your competition, or individual, club run sites?

Results for question 8 are shown according to league, and in total, in Table 4.8.

Table 4.8: Organisation Preference for League Based or Club Run Web Sites

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Response</th>
<th>AFL %</th>
<th>NBL %</th>
<th>NRL %</th>
<th>NSL %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>League</td>
<td>5</td>
<td>38.46%</td>
<td>4</td>
<td>40.00%</td>
<td>3</td>
</tr>
<tr>
<td>Club</td>
<td>8</td>
<td>6</td>
<td>61.54%</td>
<td>6</td>
<td>60.00%</td>
<td>10</td>
</tr>
<tr>
<td>n</td>
<td>13</td>
<td>10</td>
<td>5</td>
<td>13</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

The clear preference amongst respondents for independent club control of their web sites is evident from the total percentages across each league, and the overall total of 70.83%.

Question 12:
Check which, if any (you may tick more than one box), of the following web site components your organisation utilises.

Question 12 provided a variety of on-line community building techniques and asked respondents to indicate which methods were adopted in their web site. Results are displayed across leagues and in total in Table 4.9.

Table 4.9: Web Site Components Utilised

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>Sporting League</th>
<th>Positive Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1</td>
<td>Web Site Has Fan Forums/Chat Rooms?</td>
<td>AFL 76.92%</td>
<td>NBL 30.00%</td>
</tr>
<tr>
<td>12.2</td>
<td>Web Site Has Feedback Provision?</td>
<td>AFL 84.62%</td>
<td>NBL 70.00%</td>
</tr>
<tr>
<td>12.3</td>
<td>Web Site Has Online Membership?</td>
<td>AFL 76.92%</td>
<td>NBL 30.00%</td>
</tr>
<tr>
<td>12.4</td>
<td>Web Site Has Online Chat With Players?</td>
<td>AFL 46.15%</td>
<td>NBL 30.00%</td>
</tr>
<tr>
<td>12.5</td>
<td>Web Site Has Question And Answer?</td>
<td>AFL 61.54%</td>
<td>NBL 30.00%</td>
</tr>
</tbody>
</table>
Table 4.9 shows the more popular means for online community building across leagues are feedback provision (39 of the 48 respondents using) and fan forums and chat rooms (38 of the 48 respondents using). The relative popularity of each of these options is discussed in chapter 5.

4.6 Background Information Regarding the Web Site

Question 13-22:

Questions 13-22 examined a variety of background information regarding the organisations' web sites. Results for this series of questions are displayed across a variety of tables.

Question 13:

**To what extent was the idea for the web site generated as part of a formal process of identifying strategic applications?**

1. No Extent
2. Some Extent
3. Moderate Extent
4. Great Extent
5. Very great Extent

Results for this question are displayed in Table 4.10 below:

<table>
<thead>
<tr>
<th>Response</th>
<th>AFL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Some extent</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Great extent</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Very great extent</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td><strong>n</strong></td>
<td>13</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>48</td>
</tr>
</tbody>
</table>

Table 4.10: Level of Formal Process in Web Site Idea
Table 4.10 provides an alternative breakdown of responses to question 13, with the actual number of responses for each option displayed across leagues, and in total. For example, six N.R.L. clubs, and six N.S.L. clubs indicated the web site was generated to a 'moderate extent' as part of a formal process, with 19 clubs in total (or 39.58%) also selecting this response.

**Question 14:**
The impetus for the web site was (check the most important reason):

Responses for question 14's evaluation of web site impetus are displayed in Table 4.11, across leagues, and in total.

**Table 4.11: Web Site Impetus**

<table>
<thead>
<tr>
<th>Response</th>
<th>AFL %</th>
<th>NBL %</th>
<th>NRL %</th>
<th>NSL %</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Preemptive Strike Communication With Members</td>
<td>1</td>
<td>11</td>
<td>84.62%</td>
<td>76.92%</td>
<td>38</td>
</tr>
<tr>
<td>To Offer Similar Services Provided By Like Organisations</td>
<td>2</td>
<td>2</td>
<td>15.38%</td>
<td>25.00%</td>
<td>9</td>
</tr>
<tr>
<td>n</td>
<td>13</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>48</td>
</tr>
</tbody>
</table>

Communication with members was clearly the major impetus for respondents web sites, with 79.17% of clubs in total choosing this option. Only one of the 48 clubs, from the N.R.L., indicated the web site impetus was a preemptive strike.

**Question 15:**
A user of the web site refers to those who actually use the system and for whom the site was intended. Please indicate who are the primary users of the web site.

1. Customers/Supporters
2. Suppliers
3. Personnel internal to your company
4. Other

Table 4.12 presents the result of question 15.
Table 4.12: Web Site Primary Users

<table>
<thead>
<tr>
<th>Primary User</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers/supporters</td>
<td>48</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

The implication for this overwhelming response is discussed in chapter 5.

**Question 16:**
Which year was the web site first established?

Table 4.13 presents the results of question 16.

Table 4.13: Year Web Site Established

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>AFL</th>
<th>%</th>
<th>Type Of Sporting League</th>
<th>Total</th>
<th>NBL</th>
<th>%</th>
<th>NRL</th>
<th>%</th>
<th>NSL</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>3</td>
<td>1</td>
<td>7.69%</td>
<td>1 10.00%</td>
<td>1 7.69%</td>
<td>1 0.00%</td>
<td>3 6.25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>3</td>
<td>1</td>
<td>7.69%</td>
<td>1 10.00%</td>
<td>1 0.00%</td>
<td>1 8.33%</td>
<td>3 6.25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>14</td>
<td>6</td>
<td>46.15%</td>
<td>2 20.00%</td>
<td>5 38.46%</td>
<td>1 8.33%</td>
<td>14 29.17%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1998</td>
<td>8</td>
<td>2</td>
<td>15.38%</td>
<td>1 10.00%</td>
<td>3 23.08%</td>
<td>2 16.67%</td>
<td>8 16.67%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>12</td>
<td>2</td>
<td>15.38%</td>
<td>3 30.00%</td>
<td>1 7.69%</td>
<td>6 50.00%</td>
<td>12 25.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>7</td>
<td>1</td>
<td>7.69%</td>
<td>2 20.00%</td>
<td>2 15.38%</td>
<td>2 16.67%</td>
<td>7 14.58%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>1</td>
<td>0</td>
<td>0.00%</td>
<td>1 7.69%</td>
<td>0 0.00%</td>
<td>1 0.00%</td>
<td>1 2.08%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>48</td>
<td>13</td>
<td>100.00%</td>
<td>13 100.00%</td>
<td>12 100.00%</td>
<td>48 100.00%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although there are some limitations to this question discussed in chapter 5, by allocating a value ranging from 6 (years) for 1995 responses to 0 (years) for 2001 responses, the oldest average age for web sites in the various leagues were the A.F.L. clubs at 3.54 years. These organisations were followed by the N.B.L. at 3.10 years, the N.R.L. at 3.00 years, and the N.S.L. clubs with an average web site age of 2.42 years.
4.6.1 Impact of the Web Site

Questions 17-18:

Questions 17 and 18 assessed the overall impact of the web site on the organisations’ sales growth rate, and profits, on the 7 point likert scale below:

1. Greatly decreased
2. Moderately decreased
3. Somewhat decreased
4. No impact
5. Somewhat increased
6. Moderately increased
7. Greatly increased

Results are displayed in Table 4.14 as means with standard deviations, and with totals.

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>AFL Mean</th>
<th>AFL SD</th>
<th>AFL n</th>
<th>NBL Mean</th>
<th>NBL SD</th>
<th>NBL n</th>
<th>NRL Mean</th>
<th>NRL SD</th>
<th>NRL n</th>
<th>NSL Mean</th>
<th>NSL SD</th>
<th>NSL n</th>
<th>Total Mean</th>
<th>Total SD</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Impact Of Web Site On Sales Growth Rate</td>
<td>5.23</td>
<td>0.44</td>
<td>13</td>
<td>4.70</td>
<td>0.95</td>
<td>10</td>
<td>4.46</td>
<td>1.27</td>
<td>13</td>
<td>4.67</td>
<td>0.49</td>
<td>12</td>
<td>4.77</td>
<td>0.88</td>
<td>48</td>
</tr>
<tr>
<td>18</td>
<td>Impact Of Web Site On Profits</td>
<td>4.31</td>
<td>0.75</td>
<td>13</td>
<td>4.50</td>
<td>0.97</td>
<td>10</td>
<td>4.23</td>
<td>0.93</td>
<td>13</td>
<td>4.50</td>
<td>0.52</td>
<td>12</td>
<td>4.38</td>
<td>0.79</td>
<td>48</td>
</tr>
</tbody>
</table>

The mean impact across leagues of the web site was higher for sales growth rates than profits, reflecting the costs not taken into account in question 17. The highest mean response amongst the leagues came from the A.F.L. clubs with an average impact of 5.23 on sales growth rate, and the lowest was an average impact of 4.23 on N.R.L. profits. Significantly, all leagues reported an increased mean impact on profits. In other words, no leagues reported an overall negative financial impact from their web sites.
Question 19:
Overall the competitive advantage or success of the web site has been:

1. Very low
2. Moderately low
3. Somewhat low
4. Neither low/high
5. Somewhat high
6. Moderately high
7. Very high

Table 4.15 displays the mean and standard deviation results of question 19.

Table 4.15: Web Site Competitive Advantage or Success

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>AFL Mean</th>
<th>AFL SD</th>
<th>AFL n</th>
<th>NBL Mean</th>
<th>NBL SD</th>
<th>NBL n</th>
<th>NRL Mean</th>
<th>NRL SD</th>
<th>NRL n</th>
<th>NSL Mean</th>
<th>NSL SD</th>
<th>NSL n</th>
<th>Total Mean</th>
<th>Total SD</th>
<th>Total n</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Overall Competitive Advantage Of Web Site</td>
<td>4.77</td>
<td>0.83</td>
<td>13</td>
<td>4.40</td>
<td>1.07</td>
<td>10</td>
<td>5.08</td>
<td>0.86</td>
<td>13</td>
<td>5.17</td>
<td>0.83</td>
<td>12</td>
<td>4.88</td>
<td>0.91</td>
<td>48</td>
</tr>
</tbody>
</table>

Given the nature of question 19, the results were interesting, with the total means as well as the individual league mean scores being fully reviewed in chapter 5. The leagues are however ranked according to their mean scores for question 19 in Table 4.16.

Table 4.16: CA Ranking

<table>
<thead>
<tr>
<th>RANK</th>
<th>LEAGUE</th>
<th>MEAN SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N.S.L.</td>
<td>5.17</td>
</tr>
<tr>
<td>2</td>
<td>N.R.L.</td>
<td>5.08</td>
</tr>
<tr>
<td>3</td>
<td>A.F.L.</td>
<td>4.77</td>
</tr>
<tr>
<td>4</td>
<td>N.B.L.</td>
<td>4.40</td>
</tr>
</tbody>
</table>

Table 4.16 displays the self-professed ranking of the respondents according to their respective leagues. These rankings provide an interesting reference throughout the discussion contained in chapter 5, and are also compared to the summed scale rankings displayed in Table 4.6.
Questions 20:
Indicate your organisation's sophistication in long range business planning.

1. Not at all
2. Somewhat
3. Moderate
4. Great
5. Very great

Table 4.17 displays the responses to question 20 according to league, and in total.

<table>
<thead>
<tr>
<th>Response</th>
<th>Type Of Sporting League</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFL %</td>
<td>NBL %</td>
</tr>
<tr>
<td>Not at all</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>0.00%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Moderate</td>
<td>1.69%</td>
<td>8.00%</td>
</tr>
<tr>
<td>Great</td>
<td>11.84%</td>
<td>10.00%</td>
</tr>
<tr>
<td>Very great</td>
<td>1.69%</td>
<td>0.00%</td>
</tr>
<tr>
<td>n</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

The numbers below the leagues illustrates the number of clubs that chose that particular response (also shown as a percentage), and add to the total number of respondents in that league. In the A.F.L. for example, 11 of the 13 respondents indicated that the sophistication of organisational long range business planning was 'great', or 84.62% of A.F.L. respondents. The far right column shows the overall totals. A total of 20 of the 48 respondents, or 41.67%, indicated a 'great' sophistication, making it the modal response.
Question 21:
Indicate the organisations' sophistication in managing information resources.

1. Not at all
2. Somewhat
3. Moderate
4. Great
5. Very great

Results for questions 21 are presented in Table 4.18

Table 4.18: Organisational Information Resource Management

<table>
<thead>
<tr>
<th>Response</th>
<th>AFL</th>
<th>NBL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>0.00%</td>
<td>0.00%</td>
<td>7.60%</td>
<td>1</td>
<td>58.23%</td>
<td>64.72%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>0.00%</td>
<td>2.00%</td>
<td>20.00%</td>
<td>2</td>
<td>15.38%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Moderate</td>
<td>8</td>
<td>61.53%</td>
<td>7.00%</td>
<td>9</td>
<td>69.23%</td>
<td>33.33%</td>
</tr>
<tr>
<td>Great</td>
<td>5</td>
<td>61.53%</td>
<td>10.00%</td>
<td>1</td>
<td>58.33%</td>
<td>28.33%</td>
</tr>
<tr>
<td>Very great</td>
<td>5</td>
<td>61.53%</td>
<td>10.00%</td>
<td>1</td>
<td>58.33%</td>
<td>2.00%</td>
</tr>
</tbody>
</table>

As with Table 4.17, the scores in Table 4.18 indicate the number of responses for each option, with the totals also provided. For example, nine of the 13 N.R.L. clubs indicated their organisational sophistication in managing information resources was 'moderate', with a total of 28 clubs or 58.33% of respondents choosing this answer.

Question 22:
To what extent does the person or persons primarily responsible for your website participate in the organisations business planning?

1. Not at all
2. Somewhat
3. Moderate
4. Great
5. Very great

Results for questions 22 are presented in Table 4.19 according to league, and in total.

Table 4.19: Web Site Management and Organisational Business Planning

<table>
<thead>
<tr>
<th>Response</th>
<th>AFL</th>
<th>NBL</th>
<th>NRL</th>
<th>NSL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>1</td>
<td>7.69%</td>
<td>10.00%</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>1</td>
<td>7.69%</td>
<td>20.00%</td>
<td>2</td>
<td>0.00%</td>
</tr>
<tr>
<td>Moderate</td>
<td>4</td>
<td>30.77%</td>
<td>40.00%</td>
<td>6</td>
<td>46.15%</td>
</tr>
<tr>
<td>Great</td>
<td>5</td>
<td>58.46%</td>
<td>20.00%</td>
<td>6</td>
<td>46.15%</td>
</tr>
<tr>
<td>Very great</td>
<td>2</td>
<td>15.38%</td>
<td>10.00%</td>
<td>1</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

n 13 10 13 12 48
As with Tables 4.17 and 4.18, Table 4.19 indicates the number of responses in each category (and as a percentage), according to individual leagues, and in total. A total of 18 (37.5%) respondents indicated that the person primarily responsible for the website had a 'moderate' participation in organisational business planning. The implications for these responses is discussed in chapter 5.

4.7 Background Information Regarding the Respondent Questions 23-26:

Questions 23-26 examined background information regarding the respondents. Results for this series of questions are displayed across a variety of tables.

Question 23:
How many years have you worked in the organisation?

Table 4.20 displays responses to question 23, cross-tabulated with sporting league.

**Table 4.20: Respondent Years Worked in Organisation.**

<table>
<thead>
<tr>
<th>No. of Years</th>
<th>AFL %</th>
<th>NBL %</th>
<th>NRL %</th>
<th>NSL %</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>30.77%</td>
<td>4</td>
<td>40.00%</td>
<td>4</td>
<td>30.77%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>16.67%</td>
<td>2</td>
<td>10.00%</td>
<td>2</td>
<td>15.38%</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>23.81%</td>
<td>2</td>
<td>10.00%</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>15.38%</td>
<td>2</td>
<td>20.00%</td>
<td>5</td>
<td>23.08%</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0.00%</td>
<td>2</td>
<td>15.38%</td>
<td>1</td>
<td>8.33%</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>0.00%</td>
<td>1</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>15.38%</td>
<td>1</td>
<td>10.00%</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>0.00%</td>
<td>1</td>
<td>10.00%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>n</td>
<td>13</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

As with the average age of the organisational web sites, Table 4.20 can be used to determine the average number of years the survey respondents have worked in the organisation. In this case the average length of employment for respondents in the N.B.L. was 4.10 years. This compares with the A.F.L. at 3.31 years, N.R.L. 3.23 years, and the N.S.L. at 2.83 years.
Question 24:
What is your job title?

As stated in the data collection (3.6) section of the methodology, respondents were targeted during an initial telephone call with each organisation. The aim was to identify the highest available information, IT, or communications executive, with a managerial brief (as opposed to technical).

The most common job title provided was that of a Communications Manager or Coordinator. Interestingly however, descriptions such as media, marketing and public relations were regularly cited in the job titles provided. Overall, the responses indicated that website management was rarely considered an exclusive function, but rather it was added to existing employees’ responsibilities.

Question 25:
What is the approximate annual gross revenue of your organisation?

Responses to question 25 are displayed in Table 4.21 as the total number of responses in each category, and cross-tabulated with sporting league.

<table>
<thead>
<tr>
<th>AUS $ Category</th>
<th>Type Of Sporting League</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFL</td>
<td>%</td>
</tr>
<tr>
<td>&lt;$500,000</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>$500,000 to $1m</td>
<td>0.00%</td>
<td>1</td>
</tr>
<tr>
<td>$1m to $2m</td>
<td>0.00%</td>
<td>3</td>
</tr>
<tr>
<td>$2m to $5m</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>$5m to $10m</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>&gt;$10m</td>
<td>12</td>
<td>92.31%</td>
</tr>
</tbody>
</table>

Gross revenues of the respondents are displayed in Table 4.21. The right hand total column reveals that exactly 50% of respondent’s organisations generated in excess of AUS$5 million. The table shows that 92.31% (12 of 13) of the A.F.L. clubs reported gross revenues greater than AUS$10 million, whilst 66.67% of N.S.L. clubs (8 of 12) reported gross revenues of less than AUS$2 million.
Question 26: Approximately how many employees work in your organisation?

Responses to question 26 are displayed in Table 4.22 against eligible responses, and cross-tabulated with sporting league.

<table>
<thead>
<tr>
<th>No. of Employees</th>
<th>AFL %</th>
<th>NBL %</th>
<th>NRL %</th>
<th>NSL %</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>0.00%</td>
<td>60.00%</td>
<td>0.00%</td>
<td>60.00%</td>
<td>12</td>
</tr>
<tr>
<td>10 to 24</td>
<td>0.00%</td>
<td>30.00%</td>
<td>50.00%</td>
<td>20.00%</td>
<td>11</td>
</tr>
<tr>
<td>25 to 49</td>
<td>75.00%</td>
<td>15.00%</td>
<td>10.00%</td>
<td>10.00%</td>
<td>13</td>
</tr>
<tr>
<td>50 to 99</td>
<td>45.00%</td>
<td>0.00%</td>
<td>50.00%</td>
<td>0.00%</td>
<td>12</td>
</tr>
<tr>
<td>100 to 199</td>
<td>0.00%</td>
<td>0.00%</td>
<td>10.00%</td>
<td>80.00%</td>
<td>15</td>
</tr>
<tr>
<td>&gt;200</td>
<td>0.00%</td>
<td>0.00%</td>
<td>15.38%</td>
<td>84.62%</td>
<td>12</td>
</tr>
<tr>
<td>n</td>
<td>13</td>
<td>10</td>
<td>13</td>
<td>12</td>
<td>48</td>
</tr>
</tbody>
</table>

The totals column of Table 4.22 reveals 77.09% of organisations surveyed employed less than 50 people. The modal response being between 25 and 49 employees (14 respondents).

4.8 Confirmatory Factor Analysis

Confirmatory factor analysis was performed on the 29 CAPITA measures, with a view to confirming whether the dimensions proposed by Sethi and King (1994) following their review of 185 United States manufacturing and service companies, fit the sporting organisations sampled in this research.

Due to the prior research conducted by Sethi and King (1994) there was strong theoretical support for their hypothesised structure. With this in mind, confirmatory factor analysis was considered appropriate (Hair et al., 1998). Indeed, Sethi and King utilise LISREL analysis in their research, with both their study and this research being well suited to the purposes of structural equation modeling.

The AMOS path diagram generated by constricting the data from this research to the dimensions of CA from an IT application proposed by Sethi and King (1994), is shown in Figure 4.3 below.
Figure 4.3: Confirmatory Path Diagram
The straight arrows in Figure 4.3 depict the correlation among latent constructs. Curved arrows depict the strength of relationship between measured items and the latent construct that underpins them. As shown, the sporting industry results demonstrate that the dimensions of CA proposed by Sethi and King (1994) are not applicable to this sample.

According to Hair et al. (1998) correlations greater than ±.30 are considered of minimal significance, correlations of ±.40 more important, and correlations of ±.50 or greater, practically significant. Using these figures as benchmarks, there are a number of weak or negatively loaded relationships between most dimensions and their measures, particularly ‘Synergy’, and ‘Threat’. The best relationships occurred between the measures and dimensions of ‘Primary Activity Efficiency’, ‘Resource Acquisition Functionality’ and ‘Resource Management Functionality’. In terms of the correlation among variables, there is a broad range of relationships, further supporting the identified industry variance.

