



## Key website factors in e-business strategy

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### ABSTRACT

The design of a quality website, as part of e-business strategy, has become a key element for success in the online market. This article analyzes the main factors that must be taken into account when designing a commercial website, concentrating on the Aceros de Hispania company and its business model. We have studied the features which determine website quality: accessibility, speed, navigability, content, and we have calculated the Web Assessment Index (WAI) proposed by Miranda and Bañegil [Miranda, F. J., & Bañegil, T. M. (2004). Quantitative evaluation of commercial websites: An empirical study of Spanish firms. *International Journal of Information Management*, 24(4), 313–328]. The results obtained provide several lessons which should be borne in mind when designing a commercial e-strategy. Firstly, it can be observed that Internet popularity and search engine positioning facilitate entry to practically inaccessible markets. Secondly, the navigability makes users feel comfortable and secure when browsing it, which increases the probability of a transaction being completed. Finally, the information provided on the website must be accurate, informative, updated and relevant to customers' requirements. Like Aceros de Hispania, any company, thanks to the Internet, will be able to overcome the barriers which would impede its successful worldwide development in the offline market.

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### 1. Introduction

In recent years, the Internet has become a new channel for the commercialization of products conventionally sold through traditional outlets; according to the Forrester Report, the volume of US online retailing will grow from \$172 billion in 2005 to \$329 billion in 2010. Electronic commerce (e-commerce) requires little additional investment by companies (a website is sufficient) and facilitates access to markets previously considered as out of reach. Many companies have been built upon an exclusively electronic system of sales and, unlike the offline market, have employed a weak e-business strategy. This has led to serious tactical errors which have caused many firms to fail (Phan, Chen, & Ahmad, 2005).

Numerous authors consider that the design of a quality website is a key aspect of e-business strategy (Cao, Zhang, & Seydel, 2005; Frost & Strauss, 2002; Turban, McLean, & Wetherbe, 2002) since this is the principal medium of communication to interact with current and potential customers. Thus, success in the virtual market requires firms to correctly manage technology and the information provided on its website.

The purpose of this paper is to identify the key aspects which must be taken into account in the design of a commercial website and which contribute to a successful e-strategy. We adopt

an integrative approach by considering information systems (IS) and marketing areas. We undertake a case study of a specific company, Aceros de Hispania, S.L. (ADH) (<http://www.aceros-de-hispania.com>), dedicated to the sale (exclusively online) of decorative, handmade weaponry: swords, knives, daggers, amour, shields, etc. Located in an area which has been both deprived and depressed economically in recent years, it has, nevertheless, managed to overcome obstacles such as the lack of an adequate communications network, continual depopulation, the absence of economic opportunities and a poor entrepreneurial environment. This has been due to a business model designed *ad hoc* to be developed on the Internet and which is represented through its website. ADH has become the biggest worldwide shop in its field, with regard to the number of products, and the company *par excellence* for lovers and collectors of this type of handicraft.

This article begins with a review of the literature about the key factors that must form part of any business strategy directed towards electronic commerce and which define a quality website. After that, the e-business strategy of ADH is analyzed. Finally, the principal lessons learned are discussed, with a view to aiding businesses which wish to move from the traditional bricks and mortar structure to a pure dot com one.

### 2. Design of a commercial website

An adequate e-business strategy necessarily includes the design and construction of a commercial website that visitors find com-

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portable when interacting with the company. Website quality depends upon both its content and its ease of use (Rabin, 2001). The better a company website, the greater the probabilities of success in the virtual market.

In the 1990s, many studies analyzed the importance of adequate website design, concentrating on aspects such as content, use and objectives (Ju-Pak, 1999; Liu, Arnett, Capella, & Beatty, 1997; Takacs & Freiden, 1998). However, as Nour and Fadlalla (2000) warn, such research provides a general description of the importance of the website but does not identify which factors must always be present and which improve company e-strategy.

Since then, other papers have carried out detailed studies about the characteristics that a website should contain (see Table 1). Web quality factors appear to have an impact on user acceptance because they are ways of influencing user beliefs and behavioral intention and they are, moreover, under the control of the company (Ahn, Ryu, & Han, 2007). The quality of the website affects the users'

impression of the firm because it is the portal through which the transactions are conducted.

Zhang and von Dran (2001) conclude that navigability and precise information are aspects that users value positively while Palmer (2002) affirms that the loading speed, navigability, the content and the interactivity should always be present on a website. Huizingh (2000) and Robbins and Stylianou (2003) identify similar characteristics to those mentioned above as conditioning features for the success of a commercial website. Finally, different key aspects for improving web quality have been established. Among them, we can highlight the use of graphics and colors, accessibility 24/7, and ease of use and navigation (Levine, 1999; Schacklett, 2000).

