Abstract

The wine industry is very important in Australia and the advent of e-commerce has presented the industry with new challenges. The old adage ‘the customer is always right’ has never been more important, as the foundation stone upon which electronic service quality (e-SQ) lies is customer requirements. Zeithaml, Parasuraman, and Malhotra, (2002) claim that the elimination of e-SQ gaps will lead to customer satisfaction which results in increased perceived e-SQ, value, purchases and repurchases. The aim of this research was to determine if e-SQ gaps existed in the Australian wine industry.
1 Introduction – Australian Wineries and the World Wide Web

The Australian wine industry is growing rapidly and is very important to the Australian economy. The wine industry has gained a new wine producer every 61 hours over the past three years (Winetitles, 2004). In 2000-2001, the wine manufacturing industry employed over 9,000 people and had a total turnover of $3,575.6 million. An increase in employment of 5% and turnover of 8% since 1998-1999 is further evidence of the continual growth in this industry (ABS, 2002).

There has also been a steady increase in production. The 2004 vintage was a record 1.86 million tonnes, surpassing the 2002 record of 1.51 million tonnes (Strachan, 2004). The top 22 wine companies (parent companies and their subsidiaries) account for 94% of the total sales. This leaves the remaining Australian producers (approximately 1,600) to compete for a market share of only 6% (Winetitles, 2004). The large wineries have a huge market share resulting in competitive advantages over the smaller wineries in terms of distribution and influence with the major retail chains. Hence, the smaller players need to look at other, less traditional routes to markets such as the Internet (ACIL Consulting, 2002). Furthermore, wine production currently exceeds domestic consumption and exports, resulting in an oversupply; further evidence that wineries need to look at other ways of promoting their product with the intent of increasing overall sales (ACIL Consulting, 2002). This has led to a dramatic increase in the number of wine producers adopting a Web presence over the past few years.

Preliminary discussions with several wineries in the McLaren Vale region of South Australia uncovered a similar train of thought: that the winery should have a website because everyone else has one, but the winery managers do not really know how to use it to their best advantage. The prime purpose of this research is to assist wineries
like those in the McLaren Vale region to have an effective Web presence by identifying the differences between winery customer website requirements, winery managements’ beliefs about customer requirements, and what is currently provided on winery websites. Hence the research question addressed by this research is:

*Is there a discrepancy between what customers require from Australian winery websites, what winery managers believe customers require, and what is generally being provided?*

By answering the question this research will contribute to knowledge in two areas; it has practical implications and develops theoretical knowledge. Practically, this research is of benefit to the Australian wine industry as a comparison of the data collected from the three phases of this study (customers’ survey, winery managers’ survey, and website evaluations) provides evidence of e-SQ gaps. Once these gaps are known, winery management can work towards closing them. This will make a visit to the websites more satisfying for the customers and give the wineries a more effective Web presence. The resultant winery website design framework will provide wineries with a tool that will assist them to create a new, or improve an existing, Web presence.

From a scholarly perspective this research brings together theoretical and industry practices resulting in the development of a website design framework for the Australian wine industry. In addition, part of Zeithaml et al.’s (2002) conceptual model for understanding and improving e-SQ will have been tested and proven to be valuable in the context of this study, and as a result of this study a way of measuring e-SQ gaps is under development.
2 Research Method

2.1 E-Service Quality Conceptual Model

This research is based on Zeithaml et al.’s (2002) conceptual model of understanding and improving e-SQ (Figure 1). E-SQ is “the extent to which a Web site facilitates efficient and effective shopping, purchases and delivery of products and services” (Ziethaml et al., 2000) with service including both pre- and post-website service aspects. Zeithaml et al.’s (2002) e-SQ model is a refinement of an earlier and well-accepted conceptual model of SQ (service quality) (Parasuraman, Berry & Zeithaml, 1991). The earlier model was set in the context of traditional SQ, while the revised model focuses on shortfalls in companies interacting with their customers through the Internet.

![Figure 1: Conceptual Model for Understanding and Improving E-Service Quality](image)

In this model a series of e-SQ gaps are identified, which when present, give rise to customer dissatisfaction. Zeithaml et al., (2002) purports that the elimination of e-SQ gaps will result in a better website experience for customers, with customer’s
experience being related to customers’ website requirements. Hence, the creation of satisfied customers will lead to greater perceived e-SQ, value and ultimately purchases and repeat purchases.