Having examined the path diagram, the associated data generated by AMOS was scrutinised. As described in chapter 3, having undertaken a comprehensive evaluation of CAPITA using the LISREL 7 framework, 29 measures satisfied the rigorous criteria prescribed by Sethi and King (1994), and became their final full CAPITA model. This model was then re-estimated, and is compared with the results of this research that included some additional measures, in Table 4.23 below:

**Table 4.23: Fit Measure Comparison**

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indices</strong></td>
</tr>
<tr>
<td>Number of Latent Variables</td>
</tr>
<tr>
<td>Total Number of Items</td>
</tr>
<tr>
<td>Degrees of Freedom (df)</td>
</tr>
<tr>
<td>χ² Statistic</td>
</tr>
<tr>
<td>p-value</td>
</tr>
<tr>
<td>Normed chi-square (χ²/d*)</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
</tr>
<tr>
<td>Adjusted goodness-of-fit index (AGFI)</td>
</tr>
<tr>
<td>Parsimony-adjusted GFI</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMSR)</td>
</tr>
<tr>
<td>Normed fit index (NFI)</td>
</tr>
<tr>
<td>Relative fit index (RFI)</td>
</tr>
<tr>
<td>Parsimony adjusted NFI</td>
</tr>
<tr>
<td>Parsimony Ratio</td>
</tr>
</tbody>
</table>
The degrees of freedom for both models was acceptable or overidentified, as was the likelihood ratio chi-square statistic ($\chi^2$). The normed chi-square ($\chi^2 / df$) however, fell outside the recommended levels of 1.0 to 2.0 in both studies. The goodness-of-fit index (GFI) result (0.882) for this research was unsatisfactorily close to 1.0, and the AGFI (0.856) and parsimony-adjusted GFI (0.722) were also unacceptable.

The RMSR (0.189) was the critical measure, both inappropriately high, and significantly different in the two studies. Both the NFI (0.805) and the RFI (0.778) were also unacceptable, falling well below the recommended level of 0.90 (Hair et al., 1998). The parsimony-adjusted NFI was worse again at 0.706. These results, combined with the poor correlation among variables confirmed the differences between the two study’s CA dimensions.

Based on the entire confirmatory factor analysis results, it was concluded that the sporting industry did impact on the generic dimensions of CA through an IT application proposed by Sethi and King (1994). Having established this, a series of exploratory tests were undertaken to establish the key areas of CA through the Internet for sport.

### 4.9 Exploratory Factor Analysis

#### 4.9.1 Introduction

Having inputted the data to SPSS for confirmatory factor analysis, a series of exploratory solutions was trialled in an effort to best understand the underlying structure in the data. This process follows a typical factor analysis procedure of data manipulation based on an initial solution with the computation of several additional trial solutions (Hair et al., 1998; Page & Meyer, 2000).

Initially therefore, an unsolicited solution was produced, with subsequent adaptations made, including the removal of certain questions and factor number experimentation. Decisions on which solutions to pursue were based on the information obtained from both those trial analyses and the factor matrices generated as recommended by Hair et al. (1998), and Page and Meyer (2000). As with all factor analyses, the ultimate
goal of obtaining the best representation of the underlying data through the reduction of that data into the fewest factors containing the most information, was paramount.

Three component matrices are presented using the principle component extraction method. The VARIMAX method of orthogonal rotation was implemented to present the simplest, most meaningful factor pattern (Hair et al., 1998; Page & Meycr, 2000), with all other analysis including latent root and iteration criteria provided by SPSS default settings.

4.9.2 Initial Solution

As discussed in chapter 2, Sethi and King (1994) proposed seven dimensions of competitive advantage. However, given the objectives of exploratory factor analysis, the unique nature of the sporting industry, and secondary objective 2, it was appropriate to initially allow the data to express itself without coercion. This initial analysis of the data revealed an eight-factor solution shown below:

Table 4.24: Rotated Component Matrix 1 – 8 Factor Initial Solution

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>Impact on cost of collecting/storing products</td>
<td>0.851</td>
<td>-0.066</td>
<td>0.079</td>
<td>0.115</td>
<td>-0.052</td>
<td>0.103</td>
<td>-0.015</td>
<td>0.170</td>
</tr>
<tr>
<td>3.2</td>
<td>Impact on cost of transforming inputs</td>
<td>0.798</td>
<td>-0.141</td>
<td>0.246</td>
<td>-0.117</td>
<td>-0.100</td>
<td>0.216</td>
<td>-0.043</td>
<td>-0.048</td>
</tr>
<tr>
<td>3.4</td>
<td>Impact on cost of providing service</td>
<td>0.787</td>
<td>0.048</td>
<td>0.005</td>
<td>0.116</td>
<td>0.150</td>
<td>0.105</td>
<td>-0.195</td>
<td>0.155</td>
</tr>
<tr>
<td>3.1</td>
<td>Impact on cost of receiving/storing data</td>
<td>0.774</td>
<td>-0.032</td>
<td>0.204</td>
<td>0.032</td>
<td>-0.180</td>
<td>0.085</td>
<td>-0.142</td>
<td>-0.241</td>
</tr>
<tr>
<td>3.7</td>
<td>Impact on cost of coordinating activities</td>
<td>0.696</td>
<td>0.017</td>
<td>0.099</td>
<td>0.210</td>
<td>0.155</td>
<td>0.342</td>
<td>-0.085</td>
<td>-0.129</td>
</tr>
<tr>
<td>4.4</td>
<td>Ability of customers to monitor team</td>
<td>-0.080</td>
<td>0.866</td>
<td>-0.117</td>
<td>-0.037</td>
<td>-0.007</td>
<td>0.075</td>
<td>-0.034</td>
<td>0.124</td>
</tr>
<tr>
<td>4.7</td>
<td>Ability of customers to evaluate performance</td>
<td>-0.154</td>
<td>0.857</td>
<td>-0.055</td>
<td>-0.086</td>
<td>0.141</td>
<td>0.023</td>
<td>-0.055</td>
<td>0.042</td>
</tr>
<tr>
<td>4.1</td>
<td>Ability of customers to order product</td>
<td>0.132</td>
<td>0.731</td>
<td>-0.101</td>
<td>-0.003</td>
<td>0.491</td>
<td>-0.174</td>
<td>0.115</td>
<td>-0.014</td>
</tr>
<tr>
<td>3.13</td>
<td>Impact on costs customers incur to locate</td>
<td>0.241</td>
<td>-0.030</td>
<td>0.814</td>
<td>-0.041</td>
<td>0.023</td>
<td>-0.006</td>
<td>-0.163</td>
<td>-0.118</td>
</tr>
<tr>
<td>3.12</td>
<td>Impact on costs customers incur to change</td>
<td>0.274</td>
<td>-0.091</td>
<td>0.808</td>
<td>0.022</td>
<td>-0.236</td>
<td>0.122</td>
<td>0.053</td>
<td>0.062</td>
</tr>
<tr>
<td>Qu. No.</td>
<td>Question</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>2.8</td>
<td>Web site has influenced technical standards</td>
<td>0.072</td>
<td>-0.296</td>
<td>0.737</td>
<td>0.148</td>
<td>-0.103</td>
<td>0.396</td>
<td>-0.100</td>
<td>0.101</td>
</tr>
<tr>
<td>2.9</td>
<td>Org. Has capability to innovate</td>
<td>-0.244</td>
<td>-0.351</td>
<td>-0.418</td>
<td>0.348</td>
<td>-0.271</td>
<td>0.143</td>
<td>-0.105</td>
<td>-0.204</td>
</tr>
<tr>
<td>2.2</td>
<td>Web site aligned with marketing policies</td>
<td>0.034</td>
<td>-0.004</td>
<td>-0.024</td>
<td>0.823</td>
<td>-0.189</td>
<td>-0.109</td>
<td>-0.023</td>
<td>-0.090</td>
</tr>
<tr>
<td>2.1</td>
<td>Web site aligned with business strategy</td>
<td>0.123</td>
<td>-0.035</td>
<td>-0.012</td>
<td>0.820</td>
<td>0.033</td>
<td>-0.041</td>
<td>-0.045</td>
<td>0.109</td>
</tr>
<tr>
<td>2.4</td>
<td>Top management involved</td>
<td>0.040</td>
<td>-0.211</td>
<td>0.231</td>
<td>0.357</td>
<td>0.188</td>
<td>0.039</td>
<td>0.312</td>
<td>-0.498</td>
</tr>
<tr>
<td>2.7</td>
<td>Web site protected from imitation</td>
<td>0.234</td>
<td>-0.152</td>
<td>0.280</td>
<td>0.468</td>
<td>-0.126</td>
<td>0.048</td>
<td>-0.072</td>
<td>0.464</td>
</tr>
<tr>
<td>2.5</td>
<td>Web site provides access to channels</td>
<td>0.126</td>
<td>-0.198</td>
<td>0.027</td>
<td>0.194</td>
<td>-0.776</td>
<td>0.282</td>
<td>0.032</td>
<td>0.038</td>
</tr>
<tr>
<td>4.6</td>
<td>Ability of customers to transfer products</td>
<td>-0.203</td>
<td>0.100</td>
<td>-0.521</td>
<td>0.288</td>
<td>0.585</td>
<td>0.326</td>
<td>-0.043</td>
<td>0.111</td>
</tr>
<tr>
<td>4.2</td>
<td>Ability of customers to acquire product</td>
<td>0.207</td>
<td>0.502</td>
<td>-0.201</td>
<td>0.017</td>
<td>0.585</td>
<td>0.143</td>
<td>-0.122</td>
<td>0.003</td>
</tr>
<tr>
<td>2.6</td>
<td>Web site market positioning</td>
<td>-0.095</td>
<td>-0.070</td>
<td>0.442</td>
<td>0.250</td>
<td>-0.521</td>
<td>0.162</td>
<td>-0.145</td>
<td>-0.304</td>
</tr>
<tr>
<td>4.5</td>
<td>Ability of customers to upgrade products</td>
<td>-0.269</td>
<td>0.334</td>
<td>-0.298</td>
<td>0.048</td>
<td>0.393</td>
<td>-0.179</td>
<td>-0.222</td>
<td>0.380</td>
</tr>
<tr>
<td>3.8</td>
<td>Impact on costs if org changes suppliers</td>
<td>0.235</td>
<td>0.091</td>
<td>0.149</td>
<td>-0.117</td>
<td>0.115</td>
<td>0.703</td>
<td>0.154</td>
<td>-0.050</td>
</tr>
<tr>
<td>3.5</td>
<td>Impact on cost of personnel</td>
<td>0.372</td>
<td>0.139</td>
<td>0.166</td>
<td>-0.208</td>
<td>-0.112</td>
<td>0.674</td>
<td>0.078</td>
<td>0.070</td>
</tr>
<tr>
<td>3.6</td>
<td>Impact on cost of general management</td>
<td>0.180</td>
<td>-0.053</td>
<td>-0.148</td>
<td>-0.029</td>
<td>0.020</td>
<td>0.595</td>
<td>-0.361</td>
<td>-0.305</td>
</tr>
<tr>
<td>2.3</td>
<td>Org. Has technical expertise</td>
<td>0.199</td>
<td>-0.319</td>
<td>0.276</td>
<td>0.237</td>
<td>-0.051</td>
<td>0.527</td>
<td>-0.037</td>
<td>0.142</td>
</tr>
<tr>
<td>3.9</td>
<td>Impact on ability to evaluate suppliers</td>
<td>-0.016</td>
<td>-0.091</td>
<td>-0.084</td>
<td>0.007</td>
<td>0.016</td>
<td>-0.011</td>
<td>0.887</td>
<td>-0.086</td>
</tr>
<tr>
<td>3.11</td>
<td>Impact on ability to evaluate customers</td>
<td>-0.324</td>
<td>0.180</td>
<td>-0.182</td>
<td>0.033</td>
<td>0.026</td>
<td>-0.051</td>
<td>0.764</td>
<td>0.029</td>
</tr>
<tr>
<td>3.10</td>
<td>Impact on ability to vertically integrate</td>
<td>-0.182</td>
<td>-0.198</td>
<td>0.075</td>
<td>-0.329</td>
<td>-0.236</td>
<td>0.301</td>
<td>0.544</td>
<td>0.212</td>
</tr>
<tr>
<td>4.3</td>
<td>Ability of customers to verify product</td>
<td>-0.006</td>
<td>0.406</td>
<td>-0.107</td>
<td>-0.038</td>
<td>0.340</td>
<td>-0.037</td>
<td>0.145</td>
<td>0.577</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Rotation converged in 9 iterations.

This initial factor solution did not closely reflect the hypothesised structure, and contained some cross factor loading on questions 2.4, 2.6, 2.7, 2.9 and 4.5. In addition, question 4.3 formed a single factor. Given this result, numerous further solutions were trialled in order to assess both the effect of strategic extractions, and a manipulation of the number of factors, in order to best represent the underlying structure in the data. Two of these constraints are discussed in 4.9.3 below.
4.9.3 A Priori Criterion

Whilst no priori constraints were initially set on either the estimation of components or the number of factors to be extracted, numerous constraints were subsequently imposed on the data in accordance with the a priori criterion that according to Hair et al. (1998), can be useful and justified in hypothesis testing or replication. The two constraints that best improved the explanatory power of the exploratory factor analysis, and are consequently described below, were:

- Constrained Solution Step 1: Removal of questions 2.4, 3.12 and 3.13
- Constrained Solution Step 2: Constraining the solution to five factors

4.9.4 Constrained Solution Step 1

As mentioned, a number of experimental constraints were trialled on the data, which initially focussed on both the impact of various individual questions on the data, and the effect of removing questions. Based on these trials, questions 2.4, 3.12 and 3.13 were removed in constrained solution 1.

Question 2.4, which canvassed the extent to which top management is involved in and supports the organisational web site, originally formed part of the hypothesised dimension of ‘synergy’. It was removed on the basis that it contained cross factor loading in the initial solution, and frequently formed its own factor in most constraint trials. Given the question's direct link with a major focus of the literature review in leadership, and the lack of any supporting questions, this was not unexpected and added weight to its exclusion.

Questions 3.12 and 3.13 were designed to assess the costs customers would incur in either changing teams or sports, or locating other teams or sports. Included by Sethi and King (1994) to measure the CAPITA dimension of ‘threat amongst the United States manufacturing and service companies surveyed, they were considered much less relevant in the sporting industry with its unique mutual interdependencies and subsequently different interpretations of the ‘threat’ dimension.
As stated in chapter 2, a number of authors, including Sloanc (1971), Dabscheck (1975) Stewart (1984), and Stewart and Smith (1999) have noted those peculiar economics of sport in which the mutual interdependencies of competing teams requires organisations to reassess concepts such as ‘rivalry’. The unique nature of ‘rivalry’ in the sporting industry, combined with its highly involved product, also impacts on customer behaviour and the CA concept of ‘threat’.

According to Smith and Stewart (1999:14) “sport has a symbolic significance and emotional intensity that is rarely found in an insurance company, bank or even a betting shop”, which results in sport and business operating within different behavioural parameters. Smith and Stewart (1999) extend the at times ‘irrational’ behaviour within the sporting business, to sports supporters, noting the importance of loyalty, commitment, nostalgia and tradition on these consumers. We don’t change sports teams like we change sports socks!

In short, unlike customers of businesses in other industries, sporting team supporters do not commonly change teams (the product), and in the exceptional cases where this does occur they are highly unlikely to source an alternative via the Internet. Given this hypothesis, and the improvements to the factor solutions on the subsequent removal of questions 3.12 and 3.13, the extraction of these questions was considered justified.

The result of removing these three questions was a seven-factor solution with improved cross factor loading and more easily interpreted dimensions. The component matrix and associated KMO and Bartletts Tests and variance explained tables that emanated from constrained solution 1 are shown below:
<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>Impact on cost of collecting/storing products</td>
<td>0.854</td>
<td>0.015</td>
<td>-0.047</td>
<td>0.188</td>
<td>0.073</td>
<td>0.023</td>
<td>-0.067</td>
</tr>
<tr>
<td>3.2</td>
<td>Impact on cost of transforming inputs</td>
<td>0.830</td>
<td>-0.192</td>
<td>-0.111</td>
<td>0.180</td>
<td>-0.164</td>
<td>0.069</td>
<td>0.074</td>
</tr>
<tr>
<td>3.2</td>
<td>Impact on cost of receiving/storing data</td>
<td>0.786</td>
<td>-0.205</td>
<td>-0.065</td>
<td>-0.075</td>
<td>0.052</td>
<td>0.140</td>
<td>0.173</td>
</tr>
<tr>
<td>3.4</td>
<td>Impact on cost of providing service</td>
<td>0.784</td>
<td>0.208</td>
<td>0.053</td>
<td>0.123</td>
<td>0.109</td>
<td>0.182</td>
<td>0.027</td>
</tr>
<tr>
<td>3.7</td>
<td>Impact on cost of coordinating activities</td>
<td>0.725</td>
<td>0.047</td>
<td>0.029</td>
<td>0.129</td>
<td>0.206</td>
<td>0.058</td>
<td>0.337</td>
</tr>
<tr>
<td>4.6</td>
<td>Ability of customers to transfer products</td>
<td>-0.226</td>
<td>0.747</td>
<td>0.113</td>
<td>0.057</td>
<td>0.310</td>
<td>-0.050</td>
<td>0.394</td>
</tr>
<tr>
<td>2.6</td>
<td>Web site market positioning</td>
<td>-0.054</td>
<td>-0.746</td>
<td>-0.047</td>
<td>0.208</td>
<td>0.101</td>
<td>0.135</td>
<td>0.143</td>
</tr>
<tr>
<td>2.5</td>
<td>Web site provides access to channels</td>
<td>0.124</td>
<td>0.611</td>
<td>-0.152</td>
<td>0.333</td>
<td>0.123</td>
<td>-0.142</td>
<td>0.065</td>
</tr>
<tr>
<td>4.5</td>
<td>Ability of customers to upgrade products</td>
<td>-0.308</td>
<td>0.608</td>
<td>0.298</td>
<td>-0.098</td>
<td>0.130</td>
<td>0.176</td>
<td>-0.099</td>
</tr>
<tr>
<td>4.2</td>
<td>Ability of customers to acquire product</td>
<td>0.209</td>
<td>0.551</td>
<td>0.521</td>
<td>-0.053</td>
<td>0.009</td>
<td>0.154</td>
<td>0.155</td>
</tr>
<tr>
<td>4.3</td>
<td>Ability of customers to verify product</td>
<td>-0.009</td>
<td>0.532</td>
<td>0.461</td>
<td>0.246</td>
<td>-0.107</td>
<td>-0.094</td>
<td>-0.358</td>
</tr>
<tr>
<td>2.9</td>
<td>Org. Has capability to innovate</td>
<td>-0.200</td>
<td>-0.522</td>
<td>-0.278</td>
<td>0.383</td>
<td>0.217</td>
<td>0.156</td>
<td>0.012</td>
</tr>
<tr>
<td>4.4</td>
<td>Ability of customers to monitor team</td>
<td>-0.062</td>
<td>0.094</td>
<td>0.860</td>
<td>-0.078</td>
<td>-0.023</td>
<td>0.004</td>
<td>0.044</td>
</tr>
<tr>
<td>4.7</td>
<td>Ability of customers to evaluate performance</td>
<td>-0.148</td>
<td>0.146</td>
<td>0.851</td>
<td>-0.123</td>
<td>-0.075</td>
<td>0.062</td>
<td>0.034</td>
</tr>
<tr>
<td>4.1</td>
<td>Ability of customers to order product</td>
<td>0.134</td>
<td>0.411</td>
<td>0.715</td>
<td>-0.271</td>
<td>0.035</td>
<td>-0.028</td>
<td>-0.118</td>
</tr>
<tr>
<td>2.3</td>
<td>Org. has technical expertise</td>
<td>0.253</td>
<td>-0.122</td>
<td>-0.205</td>
<td>0.667</td>
<td>0.064</td>
<td>0.037</td>
<td>0.175</td>
</tr>
<tr>
<td>2.8</td>
<td>Web site has influenced technical standards</td>
<td>0.164</td>
<td>-0.375</td>
<td>-0.218</td>
<td>0.647</td>
<td>0.035</td>
<td>0.103</td>
<td>0.132</td>
</tr>
<tr>
<td>2.7</td>
<td>Web site protected from imitation</td>
<td>0.256</td>
<td>-0.062</td>
<td>-0.083</td>
<td>0.539</td>
<td>0.387</td>
<td>0.085</td>
<td>-0.286</td>
</tr>
<tr>
<td>3.5</td>
<td>Impact on cost of personnel</td>
<td>0.427</td>
<td>-0.113</td>
<td>0.219</td>
<td>0.455</td>
<td>-0.330</td>
<td>-0.149</td>
<td>0.375</td>
</tr>
<tr>
<td>2.2</td>
<td>Web site aligned with marketing policies</td>
<td>0.015</td>
<td>-0.186</td>
<td>-0.031</td>
<td>-0.001</td>
<td>0.855</td>
<td>0.011</td>
<td>-0.005</td>
</tr>
<tr>
<td>2.1</td>
<td>Web site aligned with business strategy</td>
<td>0.116</td>
<td>0.060</td>
<td>-0.040</td>
<td>0.143</td>
<td>0.841</td>
<td>0.024</td>
<td>-0.021</td>
</tr>
<tr>
<td>3.9</td>
<td>Impact on ability to evaluate suppliers</td>
<td>0.004</td>
<td>-0.016</td>
<td>0.113</td>
<td>0.158</td>
<td>-0.068</td>
<td>0.861</td>
<td>0.036</td>
</tr>
<tr>
<td>3.11</td>
<td>Impact on ability to evaluate customers</td>
<td>0.322</td>
<td>-0.088</td>
<td>-0.191</td>
<td>0.095</td>
<td>-0.039</td>
<td>0.745</td>
<td>0.161</td>
</tr>
<tr>
<td>3.10</td>
<td>Impact on ability to vertically integrate</td>
<td>0.150</td>
<td>0.118</td>
<td>0.170</td>
<td>-0.248</td>
<td>0.341</td>
<td>0.644</td>
<td>-0.073</td>
</tr>
<tr>
<td>3.6</td>
<td>Impact on cost of general management</td>
<td>0.193</td>
<td>-0.005</td>
<td>-0.055</td>
<td>0.053</td>
<td>-0.012</td>
<td>0.216</td>
<td>0.765</td>
</tr>
<tr>
<td>3.8</td>
<td>Impact on costs if org changes suppliers</td>
<td>0.293</td>
<td>-0.149</td>
<td>0.134</td>
<td>0.343</td>
<td>-0.161</td>
<td>-0.280</td>
<td>0.550</td>
</tr>
</tbody>
</table>

Table 4.25: Rotated Component Matrix 2 – Constrained Solution Step 1
### Table 4.26: KMO and Bartlett's Test 1 – Constrained Solution Step 1

<table>
<thead>
<tr>
<th>KMO and Bartlett's Test</th>
<th>.466</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
<td></td>
</tr>
<tr>
<td>Bartlett's Test of Sphericity</td>
<td></td>
</tr>
<tr>
<td>Approx. Chi-Square</td>
<td>702.238</td>
</tr>
<tr>
<td>Df</td>
<td>325</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

### Table 4.27: Variance Explained 1 - Constrained Solution Step 1

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1.000</td>
<td>6.139</td>
<td>23.611</td>
<td>23.611</td>
</tr>
<tr>
<td>5.000</td>
<td>1.554</td>
<td>5.979</td>
<td>61.529</td>
</tr>
<tr>
<td>6.000</td>
<td>1.313</td>
<td>5.049</td>
<td>66.578</td>
</tr>
<tr>
<td>8.000</td>
<td>0.865</td>
<td>3.327</td>
<td>74.338</td>
</tr>
<tr>
<td>9.000</td>
<td>0.807</td>
<td>3.105</td>
<td>77.443</td>
</tr>
<tr>
<td>10.000</td>
<td>0.772</td>
<td>2.968</td>
<td>80.411</td>
</tr>
<tr>
<td>11.000</td>
<td>0.696</td>
<td>2.678</td>
<td>83.088</td>
</tr>
<tr>
<td>12.000</td>
<td>0.657</td>
<td>2.527</td>
<td>85.616</td>
</tr>
<tr>
<td>13.000</td>
<td>0.570</td>
<td>2.192</td>
<td>87.808</td>
</tr>
<tr>
<td>14.000</td>
<td>0.540</td>
<td>2.078</td>
<td>89.886</td>
</tr>
<tr>
<td>15.000</td>
<td>0.526</td>
<td>2.025</td>
<td>91.911</td>
</tr>
<tr>
<td>16.000</td>
<td>0.410</td>
<td>1.575</td>
<td>93.486</td>
</tr>
<tr>
<td>17.000</td>
<td>0.355</td>
<td>1.386</td>
<td>94.852</td>
</tr>
<tr>
<td>18.000</td>
<td>0.276</td>
<td>1.003</td>
<td>95.914</td>
</tr>
<tr>
<td>19.000</td>
<td>0.247</td>
<td>0.951</td>
<td>96.865</td>
</tr>
<tr>
<td>20.000</td>
<td>0.205</td>
<td>0.788</td>
<td>97.653</td>
</tr>
<tr>
<td>21.000</td>
<td>0.177</td>
<td>0.682</td>
<td>98.335</td>
</tr>
<tr>
<td>22.000</td>
<td>0.151</td>
<td>0.579</td>
<td>98.914</td>
</tr>
<tr>
<td>23.000</td>
<td>0.110</td>
<td>0.423</td>
<td>99.337</td>
</tr>
<tr>
<td>24.000</td>
<td>0.088</td>
<td>0.337</td>
<td>99.674</td>
</tr>
<tr>
<td>25.000</td>
<td>0.063</td>
<td>0.241</td>
<td>99.915</td>
</tr>
<tr>
<td>26.000</td>
<td>0.022</td>
<td>0.086</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Although still only loosely representing Sethi and King’s (1994) hypothesised structure, the rotated component matrix displayed in Table 4.25, supports the removal of questions 2.4, 3.12 and 3.13, providing a better explanation of the underlying data structure. The analysis presented a seven-factor solution with significantly improved cross factor loading and included no single question factors.

