

Adoption of Web 2.0 by Tourism Businesses in NSW

By: Andrea Au

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The Facebook logo, consisting of the word "facebook" in white lowercase letters on a dark blue rectangular background.The word "twitter" in a light blue, lowercase, rounded font with a white outline.The YouTube logo, featuring the word "You" in black and "Tube" in white inside a red rounded rectangle.

Executive summary

This research report is concerned with the adoption of Web 2.0 by tourism organisations in NSW. Recent research conducted by Tourism NSW indicated that Australian travellers were increasingly using this new technology during their travel decision-making process. A literature review conducted for this research project similarly established that consumer demand for Web 2.0 was growing. The core objective of this study was to determine whether NSW tourism businesses were responding to this consumer demand. The other key objectives of the project included establishing the factors associated with Web 2.0 uptake, as well as determining the barriers to and benefits of technological adoption. The research project used a questionnaire survey, in-depth interviews and a case study to achieve the project's objectives.

The findings from the questionnaire and in-depth interviews indicated that there was a high level of Web 2.0 uptake in the NSW tourism industry. All businesses that had adopted Web 2.0 believed that there were advantages in employing the technology. Competitive advantage, the increase of website traffic and improved search engine rankings were the most commonly cited benefits within the survey. Furthermore, the majority of surveyed businesses recognised the importance and value of Web 2.0 to their organisation.

Since all non-adopters of Web 2.0 in the survey were micro, small or medium-sized enterprises, it appeared that organisation size was a factor that influenced Web 2.0 adoption. On the other hand, it was suggested that the type of organisation did not play a significant role in affecting Web 2.0 uptake. The main factor which seemed to hinder the employment of Web 2.0 was the lack of technical competence.

The in-depth interviews were used to create a case study to highlight best-practice use of Web 2.0. The difficulty of measuring the effectiveness of Web 2.0 was also suggested in the in-depth interviews. It was found that Web 2.0 can enhance audience engagement and provide access to new markets when organisations are innovative and proactive in meeting consumer demand.

Finally, some recommendations were made following the discussion of the project's findings. These recommendations are summarised below:

Priority Key:

Red: Key Issue (of high importance) **Green:** Secondary Issue (of medium importance)

Issue	Priority	Recommendation
Limited technical expertise	High	Tourism businesses do not appear to be aware that information sources which can address the problem of technical competence already exist. It is recommended that key information sources such as the Tourism Online Marketing E-Kit on the Tourism NSW Corporate website, should be promoted as websites of choice for updates on technological trends and their benefits.
Difficulty of measuring Web 2.0's effectiveness	High	Audience engagement can be measured through analysing both the number and content of consumer comments or participation in the business's Web 2.0 applications.
Organisation Size	High	Education and training should be targeted at small to medium-sized tourism enterprises as they were found to be less likely to meet consumer demand for new technologies.
Barriers to Web 2.0 uptake	Medium	Since the majority of research participants were Web 2.0 adopters, it is suggested that in-depth interviews be conducted with non-adopters to develop a clearer understanding of their barriers.

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1 Introduction

This research project discusses changing technologies and the effect on NSW tourism enterprises. More specifically, this project is concerned with the uptake of Web 2.0 technologies by NSW tourism businesses. Web 2.0 technologies allow the individual to post their own content, images, video, audio or opinions on the web for other individuals to see and respond to (Reactive, 2007). It includes applications such as Twitter, Facebook, blogs, wikis and user-generated content.

Tourism is known as one of the largest industries in the world and in the 1960s it was one of the earliest industries to adopt technology (Antoniou, Skylogiannis, Bikakis and Bassiliades, 2005). The Internet has been embraced by the tourism industry as an opportunity but it also poses a challenge for tourism enterprises (Egger and Buhalis, 2008). The aim of the research project was not only to determine the benefits of adopting Web 2.0, but also identify the challenges of employing Web 2.0. It should be noted that the results of this research project are not intended to be representative. However, the findings are indicative of common challenges and opportunities that tourism operators face in their adoption of Web 2.0.

1.1 Project background

Research conducted by the client, Tourism NSW, has primarily been concerned with the increasing Australian consumer demand for technologically savvy content. This means that knowledge of technological trends has only been understood from the perspective of the consumer. There is a lack of understanding of how businesses are responding to this trend. As a result, Tourism NSW requires research on how tourism organisations in NSW are responding to consumer demand for online content such as Web 2.0. Tourism NSW want to ascertain if businesses understand technological advancements, the reasons for Web 2.0 uptake and the barriers to employing Web 2.0.

1.2 Justification of problem

Tourism NSW is a state government body that markets and supports the development of New South Wales destinations. This project is relevant to Tourism NSW as it is aware of the increasing consumer demand for new online trends, and wanted to enhance its understanding of how the tourism industry is responding to this consumer demand for new

technologies. Through gaining this knowledge, Tourism NSW can then achieve its strategic objective of sharing its expertise to promote growth within the travel industry.

Most of the literature is already outdated as the primary focus is on business adoption of Internet usage, online reservations or email (Gretzel and Yoo, 2008). These are all older technologies. Technological trends surface at rapid speeds and the most recent major development, Web 2.0, is a term that was only introduced in 2004 (O'Connor, 2008). For these reasons, it is perhaps not surprising that the use of Web 2.0 is yet to be widely discussed within the literature. In order to contribute to a gap in the literature, this project will determine whether businesses are using the latest technologies, such as Web 2.0.

In addition, literature on technological adoption is dominated by North American and European research and insight into the Australian context is limited (Nodders, Mason, Ateljevic and Milne, 2003; & Mistilis, Agnes and Presbury, 2004). Therefore, this project will address this gap in research by conducting primary research with Australian tourist organisations. By providing an Australian case study in an area of literature dominated by overseas research, this project will assist Tourism NSW in achieving its strategic objective of supporting local industry through sharing its knowledge and insights.

1.3 Objectives

The research project has the following key aims:

1. determine the level of consumer demand for new technologies;
2. determine whether the NSW tourism industry is responding to consumer demand for new technologies;
3. identify factors associated with adoption of Web 2.0 in NSW tourism businesses;
4. identify barriers associated with uptake of Web 2.0 for NSW tourism businesses; and
5. determine the advantages of adapting to changing technologies.

1.4 Research approach

The research methods of literature review, questionnaire, in-depth interviews and a case study were utilised to address the research problem. A literature review was conducted to

provide a contextual basis for the project. The level of consumer demand for Web 2.0 was also established through the literature review. The in-depth interviews and questionnaire were conducted to identify the reasons for employing Web 2.0, as well as the barriers and benefits of Web 2.0 uptake. The case study was designed to highlight best-practice use of Web 2.0.

2 Literature review

In establishing a context for the research project, several theoretical areas within the literature need to be understood. Firstly, the project determined what new online trends were being embraced by travellers. This was followed by an understanding of the significance of these technological trends for the tourism industry. Consumer demand for new technologies was then established in order to answer the question of how businesses are adapting to online trends. Finally, the literature was used to establish whether businesses have adapted to technological developments and the reasons for doing so. It should also be noted that this research project occasionally uses technical terms. A glossary of technical terms has been included in Appendix 4.

2.1 *New technologies used by consumers*

Web 2.0 and user-generated content are currently the biggest online developments reshaping traditional marketing methods of tourism businesses (Reactive, 2007). According to Tourism Australia (2007), the traditional method of word of mouth marketing is radically changing. The emergence of Web 2.0 technologies has played a large role in altering how consumers relate their feedback of a product or experience. Within the context of the tourism industry, this can be achieved by photo sharing, travel blogs, travel reviews and video sharing (Cox et al. 2007).

The notion of user-generated content is critical to the research project. User-generated content (UGC) is used to explain the role that consumers now have in creating information (Cox et al. 2007). Traditional forms of marketing where content was created by the marketer now co-exist with the trend of user-generated content where content is generated by the consumer. This new form of word-of-mouth marketing means that anybody can share their opinion or travel experience with other individuals (O'Connor, 2008).

2.2 *Significance of Web 2.0 for the tourism industry*

The online trends outlined above all have one underlying theme, that is, they are consumer-centric. Social media and user-generated content are all technologies driven by the consumer. An implication of these online trends means that consumers are having more control over their travel decision making process (Cox et al. 2007). Hence, marketers have less control

over what messages reach their audience. This loss of control does not necessarily have negative ramifications as user-generated web sites can build brand loyalty and it can be a way of forming a relationship with the traveller (Cox et al. 2007).

There are conflicting arguments within the literature on the impact of UGC on travel. Although Frommer (2007) is skeptical of UGC due to the lack of travel expertise held by the majority of individuals who contribute content, the overwhelming belief is that the significance of Web 2.0 cannot be ignored if tourism businesses are to survive (Cox et al. 2007; O'Connor, 2008; Gretzel and Yoo, 2008; & Schegg, Liebrich, Scaglinone and Ahmad, 2008).

O'Connor, Höpken and Gretzel (2008) note that tourism is an information-intensive service that suits digital delivery as it is typically targeted at customers that are not local. Moreover, as travel is an intangible service that cannot be easily described, travellers often rely on word of mouth to decrease their uncertainty and perceived risk (Gretzel and Yoo, 2008). It is for these reasons that Hanlan and Kelly (2005) have predicted that Web 2.0 will only grow in its influence in transforming the traditional word of mouth marketing (as cited in Gretzel and Yoo, 2008). As a result, current online technological developments have the strong potential to continue changing the tourism landscape and tourism business will need to keep up with these trends to remain competitive (Scheidegger, 2006).

