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Developing a Framework for Evaluation of Corporate Non-Transactional Business-to-Consumer Web Sites: A Descriptive Study

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Developing a Framework for Evaluation of Corporate Non-Transactional
Business-to-Consumer Web Sites: A Descriptive Study

by

Karen D. Pate

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in
Information Science

Graduate School of Computer and Information Sciences
Nova Southeastern University

2010

We hereby certify that this dissertation, submitted by Karen D. Pate, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the dissertation requirements for the degree of Doctor of Philosophy.

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An Abstract of a Dissertation Submitted to Nova Southeastern University in Partial
Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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During the soaring information economy of the last decade, organizations spent large sums of money on the development of Web sites without much knowledge of their performance value. In time, organizations realized that measuring Web site performance to determine value was fundamental. For transactional, e-commerce Business-to-Consumer (B2C) Web sites, this effort is straightforward because value is attached to sales. Measuring performance to determine the value of non-transactional B2C Web sites (i.e., sites that provide information, not sales) is more complex.

This study examined the underexplored subject of evaluating non-transactional Web sites. Performance was defined as outcomes ranging from site visitor attributes to business impacts. Value was defined as the degree to which the site contributed to achieving business objectives.

The resulting qualitative, exploratory study involved 45-60 minute semi-structured interviews conducted with 15 employees from four corporations across diverse industries regarding evaluation of non-transactional sites. Each interview was recorded with participant consent and transcribed.

Interview results were aggregated, analyzed, and grouped based on themes and patterns. Logical groupings of participant opinions on topics such as associating Web initiatives to company business strategy, how Web success is defined, comfort with subjective measurement, and value placed on subjective measurement were identified and placed on several continuums.

The study's result is a three phase process to evaluate non-transactional Web sites. Phase one is comprised of four components: 1) identify the company's Web belief system, 2) clarify the company's level of expectation for non-transactional Web sites, 3) determine which viewpoint (business, customer, or both) the company will use to evaluate Web site effectiveness and success, and 4) identify the purpose of evaluating the performance of Web sites. Phase two includes two components: 1) select applicable metrics and 2) collect appropriate data. To supplement Phase two, three tools/guides were developed: 1) expectations/evaluation considerations matrix, 2) sample business viewpoint metrics and

3) sample customer viewpoint metrics. Phase three consists of two components: 1) analyze the data and identify insights and 2) act upon the results. Together, this three phase process and accompanying tools constitute a practical framework for evaluating non-transactional Web sites.

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Chapter 1

Introduction

Background

Within the last decade, the rapid expansion of technological capabilities has helped the information economy soar (Ong & Lai, 2007). Cho and Hau (2001) described this economy as a transition from a traditional value chain to a digital value chain. One of the best examples of digital transition is the development and rapid adoption of Web sites. These sites have changed the way businesses operate and are seen as a viable medium for communicating and advancing business (DeLone & McLean, 2004; Koo, Koh, & Nam, 2004; Lee & Kim, 2007; Lehmann & Reibstein, 2006; Motiwalla, Khan, & Xu, 2005; O'Leary, 2003).

During this rapid technological expansion, particularly in the dot-com boom, organizations were spending large sums of money on Web sites and systems with little knowledge of their performance and ultimately their value. The author defined "performance" in this study as a set of outcomes and, in the context of a Web site, performance measurements range from site visitor attributes and behaviors to business impacts. Value was defined as the degree to which a site contributes to helping an organization achieve its business objectives. Straub, Hoffman, Weber, and Steinfield (2002a) stated this early spending behavior was an erroneous and arrogant assumption

that Web sites were different and were changing everything about a business. Shih, Dedrick, and Kraemer (2005) described this period as a cycle of hype, disappointment, and then renewed hope. While the Web has unique characteristics that must be addressed differently, the exercise of measuring and evaluating the value of any aspect of a business is fundamental (Straub, Hoffman, Weber, & Steinfield, 2002b). In 1996, former U.S. Federal Reserve Chairman, Alan Greenspan described the dot-com boom stock valuations as “irrational exuberance” (Straub et al, 2002a.). In the aftermath of the dot-com boom and then bust, organizations realized they must learn how to measure and evaluate their business Web sites.

The desire to measure the performance (a set of outcomes) to help determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites prompted interested stakeholders to require site success measurements and return-on-investment calculations (DeLone & McLean, 2004; Eisenberg, 2005; King & Liou, 2004; Mason, 2007; Sterne, 2004b; Sterne, 2004d; Sterne, 2004e). With key stakeholders wanting to have a better understanding of the performance of their corporate Web sites so they can determine the value or what an organization is getting in return for investment in developing and maintaining a Web site, there is continued pressure to justify expenditures for these sites (Andal-Ancion, Cartwright, & Yip, 2003; King & Liou; Sawhney, 2002).

Measuring the performance of, and ultimately determining the value for, transactional sites, specifically e-commerce Business-to-Consumer (B2C) Web sites, is straightforward because there is a defined conversion point (i.e., sale of products or services) with a value attached. However, measuring the performance to help determine the value of non-

transactional B2C Web sites where a business provides information or content to support the business (i.e., products and services are not sold directly online) is more complex (Belanger, Fan, Schaupp, Krishen, Everhart, Poteet, & Nakamoto, 2006; Bredenberg, 2002; Lehman & Reibstein, 2006; Mason, 2007; Silverstein, 2002; Turban, King, Lee, Warkentin, & Chung, 2002).

For example, Amazon.com is a transactional Web site because a visitor can enter the Web site, search for products, order, and then pay for these products. The entire purchase process (the transaction) is conducted online within Amazon's Web site; thus, Amazon is able to calculate the number of products sold and compare this figure to the amount of money the company invests in designing and maintaining the Web site. Because the complete transaction process is performed online, Amazon can more easily measure the performance or a set of outcomes of the Web site and then determine the value the site brings to the company; or, in other words, Amazon can determine the degree to which the site contributes to Amazon achieving its business objectives.

In contrast, Thecoca-colacompany.com is a non-transactional site because visitors can enter the site, search for products, and gather information about these products; however, visitors are unable to purchase (complete a transaction) directly online. In some instances, visitors are given information regarding where to buy these products (typically at brick-and-mortar locations); but again, the visitor is not able to make this purchase or complete their transaction online within Thecoca-colacompany.com. Compared to Amazon, The Coca-Cola Company has a greater challenge of measuring the performance (a set of outcomes) of its Web site to determine its value (the degree the site supports The Coca-Cola Company in achieving its business objectives). The primary factor contributing to

this challenge is that Thecoca-colacompany.com does not sell over the Web.