Table 4.26 Shows the KMO (0.468) and the Bartlett’s test of sphericity (Approx. Chi-Square 702.238, df 325, sig. .000). The KMO indicates the proportion of variance in variables that is common variance (i.e. that might be caused by underlying factors), with high values being close to 1.0. Although KMO values of less than 0.50 generally indicate that a factor analysis is inappropriate due to the small common variance between the variables, two statistics outweigh this observation. Firstly, the Bartlett’s test is significant. Very small (less than 0.05) significance levels indicate the presence of significant relationships among variables. Secondly, the notable amount of correlations above 0.3 amongst the variables further supports factor analysis.

Table 4.27 presents the variance explained in the constrained solution. With the standard minimum acceptable cumulative eigenvalues for social sciences being 60% (Boyd et al., 1989; Hair et.al., 1998; Page & Meyer, 2000) the seven factors represent a very satisfactory 71.011% of the total variance explained.

Having completed step 1 of the constrained solution, the structure of the seven factors prompted a more detailed examination of the model hypothesised by Sethi and King (1994), with a view to identifying any differences associated with CA dimensions in the sporting industry as opposed to other industries generally. This process is described below.

4.9.5 Constrained Solution Step 2: Final Solution

Having removed questions 2.4, 3.12 and 3.13, the structure of the resultant seven factors was scrutinised. As stated, Sethi and King’s (1994) instrument was developed to measure CA across a broad range of United States businesses and resulted in seven CAPITA measures that met unidimensionality and convergent
validity criteria. Importantly, the initial Sethi and King (1994) CAPITA model was conceptualised in terms of five dimensions, and was only subsequently revised to seven dimensions when both the efficiency and functionality dimensions were revised from unidimensional to two-dimensional concepts.

In most factor solution trials in this research however, the questions that constituted the efficiency and functionality dimensions, whilst regularly falling together, did not separate in the manner proposed by Sethi and King. However they did regularly form variations of these factors amongst themselves. Table 4.28 below presents the specific structure hypothesised by Sethi and King (1994):

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synergy</td>
<td>2.1, 2.2, 2.3, 2.4, 2.9</td>
</tr>
<tr>
<td>Preemptiveness</td>
<td>2.5, 2.6, 2.7, 2.8</td>
</tr>
<tr>
<td>Primary activity efficiency</td>
<td>3.1, 3.2, 3.3, 3.4</td>
</tr>
<tr>
<td>Support activity efficiency</td>
<td>3.5, 3.6, 3.7</td>
</tr>
<tr>
<td>Threat</td>
<td>3.8, 3.9, 3.10, 3.11, 3.12, 3.13</td>
</tr>
<tr>
<td>Resource acquisition functionality</td>
<td>4.1, 4.2, 4.3</td>
</tr>
<tr>
<td>Resource management functionality</td>
<td>4.4, 4.5, 4.6, 4.7</td>
</tr>
</tbody>
</table>


Using the seven-factor solution matrix presented in Table 4.25 and the hypothesised ‘functionality’ dimensions shown in Table 4.28 above as an example, the variation on dimensional structures is evident. Factor two in the Table 4.25 matrix includes questions 4.6, 4.5, 4.2, and 4.3, or two resource acquisition functionality measures and two resource management functionality measures. Factor three in that same matrix includes questions 4.4, 4.7 and 4.1, being the remaining resource acquisition functionality measure and the final two measures of resource management functionality. This scenario occurred frequently in numerous trials not displayed here, with a similar situation appearing with primary activity efficiency and support activity efficiency questions.
In other words, the questions that measured these two dimensions generally did form two dimensions, however the question mix was different to that hypothesised. Given that the dimensions did usually group together but without a consistent structure, it was hypothesised that the dimensions did exist in the sporting industry. However rather than comprising two dimensions as in the final model proposed by Sethi and King (1994), for the purposes of this analysis they could be considered unidimensional as originally proposed.

Given that this would reduce the number of CAPITA dimensions to five in this analysis, the data was further constrained to produce a five-factor solution. The component matrix, KMO and Bartlett’s Tests, and variance explained tables that emanated from constrained solution 2 are shown below.

Table 4.29: Rotated Component Matrix 3 – Constrained Solution Step 2

<table>
<thead>
<tr>
<th>Qu. No.</th>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Ability of customers to order product</td>
<td>0.812</td>
<td>0.096</td>
<td>-0.159</td>
<td>-0.074</td>
<td>-0.011</td>
</tr>
<tr>
<td>4.2</td>
<td>Ability of customers to acquire product</td>
<td>0.768</td>
<td>0.214</td>
<td>0.022</td>
<td>-0.029</td>
<td>0.165</td>
</tr>
<tr>
<td>4.7</td>
<td>Ability of customers to evaluate performance</td>
<td>-0.730</td>
<td>-0.229</td>
<td>0.131</td>
<td>-0.158</td>
<td>0.137</td>
</tr>
<tr>
<td>4.4</td>
<td>Ability of customers to monitor team</td>
<td>0.704</td>
<td>-0.174</td>
<td>0.192</td>
<td>-0.099</td>
<td>0.089</td>
</tr>
<tr>
<td>4.3</td>
<td>Ability of customers to verify product</td>
<td>0.630</td>
<td>0.015</td>
<td>-0.072</td>
<td>0.001</td>
<td>-0.206</td>
</tr>
<tr>
<td>4.6</td>
<td>Ability of customers to transfer products</td>
<td>0.629</td>
<td>-0.156</td>
<td>0.001</td>
<td>0.299</td>
<td>-0.049</td>
</tr>
<tr>
<td>4.5</td>
<td>Ability of customers to upgrade products</td>
<td>-0.621</td>
<td>-0.257</td>
<td>0.306</td>
<td>0.106</td>
<td>0.111</td>
</tr>
<tr>
<td>2.9</td>
<td>Org. has capability to innovate</td>
<td>-0.572</td>
<td>-0.225</td>
<td>0.274</td>
<td>0.326</td>
<td>0.171</td>
</tr>
<tr>
<td>2.5</td>
<td>Web site provides access to channels</td>
<td>-0.526</td>
<td>0.056</td>
<td>0.423</td>
<td>0.202</td>
<td>-0.079</td>
</tr>
<tr>
<td>2.6</td>
<td>Web site market positioning</td>
<td>-0.522</td>
<td>-0.144</td>
<td>0.402</td>
<td>0.212</td>
<td>0.241</td>
</tr>
<tr>
<td>3.3</td>
<td>Impact on cost of collecting/storing products</td>
<td>-0.035</td>
<td>0.865</td>
<td>0.122</td>
<td>0.139</td>
<td>-0.004</td>
</tr>
<tr>
<td>3.2</td>
<td>Impact on cost of transforming inputs</td>
<td>-0.219</td>
<td>0.810</td>
<td>0.276</td>
<td>-0.101</td>
<td>0.071</td>
</tr>
<tr>
<td>3.4</td>
<td>Impact on cost of providing service</td>
<td>0.180</td>
<td>0.796</td>
<td>0.067</td>
<td>0.148</td>
<td>0.159</td>
</tr>
<tr>
<td>3.1</td>
<td>Impact on cost of receiving/storing data</td>
<td>-0.212</td>
<td>0.741</td>
<td>0.176</td>
<td>0.005</td>
<td>0.217</td>
</tr>
<tr>
<td>3.7</td>
<td>Impact on cost of coordinating activities</td>
<td>0.094</td>
<td>-0.706</td>
<td>0.302</td>
<td>0.209</td>
<td>0.123</td>
</tr>
<tr>
<td>3.8</td>
<td>Impact on costs if org changes suppliers</td>
<td>0.027</td>
<td>0.240</td>
<td>0.721</td>
<td>-0.103</td>
<td>-0.158</td>
</tr>
<tr>
<td>3.5</td>
<td>Impact on cost of personnel</td>
<td>0.075</td>
<td>0.379</td>
<td>0.717</td>
<td>-0.212</td>
<td>-0.076</td>
</tr>
<tr>
<td>2.8</td>
<td>Web site has influenced technical standards</td>
<td>-0.446</td>
<td>0.147</td>
<td>0.545</td>
<td>0.233</td>
<td>0.107</td>
</tr>
<tr>
<td>2.3</td>
<td>Org. has technical expertise</td>
<td>-0.262</td>
<td>0.203</td>
<td>0.517</td>
<td>0.272</td>
<td>0.021</td>
</tr>
<tr>
<td>3.6</td>
<td>Impact on cost of general management</td>
<td>0.028</td>
<td>0.185</td>
<td>0.402</td>
<td>-0.050</td>
<td>0.352</td>
</tr>
<tr>
<td>2.1</td>
<td>Web site aligned with business strategy</td>
<td>0.045</td>
<td>0.112</td>
<td>-0.060</td>
<td>0.843</td>
<td>0.030</td>
</tr>
<tr>
<td>2.2</td>
<td>Web site aligned with marketing policies</td>
<td>-0.097</td>
<td>-0.023</td>
<td>-0.066</td>
<td>0.797</td>
<td>0.063</td>
</tr>
<tr>
<td>2.7</td>
<td>Web site protected from imitation</td>
<td>-0.153</td>
<td>0.262</td>
<td>0.127</td>
<td>0.567</td>
<td>0.002</td>
</tr>
<tr>
<td>3.9</td>
<td>Impact on ability to evaluate suppliers</td>
<td>0.045</td>
<td>0.017</td>
<td>0.046</td>
<td>-0.008</td>
<td>0.836</td>
</tr>
<tr>
<td>3.11</td>
<td>Impact on ability to evaluate customers</td>
<td>-0.201</td>
<td>0.349</td>
<td>0.055</td>
<td>0.001</td>
<td>0.736</td>
</tr>
<tr>
<td>3.10</td>
<td>Impact on ability to vertically integrate</td>
<td>0.226</td>
<td>0.153</td>
<td>-0.316</td>
<td>0.250</td>
<td>0.840</td>
</tr>
</tbody>
</table>

Table 4.30: KMO and Bartlett’s Test – Constrained Solution Step 2

<table>
<thead>
<tr>
<th>KMO and Bartlett’s Test</th>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td>Approx. Chi-Square</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.468</td>
</tr>
</tbody>
</table>

Table 4.31: Variance Explained 2 – Constrained Solution Step 2

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1.000</td>
<td>6.139</td>
<td>23.611</td>
<td>23.611</td>
</tr>
<tr>
<td>5.000</td>
<td>1.554</td>
<td>5.979</td>
<td>61.529</td>
</tr>
<tr>
<td>6.000</td>
<td>1.313</td>
<td>5.049</td>
<td>66.578</td>
</tr>
<tr>
<td>8.000</td>
<td>0.865</td>
<td>3.237</td>
<td>74.338</td>
</tr>
<tr>
<td>9.000</td>
<td>0.807</td>
<td>3.105</td>
<td>77.443</td>
</tr>
<tr>
<td>10.000</td>
<td>0.772</td>
<td>2.968</td>
<td>80.411</td>
</tr>
<tr>
<td>11.000</td>
<td>0.696</td>
<td>2.678</td>
<td>83.088</td>
</tr>
<tr>
<td>12.000</td>
<td>0.657</td>
<td>2.527</td>
<td>85.616</td>
</tr>
<tr>
<td>13.000</td>
<td>0.570</td>
<td>2.192</td>
<td>87.808</td>
</tr>
<tr>
<td>14.000</td>
<td>0.540</td>
<td>2.078</td>
<td>89.880</td>
</tr>
<tr>
<td>15.000</td>
<td>0.526</td>
<td>2.025</td>
<td>91.911</td>
</tr>
<tr>
<td>16.000</td>
<td>0.410</td>
<td>1.575</td>
<td>93.486</td>
</tr>
<tr>
<td>17.000</td>
<td>0.355</td>
<td>1.386</td>
<td>94.852</td>
</tr>
<tr>
<td>18.000</td>
<td>0.276</td>
<td>1.063</td>
<td>95.914</td>
</tr>
<tr>
<td>19.000</td>
<td>0.247</td>
<td>0.951</td>
<td>96.865</td>
</tr>
<tr>
<td>20.000</td>
<td>0.205</td>
<td>0.758</td>
<td>97.653</td>
</tr>
<tr>
<td>21.000</td>
<td>0.177</td>
<td>0.682</td>
<td>98.335</td>
</tr>
<tr>
<td>22.000</td>
<td>0.151</td>
<td>0.578</td>
<td>98.914</td>
</tr>
<tr>
<td>23.000</td>
<td>0.110</td>
<td>0.423</td>
<td>99.337</td>
</tr>
<tr>
<td>24.000</td>
<td>0.088</td>
<td>0.337</td>
<td>99.674</td>
</tr>
<tr>
<td>25.000</td>
<td>0.063</td>
<td>0.241</td>
<td>99.915</td>
</tr>
<tr>
<td>26.000</td>
<td>0.022</td>
<td>0.085</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Table 4.31 presents an acceptable cumulative eigenvalue of 61.529%. Although factors six and seven have eigenvalues greater than 1.0, as stated, the data was constrained to five factors to better reflect the hypothesised unidimensionality of 'functionality' and 'efficiency'. Factors six and seven were subsequently excluded despite their eigenvalues, allowing the overall solution to merge together in a more meaningful way. Thus, the tables generated by the second stage of the solution, i.e.
the removal of questions 2.4, 3.12 and 3.13, and constraining the solution to five factors, presented the best representation of the underlying structure in the data of any solutions trialled, and hence became the final solution.

The component matrix (Table 4.29) illustrates little cross factor loading, and no dimensions with less than three measures, which according to Boyd et.al. (1989) aids in identifying and naming factors. Additionally, all of the 'functionality' measures grouped together as predicted, with three additional measures. However not all of the 'efficiency' measures grouped together, but questions 3.1, 3.2, 3.3 and 3.4 (primary activity efficiency) did group together, with an additional 'support activity efficiency' measure. The remaining two 'support activity efficiency' measures formed a new factor with three unrelated measures.

The KMO and Bartletts test results were unchanged from step one of the final solution, and the five factors still represent an acceptable 61.529% of total variance explained. Finally, despite the fact that the final solution presented confirmed the existence of Sethi and King's (1994) hypothesised dimensions of CA provided by an IT application, the results also demonstrate some important differences in how these dimensions should be considered in the sporting industry.

4.10 Conclusion

The process of presenting the results of the questionnaire throughout chapter 4 provides a pre cursor to the interpretation and implication stage of the research to be conducted in chapter 5. The implication of the final solution generated by the exploratory factor analysis, along with the results of all other questions asked in the survey, are examined in chapter 5 in terms of the original objectives of the study, and within the framework of the Business Activity Model.
CHAPTER 5: DISCUSSION AND IMPLICATIONS

5.1 Introduction

According to Page and Meyer (2000), having presented the results of the survey in chapter 4, the objective of the discussion section should be "linking (the) data to the present body of knowledge" (2000:253). This study's newly conceptualised Business Activity Model facilitates the comparison of the data and the relevant literature themes. With this in mind, chapter 5 discusses, interprets, explains and analyses the results, in terms of the Business Activity Model, the literature themes highlighted in chapter 2, and the research objectives.

To aid in the logical progression of this chapter, the literature themes have been included in a Business Activity Model below to illustrate their respective positions in sporting organisations' operations. In addition, Shilbury's (1994) sporting value chain activity examples have been included to provide depth to the model.

**Figure 5.1: Sporting Organisation Business Activity Model**

![Diagram of Business Activity Model]

The model above uses the dotted lines between the seven Internet dimensions and the value chain to represent the seventh literature theme: Assimilation theory. Using this
model as the framework for analysis, secondary objectives 2, 4 and 5 are addressed. They are:

2. To test the application of the generic Business Activity Model on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations;

4. To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).

Secondary objective 2 relates to the ‘C’ shaped band that represents the Internet and its seven dimensions and surrounds the value chain. It is considered in this chapter under the sub-heading “the application of the Business Activity Model on the sport industry”, which includes the identification of key areas of CA via the Internet for sport, and a review of each Internet CA dimension.

The gap analysis component of secondary objective 4 is resolved using the seven sectional themes that constituted the survey instrument, and the Business Activity Model. This discussion is conducted under the sub-heading ‘Internet practices of Australian Professional Sport’, and as stated is based on the seven survey themes, two of which are further divided in order to more clearly discuss the results. The data is therefore discussed according to the following sections:

5.3.1 Site Goals
5.3.2 Features of the Web Site
5.3.3 Impact of the Internet on the Organisation
5.3.4 Impact of the Web Site on Users
5.3.5 Web site Details
• Fantasy Sports
• Managers Perceptions of Online Commerce
• Online Partnerships and Alliances
• Internet Vision Statements
• Internet Project Teams
• Online Community Building.

5.3.6 Background Information Regarding the Web Site
• Web Site Driving Forces
• Impact of the Web Site
• Management Systems

5.3.7 Background Information Regarding the Respondent

These sections contained all 26 questions in the survey with associated questions grouped together. Additionally, the data contained in each section is directly linked to the sporting organisation Business Activity Model provided during the discussion. Using these themes assured the explanation of data from every question, in a logical sequence, and with the underpinning of the research model.

An extension of the gap analysis, secondary objective 5 is also conducted under the sub-heading “Internet practices of Australian Professional Sport”. In addition to comparing the practice of Australian professional sports in general to theory, both an intra-league, and an international examination, is conducted where possible.

The three objectives are therefore considered in this chapter in two sections:

5.2 The Application of the Business Activity Model on the Sport Industry:
Secondary objective 2;

5.3 Internet practices of Australian professional sport: Secondary objectives 4 and 5.
In line with the recommendations of Page and Meyer (2000), the reader will be referred back to the tables and figures provided as evidence in chapter 4 where appropriate, while the discussion looks toward chapter 3 to "find areas that both support and contradict ... the theories built from the findings of others" (2000:254).

The sample return rate of 87% lends weight to the purposes of this chapter. When considering the data presented in the previous section in relation to Australian professional sporting organisations, and in particular the four leagues represented, any identified themes within the literature review can be confidently linked to a representative population.

Also worth re-establishing are the benefits of obtaining a number of questions in the survey instrument from both Sethi and King (1994), and Caskey (1998). This process served to both provide some validation of this survey, and importantly, provided the opportunity to make comparisons with CAPITA issues in a range of industries, and in the case of Caskey (1998), between Australian and United States professional sporting organisations. Wherever possible this benefit is exploited.

In short, the purpose of chapter 5 is to integrate the findings displayed in the previous chapter with the Business Activity Model and the themes outlined in the literature review, with particular reference to assessing the study objectives. This process is conducted in two stages, beginning next with a review of the application of the generic Business Activity Model on the sport industry.

5.2 The Application of the Business Activity Model on the Sport Industry

Secondary objective 2 called for a test of the application of the generic Business Activity Model on the sport industry, and the identification of key areas of CA via the Internet for sport. The process used to undertake this objective included an initial confirmatory factor analysis that examined whether there were dimensional differences using a sporting population, and secondly given the differences, an exploratory factor analysis to identify what the key areas of emphasis in the sample
were. This process culminates in an individual review of each of the CA dimensions as they relate to sport.