The e-SQ gaps identified by Ziethaml et al. (2002) are the information, design, communication, and fulfilment gaps. The information gap represents the difference between customers’ website requirements and managements’ beliefs about those requirements. The design gap represents the failure to fully incorporate knowledge about customer requirements into the structure and functioning of the website. The communication gap represents the inaccurate or inflated promises made about a website through traditional media and on the website itself. The fulfilment gap represents the discrepancy between customers’ requirements and experiences (what they actually receive). The fulfilment gap represents the cumulative effects of the information, design, and communication gaps.

The shaded areas in Figure 1 denote where this research fits with the model. Customer websites requirements and managements’ beliefs about customer requirements are measured, and websites are evaluated. Marketing of the website and the communication gap is excluded from this study due to the inability of the researcher to measure such a concept. Furthermore, the researcher has made no attempt to measure customers’ experiences (perceived e-SQ, value, purchases and repeat purchases) as it is inferred that the quality of the experience will increase as the customers’ requirements are met. Therefore, a simplified model that covers the context of this research is presented in Figure 2.
2.2 Design and Evaluation Framework

A thorough literature review was conducted to identify the main website design and evaluation frameworks. A website design framework specifically for Australian wineries (Davidson 2002, 2003) was then developed based on the following:

- The evaluation frameworks identified in the literature;
- Web style guides;
- Preliminary investigation of Australian and foreign winery websites;
- Consultation with electronic commerce researchers;
- Personnel in the website design/development industry; and
- Personnel from Australian wineries.

The developed framework is a little different to those developed in the past in that the intention was to capture all of the content and design issues relevant for Australian winery websites, rather than the higher-level approach adopted by researchers such as: Cockburn and Wilson (1996), Ho (1997), Burgess and Cooper (1999, 2000), and Timmers (2000). This website design framework, that was developed in previous
research (Davidson 2002, 2003), is used in this research to underpin the website evaluations and customer and manager surveys. These are used to gather data to determine the respective gaps as defined in the following section.

2.3 Formal Definition of e-SQ Gaps
From the simplified e-SQ model (Figure 2), it follows that there is no overall e-SQ gap when:

(i) The winery manager knows what the customer requires and there is no information gap;
(ii) The website developer implements what the winery manager knows and there is no design gap; and
(iii) The customer gets what the customer requires and there is no fulfilment gap.

If there is not an information gap, winery managers’ know exactly what customers require. Hence, there would be a perfect positive relationship between customer and manager responses. That is, when customers are asked of their website requirements, their responses will agree with winery managers’ beliefs about customer requirements.

Similarly, there will be no design and fulfilment gap when there is a perfect positive relationship between managers’ beliefs and the design and operation of the websites, and the websites and customers’ requirements. These relationships can be shown graphically. A ‘no gap exists’ and a ‘gap exists’ situation is illustrated in Figures 3 and 4 respectively.
The position of the y-intercept ($\beta_0$), the slope of the regression line ($\beta_1$), and the coefficient of correlation ($r$) influence the existence and extent of a gap. In a perfect positive relationship no gap exists and the line of regression intercepts the y-axis at zero ($\beta_0 = 0$), has a slope of one ($\beta_1 = 1$), and a coefficient of correlation of one ($r = 1$). Conversely, any deviation from these three conditions will result in the presence of a gap. Technically, $r$ should equal 1, (as well as $\beta_0 = 0$ and $\beta_1 = 1$) for a perfect relationship. However, it is unusual for all data to occur in a straight line (Zar, 1999, p. 327) which would result in the condition $r = 1$ never being satisfied when in fact it could be very close. Therefore, a threshold for $r$ is set at 0.75 (as recommended by
Zar, 1999). Hence, the $r = 1$ condition becomes $r \geq 0.75$ and any $r$ value that is significantly less than 0.75 results in a rejection of the condition.

### 3.2 Data Collection and Analysis

#### 3.2.1 The Hypotheses

To answer the research question three hypotheses were formulated; one for each of the three e-SQ gaps. These hypotheses are based on the simplified e-SQ model (Figure 2) and the formal definition of e-SQ gaps presented in the previous section.

The three hypotheses are:

1. **$H_0$: There is no information gap**
   - There is no difference between what customers require on winery websites and what winery managers believe customers require.
   - All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.

   **$H_1$: There is an information gap**
   - There is a difference between what customers require on winery websites and what winery manager believes customers require.
   - At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$.