Many papers have found two main groups of indicators, one connected with the content and the other with the design of the website (among others, Heldal, Svovold, & Foyen, 2004; Robbins & Stylianou, 2003). The content refers to the information, the characteristics or the services offered on a website. The information that appears on the website should enable its users to clarify ambiguity and enhance their understanding of issues in a timely manner (Chen, Gillenson, & Sherrel, 2002). The design refers to the way in which the content is made available to the users (Huizingh, 2000). It should be borne in mind that the digital storefront design of virtual stores is the equivalent of the shop window of retail stores. Thus, the interface design has important implications for the perceived ease of use and for the sales of the company.

Light and Wakeman (2000) consider that very little research has analyzed the firm's interactivity with the customer via the website. One of the main objectives of a website is to promote communication and the finalization of transactions through the new channel. Therefore, it is very important to improve the interactivity of the website and to manage the information obtained adequately. Authors like Bauer and Scharl (2000), Chen and Yen (2004) and Tan and Wei (2006) have taken this characteristic into account in their research.

Finally, another line of research, which began with DeLone and McLean (2003), focuses on evaluation or success factors of websites: system quality, information quality and service quality (Ahn et al., 2007; DeLone & McLean, 2003; Lin, 2007). Systems quality is manifested in a website system's overall performance and takes in aspects like the interface, loading speed and response time (Bharati & Chaudhury, 2004). Information quality captures the quality of the content and value perceived by a customer and includes characteristics such as being up-to-date, accurate and useful (Bharati & Chaudhury, 2004; DeLone & McLean, 2003). Finally, service quality refers to the availability of a communication mechanism for accepting and solving consumer complaints (Ahn et al., 2007; Lin, 2007).

After reviewing the literature (see summary in Table 1), we can highlight three main conclusions. First, that the research on web quality is very fragmented and differs according to the paper we consider. Some authors measure this concept on the basis of three or four factors (for example, Buenadicha, Chamorro, Miranda, & González, 2001; Huizingh, 2000), while other require a wider study (Liu & Arnett, 2000 use 11 indicators and Olsina, Godoy, Lafuente, & Rossi, 1999 use 39). Second, it should be borne in mind that most of these papers only formulate an index and/or a theoretical model, without empirically testing them on any website. Third, most of the existing literature is undertaken in a general context, without differentiating between the type of firm or sector analyzed, and does not take into account that the factors considered may not be applicable in all cases.

These three conclusions show us the need to specify the key factors of commercial website design, unifying the main analysis criteria that have been used. Based on Miranda and Bañegil (2004), we have considered four main factors: accessibility, speed,

**Table 1**  
Review of the a literature on web quality.

Paper	Factors considered
Ahn et al. (2007)	System quality, information quality, service quality
Boshoff (2007)	Efficiency, delivery, privacy, speed, system availability, reliability
Lin (2007)	System quality, information quality, service quality
Wu (2007)	Information quality, system quality, service quality, use and user satisfaction
Cao et al. (2005)	System quality, information quality, service quality, attractiveness
Moustakis, Tsironis and Litos (2006)	Content, navigation, design and structure, appearance and multimedia, uniqueness
Marsico & Levaldi (2004)	Personal/social dimension, communication style, site/info dimension
DeLone & McLean (2003)	System quality, information quality, service quality
Robbins & Stylianou (2003)	Content, design
Aladwani & Palvia (2002)	Appearance, specific content, content quality, technical adequacy, perceived web quality, overall quality rating
Chen, Gillenson, and Sherrel (2002)	Product offerings, information richness, usability storefront, perceived service quality, perceived trust
Palmer (2002)	Download delay, navigation, interactivity, responsiveness, information content, web site success
Ranganathan & Ganapathy (2002)	Information content, design, security, privacy
Buenadicha et al. (2001)	Accessibility, speed, navigability, content
Zhang & von Dran (2001)	Navigability, information accuracy
Bauer & Scharl (2000)	Content, navigation, interactivity
Huizingh (2000)	Content, design
Liu & Arnett (2000)	Learning capacity, information quality, playfulness, system quality, system use, service quality
Nielsen (2000)	Navigation, response time, credibility, content
Schacklett (2000)	Use of graphics and colors, web accessibility 24/7, ease of use, navigation
Levine (1999)	Speed download, interactivity, content timeliness
Johnson and Misis (1999)	Functional/navigational issues, content and style and contact information
Olsina et al. (1999)	Functionality, usability, efficiency, site reliability
Barron, Tompkins and Tai (1998)	Graphics, text, links, size, length, multimedia
Bell & Tang (1998)	Access, content, graphics, structure, familiarity, navigation, usefulness, specific characteristics
Delone and McLean (1992)	System quality, information quality, satisfaction, individual impact, organizational impact, use

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