5.2.1 Confirmatory Factor Analysis Results

The purpose of the confirmatory factor analysis (SEM) was the constriction of the data to the CAPITA construct proposed by Sethi and King (1994), in order to assess the fit. The data displayed in chapter 4 provided clear evidence that the proposed dimensions did not easily fit the sporting industry, predominantly via the RMSR (0.189). This element of the research replicated the first element of Sethi and King's (1994) research, the estimation of a CAPITA construct.

Having established that the dimensions of CA are effected by the sporting industry, the bulk of the discussion and implications of this finding occurred on the completion of the exploratory factor analysis. In other words, the confirmatory factor analysis identified that the proposed construct did not clearly fit the unique nature of the sporting industry. However the exploratory factor analysis provided the missing information required to estimate appropriate areas of dimensional focus for CA for the sporting industry. In addition, by bringing in the theoretical issues identified in chapter 2, the exploratory factor analysis results are further enhanced, and provide the opportunity to estimate reasons for the confirmatory factor analysis.

In short, a discussion of the confirmatory results and their implications, other than to acknowledge that the proposed construct did not possess perfect fit with this study's data, is premature. The purpose of the confirmatory factor analysis was to establish a need for the exploratory factor analysis. The exploratory factor analysis results, and a revision of theory, were required before a discussion of the entire process could take place. This discussion then, begins in 5.2.2 below.

5.2.2 Exploratory Factor Analysis Results

Sethi and King (1991,1994) have completed pioneering work in the research and development methodologies in the field of information systems. Having recognised
both the theoretical and organisational importance of measuring IT investments, and the criticisms regarding a lack of theories, the absence of a paradigm, and for being an eclectic collection of diverse fields, they set out to develop a tool for the measurement of the CA provided by IT. With the objective of defining and distinguishing IS from other disciplines, and measuring its dimensions, their work was an excellent platform from which to extend Internet CA research into the sport business industry. This discussion therefore explores the similarities and differences between obtaining CA through an IT application in the general business community, and the sporting industry.

Having completed the confirmatory factor analysis, the exploratory factor analysis followed a process of trial and error prescribed by the literature (Hair et al., 1998; Page & Meyer, 2000) in order to evaluate the specific nature of the CAPITA dimensions proposed by Sethi and King (1994) in relation to the Australian professional sports teams sampled. The final solution which best represented the underlying structure of the data provided some important contrasts between this study’s population and those dimensions proposed by Sethi and King (1994).

These contrasts can be broadly sorted into two categories representing the variations detected in the importance or relevance of certain elements of the CAPITA construct: variations in proposed measures and variations in the proposed dimensions. Although these variations are clearly related they are initially discussed separately below, culminating in a review of the final solution.

**Measures of CAPITA Dimensions**

The review of the 29 measures (i.e. questions) of CA proposed by Sethi and King (1994) centered on an analysis of any questions that were either not relevant to the sporting industry, or provided unacceptable statistical complications for data interpretation. As stated in chapter 4, three questions were ultimately removed from the construct, with speculation over the merit of a number of other measures, particularly those relating to the dimension of ‘threat’.
The first question removed was 2.4, measuring the extent to which top management is involved in, and supports the organisations' web site. Sethi and King (1994) included the question as a measure of the dimension of synergy, which also included questions 2.1, 2.2, 2.3, and 2.9. Question 2.4 mirrored the 'leadership' theme identified in the literature, which was also displayed in Figure 5.1 as an element of synergy.


In short, the issue of web site leadership by senior management in the form of involvement and support was considered a literature theme in itself. Indeed, the exploratory factor analysis consistently separated it from the other measures prompting the conclusion that the question needed to be removed from the analysis. The implication therefore is not that the question should be permanently eliminated from further research in the sporting industry, but rather complimented by further measures of leadership, as an important example of synergistic CA opportunities.

The final questions removed were 3.12 and 3.13. These two questions were measures of the somewhat controversial CA dimension of 'threat'. In the initial solution these two questions factored strongly together, however two unrelated measures were also included in the dimension (2.8 and 2.9), with question 2.9 also demonstrating high cross factor loading. These statistical limitations on the questions resulting from the exploratory factor analysis combined with literature queries over the dimension of 'threat' in the sporting context to justify their removal. Importantly, as noted in chapter 4, the factor solution results were statistically enhanced upon their removal.

**CAPITA Dimensions and the Sporting Industry**

Having removed three of Sethi and King's (1994) CAPITA measures in constrained solution step 1, a seven-factor solution was generated. The loose relationship
between the structure of these seven dimensions and those proposed by Sethi and King (1994) prompted a detailed examination of the impact of the unique characteristics of the sporting industry on the concept of CAPITA.

The first dimension considered was ‘functionality’. The results of numerous ‘non-CAPITA questions’ in the survey clearly indicated that the emphasis for sporting organisations’ web sites was solely upon customers and supporters. Because functionality is a core requirement of customers and supports, its importance as a CA dimension was reinforced in the sport sample. However, unlike the two-dimensional dimension of ‘functionality’ ultimately identified by Sethi and King (1994), the results of this study and its conditions were more supportive of the originally hypothesised unidimensional concept of ‘functionality’.

The ‘functionality’ measures consistently factored together during trials confirming the dimension’s relevance, however they did not factor according to the ‘resource acquisition’ and ‘resource management’ separation proposed by Sethi and King (1994). Although the small sample size may have contributed to these results, the lack of support for any distinction in the dimension based on other questions in the survey, resulted in the supposition of unidimensionality. Again, the final solution resulted in all seven measures of functionality factoring together, supporting this thinking. This is not to suggest that the two dimensions do not exist independently for sport, but rather that with the given measures, and considering sports web sites, sport managers could at this point address functionality applications simultaneously.

A similar review process, and ultimately decision process, was undertaken on the dimension of ‘efficiency’. The final solution did not however support this hypothesis. The ‘primary activity efficiency measures’ all factored together, however all but one of the ‘support activity efficiency measures’ did not. The two dimensional nature of the efficiency measure as proposed by Sethi and King (1994) was therefore confirmed in this population.

The next dimension considered was that of ‘threat’. To repeat, a number of authors including Sloane (1971), Dabscheck (1975) Stewart (1984), and Stewart and Smith (1999) identify the peculiar economics of sport. This concept is directly linked to the
dimension of ‘threat’ through its impact on customer behaviour in the sporting industry. The dimension’s impact on organisations was proposed by Porter (1985), and described by Sethi and King as follows:

IT applications which reduce a firm’s switching costs and facilitate supplier selection and backward integration reduce the bargaining power of suppliers. Analogously, applications which assist in forward integration and customer selection and which increase customers’ search-related and switching costs diminish the bargaining power of customers (1994:1615).

Sethi and King’s (1994) description of ‘threat’ impacts heavily on how sport managers should consider this CAPITA dimension, an issue discussed throughout this chapter. However, based on the final solution generated by the exploratory factor analysis, which included measures of ‘threat’, Table 5.1 below was generated to compare the CAPITA dimensions hypothesised by Sethi and King (1994) and the underlying structure presented by the data from this study.

<table>
<thead>
<tr>
<th>CA Dimensions for General Industry IT Applications</th>
<th>Measures</th>
<th>CA Dimensions for Sporting Industry IT Applications</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synergy</td>
<td>2.1,2.2,2.3,2.4,2.9</td>
<td>Functionality</td>
<td>4.1,4.2,4.3,4.4,4.5,4.6,4.7</td>
</tr>
<tr>
<td>Preemptiveness</td>
<td>2.5,2.6,2.7,2.8</td>
<td>Primary activity efficiency</td>
<td>3.1,3.2,3.3,3.4,3.7</td>
</tr>
<tr>
<td>Primary activity efficiency</td>
<td>3.1,3.2,3.3,3.4</td>
<td>Support activity efficiency</td>
<td>2.3,2.8,3.5,3.6,3.8</td>
</tr>
<tr>
<td>Support activity efficiency</td>
<td>3.5,3.6,3.7</td>
<td>Synergy</td>
<td>2.1,2.2,2.7</td>
</tr>
<tr>
<td>Threat</td>
<td>3.8,3.9,3.10,3.11,3.12,3.13</td>
<td>Threat</td>
<td>3.9,3.10,3.11</td>
</tr>
<tr>
<td>Resource acquisition functionality</td>
<td>4.1,4.2,4.3</td>
<td>Resource management functionality</td>
<td>4.4,4.5,4.6,4.7</td>
</tr>
<tr>
<td>Resource management functionality</td>
<td>4.4,4.5,4.6,4.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5.1 illustrates the relationship between the dimensional groups. The sporting CAPITA dimensions of ‘functionality’ and ‘primary activity efficiency’ closely resemble those proposed by Sethi and King (1994), despite the unidimensionality of
‘functionality’. The sporting CAPITA dimension of ‘threat’ also closely resembles the proposed dimension with the removal of questions 3.12 and 3.13. The sporting dimensions ‘synergy’ and ‘support activity efficiency’ only loosely resembled their proposed counterparts, and the dimension of ‘preemptiveness’ was particularly disjointed.

The ‘preemptiveness’ CAPITA dimension proposed by Sethi and King (1994) consisted of questions 2.5, 2.6, 2.7 and 2.8, with its underlying concept incurring similar relevance barriers as ‘threat’ due to the peculiar economies of sport already covered. Question 2.6 for example, forcing competitors to ‘adopt less favourable market postures’, runs counter to unique mutual interdependency theories outlined in the literature. Additionally, the proposed dimension, whilst necessary when considering the large variety of IT applications against which CA can be measured, was not as applicable to organisational web sites. Question 2.7, the ability to offer ‘barriers against imitation such as patents, copyrights and trade secrets’, would be applicable to specific new technology, but does not apply to the web site concept, or many of its functions. This particular IT application is unprotectable.

5.2.3 CA Dimensions

To this point the confirmatory and exploratory factor analysis process has been reviewed, with particular attention to the impact of sport on both the measures and dimensions of CAPITA. A brief review of each dimension, including their generic measures, is now provided prior to concluding remarks.

Synergy

The ‘Synergy’ dimension was measured using questions 2.1, 2.2, 2.3, 2.4 and 2.9, listed below:

2.1 Our web site is aligned with our organisation’s business strategy.
2.2 Our web site is aligned with our organisation's marketing policies and practices.

2.3 Our organisation has technical expertise in web technologies.

2.4 Top management is involved in and supports our web site.

2.9 Our organisation has the capability to continuously innovate and enhance our web site.

The 'Synergy' dimension of CA through the Internet is a critical element of online success. There does not, however, appear to be any sport specific focus or consideration on this dimension. In this study, question 2.4 continuously separated itself from the other measures. Given the importance of top management support or leadership in the literature, this result is consistent with the view that leadership is a distinct synergistic process, rather than a measure of the dimension.

Preemptiveness

The 'Preemptiveness' dimension was measured using questions 2.5, 2.6, 2.7 and 2.8, listed below:

2.5 Our web site provides unique access to channels such as the media, ticket distributors, or retailers.

2.6 Our web sites market positioning is such that competitors are forced to adopt less favourable postures.

2.7 Part or all of our web site is protected from imitation by institutional barriers such as patents or copyrights.

2.8 Our web site has influenced the development of technical standards and practices in the industry.

The 'Preemptiveness' dimension was found to be affected by both the sporting industry, and the web site IT application being investigated. Although 'Preemptiveness' is likely to be an important element of CA through the Internet that
warrants inclusion in the generic Business Activity Model, the dimension requires specialised consideration in the sport industry for two reasons. Firstly, the peculiar economies of sport such as those encapsulated by mutual interdependency theories, impact upon issues such as forcing competitors to adopt less favourable postures, making the dimension less relevant in the sporting context. Secondly, the IT application being considered was primarily the web site, which is inherently difficult to protect. In short, 'preemptiveness' is not at this point a major CA consideration in the Business Activity Model when specifically assessing sporting organisations' development of their web site.

**Primary Activity Efficiency**

The 'Primary Activity Efficiency' dimension was measured using questions 3.1, 3.2, 3.3, and 3.4, listed below:

3.1 Impact of the Internet on the following:
- Cost of receiving, storing, and disseminating inputs e.g. player/member information, warehousing materials, e.g. uniforms equipment.
- Cost of transforming inputs into products e.g. training, ticketing.
- Cost of collecting, storing and distributing products to customers e.g. membership/merchandise processing, ticketing.
- Cost of providing service to maintain or enhance the value of the product e.g. servicing sponsors/members, providing additional information.

The 'Primary Activity Efficiency' dimension of CA via the Internet was clearly evident within the sporting sample. In addition, this dimension was not influenced by the sporting industry, suggesting that it is as important to the study’s sample as it is to the wider business community.
Support Activity Efficiency

The ‘Support Activity Efficiency’ dimension was measured using questions 3.5, 3.6, and 3.7, listed below:

Impact of the Internet on the following:

3.5 Cost of recruiting, hiring, training, development, and compensation of personnel, both athletes and off field staff.
3.6 Cost of general management activities, e.g. planning, finance, accounting, legal, and government affairs.
3.7 Cost of coordinating different activities described above, such as purchasing, processing, marketing, sales, etc.

As with ‘Primary Activity Efficiency’, ‘Support Activity Efficiency’ was clearly evident and generically applicable to the sporting industry. As such it does not warrant specialised consideration in the Business Activity Model.

Threat

The ‘Threat’ dimension was measured using questions 3.8, 3.9, 3.10, 3.11, 3.12, and 3.13 listed below:

Impact of the Internet on the following:

3.8 Costs your organisation would incur if it changed to alternate suppliers, e.g. merchandise, apparel, ticketing.
3.9 Your organisations’ ability to evaluate various suppliers and choose the most appropriate supplier.
3.10 Your organisations’ ability to threaten vertical integration, i.e. threaten to perform some of the functions performed currently by its suppliers and customers.
3.11 Your organisations’ ability to evaluate and choose the most appropriate customer, e.g. sponsors or member information.
3.12 Costs which customers would incur if they change to alternate teams or sports.

3.13 Customers' cost of locating alternate teams or sports.

The dimension of 'Threat' has proven particularly interesting throughout the study. Although relevant with the consideration of partnerships and alliances contained in the dimension, 'Threat' is heavily impacted by the peculiar economies of sport. In short, sport managers should consider Threat a key element of the Business Activity Model, both because of the significant leverage that can be obtained by its strategic manipulation, and because it needs such unique consideration in the sporting industry. The ability to strategically manipulate the 'Threat' dimension for CA in the sporting industry, clearly warrants further investigation.

**Resource Acquisition Functionality**

The 'Resource Acquisition Functionality' dimension was measured using questions 4.1, 4.2 and 4.3 listed below:

4.1 Order or put in a request for the product.
4.2 Acquire the product i.e. be in physical possession of the product, e.g. merchandise or tickets.
4.3 Verify that the product meets specifications, e.g. check membership entitlements or merchandise details, or check game dates/times.

The 'Resource Acquisition Functionality' dimension warrants consideration by the sport industry due to the emphasis placed on customers as users of sporting organisation's web sites, making functionality a key issue. However, 'resource acquisition functionality' can be considered simultaneously with 'resource management functionality' in terms of the Business Activity Model, and in the context of the sporting industry and their web sites.
Resource Management Functionality

The ‘Resource Management Functionality’ dimension was measured using questions 4.4, 4.5, 4.6, and 4.7 listed below:

Impact of the web site on the ability of customers to do the following:
4.4 Monitor the team, i.e. keep track of results or players.
4.5 Upgrade products if necessary, e.g. memberships, match tickets.
4.6 Transfer or dispose of products such as memberships or tickets.
4.7 Evaluate the overall performance of the team through regularly updated team and league results and information.

As stated above, ‘Resource Management Functionality’ is important to sporting organisations attempting to improve CA via the Internet, however functionality issues can be considered simultaneously.

5.2.4 The Business Activity Model and Sport: Final Comments

Secondary objective 2 called for a test of the application of the generic Business Activity Model on the Australian sport industry, and the identification of key areas of CA via the Internet for sporting organisations. This investigation was conducted using both a confirmatory and an exploratory factor analysis, and successfully achieved the secondary objective, thus contributing to the study’s primary objective of identifying CA opportunities and strategies via the Internet.

The findings of the confirmatory factor analysis provided an uneasy fit with the proposed dimensions, indicating that there were indeed differences in the way sport managers should consider the dimensions proposed by Sethi and King (1994). It is important to reiterate that the existence of these seven dimensions was not in dispute. At issue was the impact of the sporting industry, and ultimately the areas of emphasis for sporting organisations. To this end there were some valuable findings.
Firstly, the dimensions of ‘Synergy’, ‘Primary Activity Efficiency’, and ‘Support Activity Efficiency’ are not impacted by the sporting industry when considering CA through organisational web sites. Further, ‘Resource Acquisition Functionality’ and ‘Resource Management Functionality’ are considered critical, but can be assessed under the solitary ‘Functionality’ dimension.

Of particular interest was the impact of sport on the dimensions of ‘Preemptiveness’ and ‘Threat’. Both dimensions exist for sporting organisations, however they are clearly industry specific and require specialised CA consideration.

Some conclusions are evident when returning to the secondary objective at hand: To test the application of the generic Business Activity Model on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations. Every new element of the generic Business Activity Model is relevant to the sporting industry and should be considered as a potential source of CA. The sporting industry does however clearly impact upon the model, particularly in the areas of ‘Preemptiveness’ and ‘Threat’. Additionally, there appears at this point to be little distinction between functionality issues, although by drawing in the results of question 15 of the survey that indicated customers were the primary user of the sites, this dimension can clearly be considered a key area of CA.

These conclusions are helpful to practitioners due to their illumination of the impact of sport on the new Business Activity Model, and to assist in the identification of key areas of CA through the Internet. It is apparent however, that further specific research would be useful in this area, particularly given that the sample size, although representing the bulk of the population, is not ideal for the purposes of factor analysis. At this point however, sport managers would be wise to consider every element of the Business Activity Model during the Internet strategy formulation phase, paying particular attention to the specialised nature of ‘Preemptiveness’ and ‘Threat’, and the critical importance of a highly functional web site.
5.3 Internet Practices of Australian Professional Sport

The second section of this chapter is designed to achieve secondary objectives 4 and 5, as described below:

4. To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).

To achieve this, the results of the sectional themes in the questionnaire are discussed in relation to the Business Activity Model, and where relevant, online strategy literature and the findings of Caskey (1998). The survey themes to be discussed are re-listed below:

5.3.1 Site Goals
5.3.2 Features of the Web Site
5.3.3 Impact of the Internet on the Organisation
5.3.4 Impact of the Web Site on Users
5.3.5 Web site Details
   - Fantasy Sports
   - Managers Perceptions of Online Commerce
   - Online Partnerships and Alliances
   - Internet Vision Statements
   - Internet Project Teams
   - Online Community Building.
5.3.6 Background Information Regarding the Web Site
   - Web Site Driving Forces
   - Impact of the Web Site
   - Management Systems
5.3.7 Background Information Regarding the Respondent
The discussion therefore seeks to address secondary objectives 4 and 5, using the survey’s sectional themes, and underpinned by the Business Activity Model. The first theme to be addressed is Site Goals.

5.3.1 Site Goals

The initial examination of web site goals amongst the respondents came via question 1, which was taken directly from question 9 of Caskey’s (1998) instrument. Caskey noted United States respondents had some difficulty with this question (1998:55), with only 29 usable responses from the 45 respondents in his study. Confusion over the question was predominantly overcome in this research however, through the nature of the telephone interview data collection, and the opportunities for clarification offered by the technique.

As an introductory question, the ranking of site goals served as an indication of the nature of questions to follow, and related closely to leadership, the impact of managers’ perception of online commerce, and the subsequent impact on strategy implementation, reviewed in chapter 2. Site goals therefore, should be considered in the context of the ‘Synergy’ dimension of the Business Activity Model. Understanding the ranking of site goals by organisations serves to frame the objectives against which their web strategies are formulated, and success is measured. Hence it is a key component in evaluating ‘Synergy’.

Figure 4.2 summarised all the rankings, and illustrated the importance of the goal “offering information” (31%), alongside extending the brand (22%), and both generating revenue and promoting other media endeavours (19%). The data obtained by Caskey via this question provides a remarkable comparison, and is displayed in Table 5.2 below:
Table 5.2: Caskey Table 9C: Ranking Site Goals – Team/League Sites

<table>
<thead>
<tr>
<th></th>
<th>Offer timely, useful information</th>
<th>Generate revenue</th>
<th>Extend an existing brand</th>
<th>Promote other media endeavors</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Important (1)</td>
<td>81% (13)</td>
<td>0%</td>
<td>13% (2)</td>
<td>0%</td>
<td>50% (1)</td>
</tr>
<tr>
<td>(2)</td>
<td>6% (1)</td>
<td>33% (6)</td>
<td>44% (7)</td>
<td>19% (3)</td>
<td>0%</td>
</tr>
<tr>
<td>(3)</td>
<td>13% (2)</td>
<td>20% (3)</td>
<td>19% (3)</td>
<td>44% (7)</td>
<td>50% (1)</td>
</tr>
<tr>
<td>(4)</td>
<td>0%</td>
<td>47% (7)</td>
<td>25% (4)</td>
<td>25% (4)</td>
<td>0%</td>
</tr>
<tr>
<td>Least Important (5)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>13% (2)</td>
<td>0%</td>
</tr>
</tbody>
</table>


Table 5.1 presents some interpretation difficulties, however, on converting the data to graphical form using the same scoring calculation methods and figures used in chapter 4, the rankings and percentages of web site goal importance generated by United States sporting organisations was found to be extraordinarily similar to those of Australian sporting organisations. Refer to Figure 5.2 below:

Figure 5.2: Graphical Representation of Caskey Table 9C – United States Site Goals Ranking
When compared to the overall goal importance of this study’s respondent’s (Figure 4.2), Figure 5.2 provides almost identical overall web site goal rankings between Australian and United States sporting organisations. These similarities are also clearly illustrated in Table 5.3 below:

**Table 5.3: Overall Goal Importance Percentages – Australian and United States Sporting Organisations**

<table>
<thead>
<tr>
<th>Web Site Goal</th>
<th>Australian Sporting Organisations</th>
<th>United States Sporting Organisations</th>
</tr>
</thead>
<tbody>
<tr>
<td>To offer timely, useful information</td>
<td>31%</td>
<td>33%</td>
</tr>
<tr>
<td>Extend on an existing brand</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td>Generate revenue</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Promote other media endeavours</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

It is important to note some differences in the data sources for these results. The United States data was presented in 1998, and came from a total of 16 respondents. It is also worth noting the total of the Australian organisations equals 99% due to the rounding mechanisms in Microsoft Excel. Nevertheless the striking similarities in the site goals of the Australian and United States sporting organisations sampled provides excellent validation of further result comparisons undertaken in this chapter.