2. **$H_0$: There is no design gap**
   - There is no difference between what winery managers believe customers require and what is implemented on winery websites.
   - All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.

   **$H_1$: There is a design gap**
   - There is a difference between what winery managers believe customers require and what is implemented on winery websites.
   - At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$.

3. **$H_0$: There is no fulfilment gap**
   - There is no difference between what is implemented on winery websites and what customers require on winery websites.
   - All of: $r \geq 0.75$, $\beta_0 = 0$, and $\beta_1 = 1$.

   **$H_1$: There is a fulfilment gap**
   - There is a difference between what is implemented on winery websites and what customers require on winery websites.
   - At least one of: $r < 0.75$, $\beta_0 \neq 0$, or $\beta_1 \neq 1$. 

To test these hypotheses the data collected from three sources:

(i) an evaluation of Australian winery websites;
(ii) a survey of Australian winery customers; and
(iii) a survey of Australian winery managers

was analyzed.

3.2.2 Website Evaluations
A sample of 260 winery websites were chosen from a population of 796 using proportionate stratified random sampling based on size and geographical location of the winery to ensure that the sample fairly represented Australian winery websites. The researcher viewed all websites and conducted the evaluations. The evaluations involved scoring a 0-not present, or 1-present, for each of the 134 variables (Appendix A). The evaluation criteria was based on a website design framework that was developed specifically for Australian wineries (Davidson, 2002, 2003). Following the website evaluations, and after further discussions with website developers and e-commerce researchers, the design and evaluation framework was refined before commencing the customers’ and managers’ surveys.

3.2.3 The Customers’ Requirements and Managements’ Beliefs about Customers’ Requirements Surveys
Two on-line survey instruments were developed. One instrument asked customers to rate the importance of 90 website features on a five-point Likert scale of 1-not important to 5-very important. The other survey asked managers to rate their beliefs about customers’ requirements on a similar scale (Appendix B).

Customers were invited to participate by wineries, and through referrals made by participants. Wineries were asked to forward a letter onto their customers. This letter invited customers to participate and provided the Web address of the on-line survey.
All managers of Australian wineries with websites for which there was also an email address and a manager’s name available in the *Wine Industry Directory* (Winetitles, 2004) database were asked to participate. This resulted in a sample of 1,050 from a population of 1,163. Managers were invited to participate via a personalised email.

Both surveys were automated. Personalised invitations were sent to winery managers and the customer referrals. Data entered and submitted via the html survey forms was piped into a MySQL database using php scripts. To enable easy downloading and monitoring by the researcher a password protected script was activated from an administration page on the web server that piped the data from the MySQL database into an Excel spreadsheet.

### 3.2.4 The Statistical Tests

The hypotheses are tested using correlation and regression analysis. Simple linear correlation and regression is used to determine the linear relationship between the pairs of variables. To test for \( H_0: r \geq 0.75 \), Fisher’s (1915 cited in Zar, 1999, p.381) \( r \) to \( z \) transformation is used with a one-tailed test and a critical value of \( Z_{\alpha(1)} = t_{\alpha(1)} = 1.6449 \). For ease of understanding and consistency with the tests for \( \beta_0 \) and \( \beta_1 \) the 95% confidence interval for \( z \) is calculated then transformed back to an upper and lower limit for \( r \). Therefore, for \( H_0: r \geq 0.75 \) and \( H_1: r < 0.75 \), if the upper or lower bounds of the 95% confidence interval are greater or equal to 0.75, accept \( H_0 \).

The tests for the slope and \( y \)-intercept use the 95% confidence interval for \( \beta_1 \) and \( \beta_0 \) respectively. For \( H_0: \beta_1 = 1 \) and \( H_1: \beta_1 \neq 1 \), if 1 falls within the upper and lower bounds of the 95% confidence interval, \( H_0 \) is accepted. For \( H_0: \beta_0 = 0 \) and \( H_1: \beta_1 \neq 0 \), if 0 falls within the upper and lower bounds of the 95% confidence interval, \( H_0 \) is accepted. In summary:
• $H_0: r \geq 0.75$ is true if $L$ or $U \geq 0.75$;
• $H_0: \beta_0 = 0$ is true if $L \leq 0 \leq U$; and
• $H_0: \beta_1 = 1$ is true if $L \leq 1 \leq U$.