2.3 Consumer demand

In order to answer the research problem of how businesses are responding to online trends, the level of consumer demand for technology should be established. According to Tourism Australia (2007), 62% of international visitors used the internet for information before arrival in Australia which shows a huge increase from 22% in 2003. The Internet has the ability to influence the consumer once their destination decision has been made, rather than influencing the choice of a destination (Tourism Australia, 2007). Searching for air fares and planning a trip itinerary were the most common activities amongst visitors to Australia. Not only is there growing consumer use of the Internet for travel research, consumer demand for Web 2.0 websites is evident in the popularity of social networking sites such as Facebook and Myspace, as well as the use of review sites such as Trip Advisor which receives 10

million visits each week (Tourism Australia, 2007). Furthermore, the Australian Bureau of Statistics (2005) states that travel and accommodation were the most popular products purchased on the Internet.

There is a general consensus within the literature that consumer demand for the latest technological developments such as Web 2.0 is undeniably growing at a rapid rate (Gretzel and Yoo, 2008). According to O'Connor (2008), UGC is increasingly part of the decision making process for travellers. It is predicted by O'Connor (2008) that Web 2.0 will have a similar effect on transforming business that the diffusion of the World Wide Web had in the 1990s. Importantly, Gretzel and Yoo (2008) confirm that users of travel reviews submitted by other consumers perceive UGC content to be more up-to date, reliable and enjoyable to read than information submitted by marketers.

Despite the prediction that consumer demand for Web 2.0 technologies will increase in the future, travel agents will not be bypassed altogether as consumer demand for face-to-face contact amongst those who are reluctant to purchase online will still exist (Cardoso and Lange, 2007).

2.4 Adoption of changing technologies by the tourism industry

Formica and Kohler (2008) argue that recent studies show that tourism organisations have failed to match consumer demand as businesses have not completely embraced online trends. There appears to be a general consensus that the uptake of technological developments in the tourism industry is lagging and does not meet the level required to operate competitively in an increasingly ICT-driven industry (Bruan, 2004). Although most Australian tourism organisations have websites, these websites have varying levels of interaction that are often unsuccessful at taking advantage of the latest online developments (Bruan, 2004). In a study on Web 2.0 uptake, Schegg, Liebrich, Scaglinone and Ahmad (2008) found that the presence of Web 2.0 applications was low and was restricted to innovative newcomers. Traditional tourism businesses which comprise the bulk of the industry were slow to use Web 2.0.

In particular, small and medium tourism enterprises (SMTEs) have been cited in the adoption literature as slow adopters of online trends in comparison to large organisations

who tend to adopt technological innovations quickest (Evans, Bohrer, and Richards, 2000; Bruan, 2004; Nodders, Mason, Ateljevic and Milne, 2003; & Mistilis and D'ambra, 2006). Analysis of how SMTEs have coped with meeting consumer demand for changing technologies is important as the overwhelming majority of tourism enterprises are small or medium in size (Buhalis, 2003).

Varying levels of adoption not only exist for the size of the firm but also extends to the industry type (Evans, Bohrer, and Richards, 2000). Mistilis, Agnes and Presbury (2004) suggest that while airlines are early adopters, hotels are particularly slow in their uptake of new technologies. According to the OECD (2008), operators in the Australian accommodation industry regard the Internet as an opportunity but acknowledge that it is not fully utilised within their sector. On the other hand, Australian tour operators and travel agents are most likely to perceive Web 2.0 as a threat rather than an opportunity (OECD, 2008). This is due to the fact that consumers can now directly reach suppliers and bypass intermediaries such as travel agents. However, there are known cases of travel agencies that have embraced Web 2.0, such as STA Travel (Cox et al. 2007). Furthermore, destination marketing organisations have been found to be slow adopters of technological trends (Cox et al. 2007).

Rashid's adoption framework is critical to this project as it proposes that there are four influences in the adoption of technology. These include organisational, technological, individual and environmental aspects (Cited in Allan, Annear, Beck and Beveren, 2003). Organisational factors such as size of the firm and management support were found to have an impact on uptake of new technologies. Technological factors include the advantages, cost and compatibility of the innovation (Allan, Annear, Beck and Beveren, 2003). Environmental factors consist of public policy and the pressure from competitors. Lastly, individual factors are the business's knowledge of technology and their own innovativeness. Some factors may have a greater impact on others and there is no designated sequence or level of importance for these influences on technological uptake (Allan, Annear, Beck and Beveren, 2003).

According to Evans, Bohrer and Richards (2000), the challenges for larger organisations when employing new technologies consist of internal politics, organisational hierarchies and standardisation. Common barriers to technological adoption amongst small and medium firms include minimal understanding of the benefits and value of technology, an absence of strategic direction for ICT and a lack of training and capital (Nodder, Mason, Ateljevic, and Milne, 2003). Additionally, SMTEs are especially sensitive to maintenance costs for ICT (Evans, Bohrer and Richards 2000). Bruan (2004) also argues that SMTEs are commonly resource and time poor. Their size acts as a primary barrier to effective ICT usage and all of these factors make it particularly difficult for SMTEs to keep up with rapidly changing technologies and consumer demand.

In conclusion, the literature seems to suggest that Web 2.0 adoption amongst tourism businesses has been uneven and that they are failing to match consumer demand for the latest trends such as Web 2.0. There is general consensus within the literature that Web 2.0 is crucial to the future of tourism businesses. However, there appears to be a host of barriers to Web 2.0 uptake including limited resources and technical competence. It appears that adoption is influenced by a host of factors, including the size and type of the firm, but this will need to be determined through primary research.

6 Methodology

The methods of research undertaken for the project were literature review, online questionnaire, in-depth interviews, website analysis and a case study. This research project was conducted by only one researcher and this meant that there were certain limitations to the scope of the research. Therefore, it was not the intent of the researcher to develop a representative sample.

The questionnaire and in-depth interviews were conducted in accordance with the guidelines established by the Human Resources Ethics Committee. Responses were kept confidential and the questionnaire was short and nonintrusive. Questionnaire and in-depth interview participants were informed of the purposes of the project.

6.1 Secondary data

A literature review was carried out to examine existing ideas on the topic and to identify any gaps within the literature. In addition, the websites of the two organisations that participated in the in-depth interviews were analysed for innovativeness and Web 2.0 content.

6.2 Pilot survey

A pilot survey was sent to five individuals to review the preliminary questionnaire. Amendments to questions were made based on the feedback from pilot survey respondents.

6.3 Survey

An online questionnaire was sent to NSW tourism businesses listed in the Traveltrade Directory 2008 and subscribers of Tourism NSW's Insights Newsletter. Please refer to Appendix 5 to view the newsletter survey introduction. The survey questions are outlined in Appendix 3. The online questionnaire received 33 responses and the response rate was 16%. Data was then analysed using the survey program 'SurveyMonkey' to determine whether businesses had employed Web 2.0 and the factors which affected the level of technological uptake. Questionnaire survey was selected as a research method as it allows for responses from a large number of individuals and it can provide insight into the opinions that businesses have regarding online trends (Hult, 1996). An online questionnaire survey was

used instead of a paper survey. Dolnicar, Laesser and Matus (2009) have found that the number of omissions and dropouts for online surveys are lower than paper questionnaires.

6.4 *In-depth interviews*

The in-depth interviews were conducted using a semi-structured approach, which was similar to the data collection methods used in other technological adoption research (Evans, Bohrer and Richards, 2000; & Nodder, Mason, Ateljevic and Milne, 2003). Two in-depth interviews were undertaken as it provided more detail and flexibility than surveys, as the interviewer could interact with the respondent (Ross, 1974). One in-depth interview was conducted face-to-face and the second interview was conducted via the telephone as the business was located outside of the Sydney metropolitan area. This research method was selected to obtain further insight into the extent to which businesses understand and utilised online technologies and any concerns that they may have in responding to online trends. In-depth interviews were also imperative to the creation of the project's case study as questionnaires alone would not provide sufficient information.

6.5 *Case study*

Following the in-depth interviews, a case study was created as the tourism industry had cited a lack of in-depth case studies and best practice examples as barriers to effective adoption of the latest technologies (Evans et al. 2000). A case study can aid Tourism NSW in supporting the tourism industry by providing an example of best practice.

7 Results and discussion

The key results and discussion of findings from the questionnaire are analysed in this section. The discussion of the results is based on the objectives of the project. The findings of the research project have been divided into eight key areas: Organisation Profile; Awareness of Web 2.0; Adoption of Web 2.0; Benefits; Barriers; IT Knowledge; Future Web 2.0 Uptake and Importance of Web 2.0. Some of the findings from the interview are integrated in this section but further analysis of the interviews is featured later in the report.

