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Why keep a cobweb in your cellar: a diagnostic tool to evaluate the use of e-commerce and technology in wine marketing

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Abstract

Purpose

There are suggestions that management in small companies is characterised by limited resources and lack of specialist expertise. The use of technology in marketing for SMEs is often fraught with difficulties but the successful marriage of marketing and technology can lead to the development of a more successful organisation.

The development and evolution of technology has provided SME organisations with opportunities to widen and enhance their marketing and communication methods by developing interactive channels. Many wine SMEs limit themselves by the way in which they collect data and the collection of such data requires forward thinking as to the real purpose and value of such data. There is a tendency to under-utilise the raw data in order to get meaningful marketing information from it. Understanding and using technology whether it be data mining or for some other marketing purpose presents an entrepreneurial organisation with an opportunity for differentiation.

This paper focuses on the development and application of a diagnostic tool in using technology in the marketing of wine. The output of the research is a framework which demonstrates the interaction of technology in marketing and incorporates both operational and conceptual elements. The findings illustrate the challenges faced by small organisations with limited resources which are trying to compete in a crowded market place.

Research Objectives

The following research objectives were identified:

1) To identify the extent of the use of technology in marketing within an SME

2) To determine the effectiveness and efficiency of technology in assisting the marketing effort within the same SME

3) To identify key elements, both operational and conceptual, that should be considered prior to incorporating technology into marketing activity.

Approach

An in-depth qualitative approach was taken which included developing a relationship with an SME owner over a period of 18 months. Multiple methods of data collection were used to elicit rich data from within the company. Structured observation was undertaken at the business headquarters of the organisation, as well as semi-structured interviews with the owner-manager and a part-time consultant. The marketing systems of the organisation were interrogated and this included analysis of their customer database. The organisation’s website was also benchmarked against similar and competing businesses.

Findings and practical applications

The case highlighted a number of issues relevant to owner-manager marketing including the ability to interpret data for marketing purposes. A best-practice diagnostic tool has been developed which can assist small businesses in evaluating their level of proficiency in using technology in marketing.
Conceptual value of paper

This paper contributes to knowledge through the creation of a flexible yet structured framework. The cobweb provides the facility for plotting actual activity against given criteria relevant to the organisation and the sector in which it operates.

Managerial contribution of paper

The cobweb framework as developed in this paper provides an easy to use diagnostic tool for manager and SME organisations to evaluate the integration of technology in their marketing.

Keywords – SMEs, technology, marketing, wine retailing, relationships and cobweb framework.
Why keep a cobweb in your cellar: a diagnostic tool to evaluate the use of e-commerce and technology in wine marketing

Introduction

Owner-Managers in small companies are rarely strategists but people performing many tasks and, by necessity, occupied by the short term. Through the case of one UK based wine retailer, this paper highlights the use of e-commerce and technology in marketing and illustrates the lack of strategic marketing understanding and thought created by the numerous responsibilities thrust upon entrepreneurial owner-managers. Such owner managers usually know how a particular market functions but often have no formal marketing education, thus resulting in reactive approaches to marketing related issues. The understanding and use of technology whether it be for data mining or for other marketing purposes presents an opportunity for differentiation by an entrepreneurial organisation. This paper does not address the economics of e-commerce, such as the fluctuations of demand and price elasticity. The aim of this paper is to construct a diagnostic tool to evaluate the use of technology in marketing for an owner-managed business. In order to do this, the existing literature on entrepreneurial marketing will be outlined and applied to the illustrative case study in order to determine the actual elements of SME marketing and the interaction of technology.

Illustrative case – Background to the organisation

Magnum and Son (name changed for issues of business confidentiality) is a well-established, family run and owned, specialist wine retailer with bricks and mortar presence in the form of an historic building in the centre of a Midlands City in the UK. Whilst it is regionally focused, the company will deliver anywhere within mainland UK. The owner-manager is the fifth-generation of family involved with the business and has a staff of around a dozen people. The company embraced the Internet with the launch of a company web-site which included an online ordering facility in 2000. 2% of the sales are now online. The company also runs wine tastings and the occasional corporate event. There is a high level of commitment to individual customers, many of whom were personally known to earlier generations of family managers. Sales originate from individual consumers, trade outlets such as off-licences, golf clubs and restaurants/pubs as well as corporate clients.