A level of significance of 0.05 was chosen for this research, as 0.05 is the most conventionally accepted level for most business research (Cavana et al., 2001, p.271). Thus, there is a 5% chance of making a Type I error of rejecting $H_0$ and declaring there is an e-SQ when in fact there is not.

4 Results

4.1 Response Rate

As stated in section 3.2.3, a total of 1,050 winery managers were invited to participate in the manager survey, which yielded 171 usable responses. Thus a usable response rate of 16.3% was achieved, which compares favourably with on-line survey response rates that are usually lower than equivalent mail surveys (Crawford, Couper & Lamias, 2001).

Invitations to participate in the customer survey relied on winery managers inviting their customers and referrals. It is not known how many wineries forwarded the ‘customer invitation to participate’ onto their customers or, of those that did, how many customers they passed it onto. Nor is it possible to know accurately how many referrals were made as not all used the automatic referral system but preferred to send their invitation onto their friends. Therefore, it is not possible to calculate a response rate for the customer survey. However, 401 persons visited the customer survey site of which 358 were usable.

From the sample of 260 websites, 228 were evaluated. Thirty-two sites were not retrievable or were under construction.
4.2 Respondent Profile
The profile of the manager respondents and retrievable websites were checked against their samples. The similar proportions in terms of size and location provide evidence that the results are a fair representation of the populations.

4.3 Non-Response Bias
Responses for both the manager and customer surveys were checked for questionnaire non-response and item non-response bias. It was found that there was no statistically significant difference between late and early responders (managers), winery invitees and referrals (customers), or those that answered all questions and those with at least one response missing (customers and managers), indicating no bias.

4.4 The Data
Tests were performed on the median value for each question in the customer and manager surveys and the standardised percentage that an item recorded ‘present’ for in the website evaluations. The median is used since it is the statistic most appropriate for describing the central tendency of scores in an ordinal scale (Siegel & Castellan, 1988, p.27). The percentage present is standardised to a value between 1 and 5 so that it is on a comparable scale to that of the customers’ and managers’ medians.

4.5 Hypotheses Testing
The three hypotheses were tested using the statistical tests described above. The key figures and tests are shown on Table 1. A ‘t’ in the column headed ‘t’ indicates that the relevant test is true. The last column states whether $H_0$ is accepted or rejected based on the results of the three tests.

Each of the three null hypotheses has been rejected and the alternative accepted, establishing that information, design, and fulfilment e-SQ gaps do exist.
Table 1: Hypotheses Test Results

<table>
<thead>
<tr>
<th>Hypotheses - Descriptive test</th>
<th>Test</th>
<th>t</th>
<th>r</th>
<th>95% CI</th>
<th>Test</th>
<th>t</th>
<th>β0</th>
<th>β0 95% CI</th>
<th>Test</th>
<th>t</th>
<th>β1</th>
<th>β1 95% CI</th>
<th>Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 H0: There is no Information Gap</td>
<td>r≥0.75</td>
<td>t</td>
<td>0.922</td>
<td>L 0.8917</td>
<td>β0=0</td>
<td>0.313</td>
<td>L 0.010</td>
<td>β1=1</td>
<td>0.910</td>
<td>L 0.829</td>
<td>Reject H0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: There is an Information Gap</td>
<td>r&lt;0.75</td>
<td>U</td>
<td>0.9447</td>
<td>r</td>
<td>L 0.9447</td>
<td>β0≠0</td>
<td>t</td>
<td>U 0.616</td>
<td>β1≠1</td>
<td>t</td>
<td>U 0.992</td>
<td>Accept H1</td>
<td></td>
</tr>
<tr>
<td>2 H0: There is no Design Gap</td>
<td>r≥0.75</td>
<td>t</td>
<td>0.542</td>
<td>L 0.4062</td>
<td>β0=0</td>
<td>t</td>
<td>L -1.626</td>
<td>β1=1</td>
<td>t</td>
<td>L 0.533</td>
<td>Reject H0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: There is a Design Gap</td>
<td>r&lt;0.75</td>
<td>U</td>
<td>0.6544</td>
<td>r</td>
<td>L 0.9447</td>
<td>β0≠0</td>
<td>t</td>
<td>U 0.308</td>
<td>β1≠1</td>
<td>t</td>
<td>U 1.054</td>
<td>Accept H1</td>
<td></td>
</tr>
<tr>
<td>3 H0: There is no Fulfilment Gap</td>
<td>r≥0.75</td>
<td>t</td>
<td>0.431</td>
<td>L 0.2775</td>
<td>β0=0</td>
<td>2.98</td>
<td>L 2.652</td>
<td>β1=1</td>
<td>0.298</td>
<td>L 0.166</td>
<td>Reject H0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: There is an Fulfilment Gap</td>
<td>r&lt;0.75</td>
<td>t</td>
<td>0.5629</td>
<td>r</td>
<td>L 0.9447</td>
<td>β0≠0</td>
<td>t</td>
<td>U 3.312</td>
<td>β1≠1</td>
<td>t</td>
<td>U 0.430</td>
<td>Accept H1</td>
<td></td>
</tr>
</tbody>
</table>