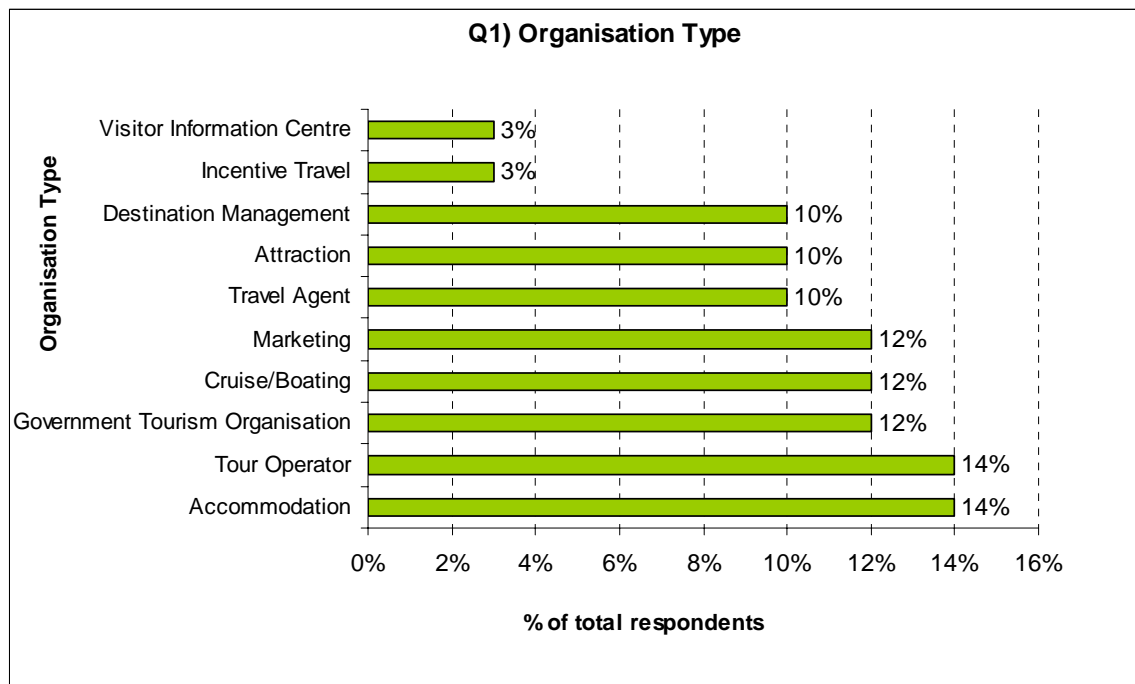
7.1 Organisation profile

The size and type of the organisation were analysed in order to determine whether these factors influenced Web 2.0 uptake.

7.1.1 Organisation type

Figure 1 outlines the types of tourism organisations that were involved in the survey. Tour operators and accommodation were the most common types of organisations that participated in the survey.

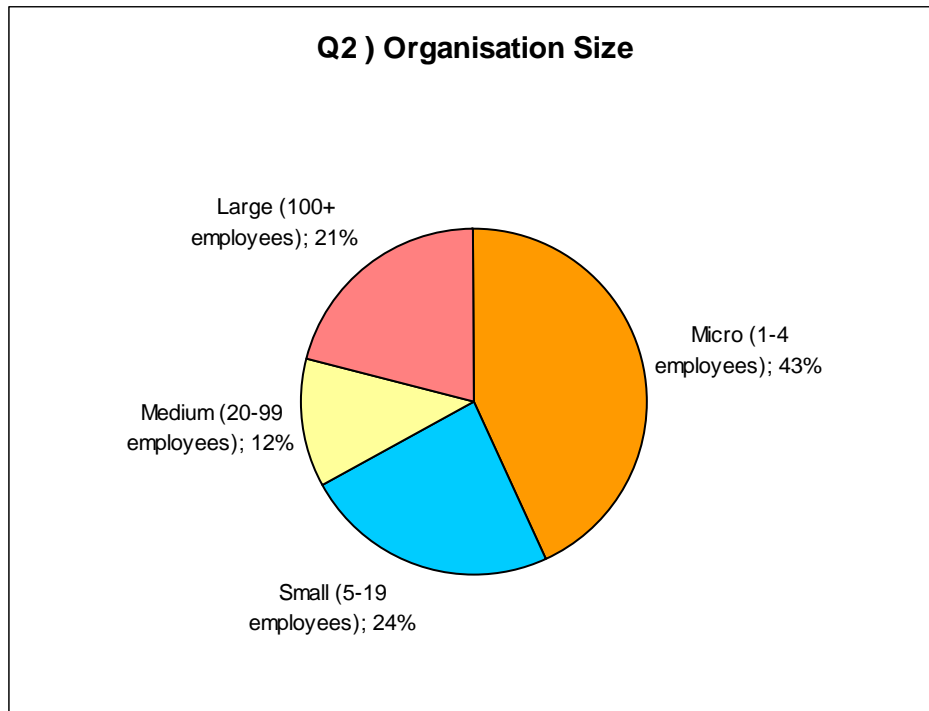
Figure 1 – Responses to question: ‘Organisation Type’



7.1.2 Organisation size

Most survey respondents (79%) were micro, small to medium-sized tourism enterprises (SMTEs), which reflects the make-up of the tourism industry where the overwhelming majority of businesses are small or medium in size (Buhalis, 2003).

Figure 2 – Responses to question: ‘Organisation Size’



7.2 Awareness of Web 2.0 applications

With the exception of one respondent, all survey respondents had awareness of Web 2.0 applications. As can be seen in Figure 3, almost all (97%) surveyed businesses were aware of online video, blogs and social networking sites. On the other hand, wikis, tagging and RSS attracted lower levels of awareness. These findings suggest that there is a high level of awareness of Web 2.0 amongst NSW tourism businesses.

Figure 3 – Awareness of Web 2.0

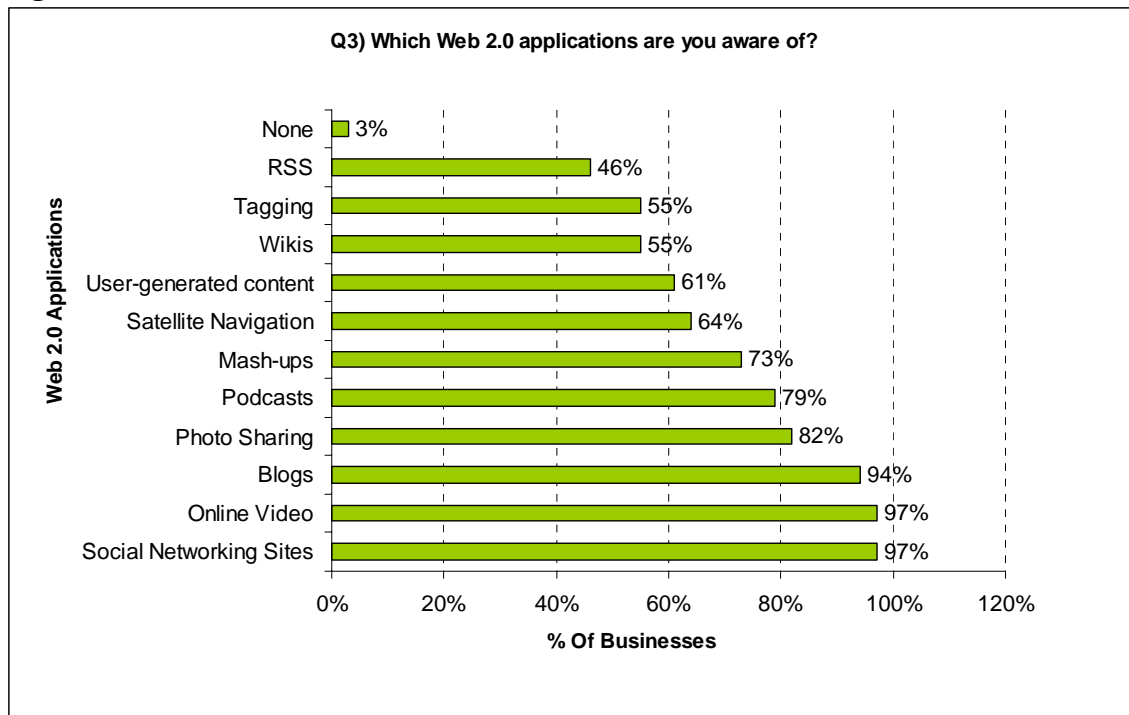
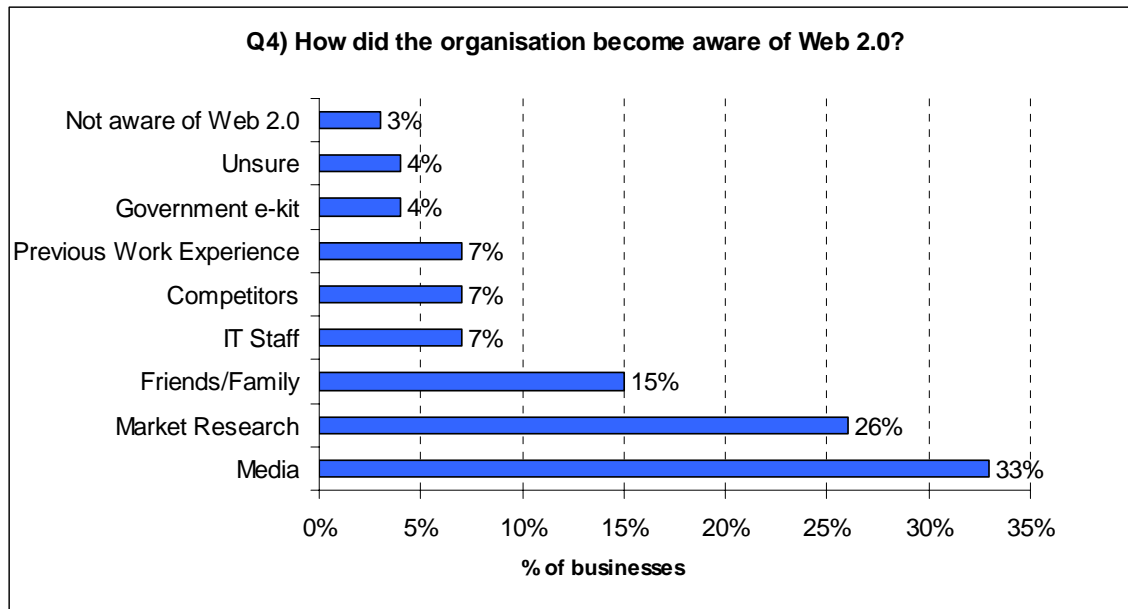


Figure 4 shows how organisations became aware of Web 2.0. Media and research were the most common sources of information that led to awareness of Web 2.0. This finding indicates that the media plays an important role in communicating new technological trends. Tourism organisations also relied on the expertise of their staff to find out about Web 2.0 (IT Staff 7% and Previous Work Experience 7%). This result suggests that training of staff would be valuable for businesses that want to understand technological developments.