Marketing and SME marketing, for specialist consumer products

In whatever market an organisation operates, marketing is relevant for both small and large firms (Hogarth-Scott and Watson 1996). Accepted thinking about SMEs and entrepreneurs - that they have an idea which they then nurture for the rest of their life (Vesper 1980) – may be extended to include future generations of the entrepreneur. They may update the idea for the modern market to keep the original idea current, including electronic marketing. The characteristics of successful entrepreneurs are likely to include the ability to take and judge risks, innovativeness, and, especially, knowledge of how the market functions. Moreover, entrepreneurial organisations are able to identify customer needs and wants (Hills and Laforge 1992), supposedly a key part of marketing orientation. But whether this “market-orientation” concept is appreciated by the small business owner is debateable (Blankson and Stokes 2002) whose exploratory research identified three factors considered and/or appreciated by small business owners; management/staff relationships, profitability and changing markets.
What passes for marketing in a small organisation may just be an instinctive reaction to the market on the part of the owner-manager. Furthermore, there are suggestions that management in small entrepreneurial companies is characterised by limited resources and lack of specialist expertise (Gilmore et al. 2001), which may result in reactive approaches to marketing related issues or based on intuition (Bhide1994).

This may be because their limited market share means that changes in the external environment force them to follow trends rather than create them. This is especially relevant to pricing strategies as there may be a perception on the part of the owner-manager that price competition is not an option (rather than a marketing-oriented decision to offer something which the customer values). Because of this perception, entrepreneurs can be led to exploit niches left by market leaders (Hill 2001) because they have no desire to, or fear that they cannot, compete in mass markets.

Often times, managers in small organisations are people faced with performing many tasks simultaneously and pre-occupied with the short-term (Lancaster and Waddelow 1998). The need to complete many tasks at the same time may lead to a non-sequential planning process (Jocumsen 2004). Smaller organisations may have staff with no formal marketing education and any strategic thinking may often be left to the founder. Hardy (1992) suggests that all managers in small businesses need to have marketing skills, knowledge and orientation in order to survive, although Hogarth-Scott and Watson (1996) appreciate that owner-managers have to be generalists. Whilst marketing is a term known to small business owners, often they associate it with advertising, selling or promotion (Patten 1989) and not with the strategic thinking which goes behind marketing action.

The process of marketing planning is often overlooked because there is insufficient knowledge or information on which to make a marketing decision. The four stages proposed by Brooksbank (1999), namely: analysing, strategising, implementing and controlling, may not be undertaken in a logical way. Such marketing planning does not have to involve complicated theoretical models or, indeed, be highly formalised (Hogarth-Scott and Wilson 1996). Nevertheless, the failure to plan can result in haphazard and ad-hoc approaches to marketing activity, as evidenced by the exploratory research undertaken by Blankson and Stokes (2002, p59) who suggest that

“owner-managers do not attach importance to issues concerning long term planning, rewarding members of staff, the use of technological systems, appreciation of long term objectives (or) being aware of market environment and formal market research”

Entrepreneurial Owner-Managers often listen to advice from business associates rather than seek or accept external help, for example from consultants (Jocumsen 2004) but this has the effect of being too inward looking and not considering the needs of the market.

Often there is a reluctance to delegate responsibilities to junior staff. There may be worries about risk in the selection and management of suitable staff (Gilmore et al. 2001). There may also be a fear that if staff potential is developed, then those staff may take their newly acquired knowledge to a competitor. In addition, there may be fear on the part of the owner-managers to embrace available technology to assist in the marketing effort.
Use of technology in marketing

New technology has allowed smaller businesses to enter markets which were previously inaccessible, e.g. for reasons of geographic location. Applied technology also creates opportunities for improved business performance (Tetteh and Burn 2001, Smith 2004), including new approaches to targeting and promotion (Rowley 2001) and developing high quality personal and electronic services (Tao and Tan 2002; Heung 2003).

The primary application of new technology in business is e-commerce. E-commerce is the buying and selling of goods and services on the Internet between two or more parties using electronic tools (DTI 2001). However, despite the benefits of adopting e-commerce, there are barriers that prevent full adoption in small companies. A lack of appreciation by the owner managers of the need for business strategy may constrain the effectiveness of any e-commerce initiatives (Ramsay et al. 2003). Hurdles also include the perception of increased workload, technical difficulty (Fillis et al. 2004) and the cost of buying in appropriate skills. Technology in itself will not deliver benefits or profits to a business, there needs to be a transformation in the marketing activities in order to maximise the opportunities presented by the evolution of technology. This transformation of marketing activity within an organisation should be conducted at both a strategic and operational level and moving away from tactical activity to strategy thinking (Brady et al. 1999, Porter 2001, Naude and Holland 2004). Thelwall (2000) stresses that websites need to be designed with business in mind, not as a technical exercise.