Consequently, there is not a direct relationship between the online actions of a customer and revenue received by the company.

Lacking the transactional component of a Web site adds complexity to measuring performance to determine value (Belanger, Fan, Schaupp, Krishen, Everhart, Poteet, & Nakamoto, 2006; Bredenberg, 2002; Mason, 2007; Silverstein, 2002; Turban, King, Lee, Warkentin, & Chung, 2002). Today, many corporations are struggling with a complex set of challenges related to measuring performance to determine value of their non-transactional Web sites (Mason, 2007). There is need for a practical framework to guide corporations' efforts to evaluate the performance in order to determine value of their non-transactional B2C Web sites (King & Liou, 2004; Mason, 2007).

Problem Statement and Research Questions to be Investigated

The problem addressed in this research is the difficulty corporations encounter when attempting to determine the value of non-transactional B2C Web sites. Specifically, this study investigated questions such as: 1) what aspects of the Web site, in the context of the company's business should be considered when evaluating Web site performance to understand the site's value to the company, 2) how is Web performance currently being evaluated to determine value, 3) what barriers hinder corporations' efforts to evaluate their non-transactional Web sites, and 4) how are these barriers overcome?

Goal of the Study

The overall goal of this research was to develop a practical framework to guide corporations' efforts to evaluate the performance (a set of outcomes) to help determine

the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Relevance and Significance

Academic literature is gradually focusing more on Web site evaluation; a few theoretical frameworks and metrics have emerged. Attempts to bring theory and practice together have produced frameworks that are more comprehensive; however, a practical model for evaluating non-transactional B2C sites has yet to evolve (King & Liou, 2004). To fill this gap, King and Liou reviewed various theoretical measurement frameworks proposed by academics and metrics published by Internet industry leaders, and compiled a central framework for Web site evaluation (King & Liou).

King and Liou (2004) validated their synthesized framework with Internet industry consultants, channel managers (those who were responsible for their organization's Web site), and end users for one retail company, two financial services organizations, and two higher education institutions. Their study resulted in a framework comprised of two levels: business and user. They concluded that their framework provides a start in bringing theory and practice together. Yet, they determined the long-term business value and benefits of Internet channels remain under-explored in practice (King & Liou). A later study by King, Barnes, and Tyagi (2006) supports King and Liou's position that the measurement of performance to understand the value of non-transactional Web sites is still in its infancy. King, Barnes, and Tyagi showed growth in satisfaction with the measurement of transactional Web sites; however, the study concluded that there is still much work to be done in evaluating non-transactional Web sites (King, Barnes, & Tyagi). According to recent industry literature, organizations that have e-commerce or

transactional Web sites are increasingly collecting performance data about their sites and using the information to make business decisions. Some organizations are even ready to take Web site measurement to the next level by positioning online measurement to have a greater influence in their business operational decisions. However, organizations with non-transactional Web sites are still searching for fundamentals by which to measure their sites (Mason, 2007).

This study was designed to expand the research of King and Liou (2004) by increasing the number of industry sectors explored and by focusing on large United States corporations (or corporations with major operations within the United States) that have at least one non-transactional B2C Web site. The intent of the approach was to collect first-hand information from corporate employees who are major stakeholders in the design, maintenance, and evaluation of their organizations' non-transactional B2C Web sites and then develop a practical framework. The aim for this practical framework is for it to be available for organizations to help them measure the performance or a set of outcomes of their Web sites to determine the value or degree the Web site contributes to help the company achieve its business objectives.

Barriers and Issues

In order to conduct this type of study, the researcher needed access to specific personnel within several corporations. Specifically, the researcher needed to interview employees who are involved in implementing their company's B2C Web sites. In addition, these employees were selected from a variety of roles within the company such as Information Technology (IT), Web Management, Marketing and Communications, Human Resources (HR), Business Development, Finance, Operations, and Sales. Because

job titles vary among organizations, participants' titles or specific job roles from one company did not exactly match participants' titles or job roles from another company. The key to obtaining a mix of job roles from each company was to ensure that a variety of perspectives within an organization was gathered. In addition, each participant needed to feel comfortable in discussing his or her Web initiative experiences from a technical, financial, strategic, and cultural perspective. While the above was a possible barrier to the study, it presented no more of an issue than obtaining the appropriate names of corporate personnel to participate than would have been the case in a quantitative study that required a survey. Recruiting for this study involved one-on-one interaction via phone call or email, not a generic invitation. One-on-one interaction helped to ensure that appropriate company personnel participated in the study. As well, once recruited, the researcher leveraged those employees to reach out to other people in appropriate roles within the company for participation. Personal introductions enhanced the researcher's ability to increase the number of study participants compared to the researcher performing cold calls.

Summary

The demand for understanding the performance (a set of outcomes) of a corporation's Web site is increasing. Organizations want to know the value of a site, or the degree to which a site contributes to an organization achieving its business goals. While great progress has been made in how to measure and understand transactional Web sites, measuring the performance to determine the value of non-transactional Web sites where a company provides information or content to support the business (i.e., products and services are not sold directly online) is more complex.

Organizations with non-transactional Web sites are still struggling with this complexity, fostering a need for a practical framework to guide their efforts to determine the value of these sites. This research developed a practical framework to guide corporations' efforts in evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Chapter 2

Review of the Literature

Introduction

The literature supported the need for measuring the performance to help determine the value of non-transactional B2C Web sites (King & Liou, 2004). In this study, performance was defined as a set of outcomes and, in the context of a Web site, range from site visitor attributes and behaviors to business impacts; value was defined as the degree to which a site contributes to helping an organization achieve its business objectives. Therefore, the performance of a Web site is measured in order for a business to determine the Web site's value.

Industry literature, in particular, focuses on current issues and opinions and is a timely source, providing a large number of articles on the subject (Burby, 2004; Burby & Atchison, 2007; Inan, 2002; Loveday & Niehaus, 2008; Peterson, 2004; Peterson & Bayriamova, 2007). While industry literature usually did not produce peer-reviewed analysis based on controlled studies or studies based on theoretical underpinnings, these "trade" publication reports represented an unequalled barometer of the business climate as it relates to measuring the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

For example, a recent survey of Web analytics users (those who collected and analyzed Web-related data within a corporation) and Web analytics consultants (those who provided data collection and analysis services to corporations) found that while over half of the respondents claimed that organizations were focused on using Web performance data to support strategic organizational decisions, 56% found that measuring the performance of B2C Web sites remained difficult (Petersen & Bayriamova, 2007).