H0: All of r≥0.75, β0=0, and β1=0  
H1: At least one of r < 0.75, β0≠0, or β1≠1  

r 95% Confidence Interval for r – H0: r≥0.75 true if L or U ≥ 0.75  
β0 95% Confidence Interval for β0 – H0: β0=0 true if L ≤ 0 ≤ U  
β1 95% Confidence Interval for β1 – H0: β1=1 true if L ≤ 1 ≤ U

5 Summary

5.1 Conclusion and Contribution

This study has proven that e-SQ gaps do exist in the Australian wine industry. The research question has been answered and it was found that there is a discrepancy between what customers require from Australian winery websites, what winery managers believe customers require, and what is generally being provided.

This means that customer requirements are not always known by winery managers and implemented on the websites resulting in customer dissatisfaction. According to Zeithaml et al. (2002) this dissatisfaction will lessen the customers’ perceived e-SQ, value and ultimately result in less purchases and repeat purchases.

Determining the existence of e-SQ gaps highlights to winery managers and their website developers the need to give more thought to customer requirements in order to make websites that are an effective business tool. However, for this research to be more useful an indication of the size and cause of the identified e-SQ gaps would be an important addition. Both of these issues are currently under investigation.
To measure the extent of the e-SQ gap a formula is being devised that takes into consideration the variables of the slope that determine the existence of the gap ($r^2, \beta_0,$ and $\beta_1$). This will give a gap measurement in the range of zero to 100 that will allow easy comparison and visualisation of the problem areas.

The design framework that was developed for the Australian wine industry, and which formed the criteria upon which the evaluations and surveys took place in this study, is being further refined after taking into consideration the survey results. This framework should provide a useful guide to winery managers and website developers. Both the measurement scale and refined framework will be the subject of further papers.

References


Appendix A: Website Evaluations

The items listed below were evaluated as either being present or not present on the winery websites.