7% of respondents only became aware of Web 2.0 through competitors. For these respondents, it appears that their adoption of Web 2.0 was a defensive reaction rather than an innovative action. The literature has proposed that adoption of Web 2.0 for these organisations is a defensive reaction to maintain market share and catch up with their competitors (Allan et al., 2003).

Figure 4 – How organisations became aware of Web 2.0



7.3 Adoption of Web 2.0

7.3.1 Web 2.0 uptake

Table 1 illustrates that most (78.8%) survey respondents had adopted Web 2.0, whereas only 18.2% of NSW tourism operators were non-adopters. One tourism business was unsure. Surprisingly, the level of Web 2.0 adoption found in the survey was particularly high when compared to previous studies. Previous studies have suggested that the presence of Web 2.0 on tourism websites is typically low and that tourism businesses are struggling to meet consumer demand for new technologies (Bruan, 2004; & Schegg, Liebrich, Scaglinone and Ahmad, 2008). The difference in findings may have been influenced by the research method. The electronic distribution of the survey may have led to a potential source of bias towards internet savvy businesses.

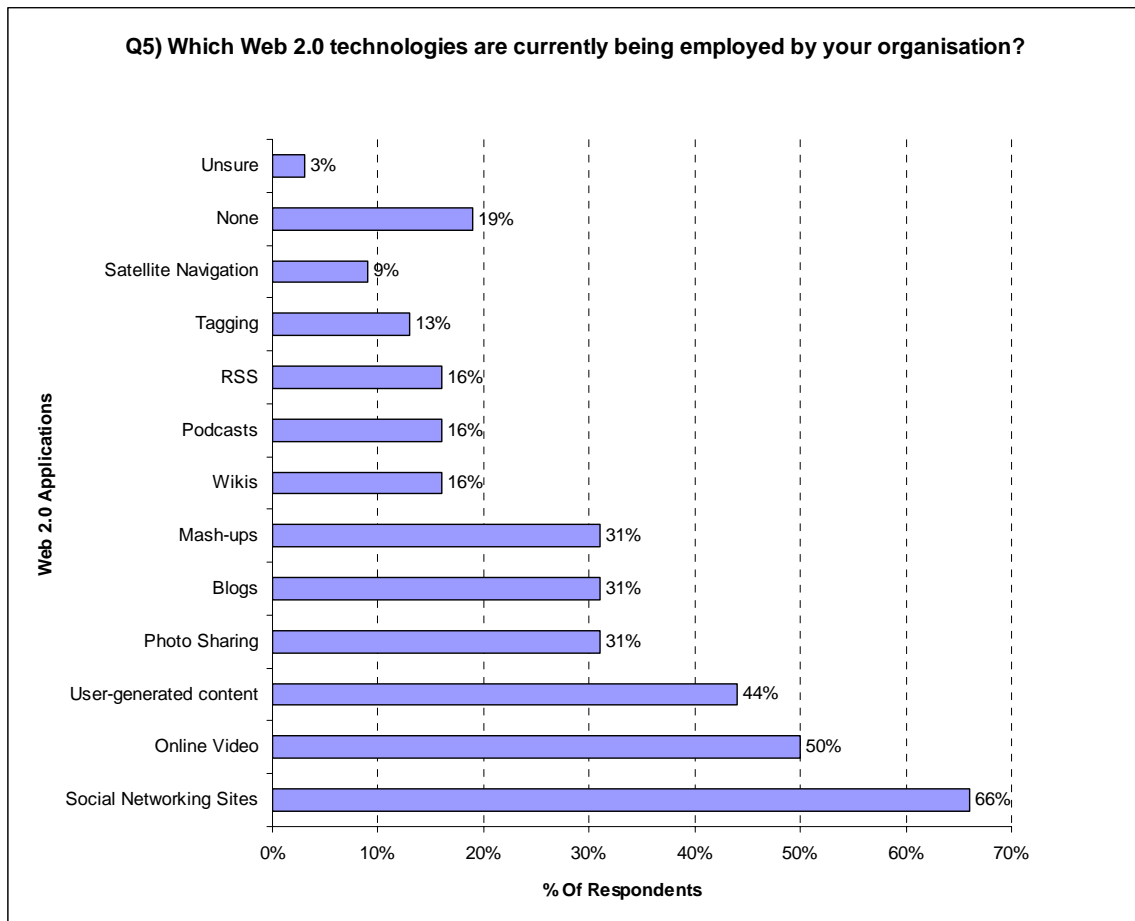
Table 1 – Web 2.0 Uptake

	% Of Total Respondents
Employs Web 2.0	78.8%
Does not employ Web 2.0	18.2%
Unsure	3%

7.3.2 Web 2.0 applications

Figure 6 shows which Web 2.0 applications are currently employed by tourism businesses. Social networking sites (66%) and online video (50%) were the most highly adopted Web 2.0 applications. On the other hand, satellite navigation and tagging were less likely to be employed by survey respondents. This is not a surprising result since social networking sites and online video attracted the highest levels of awareness, whereas tagging and satellite navigation attracted lower awareness levels. Hence, the types of Web 2.0 applications adopted by businesses seem to correlate with the types of applications that they were aware of.

Figure 6 – Adoption of Web 2.0 Applications

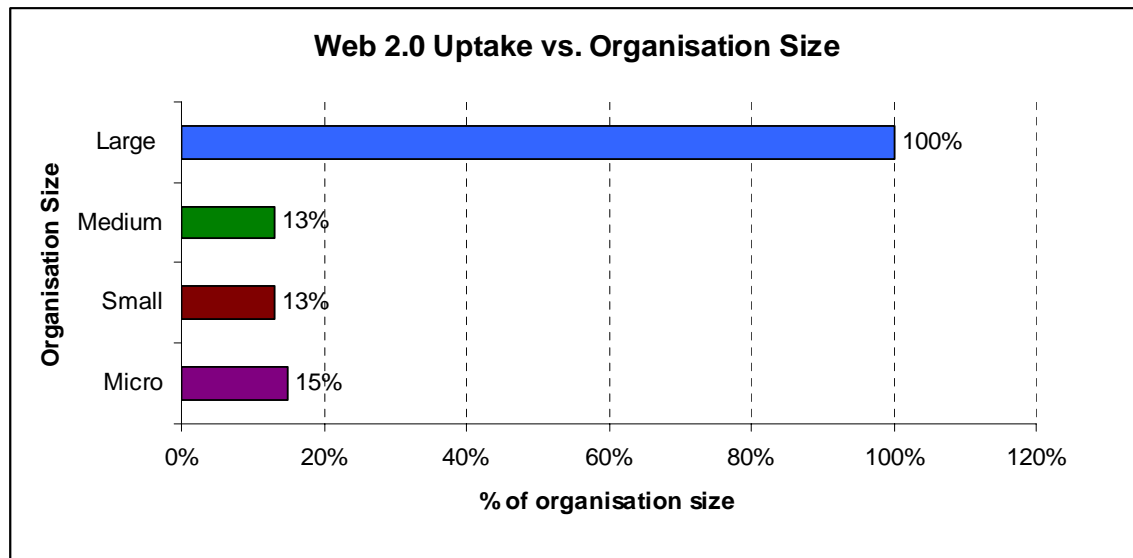


7.3.3 Web 2.0 adoption vs. organisation size

A cross-tabulation was made to determine whether organisation size influenced Web 2.0 uptake. Of total micro-sized enterprises, 15% of these respondents employed Web 2.0.

Figure 7 shows that 13% of small and medium tourism enterprises adopted Web 2.0. Interestingly, all large-sized tourism organisations in the survey had adopted Web 2.0. This means that all non-adopters of Web 2.0 in the survey were SMTEs. These findings appear to be consistent with those in previous studies. The literature has suggested that the size of SMTEs is often the primary barrier to keeping up with online trends (Bruan, 2004). Therefore, the results from the survey seem to support the general consensus that SMTEs tend to be slower adopters of technological trends when compared to large organisations (Evans, Bohrer, and Richards, 2000; Bruan, 2004; Nodders, Mason, Ateljevic and Milne, 2003; & Mistilis and D’ambra, 2006). The interviews with large sized organisations that had both adopted Web 2.0 seem to also support these findings.