Early development of e-commerce by SMEs is largely reliant on the enthusiasm of owner managers; combined with their belief that e-commerce will increase sales (Simpson and Docherty 2004) with low entry cost. The implementation of the Internet as part of core marketing strategy is often based on the ideas developed by an individual, the entrepreneurial owner-manager (Martin and Matlay 2003). Entrepreneurial owner-managers who have these ideas and an interest in technology have recognised the Internet's marketing potential and are building on it. McGowan et al. (2001) identified five competences that were likely to encourage the use of the Internet in developing customer relationships. These were communication, knowledge, judgement, experience and planning. Knowledge and interest in technology by the owner-manager generally appear to play a significant role in determining e-commerce activity in SMEs. Slater and Narver (1995) posit that there is a complementary relationship between marketing orientation and entrepreneurship. The knowledge gained through market orientation is not always applied strategically (McGowan et al. 2001).

Internet adoption and the application of technology in an SME can facilitate a market orientation that can be the basis of a customer-focused approach (Jones et al. 2003, Tapp and Hughes 2004). Although this can be true, it is not necessarily the case that relationships are developed between customers, marketing activities and the use of technology in a linear manner. Other authors suggest that it is the entrepreneur's mental capacity that allows him or her to see opportunities in the market (Albares and Busenitz 2001).

A further reason for the popularity of implementing e-commerce is that the size and structure of an SME can enable innovation and the rapid implementation of e-commerce (Bodorick et al. 2002).

Over the last decade, there has been a proliferation in online wine retailers in the UK and elsewhere (Gebauer and Ginsburg 2003). However, many of these sites were as a result of a
bolt-on attitude by existing high-street retailers who merely added a web-site as a tactical manoeuvre in an attempt to increase sales (Quinton and Harridge-March 2003a). Technology in the form of the Internet has broadened the distribution channels available to consumers for wine and has opened up the wine market to new potential buyers (Drummond and Rule 2005). Furthermore, specialist high end connoisseur sales of single bottles as well as specific cases have benefited. Any resulting sales from having a retail web presence does not guarantee consumer retention and subsequently there now exists greater awareness of the importance and role of technology in developing relationships with consumers.

**Technology and relationships**

Over the last decade, there has been much written about the difference between transaction marketing and relationship marketing and whether they are discrete functions (Walsh et al. 2004). Some SMEs believed that relationships with customers would be enhanced or that there was potential to acquire new customers (Daniels and Myers 2000). This view is reflected in the literature by McGowan et al. (2001) who highlight the potential of the internet for facilitating relationships between parties. Whilst the Internet's strength may not be in creating relationships, it has been suggested that it can and does maintain relationships (Melewar et al. 2001) and nurture them (Vandermerewe 1999). Wang et al. (2000) stress that the Internet is the perfect tool for enhancing and improving relationship marketing through acquiring and manipulating data.

Relationships require nurturing to reach optimum benefits for both sides and the owner-manager should be aware of the on-going nature of online relationships. Zontanos and Anderson (2004) pointed out the similarity between relationship marketing and entrepreneurship, stressing that both are based on creating something of value for the business organisation and creating a loyal customer base. However, few companies take advantage of the potential of relationship building based on the Internet (Arnott and Bridgewater 2002); perhaps because having a website can create quality problems and missed opportunities, especially for smaller enterprises with limited experience and/or resources (Thelwall 2000). It may be that transactional marketing and relationship marketing can take place side by side (Walsh et al. 2004) and that they are not mutually exclusive. Hence, technology can assist relationships but customers do not have to have a relationship with suppliers in order to undertake transactions.

Having reviewed the relevant literature, research objectives were developed.

1) To identify the extent of the use of technology in marketing within an SME

2) To determine the effectiveness and efficiency of technology in assisting the marketing effort within the same SME

3) To identify key elements, both operational and conceptual, that should be considered prior to incorporating technology into marketing activity.

**Methodology**

An exploratory qualitative approach was taken using multiple data collection methods, to provide triangulation, under the banner of business in action research in order to develop a deeper understanding of the issues in entrepreneurial use of marketing and technology based on a single in depth case study (Gummesson 2000).
The methods used include; observation, semi-structured interviews and benchmarking, all of which are appropriate to the objectives of the study. This triangulated approach to creating a diagnostic tool is of value because the results provide an holistic view of the overall level of integration of the use of e-commerce and technology in an SME. Much previous research has focused on discrete elements such as quality of navigation of website, payment securities issues and brand cohesion online. A discussion of the research method and process now follows.

![Diagram of data collection methods]

**Table 1 – Data Collection Methods**

**A case study**

The use of a single case as a meaningful focus for analysis from which generalisations can be made has both its defenders (Gummeson 2000) and its doubters (Bryman and Bell 2003, Creswell 2003). However the use of an individual organisation as a case can be defended as a rigorous research approach that may yield significant results in its own right (Stake 1978) cited in Denzin and Lincoln 1994). The reliability of the findings from a case study can be improved through the use of several different data sources and the use of multiple research methods, both of which were used in this piece of research. Case studies also provide an excellent platform for the use of observation (Platt (1999) cited in Bryman and Burgess 1999).