### 5.3.2 Features of the Web Site

Question 2 of they survey examined the features of the sporting club web sites, asking clubs to indicate the extent to which they disagree or agree with nine statements, on a seven point likert scale. Although this series of questions (the question 2 series), along with each of the 29 measures of CA proposed by Sethi and King (1994) were designed to examine the broader dimensions of CA, the descriptive results in chapter 4 also provide some critical insights into this research. Having said that, the two CA dimensions in the Business Activity Model that relate to these nine questions are ‘Synergy’ and ‘Preemptiveness’.
Questions 2.1 and 2.2 of the survey asked respondents to indicate the extent to which their web site aligned with the organisation’s broader business strategy and marketing policies and practices. Given that the mean score for business strategy alignment was 5.00 or ‘somewhat agree’, with marketing alignment only slightly higher at 5.23 (refer to Table 4.2) there is not a strong link between web site strategies and overall organisational objectives. A number of the literature themes are worth considering in light of these results.

The link between strategy development and both leadership and managers’ perceptions of online commerce was clearly defined in chapter 2. Indeed, the literature strongly expresses a view that online success would be significantly improved with active senior management involvement. It could be reasonably assumed that if the same leaders who determine organisation-wide strategies were actively involved in organisational web sites, those web sites and their marketing would be closely aligned to overall strategies. Given the soft link presented by these results, this level of senior management involvement in organisational web sites may well be missing.

An excellent secondary measure of this hypothesis is provided by question 2.4. The results of this question regarding top management involvement in, and support of organisational web sites, are also contained in Table 4.2. These results contribute to the discussion in two ways: first, in an analysis of the overall results; and second, in an analysis of the league breakdowns.

The overall mean result for question 2.4 is also relatively weak at 5.27, providing the first link between 2.1 and 2.2. In other words, in this sample, top management is only ‘somewhat’ involved in and supportive of the organisational web sites, with web site alignment with business and marketing strategies correspondingly, or perhaps consequently, weak.

Chapter 2 clearly identified the literature link between leadership theory and online success (Judson & Kelly, 1999; Khandpur & Wevers, 1998; Tapscott, 1996; Ware et al., 1998). The link between leadership and the alignment of online and organisational strategies is similarly clear, and was succinctly summarised by Ware
et al. (1998) with the statement that ideally "senior management would actively lead the efforts to build a Web-based business, would be actively involved in strategy formulation, would review and approve the business plans, and would regularly monitor progress" (1998:374). The correspondance between the results for top management involvement across leagues (question 2.4, mean 5.27), and the alignment of strategy formulation (questions 2.1, mean 5.00 and 2.2, mean 5.23) therefore, was accurately predicted by the literature.

The second supporting observation that can be made in relation to the results of question 2.4, is the link between leagues with higher executive level support and involvement, and a higher alignment of business and marketing strategies. The N.S.L. (6.00) and the N.R.L. (5.54), both had significantly higher results than the A.F.L. (4.92) and the N.B.L. (4.50), indicating that on average, clubs in these leagues had top management who were more actively involved in their web site development than in the other two leagues. The leadership theory highlighted earlier would therefore predict that the N.S.L. and the N.R.L should have a correspondingly stronger alignment between their web sites and wider organisational business strategies and marketing policies. An analysis of the league results for question 2.1 and 2.2 revealed that this was the case.

Although the order was reversed, the N.S.L. (2.1 mean 5.17, 2.2 mean 5.50) and the N.R.L. (2.1 mean 5.23, 2.2 mean 5.54) clubs both reported significantly higher mean responses for questions 2.1 and 2.2, than the A.F.L. (2.1 mean 5.00, 2.2 mean 5.08) and the N.B.L. (2.1 mean 4.50, 2.2 mean 4.70) clubs. In other words, the leagues with higher executive level support (N.S.L. and N.R.L.) had web sites that were more closely aligned with organisational business strategy and marketing policies and practices.

The implication drawn from these results is that, as predicted by the literature, there is a link between top management involvement in the web site, and the integration of the web site into higher organisational strategy. This observation highlights the importance of executive level involvement in web site management. It also provides further weight to the concept of a representative Internet project team, as do the results of question 2.3.
The lack of organisational technical expertise (question 2.3) in web technologies, was quite revealing. The mean score across leagues of 3.77 was below neutral on the likert scale, with only the N.S.L. respondents (mean:4.33, SD: 2.10) agreeing with the statement to a certain extent. The other three leagues all indicated various levels of disagreement with the statement, led by the N.B.L. teams (3.00, somewhat disagree). While it is possible to operate a functional web site without technical expertise through outsourcing, numerous authors (Abdel-Hamid et al., 1999; Bharadwaj, 2000; Roepke et al., 2000) reinforce the importance of incorporating both IT and managerial skills into a project team.

A number of explanations may account for the lack of technical expertise in web technologies exhibited by the sporting organisations surveyed, all of which can also be linked to some extent with leadership theory and management perception of online commerce. The first consideration in examining this issue is clearly the availability of resources. For an organisation without the financial capacity to employ personnel with technical expertise the point is, of course, moot. However, given the gross revenue figures (Table 4.21), the absence of technical expertise in A.F.L. and N.R.L. clubs for example, is unlikely to be based on lack of resources. This possibility is further stretched by the N.S.L. results, representing the league with the lowest gross revenues and the highest technical expertise. With this in mind, senior management’s perception of the value attached to this type of human resource is the next consideration.

As with many elements of organisational IT, the allocation of funds can be linked to leadership and management perception of online commerce. Although this relationship might appear obvious, an understanding of leadership theory is crucial for the development of new priorities. The organisations surveyed have either not seen any advantage in employing a technical expert, or are satisfied with outsourcing the technical elements of their web strategies. Either way, the outcome is contrary to the ideal scenario proposed by the literature, that would include technical representation within an Internet project team.

Curiously, question 2.9, which assessed the organisation’s capacity to continuously innovate or enhance the web site, a technical ability, generated the highest mean
score across leagues at 5.31. The conclusion that all respondents felt strongly that they were able to control their sites is apparently in conflict with the results of question 2.3. It is possible however, that the clubs are either confident in service providers, or interpreted the question as an examination of the information component of the sites, an element easily adapted by non-technical employees.

Further to this discussion, question 2.8 assessed the organisations’ perception of the degree to which the web site had influenced technical standards and practices within the industry. The question generated the second lowest mean result for the question 2 series with a score of 3.60, and the highest standard deviation of 1.97. The mean score was below neutral, indicating that on average sporting teams did not feel their web sites had influenced technical standards. On the other hand, the high standard deviations suggest great variability in relation to this statement. N.B.L. teams for example, had a standard deviation of 2.53.

The variability in responses between both leagues and individual clubs provides both insightful contrasts, and subsequently, tremendous opportunities. An examination of the practices of organisations with ‘successful’ web sites could ultimately lead to a ‘best practice’ scenario. This type of performance ‘gap’ identification was an important objective of this research. These results contribute to the realisation of that objective, and are highlighted in chapter 6. Questions 2.6 and 2.7 also contributed to that process, providing similar variability in responses.

Question 2.6 assessed the impact of the web sites’ market position on competitors, and presented a mean response across leagues of 3.48 (SD: 1.53), which was the lowest of the question 2 series, and well below neutral on the likert scale. The N.B.L. teams provided the lowest mean score (2.50) to any of the question 2 series. Question 2.7 reviewed the degree of protection from imitation available to the organisational web site, and provided consistent results across leagues with a mean score of 4.60. However, even though there was little mean variation across leagues, the standard deviations were quite high, peaking in the N.B.L. at 2.31.

With a mean score of 2.50 for question 2.6, N.B.L. clubs are clearly not confident in their sites’ relative strength in the market. Similarly, the high standard deviations
among N.B.L. clubs for question 2.7 (2.31) perhaps indicates a level of uncertainty regarding copyright protection. In contrast to N.B.L. clubs, N.R.L. clubs had a mean response of 4.38 for question 2.6. This result cannot be explained by the outcome of question 2.7 as N.R.L. clubs having a lower mean score (4.69) than N.B.L. clubs (4.70) in this instance. However, it is perhaps related to the fact that the N.R.L. reported the only positive mean score (4.08) in relation to the web site’s influence on technical standards. The N.R.L. clubs consider themselves industry leaders in web development, and are subsequently more confident in their market position.

Question 2.5 pertained to the web sites’ ability to provide unique access to channels such as the media, ticket distributors, or retailers. The mean score across leagues of 4.38 (SD: 1.91), included the variable means of the N.S.L. (3.75) and the N.R.L. (5.62). This result cannot be explained by the results of question 4, where N.S.L. clubs were in fact more confident than the N.R.L. with respect to the ability of their customers to perform various tasks. In this case the different means might be explained by different interpretations of the meaning of ‘unique’ access. It is possible that respondents simply hold different perceptions concerning the uniqueness of their various channels.

Reviewing the results of the features of the web site, two key considerations are evident. Firstly, the results appear to vindicate many of the views expressed in the literature, including leadership and management perceptions and their resultant impact on web strategy. This observation can be clearly linked to the literature’s espoused benefits of Internet project teams and their ideal makeup.

Secondly, the significant variations in some results both between and within leagues, indicates there are different perceptions and practices within the industry, providing an opportunity for further analysis of ‘successful’ web sites and their processes, with a view to developing best practice. These observations provide an excellent platform to assess the results of the question 3 series.
5.3.3 Impact of the Internet on the Organisation

As opposed to question 2, question 3 of the survey examined the impact of the Internet as a whole on the sporting clubs sampled. A seven point likert scale was again used, with clubs asked to indicate the extent to which the Internet (including e-mail, hyperlinks and the web site) had increased or decreased a range of costs and abilities. As such, the results of these questions relate closely to the growing literature related to assimilating Internet applications into entire operations, and specifically to the ‘Primary Activity Efficiency’, ‘Support Activity Efficiency’ and ‘Threat’ dimensions of the Business Activity Model. In short, it provided an opportunity to assess the extent to which the Internet has permeated the entire spectrum of operations amongst the sporting organisations surveyed.

The average mean for 11 of the 13 questions in this series (see Table 4.3) fell most closely to the ‘no change’ response (i.e. 4.50 or less). Given this result it may be concluded that the respondents, on average, feel that the Internet has had little impact on their organisations, at least in terms of the application which was described in question 3.

This result may in part be explained by differences between professional sporting team Internet applications, and the uses of IT by other industries. Many of the questions examine applications that, according to the results of questions 14 and 15, are not considered priorities by sporting organisations. Indeed, questions 14 and 15 indicate that a team’s impetus for (and users of) their web presence is almost exclusively external to the organisation, i.e. members, customers, supporters.

Another explanation for the lack of impact the Internet has made on costs for the sporting organisations, is the nature of the CA dimensions proposed by Sethi and King (1994). Six of the questions were based on Sethi and King’s hypothesised CA dimension of ‘threat’. As will be fully explored later, the CA dimension of ‘threat’ is based on items such as organisational and customer switching costs, and the ability of organisations to evaluate and choose alternative customers. The concept of ‘threat’ therefore, is tempered in the sporting industry by the peculiar economies of sport.
Questions 3.8 for example, in examining the costs organisations would incur if they changed to alternate suppliers, e.g. merchandising, apparel, ticketing, also generated a close to ‘no change’ mean score (4.13, SD: 0.98). The unique nature of the sporting product along with people’s high involvement may cause organisations to view some of the measures of threat, such as question 3.8, as being less relevant in the sporting industry than in other industries. Hence the ‘no change’ response.

Questions 3.9, 3.10 and 3.11 were also linked to the CA dimension of threat, and were phrased to measure the impact of the Internet on an ‘ability’, rather than a cost. As explained in chapter 4, these results have been reversed so that higher scores still represent higher CA for respondents. These three questions generated the highest mean results across leagues for the question 3 series; a predictable result given their close association with information provision (refer to Table 4.3), an inherent strength of the Internet and a focus of respondent goals.

These three questions also highlighted some variations among the leagues. Question 3.9, for example, saw N.B.L. teams generate the highest mean score (4.70) in relation to using the Internet for evaluating and choosing suppliers. A more detailed examination of the specific channels being accessed by the N.B.L. clubs may present CA opportunities for clubs in other leagues. Question 3.10 assessed ‘the ability to vertically integrate’, where the N.S.L. provided the highest mean score (4.92). It is possible that the relatively small scale of operations for N.S.L. clubs provides them with greater opportunities for vertical integration techniques such as ground ownership and in-house ticketing arrangements.

Finally, question 3.11 which assessed ‘the ability to evaluate and choose customers’ generated the highest mean score across leagues of 4.98 (SD: 1.06). The N.S.L. generated the highest league mean with 5.33. Again, given these questions represented the concept of ‘threat’, a concept with different dimensions in the sporting industry, these results should be interpreted cautiously. The relevance of the results in other words, is subject to confirmation of the relevance of the questions.

Questions that measured internal applications of the Internet, such as question 3.4 that examined the cost of providing service to maintain or enhance the value of the
product, for example servicing sponsors/members or providing additional information, also typically provided a flat or even negative response. Question 3.4 had a mean score across leagues of 4.50 (SD: 1.53). The equivalent of either 'no change' or 'somewhat decreased', this was the greatest positive effect on costs incurred by the organisation (i.e. a decrease), and can in part be explained by the questions' focus on providing value for customers. Indeed, despite the fact that both the N.B.L. and the N.S.L. recorded means greater than 5.00, with 5.10 and 5.17 respectively, the mean results would indicate significant scope for increased CA according to assimilation theorists such as Armstrong and Sambamurthy (1999), DeLone and McLean (1992), Jarvenpaa and Ives (1991), Mahmood and Soon (1991), and Sethi and King, (1994).

Adding to this perception, question 3.4, through the N.R.L., provided the first negative mean cost impact (i.e. the Internet has actually increased the organisational cost) with 3.92 (SD: 1.75). In other words, the emergence of the Internet has provided an additional expense for some organisations that have not been offset by any cost savings or revenue generation. Although the Internet has in some ways increased areas of service for sporting organisations, (for example question 3.4), this result further highlights the CA opportunities in assimilation.

Question 3.5 examined the impact of the Internet on the cost of recruiting, hiring, training, developing and compensating personnel. The mean score across leagues for question 3.5 was 4.08 (SD: 0.85), with both the A.F.L. (3.92) and the N.R.L. (3.92), finding the Internet has again, on average, increased costs for the organisation in terms of human resources. Unlike question 3.4 where an additional service has been created, the human resource activities described in question 3.5 are not new, and it is not clear where organisations are incurring costs in this area that are attributable to the Internet. It is possible however that some additional startup hardware and staff training costs may have contributed to this result.

Questions 3.12 and 3.13 generated the most significant negative results for respondents, and were based on the impact of the Internet on costs customers incur in changing or locating alternate teams or sports. Again, it would be reasonable to hypothesise that the peculiar economies of sport reinforced by Sloane (1971),
Dabscheck (1975), Stewart (1984), and Stewart and Smith (1999), would impact on all of the measures of threat, and the final two questions of the question 3 series in particular. Sports team supporters are not likely to change teams or sports regularly (certainly not in comparison to other products), and in the event that a disgruntled supporter did decide to change teams, it is unlikely that that supporter would source his or her new team via the Internet. With this in mind, the results of these two questions are not surprising, indicating a slight decrease in customers' costs of locating or changing teams or sports (a negative in terms of threat for sporting organisations). However, most means still averaged around the 'no change' zone.

Even elements of Internet applications with strong links to the customer provided disappointing results in terms of an impact on costs. Questions 3.2 and 3.3 both included analogies that highlighted customer benefits e.g. ticketing, and also failed to provide mean results above 'no change'. Question 3.2, examining the cost of transforming inputs into products e.g. training or ticketing, resulted in a mean score across leagues of 4.33 (SD: 0.93). Both the N.B.L. and the N.S.L. had mean scores of 4.50 for this question, with the A.F.L. and N.R.L. providing mean scores of 4.23 and 4.15 respectively. Similarly, question 3.3, assessing the impact of the Internet on the cost of collecting, storing, and distributing products to customers, e.g. membership/merchandise processing, and ticketing, had a mean score across leagues of 4.40 (SD: 1.36), which was also a 'no change' response.

Question 3.6 provided further evidence that the Internet is not complementing traditional management activities and subsequently providing cost benefits. Assessing the impact of the Internet on the cost of general management activities, e.g. planning, finance, accounting, legal, and government affairs, question 3.6 provided a mean result across leagues of 4.25 (SD: 0.86). All mean results for this question were close to the 'no change' response, indicating that the Internet is having little effect on the organisations' cost of general management. The results of question 3.7, a review of the cost of coordinating the different activities described in question 3.6, supports this contention with a mean score across leagues of 4.38 (SD: 1.16).
The likely conclusion is that the Internet is not being used for 'knowledge management' such as Intranets, emails, and acquiring and distributing internal information, but rather almost exclusively as a customer communication and distribution tool. This observation lends further weight to a review of the CA opportunities offered by the Internet, and the online strategies of Australian professional sporting organisations.

Indeed, given these results it appears that the sporting clubs surveyed have either not attempted to, or have been unable to, generate the assimilation advantages as discussed in the literature review. This element of CA is highlighted by a number of authors (Armstrong & Sambamurthy, 1999; DeLone & McLean, 1992; El Sawy et al., 1999; Jarvenpaa & Ives, 1991; Mahmood & Soon, 1991; Raghunathan & Raghunathan, 1994; Sethi & King, 1994), who view the assimilation of IT across all aspects of organisational operation, as opposed to static applications with isolated advantages, as the critical component of IT strategy for contemporary organisations.

Despite the fact that it will become clear following a review of the question 4 series that the participating teams believe they have had considerable success in improving services to their customers, this success has not extended to either internal or business-to-business applications of the Internet. Customer service was the area of emphasis for the respondents, as illustrated by the results of questions 14 and 15. This observation of priorities does not unequivocally answer the question of whether the teams are either ignoring, or failing to achieve the value opportunities and CA offered by integrating the Internet into the entire organisational IT strategy.

The results suggest that the organisations surveyed are not attempting to obtain CA through integrating the Internet across their business. Internal applications in particular are not considered a priority. This may possibly be explained in some part by the size of sporting organisations compared to other businesses, in terms of employee numbers. As relatively small organisations it is possible that clubs do not perceive value in chasing these value opportunities. What is clear is that if the assimilation theorists highlighted in the literature review are correct, CA avenues are not being fully exploited by these sporting organisations. By definition therefore, opportunities exist.
5.3.4 Impact of the Web Site on Users

Question 4 of the survey returned the respondents' focus to their web site functionality. The questions examined the impact of the clubs' web sites on users, by asking respondents to describe how the web site has increased or decreased the ability of customers (members, supporters or the public) to perform 7 tasks. A seven-point likert scale was used again, however in this instance a lower score (increase in ability) represented a better result for the organisation.

Assessing both 'resource acquisition', and 'resource management functionality', the question 4 series correlate to the web site priorities already identified, and can be identified on the Business Activity Model. Given that in this population, customers were identified as the primary focus of the organisational web sites, the ability of those customers to perform tasks (i.e. functionality), would presumably be a priority.

Although the results for questions assessing functionality were generally quite high (Refer to Table 4.6), many of the questions still provided plenty of scope for improved CA. For example, questions 4.2 and 4.5 examined the ability of customers to both physically acquire the product, and upgrade products such as memberships and match tickets. With mean scores across leagues of 2.50 and 2.85 respectively, there is certainly some room for improvement in this element of customer functionality. A limitation that should be noted is that there is room to interpret the 'product' in such a way as to include visual and audio transmissions of games. However the issues of broadcasting via the Internet and web sites was outside the scope of this research. Nonetheless, the anecdotes provided in the survey, and verbal explanations during the telephone interviews clearly indicated a need to investigate this issue in further research.

The ability of customers to acquire a product would appear to only hinge on the administration of the packaging and postage of mainly either tickets or merchandise. Given the respondents' focus on customer satisfaction (question 15), this type of attention to detail should be a formality, particularly given that those customers would generally expect and accept the associated costs for utilising such a service. Similarly, while there are some additional administrative requirements associated
with providing customers with the ability to upgrade products if necessary, they are certainly not prohibitive. The assumption that the demand for an ability to upgrade products would be limited in the sporting industry also should not impact on the ability to conduct a relatively simple, administratively-based task.

In the product acquisition or upgrade elements of web site functionality, there were some significant variations amongst the leagues. In question 4.2 for example, the N.S.L. clubs (3.17) expressed a significantly lower response than other leagues in terms of the ability of customers to acquire products. In the area of product upgrades it was the N.B.L. clubs (3.20) that were the furthest behind in offering this service to customers. These results present specific opportunities for improved CA in these leagues.

Mullin (1985) promotes the concept of moving sports customers up the ‘frequency escalator’ of consumption. This process of ‘up-tiering’, although well suited to Internet technologies, does not appear to be occurring via organisational web sites. The ability to facilitate this process represents a major area of leverage for Australian sporting organisations, and should be vigorously pursued by strategy formulators, and in future research.

The results from questions 4.3 and 4.6 also promote mixed interpretations. Question 4.3 asked respondents to comment on the ability of customers to verify that products meet specifications e.g. check membership entitlements or game dates and times. Given that this is purely a content issue, and one that does not require regular updating, it would be reasonable to expect a better response than the reported mean score across leagues of 2.27 (Refer to Table 4.4).