On the other hand, academic literature has covered, in detail, the topic of e-commerce, including issues related to measuring the performance of transactional Web sites. Some literature even has produced theories and models presently in use by organizations today (Cao, Gruca, & Klemz, 2003; King, Sen, & Xia, 2004; Li, Browne, & Wetherbe, 2006; Massad, Heckman, & Crowston, 2006; Nikolaeva, 2005; Wade & Nevo, 2005; Zhuang & Lederer, 2003). Published academic research for non-transactional Web sites remains sparse.

For this study, it was important to review and include industry literature to stay abreast of the current business mindset as well as the trends related to the research topic. Academic research, such as the studies conducted by King and Liou (2004) and King, Barnes, and Tyagi (2006), were used as a foundation for this study.

Both academic and industry literature supported the need for measuring the performance of non-transactional B2C Web sites to understand their value (King & Liou, 2004; Mason, 2007; Petersen & Bayriamova, 2007). In addition, review of the literature identified theories and practices of measurement. This literature review reflected those thoughts within three topic areas: 1) the need to evaluate corporate Web sites, 2) aspects

to consider when evaluating site performance and determining value of a site, and 3) barriers that hinder Web site evaluation.

The Need to Evaluate Web Site Performance to Understand the Value of the Site

The literature supported the importance of measuring a Web site (Buchanan & Lukaszewski, 1997; Burby, 2004; Inan, 2002; Keen, 2003; Peterson, 2004; Peterson & Bayriamova, 2007). Typical reasons included gaining a better understanding of a site's success (Inan), getting more out of current online investments (Peterson & Bayriamova), assessing the value that intangible assets contribute to a business (Burby; Keen), and avoiding getting tangled in the quagmire of uncertain value and spiraling costs (Buchanan & Lukaszewski). Yang, Cai, Zhou, and Zhou (2004) stated that more organizations are creating information presenting Web sites in order to have a cost effective channel to communicate with potential and existing customers. Swamy (2002) stated that to survive in this millennium, the performance of these Web-based initiatives must be incorporated into an organization's performance measurement framework. Without consideration or understanding of online successes and failures, a business does not have a complete picture of its company (Ittner & Larcker, 2003; Mason, 2007; Pettit, 2005; Schlegel & Vollmer, 2003; Swamy).

While non-transactional sites lean toward what some consider a difficult-to-determine return on investment, some authors, including Buchanan and Lukaszewski (1997), Hubbard (2007), Inan (2002), Mason (2007), Nobles and Grady (2001), Peterson and Bayriamova (2007), and Sterne (2004c; 2004d) did not view determining the value of non-transactional sites as unsolvable. Sterne wrote that even though businesses should have different expectations for different types of sites, this does not mean Web sites are

immeasurable. Hubbard and Zimmermann (2003) added that the problem with expectations for measuring the soft-dollar components of an organization is the assumption that measuring return on investment means inputting numbers into a spreadsheet. The reality is that determining the value requires far more effort than creating a spreadsheet; it is a method of careful analysis (Zimmermann) and an understanding of how to measure the value of the intangibles in business (Hubbard).

Typically, marketing activities, information presentation, or image building use non-transactional B2C sites (Yang, Cai, Zhou, & Zhou, 2004). In today's business climate there is strong pressure to improve marketing accountability (Lenskold, 2007; Nail, 2005; Pettit, 2005). For example, several studies conducted in 2007 found that only 7% of financial executives at organizations around the world were satisfied with their organization's abilities to measure marketing return on investment (Lenskold, 2007).

The push to ensure that an organization is getting a return on its online investment as well as having more marketing accountability has thrust non-transactional B2C Web sites into the corporate accountability spotlight. In other words, organizations are demanding to understand the value of the Web site and how the site contributes to the company achieving its business objectives. However, organizations are still struggling to measure with accuracy the performance (a set of outcomes) of their Web sites to determine value (Keen, 2003; Lenskold, 2007; Nail, 2005; Peterson, 2004; Peterson & Bayriamova, 2007; Pettit, 2005; Rubin, 2004).

Aspects to Consider When Evaluating Site Performance to Determine the Value

After reviewing the literature regarding Web site evaluations, three distinct approaches emerged. The first approach taken by some authors (Amit & Zott, 2001; Ho,

1997; Kim, Lee, Han, & Lee, 2002; Nambisan & Wang, 1999; Rayport & Sviokla, 1996; Teo & Pian, 2004) proposed evaluating Web sites from a business perspective.

Conversely, the second approach, taken by other authors (Peterson, 2004; Schlegel & Vollmer, 2003; Torkzadeh & Dhillon, 2002), proposed evaluating Web sites from the end users' point of view. The third approach combined the first two and proposed evaluating Web sites from both business and end user perspectives (King & Liou, 2004).

Literature Proposing to Evaluate Web sites from a Business Perspective

Teo and Pian (2004) categorized Web sites into five areas based on an organization's level of Web adoption as well as the degree the company integrated the Web site into its business strategy. Teo and Pian's first level, which is labeled zero, is email adoption. This is the lowest common denominator for Web adoption. In actuality, this is Internet adoption since an organization engages in electronic connectivity with customers and business partners through email; the organization does not have a Web site. Teo and Pian's level one Web presence, classified such businesses as being in Web adoption infancy; they own a domain name, but the implementation of a site is still in progress or a minimal site exists providing no more information than can be found on the company's brochure. Typically, a level one site is not tied to any business strategy. Level two, of their Web adoption definition, is termed prospecting and described businesses that use a Web site in a limited fashion, offering customers basic product information and news. Level two is also rarely tied to an organization's business strategy. Level three, business integration, defined a situation where an organization's Web adoption is incorporated into its business model and business processes, and the objectives of the site are related directly to the company's business strategy. These sites typically contain cross-functional

links between customers and suppliers. Last is level four, business transformation, which is the highest level of Web adoption. Level four focuses on the Web site to transform the overall business model in the organization through building relationships and seeking new business opportunities (Teo & Pian) (see Table 1).