**Observation**

In this study the researchers took the roles of ‘observer as participant’ within the classic categories of observation developed by Gold (1958) or ‘known observers’ (Lofland 1971) or researchers with an explicit role (Vinten 1994). Within this role the researchers were the outsiders inside the organisation and their purpose was known to the employees.

Having been given permission and having unrestricted access was an advantage although the presence of observers could potentially have influenced the behaviour of those under observation (Vinten 1994). A level of detachment is afforded by taking on this particular type of observation which allows the researchers to focus on the data collection rather than on being distracted by having to intervene frequently in what they are observing (Bryman and Bell 2003).

The researchers observed and recorded a wide variety of verbal and physical activities ranging from the minutiae of daily tasks to strategic discussions with a consultant. (see Table 1 for examples). Jotted notes were taken down as the actions were observed as a temporary capture of the observations and these were written up in full at the end of both days (Lofland 1971). Error and bias concerning what was being observed and how it was recorded was minimised by having two observers who kept their own, separate, notes.
Analysis of the observations took the form of sifting through the notes made (Jorgensen 1989) to search for patterns of activities, or non-activities (things not happening that should have) and repeated behaviour in order to reconstruct the data in a meaningful way so that when combined with the other data collection methods insight would be gained to answer the research objectives about the Marketing activities and processes of entrepreneurial SMEs.

<table>
<thead>
<tr>
<th>Interactions with core staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical movement from office to retail space</td>
</tr>
<tr>
<td>Interactions with consultant</td>
</tr>
<tr>
<td>Writing of copy for brochure</td>
</tr>
<tr>
<td>Answering telephone</td>
</tr>
<tr>
<td>Interrupting other staff</td>
</tr>
<tr>
<td>Manipulating database</td>
</tr>
<tr>
<td>Checking sales ledgers</td>
</tr>
<tr>
<td>Sampling wine and making tasting notes</td>
</tr>
<tr>
<td>Organising PDA system</td>
</tr>
<tr>
<td>Getting food/drinks</td>
</tr>
</tbody>
</table>

**Table 1 – Illustrative activities observed**

**Semi-structured interviews**

In conjunction with the two-day observation, two semi-structured interviews were held, one with the owner/director and the other with a part-time marketing consultant being employed by the company. These in-office interviews were conducted during the working day with both researchers asking questions and recording the proceedings. The role of these semi-structured interviews was to flesh out the activities that had been observed. Historical contextual data was given (Creswell 2003) and interviews were viewed as appropriate in a commercially sensitive environment (Easterby-Smith et al. 1991) where complex questions may need to be asked (Collis and Hussey 2003).

**Benchmarking**

As part of the exploration into the marketing activities of the organisation a short external benchmarking exercise was also undertaken. This consisted of assessing the organisation’s award winning website against other wine retailer websites and other online organisations to gauge competitiveness and interactivity. Benchmarking the company’s website was seen as an expeditious method to gauge the level and types of application of technology in marketing at a certain point in time for Magnum and Son. In addition, by benchmarking the website, it is possible to gain insight of the company from the customer’s perspective and therefore any findings would have potential use in improving customer focus for this organisation. External benchmarking measures best practice between organisations either within one sector or between different sectors (Codling 1996). “Companies should compare the best in class wherever it can be found” (McGaughy 2002, p. 474), so other direct competitors in the same sector and other organisations synonymous with internet activity, such as Amazon and Friends Reunited, were used as bases for comparison. Benchmarking is an established
diagnostic tool to help improve an organisation’s performance (Kyro 2004, O’Dell 1994, Camp 1989) and has developed to the extent of having an academic journal devoted to its discussion ‘Benchmarking: an International Journal’. Benchmarking is increasingly being utilised within the e-commerce environment (McGaughey 2002), a further justification for its application in this research.

The selection of direct competitors to benchmark against was made using the outcomes of previous research (Quinton and Harridge-March 2003), from which the three online wine retailers achieving the highest scores for interactivity were chosen as the comparators with the organisation under scrutiny. The organisation’s website was explored and the researchers independently searched the site for product information, tried to register their interests, used hypertext links etc. (see Table 2 for complete listing of criteria tested).

<table>
<thead>
<tr>
<th>Ease of navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of product information</td>
</tr>
<tr>
<td>Time taken to register</td>
</tr>
<tr>
<td>Position on search engines</td>
</tr>
<tr>
<td>Tone and style of pages</td>
</tr>
<tr>
<td>Level of interaction possible</td>
</tr>
<tr>
<td>Ordering process</td>
</tr>
<tr>
<td>Links to third parties</td>
</tr>
<tr>
<td>Contact us information and completeness</td>
</tr>
</tbody>
</table>

Table 2 – Criteria for benchmarking website

Having provided a rationale for each of the individual methods, the process of data collection and collation and analysis is laid out in table 3. The combination of methods provided comprehensive insight into the use of technology in marketing by Magnum and Son.