Figure 7 – Web 2.0 Adoption vs. Organisation Size



7.3.4 Web 2.0 adoption vs. organisation type

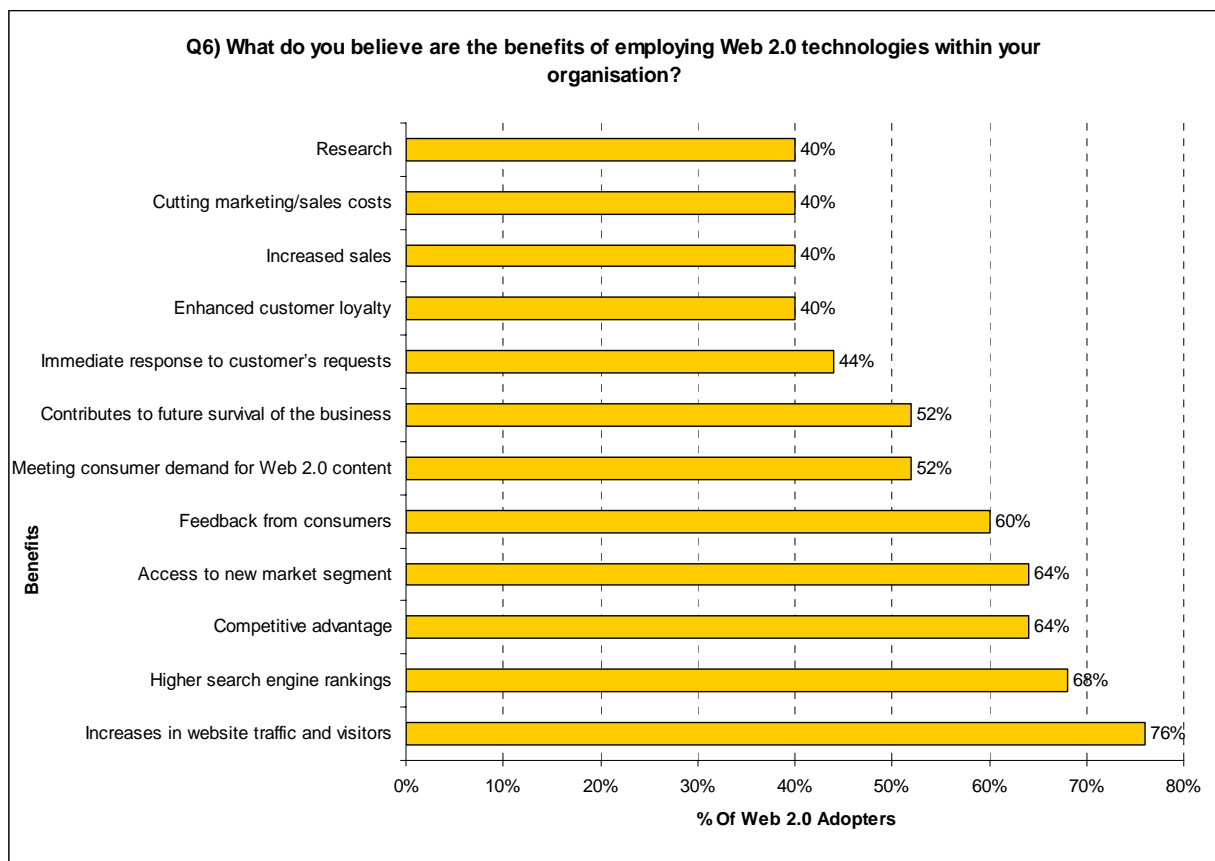
Another cross-tabulation was made to establish whether organisation type affected technological adoption. Of the seven organisations that had not adopted Web 2.0, three were cruise/boating businesses and the remaining four non-adopters were a travel agent, tour operator, visitor centre and accommodation provider. In contrast to literature studies, there does not appear to be a certain type of organisation that is more or less likely to employ Web 2.0. These findings suggest that the organisation type is not a factor in Web 2.0

uptake. This result was surprising since an interviewee had suggested that the organisation type could influence Web 2.0 uptake.

7.4 Benefits

The list of benefits provided in the survey was sourced from suggestions made by the literature. Figure 8 shows that all benefits listed in the survey received some affirmative responses. Therefore, it appears that the benefits of Web 2.0 suggested by tourism businesses correspond with suggestions made in the literature. All surveyed tourism businesses that adopted Web 2.0 believed that there were benefits in employing the technology. This result supported findings in the literature that have argued that there a host of benefits for organisations that employ this technology (O'Connor, Höpken and Gretzel, 2008; & Cardoso and Lange, 2007).

Figure 8 – Benefits of Web 2.0



The most commonly cited benefits of Web 2.0 were an increase in website visitors and higher search engine rankings. Competitive advantage and the ability to access new market segments were other highly rated benefits of employing the technology. Access to new markets and competitive advantage were benefits that were also identified in both in-depth interviews. Competitive advantage is particularly important to achieving growth for tourism in NSW. The OECD (2006) has suggested that tourism businesses need to be at the forefront of new ideas in order to remain competitive. Hence, findings from the literature, survey and in-depth interviews confirm the importance of adopting advantageous technology.

Interestingly, 40% of businesses that had employed Web 2.0 believed their sales had increased as a result of using the technology. This was a surprising finding since the Australian Museum suggested in its interview that it was difficult to measure the correlation between sales and Web 2.0.

7.5 Barriers

Of the seven businesses that had not employed Web 2.0, a quarter believed that Web 2.0 was not relevant to their business, were unsure of which factors had prevented their adoption of Web 2.0 or lacked technical expertise and training. One respondent believed that the lack of in-depth case studies was a barrier. Most of the barriers cited by survey respondents were related to areas of technical competence. This finding seems to demonstrate that Web 2.0 uptake is strongly hindered by a lack of understanding of the technology and its benefits. It was similarly proposed by the literature that small and medium-sized firms are typically constrained by the absence of expertise and training (Nodder, Mason, Ateljevic, and Milne, 2003; & Bruan, 2004).

Figure 9 – Barriers to Web 2.0 uptake



Other barriers to Web 2.0 uptake suggested in the literature were not selected by survey participants. These suggested barriers were: absence of adequate infrastructure; unsuccessful past experiences; internal politics; Internet security issues; absence of strategic management for IT and the threat of the Internet to the business. However, these other barriers should not be disregarded as only seven businesses were non-adopters of Web 2.0 in the survey. Therefore, this finding is not intended to be representative of all barriers experienced by tourism operators.

7.6 IT knowledge

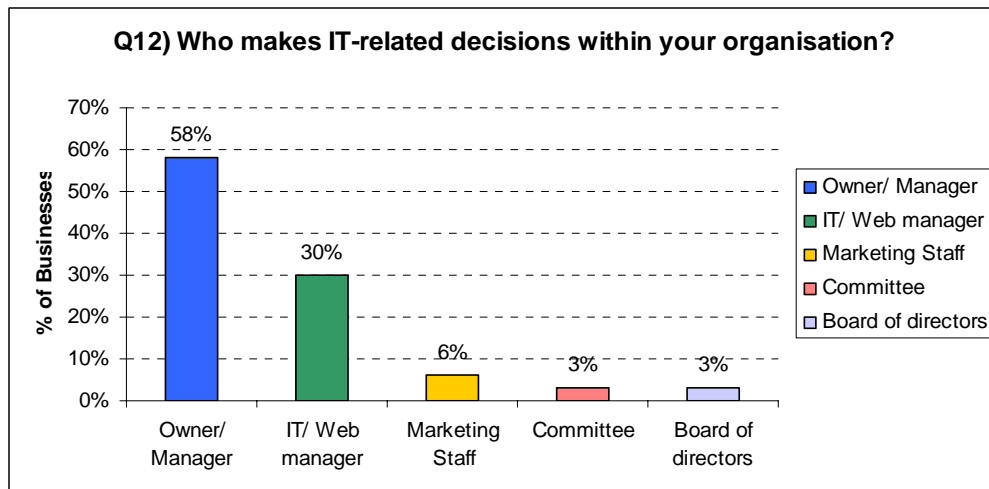
Perceived IT knowledge was measured to determine if technical expertise affected use of new technologies.

7.6.1 IT decision-maker

Figure 10 illustrates that management (58%) and web managers (30%) were the positions that were most commonly charged with IT decisions. The in-depth interviews support this finding as web specialists were responsible for IT in both organisations.

IT decisions were made by management in more than half of the tourism organisations surveyed. This result suggests that the support of management is highly influential to Web 2.0 adoption, a finding that was similarly cited in the literature (Allan, Annear, Beck and Beveren, 2003).

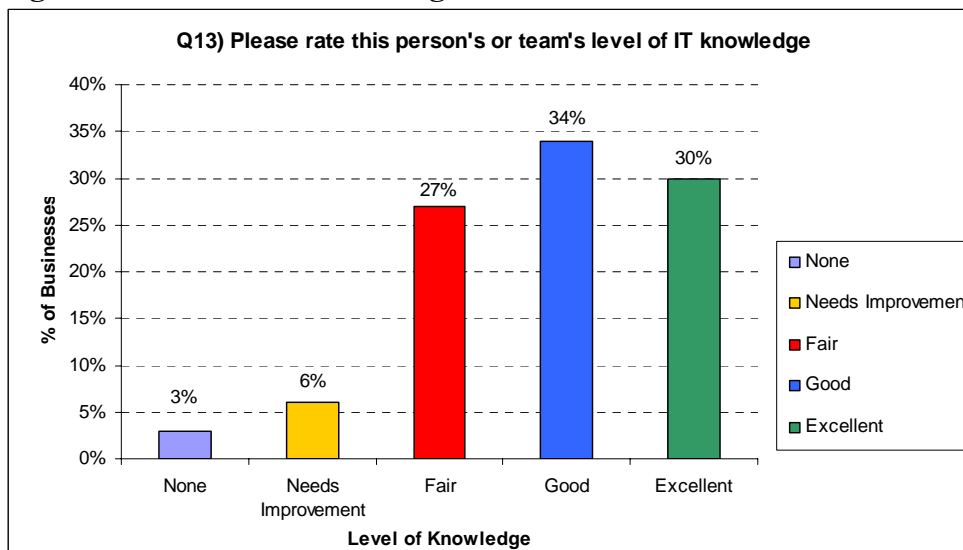
Figure 10 - IT decision-maker



7.6.2 Perceived level of IT knowledge

The majority of survey respondents believed that their organisation's IT knowledge was 'good' (34%) or 'excellent' (34%). Figure 11 shows that only a small minority believed that organisational knowledge of IT did not exist or needed to be improved.