Table 1. Teo and Pian's Categorization of Business's Level of Web Adoption

Level	Description	Web Site is Tied to Business Strategy
Level 0 - Internet Adoption/Email	Business has email connectivity with customers and business partners; Web site is NOT used.	No
Level 1 - Web Presence	Company's Web site provides the same information that is found in company collateral (brochures, other print materials).	No
Level 2 - Prospecting	Company's Web site offers basic product information and news.	Rarely
Level 3 – Business Integration	Company's Web site is incorporated into certain business processes.	Yes – Web site objectives are related directly to business strategy.
Level 4 – Business Transformation	Company's Web site influences their business model.	Yes – Web site is used to create new business opportunities.

Several authors, such as Ho (1997) and Nambisan and Wang (1999), took the approach of categorizing Web sites based on business purposes. Nambisan and Wang categorized Web sites into three types of business purposes: 1) information access, 2) work collaboration, and 3) core business transactions. Ho classified Web sites according to their business purpose and developed three categories: 1) promotion of products and services, 2) provision of information, and 3) processing of business transactions.

Rayport and Sviokla (1996) categorized Web sites more from a process-level point-of-view to help firms understand their Web site's value. The first level is visibility,

defined as a firm's effort to represent physical operations more effectively by using the Web. The second level is called mirroring capability, which is a firm's effort to take physical business activities and conduct them virtually. The third level is new customer relationships, defined as a firm delivering new value to customers through online presence (Rayport & Sviokla).

Amit and Zott (2001) suggested an approach a little different from business process and purpose. The authors suggest that firms use a resource view, which sees an organization as a bundle of resources and capabilities that combine in a unique manner to create value. The resources and capabilities of a firm are valuable only if they reduce costs or increase revenues for the business (Amit & Zott). In applying this idea to an organization's Web site, Amit and Zott proposed that businesses evaluate factors such as richness of information, complementary products, and disintermediation. The depth and detail of information collected, offered, and exchanged among online market participants identifies richness. Complementary products refer to an extension of an organization's product range through an online channel such as forms of collaboration and other technologies. Disintermediation refers to the circumvention of intermediaries, such as brokers, who exist in traditional physical environments (Amit & Zott).

Going even further from the business process and purpose approach, Kim, Lee, Han, and Lee (2002) designed a framework for measuring the quality of a firm's Internet business by taking several models used for evaluating buildings in the physical world and applying them to the virtual world. This approach was based on six areas: 1) internal stability, 2) external security, 3) information gathering, 4) order processing, 5) system interface, and 6) communication interface (Kim et al.).

Literature Proposing to Evaluate Web sites from an End User Perspective

Schlegel and Vollmer (2003) created four categories for classifying Web sites based on how customers would use a site: community, information, service, and commerce. A community site is defined as a relationship-building site whose purpose is to generate interest in the company or product, build closer relationships, and promote further customer team building through collaborative interaction. An information site is defined as one that enables users to collect basic information about an organization's history, mission, philosophy, products, services, and job opportunities. A service Web site is defined as a site that delivers customer support with little or no human intervention. Last, a commerce site is defined as a site designed to enable prospects and customers to execute a transaction such as purchasing a product or service (Schlegel & Vollmer).

Torkzadeh and Dhillon (2002) also used a customer-oriented approach, but provided categories different from those of Schlegel and Vollmer (2003). For example, Torkzadeh and Dhillon proposed examining Web sites using two sets of variables: means objectives and fundamental objectives. Means objectives assist a firm in obtaining what is important for their customers and fundamental objectives are what customers perceive to be important (Torkzadeh & Dhillon).

Still applying an end-user-oriented approach, other authors took a slightly different angle and suggested that organizations examine their Web sites based on end user perception and their quality of experience. For example, Palmer (2002) stated that performance factors such as download speeds, navigability, site content, interactivity, and responsiveness influences end users' perceptions of a Web site's effectiveness. According to this author, these are key factors that are integral to the site's success and

therefore attributes that should be measured (Palmer). Skadberg and Kimmel (2004) found Web site success to be related directly to users' flow experience (act of browsing through a Web site). A good flow experience leads to changes of users' attitudes and behaviors, which leads them to taking positive actions (Skadberg & Kimmel). The authors determined that flow experience should be evaluated in terms of time distortion, enjoyment, and telepresence, which is defined as users' perceptions of the online environment they are browsing (Skadberg & Kimmel).

Yang, Cai, Zhou, and Zhou (2004) created one of the more detailed theoretical frameworks based on end-users' perspectives. The authors indicated that end-user satisfaction was a key way to measure the success of non-transactional Web sites (which the authors called IP or "information presenting" Web sites). Based on existing models, the authors determined that end-user satisfaction was influenced by their perception of overall service quality.

In their study, Yang, Cai, Zhou, and Zhou (2004) found that attitudes toward usefulness and ease of use formed the basis for a user's decision to adopt information technology. This suggestion is founded on Davis' Technology Acceptance Model (TAM), created in the mid-to-late 1980s and verified in many subsequent studies (Yang et al.). The emphasis of the authors' study was to investigate which aspects of "usefulness" and "end users' expected ease of use."

Categorized under two constructs, information quality and system quality, Yang, Cai, Zhou, and Zhou (2004) identified five key attributes that significantly affect users' perception of quality and, thus, their overall satisfaction. The first two attributes fall under information quality and are usefulness of content and adequacy of information. The

remaining three attributes are grouped under system quality and are usability, accessibility, and interaction. To clarify, the authors intended accessibility to be viewed in a broad sense to mean availability and responsiveness of the Web site in relation to all users and not just for persons with disabilities. The phrase, “accessibility of a Web site,” is sometimes used to refer to a site being compliant with Americans with Disabilities Act (ADA) standards so the site is accessible to people with disabilities.

As a result of their study, the authors isolated multiple factors under each of five attributes to form a theoretical framework for measuring user-perceived quality of non-transactional Web sites (Yang, Cai, Zhou, & Zhou, 2004). Other authors have also suggested that organizations should consider establishing key performance indicators and metrics around customers’ “quality of experience,” which is influenced by multiple factors, such as user interface design, user interactions, navigational structures, and trustworthiness, including privacy and security. However, these authors also stated that the analytical framework to support measuring “customer quality of experience” would require multiple assessment techniques that are both qualitative and quantitative (Jokela, Siponene, Hirasawa, & Earthy, 2006; Lightner, 2004; Peterson, 2004; Schlegel & Vollmer, 2003; Wu & Wang, 2007).