Diagnostic cobweb framework for evaluating the use of technology in marketing

The literature search and review elicited six important elements underpinning success in utilising e-commerce and technology in marketing. These were core skills as discussed by Gilmore et al. 2001; Hardy 1992. The importance of strategic intent (Brooksbank 1999; Blankson and Stokes 2002). The need to for building networks (Jocumsen 2004.; Arnott and Bridgewater 2002), issues relating to the developments of Internet activity (Tao and Tan 2002; Heung 2003, McGowan et al. 2001.) the central role of database information and interpretation – and highlighted by Tapp and Hughes 2004; Wang et al. 2000. Finally, the necessity of brand development as espoused (Quinton and Harridge-March 2003a). Subsequently, these elements were used as the main stays in the creation of the cobweb.
### Table 3 – overview of research methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Data Collected</th>
<th>Indicative Unit of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study</td>
<td>Secondary company information, Sector trade reports, Published Trade magazine articles, Interrogation of database, Written notes, Emails from and to owner-manager</td>
<td>Consistency of brand identity, communications tools used, Trends and patterns, market shares etc. Retailer initiatives, Database marketing principles, RFV, acquisition v. retention, Pattern Matching, Used as a cross-check to confirm initial analysis</td>
</tr>
<tr>
<td>Observation</td>
<td>Real time written notes of activity</td>
<td>Patterns of actual behaviour v. statements of behaviour</td>
</tr>
<tr>
<td>Semi-structured interviews</td>
<td>Written notes, Follow-up e-mails</td>
<td>Repetition of key themes, important isolated comments</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>Printed web site pages, Written notes</td>
<td>See table 2 criteria</td>
</tr>
</tbody>
</table>

The two constructs of conceptual and operation highlighted in the research findings have been incorporated into a spider’s web. Within each construct, there emerged three individual elements from the literature which demonstrate the interconnectivity and inter-dependence of the findings. Three of these elements – strategic intent, brand development and building networks can be viewed as the conceptual elements of the web because they all comprise different dimensions. The second group of three elements – database information and interpretation, core skills, developments of internet activity are operational elements.

Spiders’ Webs, also known as cobweb frameworks, are an effective style of diagrams which combine a picture and a measurement to illustrate and assess at the same time (Bernstein 1986). The cobweb framework created in this paper is useful as it illustrates the relative strengths or weakness of each component, the relationship between the components and the overall pattern of interaction of technology in current marketing activity. This cobweb framework is a systematic approach to determining how an SME is performing in terms of the interaction of technology and marketing. The same organisation can be evaluated at different points in time as well as assessing different SME organisations in the same sector or across sectors.

Gradients along each of the main stays of the cobweb assist in providing a series of measures against which an organisation can be assessed. A six point Likert type scale, numbered 0 to 5, was used as is common practice in organisational research (Fields 2002). Further justification for the use of this scale type can be found in Narver and Slater’s scale for Market Orientation. (Narver and Slater 1990 cited in Bearden 1999). Robson (2000) also supports this approach for small scale evaluation. The organisation was scored against each of the three conceptual elements as well as the three operational elements resulting from the data analysis. The criteria used for each can be seen in Tables 4 and 5 and were developed from an amalgam of
published best practice indicators and relevant literature. Both researchers scored Magnum and Son against each element separately and then compared notes to agree a score.

<table>
<thead>
<tr>
<th>CONCEPTUAL</th>
<th>Strategic intent</th>
<th>Brand development</th>
<th>Building networks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scanning and planning</td>
<td>Differentiation</td>
<td>Customer groups</td>
</tr>
<tr>
<td></td>
<td>Smart objectives</td>
<td>Clarity and cohesion</td>
<td>Intra-customer</td>
</tr>
<tr>
<td></td>
<td>Benchmarking</td>
<td>Integration of technology to brand</td>
<td>Collaborators</td>
</tr>
<tr>
<td></td>
<td>Best practice</td>
<td>Audience focus</td>
<td>Suppliers</td>
</tr>
</tbody>
</table>