<table>
<thead>
<tr>
<th>Company Information</th>
<th>Previous Orders</th>
<th>Value-Added Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Company Details</td>
<td>◆ Previous orders remembered</td>
<td>◆ News / Information</td>
</tr>
<tr>
<td>◆ Name</td>
<td>◆ Customer details remembered</td>
<td>◆ Press releases</td>
</tr>
<tr>
<td>◆ Address</td>
<td>◆ Cross Selling / Up Selling</td>
<td>◆ Employment opportunities</td>
</tr>
<tr>
<td>◆ Phone</td>
<td>◆ Similar products</td>
<td>◆ Special offers</td>
</tr>
<tr>
<td>◆ Fax</td>
<td>◆ Complementary products</td>
<td>◆ New product announcements</td>
</tr>
<tr>
<td>◆ E-mail</td>
<td>◆ Customer Service</td>
<td>◆ Best buys</td>
</tr>
<tr>
<td>◆ Contact name</td>
<td>◆ Accessories</td>
<td>◆ General Information &amp; Features</td>
</tr>
<tr>
<td>◆ Geographical Location*</td>
<td>◆ Gift boxes</td>
<td>◆ Wine making information*</td>
</tr>
<tr>
<td>◆ Geographical Zone*</td>
<td>◆ Personalised labels*</td>
<td>◆ Wine storage information*</td>
</tr>
<tr>
<td>◆ Investor Information</td>
<td>◆ Food and wine packs*</td>
<td>◆ Wine ageing information*</td>
</tr>
<tr>
<td>◆ Annual financial reports</td>
<td>◆ Corporate gift service</td>
<td>◆ Complementary food*</td>
</tr>
<tr>
<td>◆ Quarterly financials</td>
<td>◆ Trade section</td>
<td>◆ Wine show awards*</td>
</tr>
<tr>
<td>◆ Aust. Security &amp; Investment Commission filings</td>
<td>◆ Flexible purchasing*</td>
<td>◆ Virtual tour of winery*</td>
</tr>
<tr>
<td>◆ Analyst reports</td>
<td>◆ - mixed dozen</td>
<td>◆ - video clips</td>
</tr>
<tr>
<td>◆ Stock quotes</td>
<td>◆ - dozen lots</td>
<td>◆ - 360 degree images</td>
</tr>
<tr>
<td>◆ Product Information</td>
<td>◆ On-line customer service</td>
<td>◆ Tourism promoted*</td>
</tr>
<tr>
<td>◆ Wines*</td>
<td>◆ Delivery/order status on-line</td>
<td>◆ Accommodation promoted*</td>
</tr>
<tr>
<td>◆ Description*</td>
<td>◆ Customer wish list</td>
<td>◆ Restaurant promoted*</td>
</tr>
<tr>
<td>◆ Tasting notes*</td>
<td>◆ Surprise bonus/discounts on ordering</td>
<td>◆ Foreign languages</td>
</tr>
<tr>
<td>◆ Price</td>
<td>◆ Loyalty discounts</td>
<td>◆ Contact facility</td>
</tr>
<tr>
<td>◆ Technical notes*</td>
<td>◆ Choice of delivery</td>
<td>◆ - browser based email</td>
</tr>
<tr>
<td>◆ Tasting chart*</td>
<td>◆ ◆ Off-Line Orders</td>
<td>◆ - Web form</td>
</tr>
<tr>
<td>◆ Best sellers list</td>
<td>◆ ◆ Method of ordering</td>
<td>◆ FAQs</td>
</tr>
<tr>
<td>◆ Reviews*</td>
<td>◆ - phone</td>
<td>◆ Members / wine club*</td>
</tr>
<tr>
<td>◆ - by consumer</td>
<td>◆ - post / fax</td>
<td>◆ Electronic newsletter</td>
</tr>
<tr>
<td>◆ - by winemaker</td>
<td>◆ Fill in form before printing</td>
<td>◆ Chat room / bulletin board</td>
</tr>
<tr>
<td>Sales and Ordering</td>
<td>◆ Prices and freight calculated</td>
<td>◆ Contests / give-aways</td>
</tr>
<tr>
<td>◆ On-Site Tasting and Sales*</td>
<td>◆ before printing</td>
<td></td>
</tr>
<tr>
<td>◆ - On-site tasting and sales promoted*</td>
<td>◆ Content, Organisation, and Timeliness</td>
<td></td>
</tr>
<tr>
<td>◆ - Opening hours*</td>
<td>◆ ◆ Content</td>
<td>◆ Navigation</td>
</tr>
<tr>
<td>◆ - Cellar address*</td>
<td>◆ ◆ Home page</td>
<td>◆ ◆ Navigation</td>
</tr>
<tr>
<td>◆ - Location map</td>
<td>◆ - name</td>
<td>◆ ◆ Breath-emphasising design</td>
</tr>
<tr>
<td>◆ ◆ External Distributors</td>
<td>◆ - navigation</td>
<td>◆ ◆ Depth-emphasising design</td>
</tr>
<tr>
<td>◆ ◆ Name</td>
<td>◆ - summary</td>
<td>◆ ◆ Breath and depth-emphasising navigation</td>
</tr>
<tr>
<td>◆ ◆ Location</td>
<td>◆ - search facility</td>
<td>◆ ◆ Primary and secondary menus</td>
</tr>
<tr>
<td>◆ ◆ Address</td>
<td>◆ ◆ Company name in title</td>
<td>◆ ◆ Site structure</td>
</tr>
<tr>
<td>◆ ◆ Phone</td>
<td>◆ ◆ Page description in title</td>
<td>◆ ◆ Site map</td>
</tr>
<tr>
<td>◆ ◆ Fax</td>
<td>◆ ◆ Contact on each page</td>
<td>◆ ◆ Search facility</td>
</tr>
<tr>
<td>◆ ◆ E-mail</td>
<td>◆ ◆ URL on each page</td>
<td>◆ - local to site</td>
</tr>
<tr>
<td>◆ ◆ Contact name</td>
<td>◆ ◆ Clarity</td>
<td>◆ - external</td>
</tr>
<tr>
<td>◆ ◆ Web site link</td>
<td>◆ ◆ Short pages</td>
<td>◆ - advanced</td>
</tr>
<tr>
<td>◆ ◆ On-Line Orders</td>
<td>◆ ◆ Organisation</td>
<td>◆ Broken links</td>
</tr>
<tr>
<td>◆ ◆ Availability</td>
<td>◆ ◆ Good use of screen space</td>
<td>◆ Error statements</td>
</tr>
<tr>
<td>◆ ◆ Clear procedure</td>
<td>◆ ◆ Supports different browsers</td>
<td>◆ Links to home page on every page</td>
</tr>
<tr>
<td>◆ ◆ Easy to edit/view order</td>
<td>◆ ◆ Supports different monitor sizes</td>
<td>◆ Links to external Web sites</td>
</tr>
<tr>
<td>◆ ◆ Order retained while within site</td>
<td>◆ ◆ Printer friendly</td>
<td>◆ - relevant</td>
</tr>
<tr>
<td>◆ ◆ Order retained between sessions</td>
<td>◆ ◆ Readily located by search engines</td>
<td>◆ - irrelevant</td>
</tr>
<tr>
<td>◆ ◆ Price &amp; freight calculated</td>
<td>◆ ◆ ◆ Timeliness</td>
<td>◆ Link descriptions meaningful</td>
</tr>
<tr>
<td>◆ ◆ Export freight prices</td>
<td>◆ ◆ Last updated date on each page</td>
<td>◆ Standard link colours</td>
</tr>
<tr>
<td>◆ ◆ Currency converter</td>
<td>◆ ◆ Download time (&lt; 10 seconds)</td>
<td>◆ Link titles</td>
</tr>
<tr>
<td>◆ ◆ Order confirmation</td>
<td>◆ ◆ ◆ Security and Privacy</td>
<td>◆ Use of frames</td>
</tr>
<tr>
<td>◆ ◆ Payment options</td>
<td>◆ ◆ Security statement</td>
<td>◆ Aesthetics</td>
</tr>
<tr>
<td>◆ ◆ - post</td>
<td>◆ ◆ Privacy statement</td>
<td>◆ ◆ Interesting</td>
</tr>
<tr>
<td>◆ ◆ - phone</td>
<td>◆ ◆ ◆ Security and Privacy</td>
<td>◆ - aesthetically pleasing</td>
</tr>
<tr>
<td>◆ ◆ - credit card on-line</td>
<td>◆ ◆ Security statement</td>
<td>◆ - same branding/logos used across site</td>
</tr>
<tr>
<td>◆ ◆ Secure transaction</td>
<td>◆ ◆ Privacy statement</td>
<td>◆ - font sizes not fixed</td>
</tr>
<tr>
<td>◆ ◆ Form validation</td>
<td>◆ ◆ ◆ Timeliness</td>
<td>◆ - goals / objectives of website met</td>
</tr>
<tr>
<td>* denotes an element that is specific to the wine industry</td>
<td>◆ ◆ ◆ Content, Organisation, and Timeliness</td>
<td>◆ - text only option</td>
</tr>
</tbody>
</table>