Literature Proposing to Evaluate Web sites from Business and End User Perspectives

Straub, Hoffman, Weber, and Steinfield (2002b) and King and Liou (2004) believed evaluation of an organization’s Web site should include both business and customer attributes. For example, King and Liou expanded on earlier works of Straub, et al. and created a two-level framework for Web site evaluation. The first level is business-focused and recommended that areas, such as strategic position, integration, revenues, and

operational efficiency, be evaluated. The second level is customer-focused and included attributes such as content and information quality, speed, navigation and ease of use, user satisfaction, emotional involvement, and customer loyalty.

As shown in Table 2, the literature reflected similarities and differences on suggested perspectives that organizations should consider in order to evaluate their Web site. At a high level, these theoretical frameworks based their evaluation model on one of three perspectives: business point of view, end user point of view, or a combination of business and end user point of view. These theoretical models also reflected similarities and differences within each perspective. For example, six bodies of work used the business point of view as a foundation for their theoretical evaluation model. However, Teo and Pian's (2004) model indicated a Web site should be evaluated based on a business' level of Web adoption compared to Kim, Lee, Han and Lee's (2002) model, which indicated evaluating a Web site based on the site's physical functions such as stability and security. On the other hand, some of the theoretical evaluation models based on a business point of view reflected some overlap or similarities. For example, Nambisian and Wang (1999) and Ho (1997) indicated evaluating a Web site based on the site's business purpose. In addition, of the three categories of business purposes listed in the two models, two of the categories are shared (information provision/access and business transaction) between the models. These theoretical models provide a solid foundation for establishing a practical model that corporations could use to guide their site evaluation methods (see Table 2).

Table 2. Theoretical Frameworks for Evaluating Web Sites

Evaluation Perspective	Description (evaluate the site by considering the following)	Supporting Literature
Business point of view	Define the level of Web site adoption, which indicates the degree the company has integrated the Web site into its business strategy and thus, helps determine which metrics to use.	Teo & Pian, 2004
Business point of view	Categorize Web sites based on business purpose to determine how to evaluate. e.g. information access, work collaboration, core business transactions e.g. promotion of products & services, provision of information, processing of business transactions.	Nambisan & Wang, 1999 Ho, 1997
Business point of view	Understand a Web site's value by viewing the site from a process-level perspective: visibility (firm's effort to represent physical operations), mirroring capability (firm's effort to conduct physical business activities virtually), new customer relationships (firm delivering new value to customers via online).	Rayport & Sviokla, 1996
Business point of view	Evaluate the Web site from a resource-based perspective (the company is a bundle of resources and capabilities that combine to create value).	Amit & Zott, 2001
Business point of view	Evaluate a Web site by applying the same methods for evaluating physical buildings (internal stability, external security, information gathering, order processing, system interface, and communication interface).	Kim, Lee, Han, & Lee, 2002
End user point of view	Classify Web sites based on how customers use the site (community, information, service, & commerce) to determine appropriate metrics.	Schlegel & Vollmer, 2003
End user point of view	Examine Web sites using two customer-centric variables: means objectives (assist a firm in obtaining what is important to the customer) and fundamental objectives (what customers perceive to be important.)	Torkzadeh & Dhillon, 2002
End user point of view	Evaluate Web sites according to end users' perception, satisfaction, and quality of experience.	Palmer, 2002; Skadberg & Kimmel, 2004; Peterson, 2004
Both business and end user point of view	Web site evaluation should include both business-focused attributes and customer-focused attributes.	King & Liou, 2004

Barriers That Hinder Web Site Evaluation

Overall, organizations are struggling with the ability to perform comprehensive Web site evaluations that help them better understand the value or return on their investment in non-transactional Web sites (King & Liou, 2004; Sterne, 2004a). In 2007, the Web Analytics Association, a professional association of industry practitioners, vendors, consultants, and educators, whose focus is the measurement, collection, analysis, and reporting of Internet data for the purpose of understanding Web usage, sponsored an industry study on the use of and attitudes toward Web analytics in organizations around the globe. Overall, the report stated that over 56% of the respondents (those involved in Web analytics) found measuring and reporting about their Web sites to be somewhat to extremely difficult. Only 15% of the respondents found these activities to be easy (Peterson & Bayriamova, 2007).

Topics regarding measuring the performance of Web sites began to appear in the literature in 2004, identifying several barriers or areas where organizations were struggling with evaluating their Web sites. In current literature, there were no drastic changes in the barriers originally identified in 2004. These barriers in the literature are: 1) aligning Web metrics with the company's business goals, 2) selecting appropriate measurements, 3) selecting the appropriate measurement tools and techniques, 4) obtaining the appropriate skills and resources to conduct analysis of Web site data, and 5) reporting insights, not just data.

Aligning Web metrics with the company's business goals

Burby (2004) stated that one of the most common reasons the Web measurement process fails is because site goals are poorly defined or not defined at all. Mason (2007)

added to this thought indicating that many who have ventured into performing Web analytics cannot start the process easily because they are unable to answer fundamental questions such as: why does the site exist, what is the company trying to achieve with the site, and how will they know if the site has been successful?

Appropriate measures cannot be selected if an organization does not really understand what needs to be measured (Hubbard, 2007; Walter & Scott, 2006). This extends to all key stakeholders in every area of the company. An organization must understand what makes a Web site successful from each area's perspective (Burby, 2004). Ittner and Larcker (2003), Jacoby and Luqi (2007), Walter and Scott (2006), Obrey (2003), and Swamy (2002) stated that the first step of any Web initiative should be to determine what needs to be accomplished and how these accomplishments support short-term business objectives as well as an organization's overall strategy. Mason (2007) contended that organizations with non-transactional Web sites fail in measurement because they lack context and are attempting to measure in a vacuum. Transactional sites are more straightforward in that the context is in the transaction itself. All of the focus of measurement is around the path to purchase. However, for non-transactional Web sites, the desired results are not as clear; as Mason stressed, the context is still needed—organizations need something on which to attach metrics and analysis.

In addition, Mason (2007) stated that organizations must understand that context needs to be provided at both the macro and micro levels. At the macro level, the context stems from the Web site's roles and objectives, which should be tied to an organization's business goals and objectives. At the macro level, measurement should be about overall site effectiveness. However, macro level only is not enough. Non-transactional Web sites

should be evaluated at the micro level, in many cases at the page level (Mason). Different pages have different jobs to do and until an organization understands what the purpose of these pages are (the context) for each of their audiences, they will have a difficult time effectively measuring the performance of their Web site and ultimately determining the value of the site (the degree to which the site contributes to helping an organization achieve its business objectives).