Table 4 – criteria for conceptual elements of cobweb

<table>
<thead>
<tr>
<th>OPERATIONAL</th>
<th>Database information</th>
<th>Core skills</th>
<th>Internet activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Data suitability</td>
<td>Enthusiasm</td>
<td>Search engine</td>
</tr>
<tr>
<td></td>
<td>Interpretation</td>
<td>Commitment</td>
<td>Intra-customer</td>
</tr>
<tr>
<td></td>
<td>Technical</td>
<td>Openness</td>
<td>communication</td>
</tr>
<tr>
<td></td>
<td>development</td>
<td>Proactive approach</td>
<td>Personalisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Willingness to share</td>
<td>Customer-oriented</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>interface</td>
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<td></td>
<td></td>
<td></td>
<td>Purpose</td>
</tr>
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</table>

Table 5 – criteria for operational elements of cobweb

**Conceptual elements of the cobweb**

The three individual conceptual elements that arose from the research were strategic intent, brand development and building networks. The simplified criteria in Table 4 give an overview but further elaboration is needed for clarity. For example, when assessing strategic intent the researchers looked for evidence of time set aside either formally or informally to scan the competitive environment and create plans. These plans should include smart objectives relating to the interaction of marketing and technology. Seeking external advice and benchmarking against direct competitors were also regarded as important components. The ability of the organisation to ‘look outside’ and incorporate best practice from other sectors was also considered desirable. Magnum and Son scored 3/5 for strategic intent.

The criteria used to determine the score for brand development included the level of differentiation provided by Magnum against its competitors and how well co-ordinated the communications were across the promotional media as well as the clarity of identity of the brand overall. Magnum scored 3/5 for brand development with room for improvement being most obvious in the co-ordination of promotional media and the need to re-think the brand identity.

Building networks was also an important conceptual element. Magnum scored 2/5 in this based on measuring the criteria listed in the Table 2 above. The identification of core customer groups with which to build networks and nurture relationships was under developed. Thinking about groups of people as potential collaborators and involving the wider community had not been realised.
**Operational elements of the cobweb**

The operational element of the cobweb consisted of database information, core skills and internet activity. Magnum and Son scored only 1/5 for database information and interpretation. Although the organisation had a logical database which captured some sales data there was little evidence of interpretation of the data for marketing purposes. However on core skills (see Table 4) the company scored 4/5 as there was much enthusiasm, commitment and a proactive approach to enhancing and extending the use of technology in marketing. The final part of the cobweb, the development of internet activity, scored 2.5/5. In this area the search engine listing and ranking was inconsistent, there was no opportunity for intra-customer communication in the form of discussion forums and personalisation of the customer end of the website was limited.

*Figure 2 – Cobweb framework*
Having collated all the raw data, it became evident that material could be grouped into two over-arching constructs, that of conceptual and operational. Within each construct, there emerged three individual elements. In order to illustrate the inter-relationship between the constructs and the elements, a cobweb was developed (see figure 2).

Findings and discussion
The first and second objectives which were 1) to identify the extent of the use of technology in marketing within an SME and 2) to determine the effectiveness and efficiency of technology in assisting the marketing effort within the same SME are now addressed in the following discussion.

These headings emerged from the analysis of the primary data and answer the third objective which was to identify key elements, both operational and conceptual, that should be considered prior to incorporating technology into marketing activity.

Conceptual
Strategic intent
It was evident from the primary data that there was no physical time for any strategic thinking as the days were filled with operational detail, some of which could have been delegated to responsible staff. This failure to think beyond the short-term and the inability to detach
oneself from daily activities is typical of the owner-manager in an SME (Blankson and Stokes 2002).

This lack of a clear strategy supports Ramsey et al.’s assertion (Ramsey et al. 2003) that owner managers often limit the potential of the business through having no explicit strategy, particularly with regard to the use of technology in their business. There is a need to understand the implications of using the internet as part of a company’s marketing strategy (Thelwall 2000). A key to sustainable competitive strategy may lie in the ability of the firm to shift its thinking so that marketing can fully utilise the potential of technology (Martin and Matlay 2003). The indication to consider longer-term changes was evidenced by the owner-manager accepting external advice from a part time consultant and from the results of this research, contrary to Jocumsen (2004). The firm’s initial foresight and strategy can be hijacked by external consultants, whose aims are very different (Jones et al. 2003).

Brand development

Corporate brand development should be the responsibility of the owner/manager (Balmer 2001) and it should embrace all aspects of the organisation with a sense of cohesion and direction. The power of building a brand that is recognised in the crowded virtual market place of the web should not be overlooked as trusted brand names are used as a substitute for information by on-line purchasers (Ward and Lee 2000).

The successful launch of its initial website gave Magnum a head start in extending the brand to a new audience via the Internet. Having been a firmly bricks-and-mortar wine provider for many years, the transition to a bricks and clicks and mortar operation has highlighted challenges in the strategic management of its brand. The original insight of the entrepreneur/owner as to the impact of an on-line service and the potential brand strengthening an e-environment could bring (Rowley 2004) has been a little diluted by the operational issues of managing the website. For example, there is a disparity between pricing on and offline, which causes customer confusion and does not reassure buyers of the cohesiveness of the company.