* denotes an element that is specific to the wine industry
Appendix B: Customer and Winery Manager Surveys

Customers and winery managers were asked to rate the importance of the following items on a scale of 1-not important to 5-very important. The questions in parenthesis were asked to winery managers. They are slightly changed from the customer questions to reflect asking the manager their beliefs about customers.

**General and product information presented on the website**
If you were visiting a winery website, how important is it that the following information is available on the site?

1. The winery name, address, phone, fax and email
2. Names of people to contact at the winery
3. Winery region (e.g. Barossa, Hunter Valley etc.)
4. Investor information (e.g. financial reports, stock quotes etc.)
5. Detailed description of the wine available
6. Price of the wine by the bottle
7. Price of the wine by the case
8. Technical notes for each wine: (e.g. Analysis: Alc/Vol: 13.5%, pH: 3.54, Acidity: 6.0g/L)
9. Tasting chart (e.g. a chart that clearly shows the intensity, dryness, body, acidity, tannin, oak, and complexity of the wine)
10. Bestseller list (e.g. a list that shows what other customers have been purchasing)
11. Reviews of the wines by:
   a. the wine maker
   b. professionals (show judges, newspaper columnist, etc.)
   c. other consumers
12. Cellar door tasting and sales opening hours
13. Address and map to the cellar door
14. External distributors’ details
15. The ability to place orders over the Internet