Question 4.6 examined the ability of customers to transfer products, and generated the highest mean score across leagues in this section with 3.52, representing only a minor improvement in customers’ ability to perform the function. In the N.S.L. (3.92), the improvement was even more negligible. It is worth noting that, as with question 4.5, these questions (4.5 and 4.6) examined an aspect of consumer behaviour less likely to be required in the professional team sports environment than other industries. In short, the nature of the sporting product makes it unlikely that
customers would regularly utilise an upgrade or transfer service even if it were available. Nevertheless, as a relatively simple and inexpensive service, it is another element of CA that could be more fully exploited.

Assessing customers' ability to order or put in a request for the product (question 4.1), is an aspect of web site functionality that should represent a primary strategic focus for organisations, given it matches both stated web site goals, and what is presumably an organisation wide goal – sales! With this in mind the mean score across leagues of 2.17 (SD: 1.10) is positive without being overwhelming.

Rating close to a 'moderately increased' score, there is a reasonable argument based on the previous observation, to suggest that the product ordering element of web site functionality should not only be better, it should be a primary concern. Without doubt there is scope for improved CA for some organisations in this respect, with an emphasis on A.F.L. clubs (2.31) and N.S.L. clubs (2.33) in particular, to review this component of their web strategy.

The results from questions 4.4 and 4.7 were more positive. Question 4.4 rated the web sites' ability to assist customers and supporters to monitor the team's results and players, with question 4.7 focused on a similar service; the ability to evaluate team performance through results and information. The two questions of course, clearly matched both the primary site goal of offering information, and the respondents' overwhelming primary site users, customers and supporters. The mean scores across leagues for these questions were 1.46 and 1.54 respectively, also being the highest mean scores across leagues in this series. The N.S.L. reported the highest impact in both these questions with the extremely high mean scores of 1.25 for question 4.4, and 1.33 for question 4.7 (Refer to Table 4.4).

The Internet's ability to distribute information, and the high involvement of the sporting product, make the transmission of team results both relatively easy, and appealing. The mean scores for questions 4.4 and 4.7 represents a clear perception among respondents that their web sites have significantly increased customers' ability to monitor and evaluate their team. In fact, this is one of the few areas in which clubs are fully exploiting the CA offered by the Internet. This result is strongly
linked to both the inherent strengths of the Internet, and in particular, the focus of organisational web site strategies.

5.3.5 Web Site Details

The section of the questionnaire pertaining to web site details included eight questions emanating from either Caskey (1998), or prevalence in the literature. The ability to make comparisons was therefore magnified, with both Caskey’s United States data, and the literature themes identified in chapter 2 cited wherever possible. As has occurred throughout the chapter, the Business Activity Model will directly underpin the discussion, with regular reference to the relevant components.

As stated in the Introduction, this section of the survey generated a number of sub-themes that provide the opportunity to better analyse the data. In the case of the web site details, the themes reviewed were:

- Fantasy Sports
- Managers Perceptions of Online Commerce
- Online Partnerships and Alliances
- Internet Vision Statements
- Internet Project Teams
- Online Community Building.

Fantasy Sports

Question 5 of the survey was taken from the Caskey instrument (question 18) to measure the number of organisations currently offering fantasy sports participation through their web sites. As with online community building, fantasy sport products would be considered a ‘Primary Activity Efficiency’ activity in the Business Activity Model, in that it is an Internet generated component of sales.
The opportunity to compare the results of this study with United States sporting organisation counterparts, was part of secondary objective 5 of this research. To that end, questions taken from Caskey (1998) presented a valuable opportunity that was exploited. Table 5.4 reports the results of fantasy sport offerings amongst United States team/league sites:

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Content</th>
<th>Team/League</th>
<th>Commerce</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>26</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>31% (5)</td>
<td>12% (3)</td>
<td>50% (1)</td>
<td>0%</td>
</tr>
<tr>
<td>No</td>
<td>69% (11)</td>
<td>88% (23)</td>
<td>50% (1)</td>
<td>100% (1)</td>
</tr>
</tbody>
</table>

Source: Caskey (1998), An examination of the attitudes of sports marketers toward the use and viability of the world wide web as a profitable tool for marketing sports, Unpublished Thesis, George Washington University, Pg. 81.

In addition to the 12% of respondents in the Caskey study who indicated they have fantasy sport participation, 31% of respondents indicated they planned to implement the program within one year (Caskey, 1998:83). This compares with 6.25% of the population in this study currently offering fantasy sports participation. It is important to note that the same number of respondents (3) in both studies indicated they have fantasy sports participation. However, given the year of the Caskey study (and the likely uptake by some teams who indicated that intention), it is unlikely that this component of web site functionality is being implemented to the same extent amongst Australian professional sports teams.

Managers Perceptions of Online Commerce

Question 6 and 7 were also taken from the Caskey (1998) instrument, and investigated organisational attitudes to online profitability. As such, they were an important component of a manager’s perception of online commerce, and in turn the Synergy dimension of the Business Activity Model.
Question 6 assessed whether the organisations believed that with the current web user base and technology, sites offering sports content were currently capable of turning a profit on the Internet. The mean response across leagues in this study to this question was 66.67%, however there was considerable deviation, with N.B.L. respondents (50%) and A.F.L. respondents (53.85%) contrasting significantly with the resounding confidence of N.S.L. respondents (91.67%), as shown in Table 4.7. The implications for this contrast in attitudes towards profitability are difficult to gauge. Whilst the N.S.L. result of 91.67% might be interpreted as ‘blind confidence’ the respondents in the Caskey (1998) research demonstrated similar optimism. Table 5.5 below was provided by Caskey to display United States results.

Table 5.5: Result Comparison 2: Profitability Of Sports Sites Vs. Site Type

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Content</th>
<th>Team/League</th>
<th>Commerce</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>26</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Yes (%)</td>
<td>94% (15)</td>
<td>96% (25)</td>
<td>100% (2)</td>
<td>100% (1)</td>
</tr>
<tr>
<td>No</td>
<td>6% (1)</td>
<td>4% (1)</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Caskey (1998), An examination of the attitudes of sports marketers toward the use and viability of the world wide web as a profitable tool for marketing sports, Unpublished Thesis, George Washington University, Pp. 113.

Clearly United States clubs reported a more optimistic view of web site profitability than the majority of respondents in this study, with 96% of respondents believing sites offering sports content were currently capable of turning a profit on the Internet. It is, however, important to highlight the year of the Caskey study (1998) given that the respondents views may have changed dependent upon their consequent experiences. The many highly publicised ‘dot com’ collapses in recent times would presumably have influenced the perceptions of senior managers in all industries. As mentioned earlier however, some Australian respondents, and indeed the literature reviewed in chapter 2, support a healthy outlook for online profitability.

Question 7 of the survey (Caskey question 36) provided another dimension to the examination of online profitability. Asking respondents if profitability was a current goal of the web site, question 7 revealed that it was a current goal for 58.33% of organisations in this study. Curiously, N.S.L. clubs, having been the most optimistic
of Australian leagues surveyed in terms of profitability, were the lowest ranked league for profitability as a current goal, at 41.47%. N.R.L. clubs were the most likely (76.92%) to indicate profitability was a current goal of the site. Table 5.6 below shows the Caskey (1998) results for the same question.

Table 5.6: Result Comparison 3: Profitability as a Goal vs. Site Type

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Content</th>
<th>Team/League</th>
<th>Commerce</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>14</td>
<td>26</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>43% (6)</td>
<td>65% (17)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>No</td>
<td>57% (8)</td>
<td>35% (9)</td>
<td>100% (2)</td>
<td>100% (1)</td>
</tr>
</tbody>
</table>


These results indicate a similar attitude to profit between the Australian and United States professional sports teams surveyed, although again, the year of the Caskey study needs to be considered.

**Online Partnerships and Alliances**

Question 8 and 9 of the survey aimed to investigate organisational attitudes towards online partnerships with their respective leagues and rival teams, as well as with any commercial organisations. Online Partnership and alliances in the sporting industry, are activities conducted within the highly specialised Business Activity Model dimension of ‘Threat’. It is not a well understood area of CA, and consequently presents a number of challenges to sport managers.

The literature review of partnerships and alliance theories prompted the identification of an extremely fragmented approach to web site partnering amongst Australian professional sporting teams. The results of question 8 confirmed this observation. In total, 70.83% of respondents indicated they favoured individual, club run sites, led by the N.S.L. with 83.33% of that league's clubs preferring to run their sites independently. The N.B.L., at 60% was the lowest score, but still represented a clear majority favouring independent web sites.
Interestingly, Caskey (1998) makes the following statement regarding his study's population, indicating a different approach to web sites by United States league based sports:

Teams whose “official” sites resided on the official server of their respective league (all teams in the NBA and WNBA, for example, whose official sites reside on NBA.com and WNBA.com, respectively) were excluded from the study, as it was assumed that all relevant site information could be obtained from a representative of the league site (1998:29).

Although the reasons for individual organisational responses in this study to this question are no doubt varied, it is evident that the Australian professional sporting organisations surveyed do not currently support a league based, generic site model. As such the various advantages and economics of scale proposed in the literature review are currently not being achieved.

A number of authors (Bishop, 1998; Chung et.al., 2000; Hannan & Freeman, 1977; Hasan & Tibbits, 2000; Hsiao & Ormerod, 1998; Inkpen, 2000; Podolny, 1993; Porter, 1985; Schwartz, 1997; Stuart, 2000; Ware et al., 1998; Westland & Clark, 2000) identify partnering benefits, including bringing together complementary assets, defrayed costs, and risk sharing. These views were supported by online commentators (Martin, 1997; Judson & Kelly, 1999), as well as authors concerned with the peculiar economies of sport (Sloane, 1971; Dabsheck, 1975; Stewart, 1984; Stewart & Smith, 1999).

As noted here, and in chapter 3, without further investigation into the specific issues that make a combined approach to web sites currently unattractive, it is unclear why this is the case. What is clear, is that this element of online commerce in the Australian professional team sports industry warrants further investigation.

Question 9 was devised to ascertain the extent to which organisations were indulging in alternative partnership agreements (i.e. outside their league), and to provide further data in relation to the issues outlined in question 8. Specifically, the question asked whether the organisation had established any partnerships/alliances with any
commercial organisations, that are leveraged, promoted or exposed through their web site.

A total of 72.92% of organisations surveyed indicated in response to this question that they currently have established an online partnership or alliance of some form. Given this high response, it can be assumed that it is not the concept of partnering that the organisations surveyed are averse to. For example, 84.62% of N.R.L. clubs indicated that they had established some form of web-based alliance, however only 23.08% (see question 8 results) preferred the concept of an intra-league web site partnership. Again, further research into this issue, and the wider Business Activity Model dimension of ‘threat’ appears warranted.

**Internet Vision Statements**

The literature reviewed in this study clearly espoused the benefits of specific Internet vision statements. These statements are a ‘Support Activity Efficiency’ activity of the Business Activity Model, in that they relate to Porter’s (1985) ‘Firm Infrastructure’ support activity, which consists of activities including general management and planning.

As noted in chapter 2, according to Bishop (1998) vision statements are the starting points for digital strategy, with the use of official, clear, and measurable digital vision statements supported by numerous authors (Bayne, 1997; Bickerton et al., 1998; Bishop, 1998; Hasan & Tibtis, 2000; Khandpur & Weaver, 1998; Levinson & Rubin, 1995, Martin, 1997; Rosen, 2000; Schulman & Smith, 1997; Standing, 2000).

Question 10 asked organisations if they possessed an Internet vision or objectives statement, in order to gauge the current use of this tool amongst the respondents. With only 45.83% of respondents indicating they possessed such a statement, a majority of organisations are obviously operating without this valuable tool. The process of developing the Internet vision statement, particularly one that uses the new Business Activity Model to identify strategy, is just as valuable as the final
product, and would be a worthwhile exercise for N.B.L. (30.00%), and N.S.L. (33.33%) clubs in particular.

Indeed, the lack of an official Internet vision statement represents a significant weakness in organisational strategy, and presents a possible explanation for the poor alignment of web sites with overall business and marketing strategies revealed by questions 2.1 and 2.2. This link between vision statements and wider organisational objectives was clearly made by Standing (2000) in chapter 2 who stated that “the management information systems (MIS) function of the organisation should develop its own strategic plan that supports the corporate plan” (2000:74).

Internet Project Teams

As with Internet vision statements, Internet project teams are also activities contained in the ‘Support Activity Dimension’ of the Business Activity Model. Internet project teams however, are related to Porter’s ‘Human Resource Management’ support activity.

The benefits of an Internet project team were also discussed in the literature, hence the inclusion of question 11, which asked organisations if they had a formal Internet or web site project team. Authors such as Drucker (1988) espoused the virtues of organisational use of teams prior to the introduction of a functional World Wide Web, a position now supported by online commentators specifically with regard to Internet teams (Bickerton et al., 1998; Hsiao & Ormerod, 1998; Khandpuri & Wevers, 1998; Schulman & Smith, 1997; Standing, 2000; Warc et al, 1998).

Only 45% of respondents indicated they had a formal Internet or web site project team. This may be considered an opportunity missed. Although the Caskey survey did not ask an identical question, the results of a question asking ‘approximately how many people are employed in organisational online/web divisions’ was interesting. Although pre-supposing such a division, Caskey (1998) found the median and mode response to this question to be 1 (the mean response of 2.6 was heavily influenced by one response of 25). This indicates that many United States teams surveyed were
also not operating with Internet teams at the time, although as mentioned, the question did imply that the author presumed such a division existed in all cases.

It is also interesting to note that one Caskey respondent, presumably a league site (this information was not provided), did in fact employ 25 full time staff in its online/Web division. This figure is supported by Caskey’s further findings that 14% of teams/leagues generated between US$100,000 and US$500,000.

**Online Community Building**

Online communities are a ‘Primary Activity Efficiency’ element of the Business Activity Model. Although it could be considered an Internet marketing or sales activity, it is identified in this research as supporting the ‘Service’ primary activity.

Question 12 presented a variety of online community building techniques in order to establish what methods, if any, the organisations were implementing to leverage the inherent strengths of sport in this crucial element of online success outlined in the literature review. The five community building options presented were designed to provide an indication of the emphasis organisations are placing on this element of their web sites. They were: Fan Forums/ Chat rooms, Feedback provision, Online memberships, Online chat with players and Question and Answer.

Although fan forums (79.17%) and feedback provision (81.25%) were quite popular web site tools, the other elements of community building were significantly less popular. Online memberships were available at only 56.25% of clubs, including a low 30% of N.B.L. clubs, which is somewhat surprising considering the nationwide participation rates, and hence potential community size, of the sport of basketball.

It should be clarified that an online membership is a value added service that neither duplicates nor extends traditional membership entitlements. An online membership is simply a service that generally provides members with an access code in order to enter restricted areas of the club site. It is available to both club members and non-members, and generally aims at highly involved supporters keen to receive up to date
or ‘pre media release’ information on club issues. One club representative indicated their organisation was currently charging a $20 fee to a membership base “in the thousands”, providing a significant revenue source and a key communication tool.

The lack of teams providing online chat with players (47.92%) is also surprising. Professional athletes are an invaluable marketing tool, and the public face of team sports. Given the public’s desire to both scrutinise, and associate with these athletes, and the corresponding opportunity to enhance online communities, it would appear to be an opportunity clubs are currently not utilising. It is also a safe and non-taxing way for players to interact with supporters.

5.3.6 Background Information Regarding the Web Site

Consisting of ten questions, this section of the survey solicited background details relating to the web site, with all questions taken from the Sethi and King (1994) instrument. As indicated in this chapter’s introduction, the sub-themes generated by the background information regarding the web site were:

- Web Site Driving Forces
- Impact of the Web Site
- Management Systems

Web Site Driving Forces

Taken from Sethi and King (1994), question 13 was the first of three questions that investigate the strategic background of the idea for the web site, its specific impetus, and intended users. In other words, the web sites’ ‘driving forces’. This theme is further augmented by an examination of the question establishing the year the web site was established. Given the theme’s affiliation with leadership issues, the data discussed here relates to the ‘Synergy’ dimension of the Business Activity Model.
The mean response across leagues for question 13 ‘to what extent was the idea for the web site generated as part of a formal process of identifying strategic applications?’ was 2.90 (SD: 1.06), on a five point likert scale. A.F.L. clubs provided the highest means score with 3.15, or slightly higher than a ‘moderate extent’. The responses across the leagues indicates that the organisational web sites were not generated as part of a formal process, but rather as a more ad hoc development. This scenario was supported in chapter 2 by authors such as Martin (1997), the SRS (1999), and Bell and Tang (1998), who believed that many organisations initially adopted a web presence out of fear that they might be left behind, or as a fashion statement. Not a particularly auspicious catalyst, but nonetheless a presence.

Question 14, which was based on a similar question from Sethi and King (1994), aimed to investigate the impetus behind the respondents’ web sites once the idea was generated. This issue can also be linked to managers’ perceptions of online commerce identified in the literature review. Indeed, given the observations of Martin (1997), the SRS (1999), and Bell and Tang (1998), an additional response option ‘To offer similar services provided by like organisations’ was added to the original Sethi and King (1994) question.

The results of both questions 14 and 15 have already been touched upon during the discussion of the question 3 series, where the relative lack of impact of the Internet on internal functions was attributed to some extent on these results, which indicated a heavy bias towards external applications.

A total of 79.17% of surveyed organisations attributed the impetus for their web site to a need for communication with members, although 18.75% of respondents indicated the impetus at their club was to offer similar services provided by other sporting clubs. Both results should be considered cautiously given that respondents would not always have been either employed at the time the web sites were launched, nor privy to strategic considerations. The 18.75% response for offering similar services might also be viewed as conservative given that some negative stigma may be attached to conceding the first-mover ‘bragging’ rights to rival clubs.
Question 15 was taken directly from Sethi and King (1994), and was clearly designed to establish the organisation's user focus in designing the site. This question was part of the background information regarding the information system section, which is a critical point of distinction given that respondents to the Sethi and King study reviewed a variety of information systems (as opposed to just web sites) and came from a number of industries. While this question would therefore generate a variety of responses in those circumstances, the respondents in this instance were unanimous in their response that customers/supporters were the primary users of their web sites.

This result is significant in that with the sole focus of the respondents' web sites being customers/supporters, many other recognised benefits of Internet strategies e.g. internal applications, are lost. Having said this, it is also reasonable to suggest that, given the size of these organisations, and the nature of the product, the respondents have correctly identified the primary focus of their web endeavours.

The results from question 16's examination of the year the web site was established were severely compromised by a large number of respondents who indicated that their web site had been recently re-launched. This limited the original benefit of the question. However it indicates that a number of organisations had perhaps critically reviewed their web sites and strategies, and presumably refocused their resources.

**Impact of the Web Site**

Questions 17, 18 and 19 were all taken from Sethi and King's (1994) exploration of background information regarding the information system (in this case the web site), and based on a seven-point likert scale. They were:

17. What has been the impact of the web site on your organisations sales growth rate? e.g. membership, merchandise, ticket sales.
18. What has been the impact of the web site on your organisations’ profits?
19. Overall the competitive advantage or success of the web site has been?
These questions pertain to both the ‘Synergy’, and ‘Primary Activity Efficiency’ dimensions of the Business Activity Model, with the mean response across leagues for question 17 being 4.77 (SD: 0.88). With 4.00 representing ‘no impact’ and 5.00 representing ‘somewhat increased’, the respondents therefore provided a collectively conservative estimate of impact on sales growth rate.

A.F.L. clubs reported a clearly higher mean response to this question at 5.23 than other leagues, with the N.B.L. clubs the next highest at 4.70. Given this result, a comparative examination of the A.F.L. clubs’ online sales components and perhaps marketing procedures is warranted. A cursory review of respondents’ web sites however, indicates a more sophisticated degree of presentation and range of saleable items amongst A.F.L. web sites, compared to the other leagues.

An examination of the impact of the web sites on profits (i.e. subtracting costs from the sales indicated in question 17), revealed an even more subdued mean response across leagues at 4.38 (SD: 0.79). Given the low ranking of generating revenue amongst site goals, the results of questions 17 and 18 are not surprising. No leagues however, reported a mean negative impact on profits.

Question 19 reported the overall competitive advantage mean score across leagues of 4.88 (SD: 0.91). Despite the likelihood that the perception of respondents concerning what specifically constituted competitive advantage no doubt varied, the N.S.L. clubs reported the highest mean score with 5.17, and the N.B.L. the lowest with 4.40.

These results might possibly be considered an anchor or reference point for many of the results presented in this chapter. Perhaps of most interest however is a comparison with the summed scales for the 29 measures of CA described by Sethi and King (1994).

The N.S.L. clubs, having reported the highest mean CA in question 19, did in fact rank highest in both summed scales presented in Table 4.5. The A.F.L., having reported the third highest CA in question 19 also ranked third in both summed scales.
In addition, the CA ranking created by question 19 for the N.R.L. (2nd) and the N.B.L. (4th) matched the order for summed scale 1.

Although question 19 can indeed be considered a key reference for much of the results, there are some issues regarding its interpretation that need to be acknowledged. Firstly, given the subjective nature of the question, inter-league comparisons are difficult. An examination of CA by clubs will generally lead them to compare themselves with other members of their own league, as opposed to other sporting leagues. This situation is further exacerbated by the resultant supposition that the power of web sites to create CA is also variable dependent on the market (league).

Question 19 presented the N.S.L. clubs as having obtained the greatest CA from their web sites. In the A.F.L. however, web sites may be of a consistently higher quality, but considered a standard service rather than a source of potential CA, given the high league gauge. This possibility however, is linked to the literature theme of manager’s perceptions of online commerce. For example, if A.F.L. managers have reverted to a ‘fashion statement’ mentality to web site strategy. This scenario would be analogous to having a business card or mobile telephone in the wider corporate environment – not a source of CA but a perceptual disadvantage when not presented. If this is indeed the perception held at any organisation, the likelihood is that the numerous untapped sources of CA available to sporting clubs will remain unexploited.