Figure 11 – Level of IT knowledge



7.6.3 Perceived level of IT knowledge vs. organisation size

A cross-tabulation was performed to determine whether organisation size influenced the perceived level of IT knowledge. Micro-sized tourism businesses were the only respondents that rated their organisation's IT knowledge as 'none' (7%) or 'needs improvement' (14%). This lack of technical expertise was identified in the literature as a typical barrier for smaller-sized tourism organisations (Nodder, Mason, Ateljevic, and Milne, 2003).

Small-sized tourism businesses tended to rate their IT knowledge as either 'good' or 'excellent' (38%). All medium-sized organisations rated their IT knowledge as either 'good' or 'excellent' and large-sized organisations tended to classify their IT knowledge as 'good' (57%). As a result, it seems that small to large-sized businesses believe that their IT knowledge is competent.

7.6.4 Perceived knowledge of IT vs. Web 2.0 uptake

The survey was analysed to determine whether the organisation's IT knowledge matched their actual Web 2.0 uptake. All respondents that believed that their organisation's IT knowledge was non-existent or needing improvement were non-adopters of Web 2.0. This result suggests that there is awareness amongst some non-adopters that their IT knowledge could be developed.

Four of seven non-adopters of Web 2.0 rated their knowledge as 'fair', 'good' or 'excellent'. This perceived level of knowledge seems at odds with their actual expertise as one of these respondents was uncertain about the benefits of Web 2.0 and two other respondents did not believe Web 2.0 was relevant.

7.7 Future plans for Web 2.0

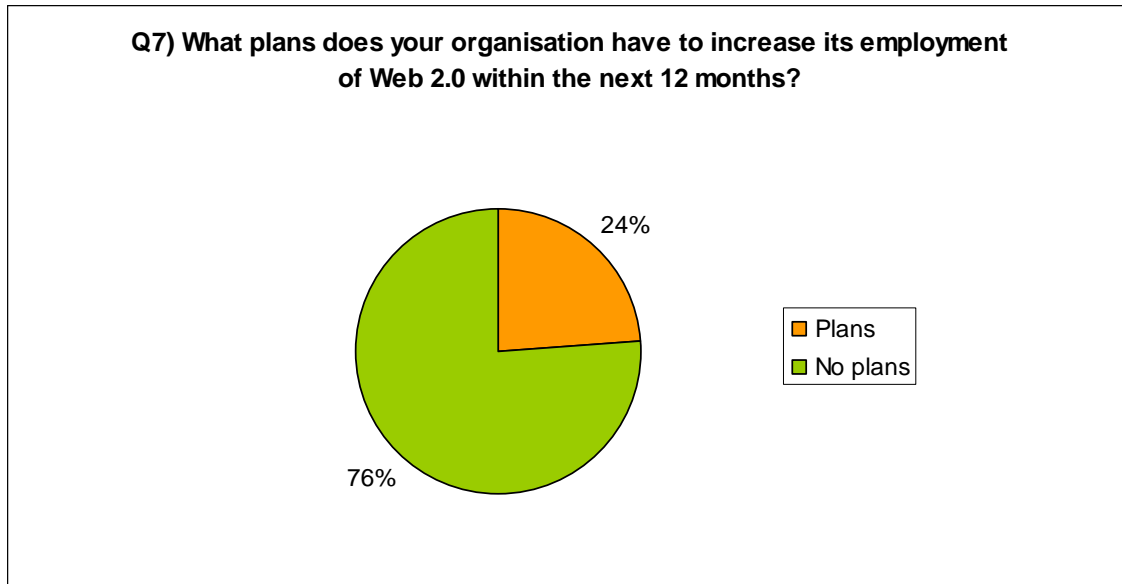
The level of Web 2.0 penetration was measured through current levels of adoption and plans for future Web 2.0 uptake.

7.7.1 Plans to increase Web 2.0 applications

Figure 12 illustrates that most adopters of Web 2.0 (76%) planned to increase their employment of the technology within a year. The high number of organisations that plan to increase Web 2.0 suggests that Web 2.0 penetration will grow in the future. Furthermore, it

appears that these survey respondents believe that Web 2.0 is likely to continue to be of material value for their businesses.

Figure 12 – Plans to increase Web 2.0

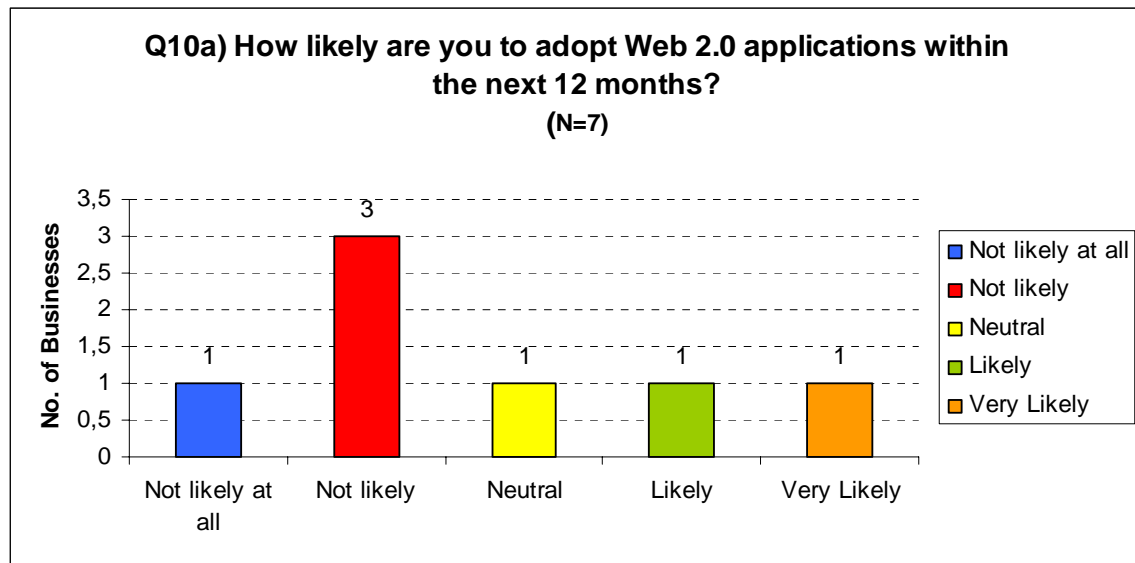


One survey respondent commented that they planned to develop an entire interactive Web 2.0 sub-site off their main website. This portal would include photo upload, forum, Facebook and Twitter links and video sharing links. This comment confirms the finding that some tourism organisations recognise the growing importance of Web 2.0 to the success of their business.

7.7.2 Plans to introduce Web 2.0

In contrast to organisations that had already adopted Web 2.0, non-adopters were less likely to have plans to employ Web 2.0 in the next twelve months. Figure 13 illustrates that only 2 of 7 non-adopters were 'likely' or 'very likely' to employ Web 2.0 within the same period. This indicates that non-adopters are still lagging behind their competitors. However, this is a tentative finding as the limited sample size is not representative.

Figure 13 – Likelihood of future Web 2.0 uptake

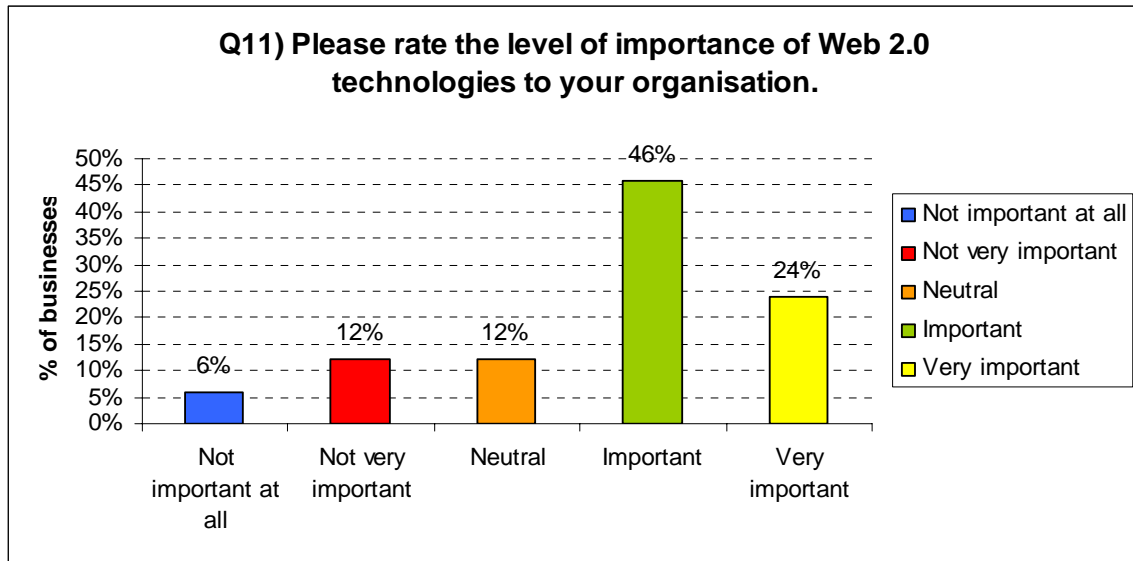


7.8 Importance of Web 2.0

Figure 14 illustrates that most respondents (70%) believed that Web 2.0 technologies were ‘important’ or ‘very important’ to their organisation. Only 18% of respondents believed that Web 2.0 was ‘not very important’ or ‘not important at all’. Therefore, it appears that most surveyed respondents understand the value of Web 2.0 to their organisation.