**On-line orders**
If orders can be placed over the Internet, how important is it that:

16. A partially completed order is retained while viewing other pages in the site or another site
17. Price and freight is automatically calculated
18. Export freight prices are provided
19. A currency converter is provided
20. A detailed confirmation of the order is returned immediately upon placing the order
21. Several payment options are made available (i.e. you are not restricted to only paying by credit card over the Internet)
22. Any exchange of information is secure to prevent another party viewing it
23. Forms can not be submitted unless all the required information is present
24. Your details and previous orders are remembered and recalled to facilitate placing subsequent orders
25. Similar products are suggested when placing an order

**Additional products and services**
How important is it that these products and services are offered:

26. Accessories such as glassware, bottle openers, and wine-related books
27. Wine in gift boxes
28. Wine with personalised labels (e.g. to celebrate an anniversary)
29. Wine and food packs (e.g. specialised regional foods such as nuts or cheeses)
30. A gift service (e.g. you give the winery a list of recipients’ names and addresses and choose a wine, and the winery sends it to them on your behalf)
31. The ability to purchase wine by single bottles, not dozen lots
32. The ability to purchase wine by mixed cases, not a case of all the same variety
33. To be able to check on your order status on-line (i.e. to see when your order was packed and shipped)
34. The provision of a customer wish list (so that you can click on items that interest you and review this list at a later time)
35. To be given a choice of delivery methods
36. To receive bonuses or discounts when ordering

**Other ordering methods**
How important is it to have other ordering methods such as:

37. The provision of an order form that can be printed and posted/faxed
38. To be able to fill such a form in before printing it
39. For this form to automatically calculate prices and freight
40. The facility to email orders
41. The facility to take phone orders

Content, Organisation & Timeliness
How important is it to have the following: [How important is it to the customer to have the following;]
42. The company name and description in the title bar (the title bar is the blue bar across the top of your browser window, when you bookmark a page this is what appears in your favourites list)
43. Contact details for the winery on every page of the site
44. The Web address on every page of the site (written on the page itself, not just appearing in the address box)
45. To know when the page you are viewing was last updated
46. To have pages that take no longer than 10 seconds to download
47. A security and privacy policy that clearly states how your personal information will be used and kept confidential (e.g. if you were placing an order, your name, address and credit card information)

Extra features
How important is it to have the following features on a winery website:
[How important is it to the customer to have the following features on a winery website;]
48. Press releases
49. Details of employment opportunities
50. New products
51. Best buys
52. Wine making information
53. Information on how to store wine
54. Information on which wines will age best
55. Information on complementary foods to eat with different wines
56. Details of awards won at wine shows
57. Video clips of the winery
58. 360 degree images of the winery
59. Photographs of the winery
60. Promotion of local tourism (sights, accommodation, restaurants etc.)
61. Web pages available in foreign languages
62. The facility to contact the winery on-line by email
63. The facility to contact the winery on-line by filling in a form
64. A Frequently Asked Questions (FAQs) section
65. A wine club that provides special offers for members
66. An electronic newsletter
67. A chat room / bulletin board
68. Contests and give-aways

Navigation
How important to you are the following navigational aids:
[How important to the customer are the following navigational aids;]
70. A site map (a page with links to all pages of the website) that shows the pages that you have already visited and the page that you just came from
71. To be able to search the winery site for key words
72. Relevant links to external sites (e.g. links to other wine industry and local tourism/accommodation sites)
73. Use of standard colours for links (i.e. blue for unused links and red for used links)
74. Use of frames (i.e. the division of the screen into areas which can keep the main items in view at all times but also limit what can be seen)

Aesthetics
The following relate to the general look and feel of a web page. Please tell me what you like and do not like about a web page? [The following relate to the general look and feel of a web page. Please tell me what you think the customer likes and does not like about a web page?]
These questions were rated on a scale of 1-Do not like to 5-Really like.
75. Colourful web pages
76. High contrast between the text and the background colour
77. Text size that is not too small (easy to read)
78. Animated or moving objects
79. Cluttered web pages
80. Lots of images
81. Long pages
82. Every page on a site to have the same menu and structure
83. To be able to alter the writing size
84. Sensational effects – (e.g. video clips, multi media presentations, animated images)
85. Short paragraphs
86. No headings
87. Bulleted lists
88. Multiple linked pages