One explanation for the apparent ‘cap’ on the perceived CA potential of web sites stems from the results of questions 1, 6 and 7. In question 1, A.F.L. clubs for example, indicated that generating revenue constituted only 18% of club web site goals. Question 6 revealed only 53.85% of A.F.L. clubs believed sports sites are currently capable of turning a profit, and question 7 showed that only 61.54% of those same clubs were pursuing profit as a current goal of the site at all. The upshot of these observations is the realisation that because management at some clubs, in all of the leagues, do not perceive their web sites as a potential revenue generating tool, their perception of CA potential is consequently capped, and opportunities lost.
Management Systems

Questions 20, 21 and 22 were modified from similar questions in Sethi and King (1994), and should be interpreted together as part of the sub-theme ‘management systems’, and more broadly, as ‘Support Activity Efficiency’ activities of the Business Activity Model. Question 20 asked respondents to indicate their organisation’s sophistication in long-range business planning along a 5 point likert scale, and provided a mean score across leagues of 3.40 (SD: 0.96), between ‘moderate’ (3.00), and ‘great’ (4.00). A.F.L. clubs generated the highest mean score to the question with 4.00.

The mean response across leagues to question 21, the organisation’s sophistication in managing information resources, was 3.02 (SD: 0.79), or a slight drop in comparison to the organisations’ sophistication in long range business planning. A.F.L. clubs again reported the highest mean score with 3.38.

Question 22 asked respondents to indicate the extent to which the person or persons primarily responsible for their web site participate in the organisation’s business planning. The question generated a mean score across leagues of 3.06 (SD: 1.10), indicating that on average, the person responsible for the web site had only a moderate participation in overall organisational business planning. A.F.L. web site leaders had the greatest average participation in business planning with 3.46, and N.S.L. leaders the lowest average with 2.42.

Overall the results from these three questions were low. In all instances the mean results present low levels of planning, resource management and web leader’s involvement in wider business planning, with subsequently reduced leverage of competitive advantage. These areas are paramount to successful strategy development and might be considered priorities for organisations reviewing online commerce operations.

A.F.L. clubs reported the highest mean scores for each of the management system questions, which is potentially linked to either larger financial and human resources, or wider management systems not covered in this research.
5.3.7 Background Information Regarding the Respondents

Also taken from the Sethi and King (1994) instrument, the section of the survey relating to background information regarding the respondent consisted of four questions. No sub-themes were addressed. However the data captured by the four questions was used to create the respondent profile presented at the conclusion of the section.

Question 23 asked how many years the respondent had worked in the organisation, and indicated a range of experience in the current organisation across respondents. However the majority of people had been with the club for four years or less. The most common job title provided by question 24 (what is your job title?) was that of a Communications Manager with a clear majority of A.F.L respondent's in particular citing this position title. As noted in chapter 4, the job title provided tended to vary according to the financial and human resources available at the club, with clubs reporting lower resources citing job titles that covered a broader spectrum of responsibilities.

Question 25 asked respondents to indicate their approximate annual gross revenue across six categories, and found that 92% of A.F.L. clubs reported gross revenue in excess of AUS$10 million. N.B.L. clubs ranged between AUS$500,000 and AUS$5 million. N.R.L. clubs were generally either between AUS$5 million and AUS$10 million, or in excess of AUS$10 million. N.S.L. clubs presented a wide range of gross revenue results, however they were predominantly below AUS$2 million. These results are consistent with publicly reported financial results, in the form of previous years annual reports.

The number of organisational employees was investigated in question 26, and results were consistent with gross revenues in that leagues with higher revenues generally employed more staff. It should be noted that the employee numbers related to off-field staff only (i.e. not players or coaches). The unique nature of the organisational set up for N.R.L. clubs, which included leagues club employees as organisational staff, provided some discrepancies in the results.
Table 5.7: Respondent Profile

<table>
<thead>
<tr>
<th>LEAGUE</th>
<th>WEB LEADER EXPERIENCE</th>
<th>JOB TITLE</th>
<th>GROSS REVENUE</th>
<th>OFF-FIELD EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.F.L.</td>
<td>3.31 Years</td>
<td>Communications Manager</td>
<td>&gt;$10 million</td>
<td>25-49</td>
</tr>
<tr>
<td>N.B.L.</td>
<td>4.10 Years</td>
<td>Media and Marketing Manager</td>
<td>$2m to $5m</td>
<td>&lt;10</td>
</tr>
<tr>
<td>N.R.L.</td>
<td>3.23 Years</td>
<td>Media and Marketing Manager</td>
<td>$5m to $10m</td>
<td>10-24</td>
</tr>
<tr>
<td>N.S.L.</td>
<td>2.83 Years</td>
<td>Director Media and Marketing</td>
<td>$1 to $2m</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

Table 5.7 was created using the mean scores for web leader experience, and modal responses to job title, gross revenue and total number of off-field employees.

5.4 Conclusion

This chapter proposed to discuss the results displayed in chapter 4, using the Business Activity Model as a framework, and paying particular attention to the following secondary objectives:

2. To test the application of the new generic Business Activity Model on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations;

4. To review literature relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between online strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis).
The confirmatory and exploratory factor analysis undertaken to explore the application of the new generic Business Activity Model on the sport industry provided a solid response to secondary objective 2. The unique nature of the sporting industry, and the specific IT applications examined, had a clear overall impact on Sethi and King’s (1994) CA dimensions contained in the Business Activity Model.

Each of the dimensions is clearly relevant, with ‘Synergy’, ‘Primary Activity Efficiency’, and ‘Support Activity Efficiency’ not significantly impacting the sporting industry when considering CA through organisational web sites. ‘Resource Acquisition Functionality’ and ‘Resource Management Functionality’ can be assessed within the same dimension. ‘Preemptiveness’ and ‘Threat’ strongly impact the sporting industry, and, along with functionality issues, are the key areas of CA via the Internet for sport.

This chapter also discussed the results of all of the questions asked in the survey, both as individual questions, and as part of broader categories or themes. The data from questions 1, 7, and 15 framed the sporting organisational web sites, resulting in the ability to define a typical site amongst respondents as a ‘non-profit tool for the distribution of information to customers and supporters’. From this background, a variety of themes and implications pertaining to the ability to obtain CA through the Internet were reviewed, particularly in terms of secondary objectives 4 and 5.

An individual examination of the 29 questions contained in questions 2, 3, and 4, and also used as measures of CAPITA, was informative. The features of the web sites were strongly influenced by top management support or ‘leadership’, and variations in the league results indicated some opportunity to investigate premium practices. The impact of the Internet in general on the organisations was low. The results from this section of the data revealed the organisations were not achieving, or indeed even attempting to achieve CA through the integration or assimilation of Internet opportunities across the spectrum of organisational operations.

The impact on the web site on users was strong, as was expected given the clarity of purpose and web site objectives. The web site functions offered to customers and
supporters, although still providing scope for improvement, had greatly improved the services available to the sites intended users.

Further descriptive statistics presented from additional questions enabled considerable analysis of the respondents web site practices. This analysis was greatly enhanced in many instances through direct comparison with data from United States sporting organisations via Caskey (1998). Crucially, the respondents generally did not perceive their web sites as revenue or profit generating IT applications, there was little evidence of support for online partnerships or alliances, and there were numerous other gaps between literature recommendations and current practice.

These results suggest a host of opportunities exist for Australian professional sporting organisations attempting to stimulate CA through the Internet and their web sites. These opportunities are effectively the ‘gap’ between recommended practice and current practice. Specific recommendations for closing this gap are clearly stated in chapter 6.
CHAPTER 6: CONCLUSION

6.1 Introduction

The benefits for Australian sporting organisations able to identify CA opportunities and strategies through the Internet have been consistently highlighted (Business Week, 1986; Lanctot & Swan, 2000; Simeon, 2000; Storck, 1997; Tapscott, 1996). Billions of dollars are currently circulating online, with sporting organisations globally at the forefront of web based revenue opportunities. Similarly, assimilation theorists have extolled the synergistic resource saving benefits of incorporating Internet applications across the entire spectrum of organisational operations. In addition, improved customer service may be seen as another opportunity to stem from IT. Combined, these opportunities create a powerful source of competitive advantage that is yet to be fully understood or realised by Australian sporting organisations.

That the Internet is a potential strategic vehicle for CA is beyond dispute. The method for sporting organisations seeking to obtain what has to this point been a somewhat elusive goal however, is at the cutting edge of Internet strategy research. Dubbed by some as the ‘productivity paradox’, online commerce has gained a reputation, in terms of financial return on investment in particular, as being on a slippery path.

In many instances, organisations have felt compelled to have a web presence, but are unsure of the degree and focus of resources to allocate at the much-vaulted cyber potential. The starting point to answering this question was the development of a generic Business Activity Model to form the framework of the analysis and underpin the research. A subsequent investigation of whether the sporting industry impacts upon that model, and the underlying dimensions through which IT applications provide CA, was insightful. Crucially, these dimensions were found to be effected by the sporting industry, and the IT application being considered. Having established this, the subsequent investigation focussed on the practices of Australian professional sporting organisations, and where possible, the gap between those practices and seven recommendations for online success emanating from the
literature. Further, variations amongst the four leagues surveyed, and the practices of their United States counterparts, were observed wherever possible.

Throughout this research, the penchant for sporting organisations to be hesitant in committing resources to their Internet operations, has been tempered by consistent evidence of sports' inherent link to the core strengths of online commerce. Sporting organisations can achieve, and should seek, CA from the Internet.

This final chapter will include a number of concluding observations, beginning with a summary of the results and a reflection upon these results in light of existing literature and theory, and the particular data collection instrument used. The implications of the study, and the provision of a set of recommendations stemming from the identified CA opportunities and strategies, is provided in accordance with the study's primary objective. Further, consideration is made of the study's significance, its limitations, and finally suggestions for future research.

6.2 Results

This section of the Conclusion provides a synthesis of the results in the context of the study's objectives. For reference, those objectives were:

Primary Objective:

The primary objective of this research is to identify CA opportunities and strategies for Australian professional sporting organisations via the Internet, and to propose practical recommendations for improved performance.

Secondary Objectives:

1. To develop a new generic conceptual business activity model to form the framework of the analysis and guide the research;
2. To test the application of the generic Business Activity Model on the
Australian sport industry, and identify key areas of CA via the Internet for
sporting organisations;

3. To establish the Internet practices of Australian professional sporting
organisations contained in the sample;

4. To review literature relating to the strategic use and overall viability of the
Internet, and where possible to conduct a gap analysis between online
strategy theory, and the practices of the sample;

5. To examine variations in Internet practice and strategy amongst the A.F.L.,
N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the
sample and their United States counterparts (macro analysis).

The findings of the secondary objectives, established to assist with the fulfillment of
the primary objective, are now reviewed.

6.2.1 Secondary Objective 1

Secondary objective 1 called for the development of a generic conceptual model to
form the framework of the analysis and guide the research. An extensive review of
literature surrounding competitive advantage, the Internet, and sport, resulted in the
conceptualisation of a new generic Business Activity Model. This model, which
developed and enhanced the work of Porter (1985) and Sethi and King (1994) in
particular, synthesised the literature, and resulted in a working model for business
activities in the 21st century. The Business Activity Model also became the
framework for analysis for this research, and the reference point throughout its
discussion.
6.2.2 Secondary Objective 2

Having conceptualised the Business Activity Model, secondary objective 2 was to test its application on the Australian sport industry, and identify key areas of CA via the Internet for sporting organisations. The work of Sethi and King (1991, 1994) was both pivotal in the development of literature on achieving CA through IT applications, and to the development of the Business Activity Model. The measures employed by Sethi and King (1994) to create the ‘Competitive Advantage Provided by an Information Technology Application’ (CAPITA) construct, were therefore replicated using the sport organisation population, in order to complete the objective.

The CAPITA construct resulted in the identification of a seven-dimensional measure or index of CA amongst the 185 corporations surveyed. Sethi and King (1994) conclude that these dimensions can provide a number of valuable roles including forming the basis of a preliminary multidimensional measure or index of CA, and computing organisational overall scores for each dimension. According to Sethi and King “a profile along the seven dimensions would be useful to practitioners for demonstrating, or at least elucidating, the benefits of an existing IT application” (1994:1617). Importantly, the authors go on to point out that such assessments, as described in the broader literature, fill a noticeable void in this respect, stating:

Such assessments are currently based on “gut feeling”..., unrealistic assumptions regarding the application’s contribution to the company’s bottom line, or a disregard for benefits such as reduced overhead, higher switching costs and other barriers to entry, and increased product differentiation (1994:1617).

In other words, this research is both an important component of the Business Activity Model, and the first stage in developing a tool for assessing CA through IT applications that takes into account every element of CA and provides organisations with a measure of their success. Such a tool would clearly be invaluable for sporting organisations in assessing their Internet strategies. However, the unique nature of the sporting industry called for an investigation into whether any differences existed in CA dimensions between sporting organisations and the wider corporate community.
The ‘peculiar economies of sport’ identified by the literature suggested that such dimensional differences would indeed be present, an assumption confirmed by the data. Additionally, respondents to the Sethi and King (1994) instrument were instructed to describe the “currently used system with the most significant impact on the firm’s competitive position” (1994:1607). This obviously resulted in data reflecting a range of IT applications and their functions. This study’s focus on a specific application, with reasonably universal functionality, impacts upon the way the dimensions should be interpreted in this instance.

The identification of differences in the way the sporting organisations should consider the dimensions of CA through IT in the sporting industry, as opposed to other industries, is critical. As with the Sethi and King (1994) research, an understanding of these dimensions provides “the measures and underpinnings for a program of research on IT impact assessment” (1994:1618). This program of research can now be undertaken in terms of the sporting industry, with an understanding of its unique characteristics, and with the solid underpinning of the business activity model.

6.2.3 Secondary Objective 3

Secondary objective 3, the identification of current Internet practice amongst Australian professional sporting organisations, was clearly relevant to the study’s primary objective. The gap between practice and theory can lead to the identification of opportunities, and subsequently to CA. Indeed, a number of gaps were identified, and are considered in the recommendations to follow later in this chapter.

Chapter 4 of this study presented the results of each question in the survey. However, given that the current practices of the sample are to be considered as part of a ‘gap analysis’, they are not reviewed here. Rather, the salient current practices of the sample are reviewed as part of 6.2.4 below, which relates to secondary objective 4.
6.2.4 Secondary Objective 4

Secondary objective 4 called for a literature review relating to the strategic use and overall viability of the Internet, and where possible to conduct a gap analysis between this literature and the Internet practices of the sample identified by secondary objective 3. The review of CA, Internet, and sporting literature, culminated in the identification of seven core themes. Those seven themes being:

1. Leadership in the Digital Economy
3. Assimilation Theory
4. Internet Vision Statements
5. Internet Project Teams
6. Partnerships and Alliances
7. Online Communities

As stated in 6.2.3 above, the identification of these literature themes facilitates a ‘gap analysis’ with the practices of the sample. The results of this analysis are summarised below according to each of the seven themes identified, beginning with the concept of leadership.

Leadership in the Digital Economy

An on-field concept familiar to sports enthusiasts, leadership in the digital estate is increasingly being considered by online strategy authors (Day, 1997; El Sawy et al., 1999; Judson & Kelly, 1999; Khandpur & Wevers, 1998; Rosen, 2000; Schulman & Smith, 1997; Tapscott, 1996; Teo & Too, 2000; Ware et al., 1998). A general consensus exists in this literature that leadership, in the form of a willingness to commit money, talent and executive-level interest (Judson & Kelly, 1999), is pivotal to online success.
Clearly, the concept of leadership is inextricably linked to a manager’s overall perception of online commerce, with both themes contained in the ‘Synergy’ dimension of the Business Activity Model. Managers are unlikely to demonstrate leadership to a cause that does not hold their convictions. Leadership however, can also be reviewed independently of manager’s perceptions, as is the case here. To this end, leadership was found to be somewhat lacking in regards to the respondent’s online presence and strategies generally.

Asked directly the extent to which top management was involved in and supported the organisational web site (question 2.4), the mean response across leagues was only slightly higher than ‘somewhat agree’ (Refer to Table 4.2). When combined with the variety of measures of management perceptions discussed below that can also be considered a reflection of leadership, the concept of leadership as a whole was considered amongst this sample to be weak.

Managers Perceptions of Online Commerce and its Impact on Strategy Implementation

As with leadership, the data collected indicated the perception of online commerce amongst the sample’s management was weak. There is a common perception that many organisations initially adopted a Web presence out of fear that they might be left behind, or as a fashion statement (Bell & Tang, 1998; Martin, 1997; SRS 1999). Additionally, management of sporting organisations, like all businesses, may vary in their attitude to Internet commerce and its ability to produce tangible results (Roepke et al., 2000). Whilst a compelling range of statistics has been provided supporting the CA power of the Internet, management of the organisations’ sampled were certainly not spirited in their approach to IT applications or strategy.

Web site goals were primarily conservative, led by the ability to offer timely information, with generating revenue a considerably lesser consideration. Indeed, only 58.33% of respondents ranked profitability as a goal at all. The fact that 66.67% of the sample felt their web sites were capable of turning a profit indicates two things. In itself, the statistic means that one third of the organisations view their
web sites as incapable of profit. Not an auspicious beginning given the question was framed to encompass any level of profit i.e. not a loss. Secondly, it seems unlikely that any organisation that felt online profit was possible would not pursue those profits. Why would 8.33% of organisations that believed they could generate a profit not list profit as a goal unless their conviction was dubious? It seems likely given these two observations that the true management view of sporting web sites’ revenue generating capabilities, a significant element of CA, is dubious at best.

Other indications of management perceptions of online commerce including the conservative ‘communication’ impetus for the web site, and the lack of commitment of human resources in the form of technical expertise or project teams, culminated in the conclusion that management perception of online commerce within the sample was also weak.

Assimilation Theory

As stated in chapter 2, a critical component of IT strategy gaining credence is the concept of merging IT strategies with the primary strategic thrust of the firm (Raghunathan & Raghunathan, 1994), and incorporating IT into the entire spectrum of organisational activities. In short, the structuring of IT applications to permeate the entire organisation. This strategy provides powerful CA in itself, and highlights the significant elements of CA available to organisations other than pure revenue generation, that impact upon organisational success. Indeed, assimilation theory contributed significantly to the Business Activity Model through the inclusion of dotted lines between all the dimensions of Internet activities, and the traditional value chain.

The concept of IT assimilation also adds weight to the importance of CA measures such as those proposed by Sethi and King (1994) that incorporate the gamut of CA. Advantages such as improved customer service and satisfaction, reduced costs, and improved internal time efficiency are all potent sources of CA available through Internet applications that ultimately impact on financial results. Assimilation theory is also linked to leadership and management perceptions, in that sport managers who
develop Internet strategies from a finite initial perception of the breadth of CA opportunities, are unlikely to investigate and implement comprehensive IT plans.

As would be expected therefore, the samples' use of assimilation strategies was weak. The investigation of numerous Internet impacts through question 3 of the Sethi and King instrument and considered in chapter 5, demonstrated a clear lack of advantage being obtained via the Internet in almost all areas of organisational operations other than those specifically related to customer functionality.

The implication is that the Internet is not being used for 'knowledge management' e.g. Intranets, emails, and acquiring and distributing internal information, but rather almost exclusively as a customer communication and distribution tool. This observation lends further weight to a review of the assimilation opportunities offered by the Internet, and the online strategies of Australian professional sporting organisations.

IT Assimilation theory emanating from authors such as Armstrong and Sambamurthy (1999), DeLone and McLean (1992), Jarvenpaa and Ives, (1991), Mahmood and Soon (1991) and Sethi & King (1994), clearly suggests that significant CA opportunity exists for sport managers in this sample.

**Internet Vision Statements**

The first of four practical strategies emerging from the literature and considered by this study's instrument was the use of Internet vision statements. A vehicle for the clarifying and communicating of organisational Internet goals and strategy, the use of Internet vision statements is well supported in the literature (Bayne, 1997; Bickerton et al., 1998; Bishop, 1998; Hasan & Tibbits, 2000; Khandpur & Wevers, 1998; Levinson & Rubin, 1995; Martin, 1997; Rosen, 2000; Schulman & Smith, 1997; Standing, 2000).

The benefits attributable to Internet vision statements including the focussing of organisational activities and resources, make its development an attractive process.
This process however is not being fully utilised by the sports organisations sampled. A relatively straightforward task, only 45.83% of respondents currently possessed an Internet vision statement. This element of Internet strategy therefore presents a further CA opportunity.

**Internet project teams**

Internet project teams were similarly underutilised by the organisations sampled. Also a reflection of leadership and perception theories in terms of a willingness to commit resources, only 41.67% of organisations sampled reported the existence of an Internet project team. Given that such a project team could be instituted to various degrees using existing human resources, and therefore without increasing specific costs, this underutilisation is further apparent.

A progeny of general team based theory, Internet project teams are clearly espoused by the literature (Bickerton et al., 1998; Hsiao & Ormerod, 1998; Khandpur & Wevers, 1998; Schulman & Smith, 1997; Standing, 2000; Ware et al. 1998). As such, a gap clearly exists in this research between this element of theory and current practice.

**Partnerships and Alliances**

The complex issues surrounding the literature theme of partnerships and alliances in sport provide a fascinating example of the unique nature of the product. Whereas traditional businesses would typically celebrate the demise of a direct competitor, the peculiar economics of sport, including the concept of "mutual interdependency", means that sports organisations require healthy competition to flourish. Sport management parlance such as the need for "uncertainty of outcome" reflect the special needs of sport that supplement the benefits of partnering proposed for traditional organisations.
As stated in chapter 2, the use of strategic alliances both on and offline is indeed an accepted strategy for business development undertaken by many organisations (Bishop, 1998; Chung et al., 2000; Inkpen, 2000; Haunan & Freeman, 1977; Hasan & Tibbits, 2000; Hsiao & Ormerod, 1998; Podolny, 1993; Porter, 1985; Schwartz, 1997; Stuart, 2000; Ware et al., 1998; Westland & Clark, 2000). Indeed, there is evidence of an improved ability to leverage partnership based CA in numerous areas including brand recognition, in organisations where markets overlap (Inkpen, 2000).

Unlike the United States where there is growing evidence of a combined approach to Internet activities by league based sporting organisations (Schwartz, 1997; Wilner, 2000), the Australian sample in this research presented a fragmented approach to the medium. That 70.83% of respondents indicated they preferred a club-based approach to web sites highlights the gap between partnership and alliance theory, purportedly more important in the sporting industry, and current practice amongst the sample.