The brand identity portrayed by a visit to the retail store is at odds with the brand image given by the website and the online order facility. The headquarters and retail outlet are housed in an historic 19th century building. The website is modern, sleek and says little of the company’s heritage. Olins suggested in 1989 that corporate brands should live both in their past, by acknowledging their heritage, and in the future by developing a forward facing strategy. An issue for Magnum and Son is whether to separate the online and the retail store brand identities or to unify them under a single, clear corporate identity.

When thinking about a strategy for an online brand, the organisation should remember that brand image can be enhanced or damaged by a single virtual experience and that a systematic approach needs to be taken in building an online brand (Rowley 2004).

Building networks

As a long-established regional business, Magnum has limited formal and informal networks because there has been limited time and no dedicated personnel to develop networks which may lead to sales and/or brand awareness. However, the authors consider that Magnum could extend its range of network partners to maximise the potential benefits. There are relationships between Magnum and various types of customer which exist and are developed
to various levels. However, there is potential for networking/relationships between various Magnum customers which Magnum could facilitate and which has the potential to add value to all in the network. Magnum should be encouraged to nurture business-to-business relationships to develop these networks. Jackson (1985) suggested that firms should consider moving towards building stronger relationships and in the 21st century, the facilitator for such relationships could be the Internet.

There has been a tendency for Magnum to compartmentalise how they view trade customers. When building networks, benefits may be in kind rather than purely focusing on increased sales and acquisition of new customers. The authors feel that reciprocity is particularly valuable to SMEs with limited budgets for marketing activity.

In small organisations it is important to extend the number of contacts by leveraging the existing network. For example, local construction companies who are clients of Magnum buy large numbers of individual bottles to give as corporate gifts. The recipient is not made aware of the wine supplier. In the event of the recipient wishing to purchase the product for themselves, perhaps for their clients, they will not be able to trace the supplier. Hence, an opportunity for Magnum is lost. A similar scenario exists for local recruitment agencies which orders wine packs as corporate gifts.

Potential key accounts require personal face-to-face nurturing. All parties involved in a network relationship need to think creatively how they might benefit individually and collectively from the relationship.

Creating networks with and for individual customers may also bring benefits. Groups of like-minded customers whose profiles are similar can be invited to participate in specific events. It is possible to determine from the database an outline of individual customers with similarities. Some professions are evident, age groups and residential areas.

Virtual networks to encourage and enhance the knowledge and interest in wine should be considered. These intra-customer contacts develop an opportunity for dialogue through the Magnum website. This involves little effort but has the potential for brand-enhancement through the halo-effect.

Currently Magnum and Son are not taking full advantage that the Internet presents for relationship building (Arnott & Bridgewater 2002). Customers may see intra-customer communication as added-value and subsequently be more positively disposed toward forming a relationship with Magnum and Son. Technology can create additional value for customers as a means of nurturing relationships (Vandermerwe 1999). This view is also shared by McGowan et al. 2001 who highlight the potential of the Internet to facilitate relationships.

**Operational**

**Development of internet activity**

In relation to the organisations benchmarked against, the following finds should be noted:

Potential on-line registrees may be frustrated with the 2 minutes 19 seconds required to register with Magnum and Son. The authors benchmarked Magnum’s registration against other online wine providers and although the others asked for less personal data, average registration time was under 20 seconds.
It was interesting to note that when searching for Magnum on-line, Magnum appeared fourth in a Google list of a “wine and Blanktown” search but Magnum did not register at all in the top half of a list of “Independent Wine Retailers” but more positively came first when searching under “Blanktown and Wine”. The order of key words, therefore, makes a difference to those who search for a potential wine provider.

Magnum’s award-winning site (2001) is now in its second stage and due for update. It offers a broad width of product information with a detached but friendly informative tone. The site itself is relatively easy to navigate but presumes a level of knowledge of wine. There are numerous links to other associated pages and one link to a third party information source. There was no facility for customers to enhance their knowledge through interactive games or quizzes. There is the potential for customers to register their wine preferences but this is not obligatory.

There is evidence of limited potential interactivity with the availability of an e-mail newsletter but no opportunity for discussion forums, consumer reviews or recommendations. Currently, no personalisation of web content occurs. Existing registered users and buyers could be addressed personally, their preference list could be utilised and a “wish-list” function could be offered.

The “Contact us” information is accurate and covers all communications methods.

A functional order placement process exists but there is no order tracking facility for the customer. This may lead to problems, owing to the fact that distant deliveries are handled by an independent courier. Delivery charges are in line with industry norms.