While the literature clearly showed a need for aligning Web metrics with business objectives, it also showed several reasons for resistance within corporations to align Web metrics with business objectives. The most basic factor related to failure is that the Web site itself is not accepted within the company as a channel capable of supporting existing business goals (Peterson, 2004; Walter & Scott, 2006). Sometimes, organizations do not consider their Web site an integral or integrated part of the overall business (Peterson). Therefore, there is little effort to align the site's metrics with the company's goals. The literature also shows that in other cases the Web site may be accepted as a viable channel; however, senior executives ignore or do not request any type of metrics (Swamy, 2002). This avoidance typically is due to executives' comfortableness with years of using fundamental offline metrics to guide strategic direction as well as a lack of understanding of the impact of Web-based initiatives (Keen, 2003; Mason, 2007; Rubin, 2004).

While these authors identified some of the barriers at the executive level, other authors believed the problem resided at a lower management level. For example, Sterne (2004a) suggested that some of the resistance to using Web metrics comes from business management below the executive level. He stated that managers welcome, in the abstract, new ways to measure whether their goals have been reached; however, in reality, they

struggle with this type of accountability. Ittner and Larcker (2003) pointed out that, in some cases, managers manipulate performance measurements for self-serving purposes so they look good and possibly earn bonuses while they avoid linking measurements to an organization's strategy. In addition, managers who are engaging Web site analytics (gathering data to assess the site's performance in relation to how well the site helps the company achieve its objectives) have worked with Web analytics technologies and tools for only three years or less. This lack of experience has resulted in concerns or a feeling of uneasiness regarding data quality, data definitions, and reporting functionality (Mason, 2007; Peterson & Bayriamova, 2007). In contrast, some organizations have embraced Web analytics technologies even though they are comparatively in their infancy.

However, Mason and Peterson and Bayriamova stated that viewing measuring Web site performance in terms of technology instead of philosophy is limiting. Organizations that focus on a successful implementation of a technology will produce a wealth of data; however, they will fail to gain any advantages. Mason continued to compare this attitude to a time not too long ago when organizations embraced Customer Relationship Management (CRM). Many organizations bought CRM technologies, and eventually ended up disappointed because the company failed to implement changes that the data indicated. In essence, they needed to view CRM as a philosophy and not just a piece of technology (Mason).

Selecting appropriate measurements

Ittner and Larcker (2003) believed poorly defined Web goals contribute to a corporation's struggle to align Web initiatives with business goals. The outcome of this is typically the selection of the wrong measurements. Hundreds of measurements can be

gathered; however, in order to narrow them down to a few appropriate ones, an organization must clarify the link between the measurement and their business strategy (Ittner & Larcker). Atchison (2007a) stated that while defining goals and metrics clearly seems obvious, the reality in not doing these things is a common pitfall.

If organizations lack direction to help them determine what they need to measure, they may measure too many irrelevant items (Ittner & Larcker, 2003). Atchison (2007a) stated that an aimless staff may produce reports that lack conciseness and contain so much “noise” that any meaning will be missed by executives or those who need to use the information. Symons (2004) claimed that bad or inappropriate metrics are worse than no measurements at all. One of his five characteristics to help guide the metric selection process is that a business should ensure the metric is relevant to the company’s strategy.

Burby (2004) summarized the importance of selecting appropriate measurements based on an organization’s business strategies. The author stated that in organizations where there is no relationship between business strategy and Web measurement the following cycle is seen. First, the person who gathers the Web data does not really know what to collect and report, thus everything possible is gathered and reported. Second, the report is circulated to department leads and top executives who ignore it because it is large, intimidating, and difficult to decipher any value. Third, action that could be taken based on the data remains dormant because the managers and top executives, who can really drive change, do not have the information they need to take action (Burby).

Atchison (2007c) stated that in addition, organizations must also standardize the types of measurements or key performance indicators across the company to establish consistency and to be able to make equivalent comparisons.

Another reason businesses struggle with selecting appropriate measurements is because they do not match the appropriate success measurements with the type of Web site that they have (Schlegel & Vollmer, 2003). As well, metrics for non-transactional Web sites are less tangible or “softer” compared to transactional sites for where more definitive numbers, such as dollars of sales, can be accounted. Organizations have often struggled with determining the value of soft-dollar corporate assets such as trademarks, business processes, knowledge, skills, and customer lists (Hubbard, 2007; Zimmermann, 2003). It is not simple to compute the value or the return on investment for these (Rubin, 2004), and such intangible assets make measuring firm performance even more difficult (Belanger, Fan, Schaupp, Krishen, Everhart, Poteet, & Nakamoto, 2006; Garbi, 2001; Keen, 2003; Mason, 2007).

Selecting appropriate measurement tools and techniques

Collecting data from group discussions of two Emetrics Summits in Santa Barbara and London, where participants talked about their troubling Web issues, Sterne (2004a; 2004d; 2004e) concluded that many who work with Web sites struggle with knowing which measurement techniques and tools to use. The marketplace is saturated with a variety of Web analytics tools used to evaluate site traffic and other behaviors, as well as other tools, techniques, and services used to evaluate usability and satisfaction. Determining which set of tools and techniques is appropriate can be difficult. In addition, tool and technique selection is tied directly to establishing what should be measured. Sometimes, analytical tools are purchased before measurements have been identified, resulting in organizations using tools that do not meet their needs.

Peterson (2004) stated that a fundamental step in choosing the right tools and techniques is a good understanding of their basic differences, their appropriate applications, and the variety of data available. Peterson categorized the different types of data into five groups: 1) Web traffic data, also known as “clickstream,” which is traditionally mined out of Web server logs or the use of page tags; 2) transactional data, which includes items such as number of customers, number of orders, average size of transaction, and is typically related to commerce Web sites, not information sites; 3) server performance data, which is related to how well pages within a site renders to visitors’ computers; 4) user submitted data, which is related to information that a visitor has submitted to the business through an entry form on the site, and as online surveys or polls; and 5) usability studies, which are less of a Web analytics data point, but provide information regarding how well people interact with the content and navigation systems of a Web site, usually related to efficiency, effectiveness, and satisfaction.

Sterne (2004b) offered overall guidance to the metrics selection process through five steps: 1) make the metric specific to the organization, including ownership and accountability; 2) ensure the metric is measurable in terms of the ability to collect the data and interpret it accurately; 3) determine that the metric is actionable (if you have no control, the metric is no good); 4) ensure the metric is relevant to the company’s strategic objectives; and 5) make the metric timely where the information can be acted on and bring value to the organization.