Interestingly, 15% of organisations that had adopted Web 2.0 believed that the technology was ‘not very important’ or felt ‘neutral’ about their use of Web 2.0. The literature has proposed that businesses that adopt new technologies do not always recognise the value of doing so (Burgess and Davidson, 2006). This is often the case for businesses that have employed technologies without sufficient planning and that have merely adopted new trends for the sake of keeping up with their competitors (Burgess and Davidson, 2006).

Figure 14 – Importance of Web 2.0



8 Case Study

During October, 2009 an in-depth interview was conducted with the Australian Museum for the purpose of creating a case study. The case study explored how Web 2.0 was being used. The Museum's case study was created as a best-practice model to illustrate how to effectively implement Web 2.0 and the benefits of doing so. It was created from an interview with two employees: the Head of Visitor Programs and Services and the Web Manager at the Australian Museum.

8.1 Case Study: The Australian Museum

<http://australianmuseum.net.au/>

8.1.1 Background

The Australian Museum was founded in 1827 and it was the first museum established in Australia. The museum is a large, state government institution with approximately 350 employees. Its mission is to inspire the exploration of nature and culture through research, public programs and collections. The Australian Museum is a cultural attraction that receives more than half of its visitors from outside of Sydney. A fifth of its visitors are international tourists.

The museum's website has been operating since 1995 and it was one of the world's first cultural institutions to set up a website. Its website now receives 2 million unique visitors monthly. The Australian Museum's earlier websites had indicated that there was a sizeable audience that wanted to interact with the museum. Although the technology did not initially exist to cater to this need, the introduction of Web 2.0 was to facilitate greater interaction with the museum's audience.

8.1.2 Adoption of Web 2.0

The Australian Museum first employed Web 2.0 through populating external social media websites such as Facebook, Twitter, Youtube and Flickr in 2007. Its early adoption of Web 2.0 is discussed in the literature as typical of large organisations who tend to adopt technologies earlier than small-to-medium enterprises (Evans, Bohrer, and Richards, 2000;

Bruan, 2004; Nodders, Mason, Ateljevic and Milne, 2003; & Mistilis and D'ambra, 2006). The Australian Museum believes that museums tend to be egalitarian and heavily focused on their audience. Web 2.0 was considered by the Australian Museum to be a natural progression for most of the museum industry. Therefore, the museum believes that uptake of Web 2.0 can also be affected by organisation type. The literature similarly suggested that varying levels of adoption depends not only on organisation size but also industry type (Evans, Bohrer, and Richards, 2000).

8.1.3 Benefits of employing Web 2.0

In June, 2009, Web 2.0 was integrated into the museum website. Comments and tags could be added by the user on almost every page of the website. Five blogs were created and the 'My Museum' component of the website allows users to share movies, images and audio files.

Although the museum does not receive a high volume of user comments, making provision for comments on every page has proved to be highly valuable. The main objective of the Web 2.0 features on the museum website was to further engage its audience. The Australian Museum was interested in the quality and type of comments rather than the quantity of comments. The museum did not want an excessive amount of comments as this would mean that its scientists would not be able to respond to and engage with its audience adequately.

Importantly, allowing users to contribute comments provided an evaluation tool that the Australian Museum previously did not have. Previously, the museum only had access to website statistics that indicated the number of unique visitors a month. However, the museum did not have knowledge of who these visitors actually were. The introduction of Web 2.0 to the website provided the Australian Museum with valuable, in-depth insight into their audience. The comments contributed by users provided information about who the museum's audience was, why they were engaging with the museum and what information their audience was interested in. Through the adoption of Web 2.0, the Australian Museum was finally able to create a snapshot of its audience.

The other benefits that Web 2.0 has yielded for the museum include savings in both financial and time resources. The addition of Web 2.0 features has also given the museum access to new markets and the ability to engage with new audiences. Consumers are increasingly using Web 2.0 technologies and employing Web 2.0 allows the museum to meet this consumer demand. Instead of consumers merely viewing the museum's exhibitions, Web 2.0 has provided a way of facilitating discussions and engaging the public further. The Australian Museum has also noticed that one-way communication, such as email, is no longer the preference for consumers.

8.1.4 Planning phase

Despite these benefits of employing Web 2.0, the interview with the Australian Museum revealed that effective usage of Web 2.0 requires extensive planning and strategy. This confirms the literature's suggestion that Web 2.0 is most beneficial for organisations when it is preceded by thorough planning and strategic management (Evans, Bohrerand, and Richards 2000).

The planning phase for the Australian Museum's new Web 2.0 website spanned four years. Although commercial companies were consulted, most of the ideas for the new website originated internally from museum staff. The museum consulted its staff to understand what social media they were using and how it was used. Web networks external to the organisation were also consulted during the lengthy planning phase. Various focus groups were conducted to understand the consumer's needs. The museum analysed many other competitor and non-competitor sites for ideas. Monthly Internet training, such as Facebook Fridays, was also provided to all interested staff members to overcome any concerns.

8.1.5 Issues

The option to comment on every page of the website was proposed during the planning phase and attracted some initial concern that the website would be inundated with the wrong information or damaging comments. However, these concerns were unfounded as barely any comments have been removed since the new website's launch. In fact, the focus groups

revealed that consumers were not concerned with wrong types of information, as long as they were aware of who had posted the comment.

The organisation's current concern with Web 2.0 is how to measure the effectiveness of its projects. The museum is still developing its understanding of how to use social media to increase attendance and generate revenue. It acknowledges that its Web 2.0 projects require more strategic direction.

8.1.6 The future

The museum recognises that consumers have embraced Web 2.0 technologies and that they are commenting about the organisation in other online spaces. For that reason, the Australian Museum plans to increase its awareness of what types of comments are being made about the museum in external Web 2.0 spaces. There are plans to create a stronger link between external social media sites and its own website by implementing a Twitter Feed. Furthermore, emphasis will be placed on external social media sites due to the cost restrictions of constantly modifying its own website.

8.1.7 Conclusions

The Australian Museum case study is a model of best-practice in the tourism industry. The Australian Museum was innovative and proactive in its efforts to meet changing consumer demand. The museum's adoption of Web 2.0 significantly enhanced its engagement with its audience. Further to this, Web 2.0 provided the museum with more in-depth insight into its audience and access to new markets. Not only does the case study demonstrate the growing consumer demand for Web 2.0 technologies, it also illustrates that effective implementation of Web 2.0 requires planning and strategic management.

9 Recommendations

The recommendations that have been identified from the survey and in-depth interviews are set out below.

Priority Key:

Red: Key Issue (of high importance) **Green:** Secondary Issue (of medium importance)

Issue	Explanation	Priority	Recommendation
<i>Human resources and technical competence</i>	Most of the barriers suggested by survey respondents were related to areas of technical expertise. The in-depth interviews similarly suggested that a lack of understanding of new technologies was a challenge when employing Web 2.0.	High	<p>Education: SMTEs need be aware of and have access to information sources that provide updates on technological trends and how to effectively use them. Tourism businesses do not seem to be aware that this type of information already exists (e.g. the Tourism Online Marketing E-Kit on the Tourism NSW Corporate website). Therefore, awareness levels of these information sources could be increased through active promotion. For example, the Tourism NSW Corporate website could be promoted as the website of choice for updates on new technologies and their benefits.</p> <p>Training: In most cases, support and training for tourism businesses would assist them in improving their expertise.</p> <p>Networks: The Australian Museum case study showed the value of forming links with local networks to share information and gain new skills. This is particularly relevant for SMTEs as creating links with other partners lead to a stronger pool of knowledge and skills.</p>

<i>Planning and strategic management</i>	The in-depth interviews indicated that the effectiveness of Web 2.0 is limited when its implementation is not preceded by extensive planning and strategic management.	High	Education: Please see the Education recommendation in ‘Human resources and technical competence’.
<i>Organisation Size</i>	The survey found that all non-adopters of Web 2.0 in the survey were SMTEs.	High	SMTEs focus: All of the above recommendations need to be targeted especially at SMTEs as they tend to lag behind large organisations in their use of technology. For example, education and training of tourism businesses should be focused on SMTEs. Targeting SMTEs is particularly important when considering that the bulk of the tourism industry is made of small to medium-sized operators.
<i>Effectiveness measures</i>	The in-depth interviews highlighted the difficulty in measuring the effectiveness of Web 2.0. The Australian Museum is still developing its understanding of how social media affects attendance and revenue. It also wants to shift away from merely using quantitative measures of Web 2.0.	High	Australian Museum: The Australian Museum already conducts Visitor Profile/Audience research that discusses general usage of its website. In future studies, the museum could update its visitor questionnaire with specific Web 2.0 questions to determine whether museum visitors explore Web 2.0 content before visiting. The Australian Museum currently measures its website in quantitative terms, such as the number of unique visitors. However, it could qualitatively explore the effectiveness of its Web 2.0 by analysing the content of comments or discussion between social media users. The Australian Museum could also use Google Alerts to inform staff when comments about their organisation have been made on other Web 2.0 spaces. These Google Alerts could help the Australian Museum to further understand audience engagement.