**Online Communities**

Due to sport’s inherent advantages in its application, the development of online communities is an exciting element of online strategy, with significant literature support for its importance (Bickerton et al., 1998; Bishop, 1998; El Sawy et al., 1999; Haynes et al., 1998; Janal, 2000; Judson & Kelly, 1999; Levinson & Rubin, 1995; Martin, 1997; May, 2000; SRS, 1999; Standing, 2000; Wang et al., 2000; Ware et al., 1998).

The high involvement nature of the sporting product provides sporting organisations with a head start in developing these communities, with numerous techniques assessed in question 12 of the instrument. Although respondents indicated a reasonable use of some of the prescribed methods, e.g. fan forums (79.17%), feedback provision (81.25%), there is certainly still scope for improvement in areas such as online chat with players (47.92%). This community building technique allows organisations to leverage the profile of players, and their customers’ desire to associate with them, and presents a strong potential community building method.
6.2.5 Secondary Objective 5

Secondary objective 5 was to examine variations in Internet practice and strategy amongst the A.F.L., N.B.L., N.R.L. and N.S.L. (micro analysis), and where possible between the sample and their United States counterparts (macro analysis). This objective added depth to the gap analysis, and enhanced the recommendations provided in response to the primary objective.

The clear existence of variations between the practices of Australian professional sporting organisations and their respective leagues, along with varying degrees of online success, highlights the need to direct resources to both Internet strategy and practices. Further, Caskey (1998) provided a valuable contribution to this research. Traditional leaders in the sport business industry, the United States sporting organisations presented continually higher results than the Australian respondents did, both in terms of a confidence in, and a commitment of resources to, the Internet.

6.3 Implications and Significance

Sport and the Internet are converging in a manner similar to the way television was synthesised into the essence of the industry throughout the second half of the twentieth century. However, given that this technology can perform the function of television, and has infinitely more functional applications, it is easy to imagine that the Internet will have an immeasurable impact on the sporting industry. Research such as this, that guides managers in their strategic choices and has significant practical implications, is therefore an invaluable commodity.

This study makes considerable inroads into the understanding of the dimensions of CA through the Internet for sporting organisations, and the development of a reliable model to assist with the identification of CA opportunities. Further, the research identifies numerous gaps between seven theoretical elements of online success and the practices of the population. The gaps raise a number of areas with significant practical implications including, the use of the Internet by sporting organisations for 'knowledge management', the utilisation of Internet vision statements and project
teams, and the fragmented position amongst Australian professional team sports in terms of Internet strategy.

Having identified numerous CA opportunities and strategic direction for the Australian professional sporting teams surveyed, a series of seven practical recommendations have been formulated. These recommendations therefore complete the primary objective of this research.

### 6.4 Recommendations

The first step in illustrating the practical online opportunities for Australian sporting organisations was the development of what was effectively an inventory of ‘gaps’ between the strategics proposed by the literature, and the practices of the sample as established by the data. This task was undertaken according to seven themes identified in the literature, and summarised in Table 6.1 below:

**Table 6.1: Sample Gap Analysis**

<table>
<thead>
<tr>
<th>Literature theme</th>
<th>Current Theoretical Position</th>
<th>Ranking</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Strong executive support necessary for success</td>
<td>Weak</td>
<td>Literature circulation Goal review</td>
</tr>
<tr>
<td>Managers Perceptions</td>
<td>Perception impacts upon ability to lead</td>
<td>Weak</td>
<td>Literature circulation Goal review</td>
</tr>
<tr>
<td>Assimilation Theory</td>
<td>Assimilation of IT applications across organisation provides CA</td>
<td>Weak</td>
<td>Review potential IT applications</td>
</tr>
<tr>
<td>Internet Vision Statements</td>
<td>Clearly stated, measurable, and communicated vision statements facilitate CA</td>
<td>Underutilised</td>
<td>Implement Goal review</td>
</tr>
<tr>
<td>Internet Project Teams</td>
<td>Empowered project team with multi level representation conducive to online success</td>
<td>Underutilised</td>
<td>Implement</td>
</tr>
<tr>
<td>Partnerships and Alliances</td>
<td>Peculiar economies of sport compound partnering benefits identified in wider business community</td>
<td>Fragmented</td>
<td>League forums</td>
</tr>
<tr>
<td>Literature theme</td>
<td>Current Theoretical Position</td>
<td>Ranking</td>
<td>Recommendation</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Online Communities</td>
<td>Online community building both critical to website success and well suited to sport consumer culture.</td>
<td>Reasonable</td>
<td>Further development</td>
</tr>
</tbody>
</table>

Table 6.1 summarises the findings of chapter 5, and reinforces that CA opportunities exist for sporting organisations in every aspect of the literature regarding IT. Seven practical recommendations are therefore reviewed below. It should be noted that these recommendations relate specifically to sporting organisations, and should not be confused with future research, an area covered later in this chapter.

6.4.1 Recommendation 1: Literature Circulation

Information is critical to the development of both leadership and senior management perceptions of online commerce opportunities. For sport managers to develop the confidence to commit resources to Internet strategies, literature reinforcing both the entire breadth of CA opportunity, and practical recommendations for achieving them, needs to be available.

6.4.2 Recommendation 2: Goal Review

The process of reviewing organisational goals is imperative to the development of leadership and the perception of online commerce by senior management, and is clearly linked to the process of developing an Internet vision statement. All of these literature themes are involved in the development of strategic goals, including for example the current lack of profit and assimilation techniques as goals. Regardless of the specific outcomes however, the process of reviewing organisational Internet and website goals, in tandem with a review of current theory, is crucial to a number of facets of online success.
6.4.3 Recommendation 3: Review Potential IT Assimilation Applications

To fully exploit the CA power of the Internet, organisations should undertake a comprehensive review of potential Internet related IT assimilation practices. Most practically undertaken by a project team, this review should consider the entire organisation, and seek to identify every opportunity to incorporate IT into operations. For example, ‘knowledge management’, HR practices, general management, and data collection, storing and distribution all possess opportunities to incorporate Internet based IT applications that assist in developing the CA dimension of ‘Synergy’.

6.4.4 Recommendation 4: Implement Internet Vision Statement

It is recommended that a clearly stated, measurable, and communicated vision statement, preferably generated by a representative project team, but essentially involving top management, be implemented.

6.4.5 Recommendation 5: Implement Internet Project Team

It is recommended that sporting organisations implement an empowered project team, with multi level representation. Although listed as recommendation 5, if during a strategy review process a sport organisation decides to implement one or more of these recommendations, the development of this type of project team should clearly be undertaken first, and given the responsibility of undertaking further recommendations.
6.4.6 Recommendation 6: League Forums

Given Australian league-based professional team sports fragmented position with regards to partnership and alliance, and the subsequent loss of associated CA, it is recommended that such leagues undertake an Internet forum to facilitate an improved position. These forums would also provide an opportunity to circulate and consider current Internet generated literature, and any number of associated CA considerations. It should be emphasised to potential participants however, that any forum convened to discuss partnership and alliance opportunities is not analogous to reducing club control of Internet rights or revenues. As has been demonstrated by some leagues in the United States, it is possible for clubs to retain independent control of their web sites, and still generate significant alliance based CA. Defraying costs, and leveraging brands should be high on the agenda.

6.4.7 Recommendation 7: Further Development of Online Community Building

Online communities are the life-blood of organisational web sites, and are well suited to the sporting industry and its product. It is recommended that clubs investigate both literature-based community building techniques, as well as innovative strategies that leverage the inherent strengths of both sport and the Internet.

6.5 Limitations

As the instrument used in this resource stemmed from the combination of three sources, Sethi and King (1994), Caskey 1998, and literature prevalence of themes, the limitations of the study need to be considered from a number of perspectives.

The Sethi and King (1994) instrument, whilst valid, applicable, and appropriate for the measurement of CA through IT applications, was designed to investigate the entire spectrum of IT applications, across all industries. As such, many questions
were irrelevant to the specific Internet and web sites application, or the sporting industry.

Although this is in some ways a limitation in terms of the identification of industry relevant issues among the Internet dimensions of CA for sport, it was also a necessary process in order to prove an initial distinction in the industries. In other words, without initially confirming a difference between the sporting industry and the broader business community using the original tool, research into the unique nature of Internet based CA in sport would have been premature.

As noted by Sethi and King (1994), given the perceptual nature of many of the survey questions, there are also problems associated with using a 'key informant' approach to data collection. This is also true of many of the Caskey (1998) and literature based questions in the instrument. The limitations attributable to using a single respondent to represent an organisation are therefore acknowledged. The use of multiple respondents, including employees in a range of positions, may enrich the data and eliminate some biases and inaccuracies.

In terms of the Caskey (1998) component of the instrument, the lack of a thorough testing or theoretical basis for the instrument in general was considered. However, although the overall sample instrument methodology described by Caskey (1998) was considered weak, the use of only four of the general questions was determined to be legitimate. The substantial comparative benefits with United States based sports organisation counterparts generated by using these questions also helped outweigh the identified limitations.

The lack of specific testing on the seven questions added to the Sethi and King (1994) and Caskey (1998) instruments is also acknowledged. Although two of these questions were common demographic assessments (question 25 and question 26), and the remaining five questions had considerable theoretical support, the questions themselves were nonetheless statistically untested. A pre-test of an initial survey, however, using an expert panel, further reduced this limitation.
A further limitation of the study was the restricted population. The sample size (48) presents some technical problems for factor analysis, however it did represent 87% of the population, and as such was considered significant enough to provide statistical power in the key areas of the research. The high percentage of the population sampled also greatly reduced generalisability issues, however ideally a larger sample size would remove any reliability or validity issues.

Finally, the limitations of trait-based research are acknowledged. Although this approach has numerous advantages, including the provision of insights into how and why IT affects CA, the trait approach does however possess limitations, such as a lack of guidance in the selection of attributes. An ‘outcome’ based approach was considered, and, having been used in past studies measuring the impact of IT, can be supported. However the significant disadvantages of this method, including the aggregation of variables, and the lack of insight into “how” IT affects CA, lead to the decision to utilise a trait-based method. The inherent limitations of trait-based measures are nonetheless acknowledged.

6.6 Future Research

The path for future research in this area is clear. Further investigation into the impact of sport on both the dimensions and measures of CA thorough the Internet is paramount. The Business Activity Model remains an excellent platform for such research, however each question in the Sethi and King (1994) instrument needs to be reviewed for relevance to the Internet and organisational web sites, as well as the sporting industry. Superfluous questions designed to cater to other IT applications or industries should be removed, and questions designed to enhance understanding tested. Additionally, due to the technical considerations of factor analyses, this particular element of the research would benefit from a larger sample, although this may necessitate the inclusion of international organisations, and subsequently creates generalisability issues.

In terms of the identified gaps between online strategy theory and practice, a more detailed study is required. Although this research has clearly identified numerous
areas of disparity, and provided a solid foundation for future research, many substantial theoretical issues such as the use of partnerships and alliances were assessed using single questions with 'yes' or 'no' responses. Further investigation into an organisation's position on this type of theme, including perceptual issues including reasons for a position, would be extremely beneficial. Qualitative approaches such as interviews and focus groups are recommended for the most reliable assessment of these organisational positions.

The significant issues surrounding broadcasting via the Internet and web sites, including visual and audio transmission of games, was outside the scope of this research. However, given the magnitude of potential revenue for sporting organisations via Internet based broadcasting, and its importance to the 'functionality' dimensions of CA contained in the Business Activity Model, there is clearly a need to investigate this issue in further research. This study also identified a lack of customer 'up-tiering' via web site based functionality initiatives. This CA opportunity is also contained in the 'functionality' dimensions of the Business Activity Model, and warrants further research.

Finally, the implementation of online partnerships and alliances has been identified as both critical, and under utilised amongst the sample. Further investigation into this issue in relation to the Australian professional team sport industry, is therefore justified.

6.7 Final Comments

The Internet is a formidable source of CA. As business leaders globally search for successful methods of tapping its riches, contemporary sport managers have the envious position of controlling a product that is inherently suited to the core strengths of the medium. People are passionate about the sporting product. They desire information about the sporting product. Sport is global, and sport is marketable. The Internet is a new form of community that has radically altered communication methods, overcome international borders, and developed mechanisms to distribute its
products and generate revenue. In short, the Internet and sport are intrinsically linked.

This research provides a platform for sport managers to effectively harness the potential of the Internet, through their web sites in particular, and realise significant CA. The Business Activity Model provides managers in all industries with a tool for the detection and understanding of potential elements of CA and incorporates all activities critical to business in the new digital economy.

A sound theoretical base for strategic development has also been provided to sport managers with the identification of key elements of online success contained in the Business Activity Model. These elements can in fact be used as the cornerstone of organisational online strategy. Further, seven practical recommendations for improved online performance based on identified CA and strategies fulfills the primary objective of this research. E-commerce continues to grow at astronomical rates, and with the Internet poised to become the life-blood of 21st century sporting organisations, these recommendations will assist managers in their ongoing search for CA.
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APPENDIX 1: Survey

CONFIDENTIAL

Web Site Survey

This survey is designed to obtain an insight into the web site strategies of clubs participating in four major Australian professional sporting leagues (A.F.L., N.B.L., N.R.L., N.S.L.).

I anticipate the survey will take approximately 15 minutes to complete during a telephone interview as discussed. Please feel free to familiarise yourself with the document prior to our interview.

The information provided by you in this survey is completely confidential. You or your organisation will in no way be identified or recognised in the research results. Findings will be presented as averages across all respondents.

Contact for enquiries:
Daniel Evans
C/-Faculty of Business and Law
DEAKIN UNIVERSITY
221 Burwood Highway
Burwood 3125

Tel: 0412 584 878

Office use only
Date: ..................................
I.D.: ..................................
INSTRUCTIONS

This study aims to investigate the extent to which sporting organisations are using web sites to gain a competitive advantage. Please answer the questions in this survey with regard to your organisation's web site.

1. Please rank the following site goals from most important (1) to least important (5) for your web site. Please note, all goals require a ranking.

   - To offer timely, useful information
   - Generate revenue
   - Extend on existing brand
   - Promote other media endeavors
   - Other, please list below

FEATURES OF THE WEB SITE

2. The following statements describe potential features of a web site. Please indicate the extent to which you disagree or agree with the following statements in regard to your organisation's web site (by circling the appropriate number as indicated in the key below).

   1. Strongly disagree
   2. Moderately disagree
   3. Somewhat disagree
   4. Neutral
   5. Somewhat agree
   6. Moderately agree
   7. Strongly agree

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Our web site is aligned with our organisation's business strategy</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Our web site is aligned with our organisations marketing policies and practices</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Our organisation has technical expertise in web technologies</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Top management is involved in, and supports our web site.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>Our web site provides unique access to channels such as the media, ticket distributors, or retailers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>Our web sites market positioning is such that competitors are forced to adopt less favorable postures.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>Part or all of our web site is protected from imitation by institutional barriers such as patents or copyrights.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.8</td>
<td>Our web site has influenced the development of technical standards and practices in the industry.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2.9</td>
<td>Our organisation has the capability to continuously innovate and enhance our web site.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
3. Organisations perform numerous activities such as buying inputs, choosing suppliers, converting inputs into outputs, selling, and advertising. Please describe the impact of the Internet (including e-mail, hyperlinks and the web site) on your organisation, by specifying the extent to which the Internet has increased or decreased the following:

1. Greatly increased  
2. Moderately increased  
3. Somewhat increased  
4. No change  
5. Somewhat decreased  
6. Moderately decreased  
7. Greatly decreased

<table>
<thead>
<tr>
<th>Impact of the Internet on the Organisation</th>
<th>Greatly Increased</th>
<th>No Change</th>
<th>Greatly Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Cost of receiving, storing, and disseminating inputs e.g. player/member information, warehousing materials, e.g. uniforms, equipment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2 Cost of transforming inputs into products e.g. training, ticketing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Cost of collecting, storing, and distributing products to customers, e.g. membership/merchandise processing, ticketing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Cost of providing service to maintain or enhance the value of the product e.g. servicing sponsors/members, providing additional information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 Cost of recruiting, hiring, training, development, and compensation of personnel, both athletes and off field staff.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6 Cost of general management activities, e.g. planning, finance, accounting, legal, and government affairs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 Cost of coordinating different activities described above, such as purchasing, processing, marketing, sales, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 Costs your organisation would incur if it changed to alternate suppliers, e.g. merchandise, apparel, ticketing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9 Your organisation's ability to evaluate various suppliers and choose the most appropriate supplier.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.10 Your organisation's ability to threaten vertical integration, i.e. threaten to perform some of the functions performed currently by its suppliers and customers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.11 Your organisation's ability to evaluate various customers and choose the most appropriate customer, e.g. sponsors or member information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.12 Costs which customers would incur if they change to alternate teams or sports.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.13 Customers' cost of locating alternate teams or sports.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE IMPACT OF THE WEB SITE ON USERS

4. Please describe how your web site has decreased or increased the ability of your customers (members, supporters or the public) to perform the following tasks:

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Greatly Increased</th>
<th>No Change</th>
<th>Greatly Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Order or put in a request for the product</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.2 Acquire the product i.e. be in physical possession of the product, e.g.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>merchandise or tickets.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4.3 Verify that the product meets specifications, e.g. Check membership</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>entitlements or merchandise details, or check game dates/times.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>4.4 Monitor the team i.e. keep track of results or players.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.5 Upgrade products if necessary, e.g. memberships, match tickets.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.6 Transfer or dispose of products such as memberships or tickets.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.7 Evaluate the overall performance of the team through regularly updated</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>team and league results and information.</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

WEB SITE DETAILS

5. Does your site currently offer fantasy sports participation? □ Yes □ No

6. With the current web user base and technology, do you believe that sites offering sports content are currently capable of turning a profit on the Internet? □ Yes □ No

7. Is profitability a current goal of your site? □ Yes □ No

8. Does your organisation support a league based, generic site, model for web sites within your competition, or individual, club run sites? □ League □ Club

9. Has your organisation established any partnerships/alliances with any commercial organisations that are leveraged, promoted or exposed through the web site? □ Yes □ No

10. Does your organisation possess a formal vision/objectives statement concerning Internet activities? □ Yes □ No

11. Does your organisation have a formal Internet or web site project team? □ Yes □ No
12. Please check which, if any (you may tick more than one box), of the following web site components your organisation utilises

- Fan Forums/Chat rooms
- Feedback provision
- Online memberships
- Online chat with players
- Question and Answer
- Other ________________________________

BACKGROUND INFORMATION REGARDING THE WEB SITE

13. To what extent was the idea for the web site generated as part of a formal process of identifying strategic applications? Please circle the appropriate response.

<table>
<thead>
<tr>
<th>Extent</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very great extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. The impetus for the web site was (check the most important reason):

- A preemptive strike (to preempt competitors and to be the first to develop a web site)
- A defensive move aimed at countering a threat
- Communication with members
- To offer similar services provided by like organisations
- Other ________________________________

15. A user of the web site refers to those who actually use the system and for whom the site was intended. Please indicate who are the primary users of the web site.

- Customers/Supporters
- Suppliers
- Personnel internal to your company
- Other ________________________________

16. Which year was the web site first established? ________________

17. What has been the impact of the web site on your organisation's sales growth rate? (e.g. memberships, merchandise, ticket sales) Please circle the most appropriate response.

<table>
<thead>
<tr>
<th>I Decreased</th>
<th>II Moderately</th>
<th>III Somewhat</th>
<th>IV No Impact</th>
<th>V Somewhat</th>
<th>VI Moderately</th>
<th>VII Greatly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatly</td>
<td>Moderately</td>
<td>Somewhat</td>
<td>No Impact</td>
<td>Somewhat</td>
<td>Moderately</td>
<td>Greatly</td>
</tr>
<tr>
<td>decreased</td>
<td>decreased</td>
<td>decreased</td>
<td></td>
<td>increased</td>
<td>increased</td>
<td>increased</td>
</tr>
</tbody>
</table>

18. What has been the impact of the web site on your organisation's profits?

<table>
<thead>
<tr>
<th>I Decreased</th>
<th>II Moderately</th>
<th>III Somewhat</th>
<th>IV No Impact</th>
<th>V Somewhat</th>
<th>VI Moderately</th>
<th>VII Greatly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatly</td>
<td>Moderately</td>
<td>Somewhat</td>
<td>No Impact</td>
<td>Somewhat</td>
<td>Moderately</td>
<td>Greatly</td>
</tr>
<tr>
<td>decreased</td>
<td>decreased</td>
<td>decreased</td>
<td></td>
<td>increased</td>
<td>increased</td>
<td>increased</td>
</tr>
</tbody>
</table>
19. Overall the competitive advantage or success of the web site has been:

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Very low</td>
<td>Moderately low</td>
<td>Somewhat low</td>
<td>Neither low/high</td>
<td>Somewhat high</td>
<td>Moderately high</td>
<td>Very high</td>
</tr>
</tbody>
</table>

20. Please indicate your organisation's sophistication in long range business planning:

- [ ] Not at all
- [ ] Somewhat
- [ ] Moderate
- [ ] Great
- [ ] Very great

21. Please indicate your organisation's sophistication in managing information resources:

- [ ] Not at all
- [ ] Somewhat
- [ ] Moderate
- [ ] Great
- [ ] Very great

22. To what extent does the person or persons primarily responsible for your web site participate in the organisation's business planning?

- [ ] Not at all
- [ ] Somewhat
- [ ] Moderate
- [ ] Great
- [ ] Very great

**BACKGROUND INFORMATION REGARDING THE RESPONDENT**

23. How many years have you worked in the organisation? _____ Years

24. What is your job title? .................................................................

25. What is the approximate annual gross revenue of your organisation? (Please tick one)

- [ ] < $500,000
- [ ] $500,000 - $1m
- [ ] $1 - $2m
- [ ] $2 - $5m
- [ ] $5 - < $10m
- [ ] > $10m

26. Approximately how many employees work in your organisation? (Please tick one)

- [ ] 1 - 10
- [ ] 10 - 24
- [ ] 25 - 49
- [ ] 50 - 99
- [ ] 100 - 199
- [ ] > 200

Would you like a copy of the survey results?  
- [ ] Yes
- [ ] No

May I call if I need to discuss your responses to any of these questions?  
- [ ] Yes
- [ ] No

*Your participation is greatly appreciated. Thank you.*

*If you have any questions please call: Daniel Evans, Telephone: 0412 584 878*