Obtaining appropriate skills and resources to conduct analysis of Web site data

Atchison (2007a) listed having trouble analyzing data in order to draw valuable insights as one of the top seven pitfalls related to measuring the performance of Web sites

to determine the sites' value. A common breakdown when interpreting Web analytics in many organizations is ownership of the process for synthesizing the data and providing insight based on the results. For example, marketing personnel sometimes expect information technology personnel to determine the meaning of the report. In turn, IT assumes that the marketing department is able to decipher the data (Sterne, 2004a).

In other instances, the issue is reversed; IT wants to own the tool and the data, and this causes conflicts with other departments, such as marketing or sales who desire to own and interpret the data. Burby (2004) stated that this situation is common in many organizations and explained that it has occurred because five to ten years ago, the IT area within an organization typically owned any online tools because they were not very end-user-friendly and required a fair amount of software to be installed on various servers. However, over time, the tools have gained better end-user interfaces and non-IT personnel can use them easily. In addition, the demand for acquiring Web performance data is growing in other departments such as marketing. Burby noted that while these analytics tools need technical support from IT personnel, the trend is to tie the tools more closely to the marketing and business sides of the organization. Some organizations are even moving to having their Web analytics team report directly to finance rather than to IT or marketing (Burby). Sterne (2004a) found that in most cases, regardless of which department wants to own the tool, none of the departments such as IT, marketing, or sales have personnel qualified to evaluate statistical data rigorously. While ownership of the tools and data is a logistical problem within an organization, the overriding issue is having resources with the appropriate skills for understanding statistics.

Another issue tied to conducting effective analysis of Web site data is understanding the limitations of the tools used to collect the data as well as possible limitations to the data gathered. Chatham (2005) claimed there are many points where errors can be introduced in the data capturing process.

Peterson (2004) added that lack of appropriate skills and understanding of Web analytics data can skew numbers, sometimes significantly. One of the most common examples is confusing the measurement of hits with page views. Hits are the number of objects that make up one page (graphics, text, applications) that a site visitor downloads to view that page. A page could have many objects, therefore evoking many hits. For example, a page could have over 100 objects. A visitor would download all of the objects to see the page. If an organization perceived the number of hits as equal to the number of pages viewed, they would think this page was viewed 100 times when in reality one visitor viewed one page. This is a simple example. Peterson pointed out other metrics that were less obvious and how misinterpretation of this data can give an organization a false sense of their site's performance.

Reporting insights, not just data

Over a span of several years, advanced technologies have made capturing data easier. The literature shows that organizations are still repeating a pattern of collecting data, but failing to extract valuable insight or applying the data to improve the business (Sen, Dacin, & Pattichis, 2006). For example, Swamy (2002) stated that raw data reporting the number of visitors, high click-through rates, or other metrics is meaningless if the site fails to create or to maintain customers.

McGovern (2003a; 2003b) pointed out that merely looking at the amount of time spent on a Web site can be misleading. One cannot tell if the time spent on the site was enjoyable or frustrating. As well, a short amount of time may mean the visitor got what they were looking for and left satisfied (McGovern, 2003a).

Stone, Bond, and Foss (2004) stated that strategic alignment of IT systems and insight into the business continues to elude many organizations resulting in businesses failing to extract value from the data to help them gain competitive advantage, generate return on investment, and improve success rates of marketing and business activities. McGovern (2003a) described the reams of data that one can obtain as time consuming and confusing. Sterne (2004d) supported this notion, citing a study of over 250 Chief Marketing Officers on marketing performance management. The study indicated that these marketing officers deemed their Web sites as one of the easiest marketing activities to measure; however, these officers were not satisfied with their ability to measure the performance of their sites. In essence, it is now easier to collect data on a Web site, but more difficult to put the information to good use (Sterne).

Swamy's (2002) reason for the overload of data and lack of insight was that sometimes organizations focus on the ability to gather raw data without first determining the type of information needed. This results in a waste of time required to analyze a tremendous amount of data and not really obtaining what was needed. Evans and Stroll (2005) stated that marketing departments have a tremendous challenge in dealing with numerous computer applications generating too much data. Stone, Bond, and Foss (2004) found that organizations sometimes focus their attention on seeking new ways to garner insight, but lack focus on the process and management of insight generation.

Pettit's work (2005) acknowledged the same pattern of businesses failing to extract value from the data collected. He stated that these organizations are enamored with the technology that can bring data and information together in an accessible manner, but they fail to place enough emphasis on marketing science and customer measurement, which provides insight and directly informs the business. Examples of types of insight that business should generate include understanding who the customers are, what customers or site visitors are looking for, user satisfaction, and factors that would make customers loyal (Pettit). Sen, Dacin, and Pattichis (2006) concurred and stated that many organizations are investing heavily in Web analytic tools, even capturing terabytes of clickstream data; however, most do not understand how to use the data effectively.

Summary of the Literature Review

Measuring the performance (a set of outcomes) to determine the value (the degree to which the site contributes to helping an organization achieve its business objectives) of non-transactional B2C Web sites is more complex than evaluating Web sites that include e-commerce (sell products and services online). Academic and industry literature indicated a need for measuring the performance of non-transactional B2C Web sites to understand their value. Specifically, academic literature has produced numerous models for measuring transactional or e-commerce Web sites. Organizations today use many of these models or variations of these models. However, in comparison, published academic research focused on measuring the performance of non-transactional Web sites remains minimal. For example, academic research has covered topics related to factors to be considered in evaluating site performance. In addition, industry press has provided

thoughts and ideas regarding some of the barriers that hinder the evaluation of site performance as well as suggestions on factors to consider.

Academic literature has just begun to focus more on non-transactional components of Web site evaluation, producing a few theoretical frameworks (see Table 2), and identifying certain metrics. However, a practical model for evaluating non-transactional B2C Web sites has yet to evolve (King & Liou, 2004; Mason, 2007). King and Liou have made the most progress producing a framework for measuring the site performance of non-transactional Web sites, but even they have stated that their work is just the beginning and more study is required.

Contribution of this Study

Researchers, such as King and Liou, have begun to bring together academic theoretical measurement frameworks and metrics established by Internet industry leaders. As well, King and Liou went further with their research and validated their initial framework with channel managers of four Web sites. Channel is defined as an avenue by which an organization markets or conducts business. Examples of various channels are the Internet, direct mail, phone solicitation, and television. King and Liou's study resulted in an initial framework based on academic theory and industry findings that were compared with the practices of these channel managers (see Tables 3 and 4).