<i>Barriers for non-adopters</i>	Although some common barriers were identified in the survey, most participants in the research project were already adopters of Web 2.0. Therefore, the sample size of non-adopters was limited.	Medium	Future research proposal: In-depth interviews with non-adopters of Web 2.0 should be conducted in order to further understand their attitudes towards new technology and the challenges of adopting new online trends.
<i>Web 2.0 uptake</i>	The level of Web 2.0 adoption found in the survey was particularly high when compared to studies in the literature. However, this result may not be representative as the medium of research was electronic. Since surveys for this research project were conducted online, this may have resulted in a potential source of bias towards organisations that were internet-savvy.	Medium	Future research proposal: A paper survey of Web 2.0 adoption is recommended so that more businesses can be included in the research. Non-electronic methods of research would help to avoid potential bias towards internet-savvy businesses.
<i>Organisation Type</i>	In contrast to previous studies in the literature, the survey results indicated that there was no correlation between organisation type and Web 2.0 uptake. However, an interviewee suggested that the organisation type did influence Web 2.0 adoption.	Medium	Future research proposal: Since the sample size of non-adopters was limited in the survey, it is recommended that future Web 2.0 adoption research should be conducted with a larger sample size to determine whether organisation size influences adoption of new technologies.
<i>Consumer control of website messages</i>	Both in-depth interviewees shared an identical concern when initially employing Web 2.0. They were concerned with the types of damaging or incorrect comments that their websites would receive if they	Medium	Education: Use case studies to demonstrate to tourism businesses that the benefit of allowing consumers to share and engage on their website far exceeds the disadvantages.

	permitted consumers to freely comment on their website pages. However, this concern was unfounded as these types of comments were rare.		
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10 Conclusion

This research report discussed the adoption of Web 2.0 by NSW tourism businesses and the factors that influenced uptake of new technologies. The consumer demand for technologically-savvy content was established through the literature review. Questionnaire survey and in-depth interviews were then used to ascertain the level of Web 2.0 uptake in the NSW tourism industry and the advantages of employing the technology. The barriers to Web 2.0 adoption and challenges of using the technology were also discussed.

The key findings from the study were:

- 1) there were high levels of Web 2.0 adoption and plans to increase the use of the technology amongst surveyed businesses;
- 2) all adopters of Web 2.0 believed that there were benefits. The main benefits were competitive advantage, increased website traffic and improved search engine rankings;
- 3) organisation size seemed to be a factor that affected Web 2.0 adoption but organisation type did not appear to be an influence;
- 4) it was indicated that the lack of technical competence was the main barrier to employing new online trends;
- 5) successful use of Web 2.0 involves strategic management and planning; and
- 6) it was suggested that the effectiveness of Web 2.0 can be difficult to measure.

Education, training and further research were some of the suggestions made to overcome any difficulties associated with employing new online technologies. It was also recommended that businesses measure the effectiveness of Web 2.0 through both quantitative and qualitative methods.

It can be concluded that most businesses involved in the research realised the importance of Web 2.0 to their organisation. The high levels of current and planned Web 2.0 adoption indicate that the technology is impacting businesses now and will continue to do so into the future.

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Appendix 1: Survey

Web 2.0 Technologies Survey

10.1.1 1. Organisation Type:

- Marketing
- Accommodation
- Travel Agent
- Attraction
- Tour Operator
- Motor Rental
- Airline
- Cruise/Boating
- Destination Management
- Events
- Other (please specify)

10.1.2 2. Organisation Size:

- Micro (1-4 employees)
- Small (5-19 employees)
- Medium (20-99 employees)
- Large (100+ employees)

10.1.3 3. Which Web 2.0 applications are you aware of?

- Wikis
- Podcasts
- Social Networking Sites (e.g. Facebook, Myspace, Twitter)
- Online Video (e.g. Youtube)
- Photo sharing
- Blogs

- Tagging
 - Mash-ups (e.g. Google Maps)
 - RSS (Really Simple Syndication)
 - User-generated content
 - Satellite Navigation
 - None of the above
- Other (please specify)

10.1.4 4. How did the organisation become aware of Web 2.0?

- Media
 - Market research
 - Competitors
 - Government e-kit
 - Friends/Family
 - My organisation is not aware of Web 2.0
- Other (please specify)

10.1.5 5. Which Web 2.0 technologies are currently being employed by your organisation?

- Wikis
- Podcasts
- Social Networking Sites (e.g. Facebook, Myspace, Twitter)
- Online Video (e.g Youtube)
- Photo sharing
- Blogs
- Tagging
- Mash-ups (e.g. Google Maps)
- RSS (Really Simple Syndication)
- User-generated content

- Satellite Navigation
 - Unsure
 - None of the above
- Other (please specify)

10.1.6 6. What do you believe are the benefits of employing Web 2.0 technologies within your organisation?

- Higher search engine rankings
 - Increases in website traffic and visitors
 - Enhanced customer loyalty
 - An increase in sales
 - Meeting consumer demand for Web 2.0 content
 - Competitive advantage
 - Research
 - Access to new market segment
 - Immediate response to customer's requests
 - Cutting marketing/sales costs
 - Feedback from consumers
 - Contributes to future survival of the business
 - None
 - Unsure
- Other (please specify)

10.1.7 7. What plans does your organisation have to increase its employment of Web 2.0 within the next 12 months?

- No plans
- We plan to employ additional Web 2.0 technologies

10.1.8 8. Please specify which Web 2.0 technologies that you plan to adopt:

- Wikis

- Podcasts
 - Social Networking Sites (e.g. Facebook, Myspace, Twitter)
 - Online Video (e.g Youtube)
 - Photo sharing
 - Blogs
 - Tagging
 - Mash-ups (e.g. Google Maps)
 - RSS (Really Simple Syndication)
 - User-generated content
 - Satellite Navigation
 - Unsure
- Other (please specify)

10.1.9 9. What factors have prevented your organisation from adopting Web 2.0?

- Internet security issues
 - Not relevant to the business
 - Uncertainty over the benefits of Web 2.0
 - Cost
 - Lack of technical expertise and training
 - The Internet is a threat to the business
 - Time constraints
 - Unsuccessful past experiences
 - Internal politics
 - Absence of adequate infrastructure
 - Absence of strategic management for IT
 - Lack of in-depth case studies and good practice
 - None
 - Unsure
- Other (please specify)

10.1.10 10. How likely are you to adopt Web 2.0 applications within the next 12 months?

- Not likely at all
 Not Likely
 Neutral
 Likely
 Very likely

10.1.11 11. Which Web 2.0 applications do you plan to adopt?

- Wikis
- Podcasts
- Social Networking Sites (e.g. Facebook, Myspace, Twitter)
- Online Video (e.g Youtube)
- Photo sharing
- Blogs
- Tagging
- Mash-ups (e.g. Google Maps)
- RSS (Really Simple Syndication)
- User-generated content
- Satellite Navigation
- Unsure
- Other (please specify)

10.1.12 12. Please rate the level of importance of Web 2.0 technologies to your organisation.

	Not important at all	Not very important	Neutral	Important	Very important
Importance	<input type="checkbox"/> Not important at all	<input type="checkbox"/> Not very important	<input type="checkbox"/> Neutral	<input type="checkbox"/> Important	<input type="checkbox"/> Very important

10.1.13 13. Who makes IT-related decisions within your organisation?

- Owner/ Manager
- External consultant

- Family member/ Friend
 - IT/ Web development manager
 - Nobody
- Other (please specify)

10.1.14 14. Please rate this person's or team's level of IT knowledge.

	None	Needs Improvement	Fair	Good	Excellent
IT Knowledge	<input type="checkbox"/> None	<input type="checkbox"/> Needs Improvement	<input type="checkbox"/> Fair	<input type="checkbox"/> Good	<input type="checkbox"/> Excellent

Appendix 2: Glossary of Web 2.0 terms

Term	Definition
Mash-ups	The combination of two or more distinct information sources to create a new experience. For example, the combination of Google Maps and hotel locations.
Wikis	A website that permits users to add, edit and remove site content. The most known example is Wikipedia.
Tagging	Tagging is used to save and sort site content that are items of interest. Multiple tags can be given to any comment.
RSS	Users can use RSS to subscribe to website content updates and keep track of their favourite sites.
Podcasting	An audio file that can be downloaded from a website.
Social networking	Users create their own content which they can share with other users that share a common interest. The emphasis is on forming relationships with other users. Examples of popular social networking sites include Facebook and Myspace.
Blogs	A website where entries are made in the style of a journal. Blogs often comment on a particular area of interest.

Source: Reactive, 2007.

Appendix 3: Survey Introduction in Tourism NSW Insights Newsletter



Survey on social media in the tourism industry

Tourism NSW is supporting a short survey that is being conducted to examine the adoption by tourism organisations of online technologies and tools such as *Facebook*, *Twitter*, blogs and wikis.

The study, called the Web 2.0 Technologies Survey, is being carried out by Tourism NSW intern Andrea Au. Ms Au is in her final year of a Bachelor of Management in Leisure and International Studies at the University of Technology.

Facebook, *Twitter* and similar sites are known as Web 2.0 Technologies because they allow users to upload their own content such as text, images, video and audio materials for response by other users. The users' content contains opinions and creates an exchange of information. Tourism NSW is actively involved in this area including ongoing work on its Facebook and Twitter sites. All responses are confidential. It is hoped that operators will share their experiences. Tourism NSW will provide a summary of the findings via *Insights*. For further information contact Andrea Au on 0415 677 435 or andrea.au@student.uts.edu.au.

The survey can be completed in around 10 minutes. To access it online, [click here](#).