Core skills

The interviews and observation over the two-day period threw up several interesting points. Watching the owner-manager answer the telephone, intervene in staff activities, search the sales figures and write copy for a wine tasting all simultaneously confirmed Lancaster and Waddelow’s (1998) observation that managers face performing many tasks concurrently and are forced to take the short-term view.

The observed behaviour also supports Hogarth-Scott and Watson (1996) view that owner-managers are generalists. During the interviews with the owner-manager, it became apparent that there had been disagreement with the previous generation over the implementation of web technology. There had been a belief that the traditional established customer base would not be willing to adopt this new technology and that the present owner-manager had had to persuade the family of the opportunity presented. The belief in the new technology and the potential for Internet business demonstrates in this case a proactive approach to marketing which contradicts Bhide (1994) and Fillis (2004).

Database information and interpretation

Magnum’s database had not been segmented. Although it was possible to sort the data according to the post-code of the buyer, this had not been done. Nevertheless, the researchers identified some themes from this data. The authors determined that the biggest sales in terms of volumes and value from individual customers came from five distinct postcode areas.
Segmenting the trade and business accounts also gave light to a worrying over-reliance on a few key accounts. The random sample of corporate and trade clients demonstrated a pyramid-like structure with a dependency on few key accounts. Three companies had comparatively large sales but fifteen organisations had sales less than £1000 this year. Current activity conforms to the Pareto principle. This indicates a potential to up-sell. The existing pyramid structure needs to be inverted to spread the risk.

A random search of recorded preferences of consumers and comparison with the sales database showed four out of six preferences stated matched actual purchase behaviour, therefore indicating truthful relationship between the two. However, the authors question the construction of the list of preferences on the web-site. What is the relationship between port and en-primeur wine? Customers purchasing sherry were given no opportunity to express their preference. There may be some confusion over what constitutes New World wine as this is an increasingly catch-all term. The authors posit that taste-type preferences may be more suitable, or even a style of wine to choose from, rather than the current options.

From the primary data, it was apparent that potential customers were leaving the site between basket and checkout, hence not completing their order on line. One possible explanation for this is that customers search for information and availability online but complete their transactions either by telephone or by visiting the shop (Nicholson et al. 2002).

There was no available data that separates those who have registered versus those who have bought on line or indicated where the initial purchase came from. In the next phase of the website development, consideration should be given to separating this information. On reflection, the database was being utilised as a sales management and accounting information system rather than a customer-centric marketing tool.

**Conclusions**

This research has highlighted the need for entrepreneurial owner-managers to ensure that conceptual elements of the cobweb framework suggested in this paper are not ignored. Owner-managers need to appreciate the link between, and the inter-dependence of, the cobweb elements (strategic intent, brand development, building networks, database information, core skills and internet activity) when planning and implementing technology in Marketing. The proposed framework will allow managers to evaluate their use of technology in marketing.

Entrepreneurial owner-managers need to allow themselves time to stand back from the day to day activities in order to plan strategically what it is that they and their customers need from technology. This means thinking longer-term and adopting best practice from other sectors as well as the market in which the organisation competes rather than rushing to manage the operational needs of the organisation. Longer term thinking needs also to be adopted when considering the type and quantity of information to be used for marketing purposes.

Information collected through the use of technology should be useful to the organisation so, again, thought needs to be given to what it will be used for. This will help consultants and designers to construct systems which will allow the data to be manipulated into useful formats, both for current and future needs.

In addition, this paper illustrates that entrepreneurial owner-managers should utilise networks in order to get closer to the market. Using technology effectively can assist in recognising
opportunities and subsequently nurturing relationships with and between networks. Both the customer perspective and the organisational viewpoint need to be considered to ensure that all parties benefit from using such technology.

The use of technology should complement the corporate brand, not compete against it, so all channels present a cohesive image in order that the brand is not damaged in any way. True integration of technology in marketing will result in an enhanced brand with on-going potential for brand development. Reference to the literature, and this research, show that databases and websites are merely tools through which technology and marketing can interact.

This paper has developed a diagnostic tool that proposes the key elements of conceptual and operational requirements for successful marketing using technology in an SME organisation. The cobweb illustrates the connections and inter-dependence of these elements. Weakness in one element will impact upon the effectiveness of marketing effort. The simplicity of the cobweb as a diagnostic tool for SMEs should not be under-rated. A clear and simple to use tool, it will assist in identifying where there are areas of need in the use of technology in marketing as well demonstrating any strengths that the SME may have. Thus, this tool could be applied to SMEs across a range of sectors once the stays of the cobweb have been developed from the relevant subject literature, for example, SMEs operating in professional services such as accountancy, financial consultancy or legal practice.

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