Table 3. King and Liou's Initial Business-level Framework

Construct	Description	Measures <i>(the extent to which the Internet is used)</i>
Strategic position	Using the Internet to achieve strategic goals.	Create a strategic position. Maintain a strategic position. Support an innovative business model.
Strategic responsiveness	Using the Internet to react rapidly to changes in the environment.	Time to market; speed of change.
Integration	Using the Internet to integrate business.	Support business strategy; combine business functions; reconfigure and realign resources and capabilities.
Complementaries	Using the Internet to complement other business channels.	Provide online and offline complementaries. Support vertical complementaries (after sales service). Support horizontal complementaries (cross-selling). Bundle products/services.
Operational efficiencies	Using the Internet to cut costs, improve productivity, etc.	Improve daily operations; integrate supply chain activities; disintermediate supply chain. Optimize human resources. Improve management control.
Communication	Using the Internet to improve communication internally and externally.	Facilitate communications among employees, partners, and customers.
Increased revenues	Using the Internet to increase revenues directly, either through online sales, or indirectly through referrals to offline sales channels e.g. call centers or branches.	Access new business opportunities/markets. Create profitable business models. Create sponsorship opportunities. Support customer decision-making in the transaction process.

Note: From "A framework for internet channel evaluation," by S.F. King and J.S. Liou, 2004, *International Journal of Information Management*, 24, pp. 478-479. Copyright 2004 by Elsevier Ltd. Reprinted with Permission.

Table 4. King and Liou's Initial User-level Framework

Construct	Description	Measures
Availability	Ease of access to the Internet channel for the user.	Ease of access; access reliability; Web site availability.
Speed	Channel response time as experienced by the user.	Waiting time.
Content/information quality	Quality of site content as perceived by the user.	Understandability; reliability; relevance, adequacy; up-to-date; usefulness. Depth and breadth. Product/service differentiation. Assurance.
Navigation/Ease of use	Ease of use as perceived by the user.	Web page layout; sequence structure.
Transaction	Efficiency and effectiveness of transactions performed via the channel.	Shopping effort; ease of ordering. Delivery.
User Satisfaction	Overall user satisfaction with using the channel.	User satisfaction. Perceived value gap.
System Responsiveness	Help provided by the system to the user in order to complete the task.	Customer service and support. Interactive consultancy.
Interactivity	Site responds in customized manner to user behavior.	Customization/personalization. Users learn from using the site.
Emotional involvement	The extent to which the user becomes emotionally involved through interacting with the site.	Attractiveness; playfulness; enjoyment; excitement; challenge. Feeling of participation.
Customer loyalty	The degree of loyalty exhibited by channel users e.g. repeat business.	Lock-in; likelihood of return; customer retention.

Note: From "A framework for internet channel evaluation," by S.F. King and J.S. Liou, 2004, *International Journal of Information Management*, 24, pp. 480-481. Copyright 2004 by Elsevier Ltd. Reprinted with Permission.

King and Liou (2004) acknowledged that the business and user-level constructs shown in Tables 3 and 4 are just a beginning and that the work to bring theory and practice together needs to continue. In addition, there were several limitations in their study, some noted by the authors themselves. For example, King and Liou interviewed

channel managers from only two European-based financial services organizations and two higher education institutions. A fifth company that was part of their study is based in the United States; however, the researchers did not interview any channel managers at this company. As well, two of the five participating entities had Web sites that were still in their infancy (one site was a prototype; the other site had been live for only one year).

While the authors obtained useful results, there is a need to continue to investigate this area and to address the circumstances that limited King and Liou's (2004) original study. For example, the present study ensured that all participating organizations were only from business industries. While both businesses and educational entities have non-transactional Web sites, there is a difference in the demands placed on businesses to achieve their objectives compared to education institutions. However, the results of the practical framework may be applied to all organizations that have a non-transactional Web site.

In addition, King and Liou reported that practices for evaluating the performance of a Web site to determine its value is not as advanced in Europe as in the United States. Consequently, this study included corporations based in the United States or at least that have major operations within the United States. The participating organizations also have well-established Web sites as opposed to either a prototype or a site in its infancy. Having a well-established Web site allowed participants in the study to draw from longer-term site performance evaluation experiences.

Addressing these limitations in this new study will further the efforts of developing a practical framework that can be used to guide corporations' efforts in measuring the performance (a set of outcomes) to determine the value (the contribution the site provides

an organization in achieving its business objectives) of their non-transactional B2C Web sites. Specifically, this study investigated questions such as: 1) what aspects of the Web site, in the context of the company's business, should be considered when evaluating Web site performance to understand the site's value to the company, 2) how is Web performance currently being evaluated to determine value, 3) what barriers hinder corporations' efforts to evaluate their non-transactional Web sites, and 4) how are these barriers overcome? The overall goal of this research was to build on King and Liou's business and user-level constructs to develop a practical framework to guide corporations' efforts in evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Chapter 3

Methodology

Introduction

This study was both qualitative and exploratory. A review of academic and industry literature guided the research. The study is comprised of two parts: 1) semi-structured interviews conducted with employees from several United States corporations (or global corporations that have major operations within the United States) regarding their efforts to evaluate their corporate non-transactional Web sites and 2) the development of a practical model or framework that can be used to guide organizations' efforts in evaluating the performance of their non-transactional B2C Web sites to determine the value of these sites. In this study, performance was defined as a set of outcomes and, in the context of a Web site, range from site visitor attributes and behaviors to business impacts; value was defined as the degree to which a site contributes to helping an organization achieve its business objectives.

Robson (2002) stated that a qualitative and exploratory approach is a valuable way to find out what is happening as well as seeking new insights. Saunders, Lewis, and Thornhill (2003) concurred and indicated that searching the literature and conducting interviews are valuable tactics for exploratory research. In contrast, quantitative studies on B2C Web sites have provided data, usually through surveys of organizations regarding

the beliefs and intent that businesses have about their Web sites. While this data has a different type of value, a qualitative study provided the researcher with the means to assess the effectiveness of practices and approaches used to solve the problems and issues related to evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites. In addition, the study provided the researcher with diverse perspectives of real-life experiences related to strategic, financial, tactical, and political issues of B2C Web sites.

Other Studies that have Used an Interview Approach

In 2004, King and Liou conducted a study of Internet channel evaluation concluding that the measurement of the performance of non-transactional Web sites was in its infancy. King, Barnes, and Tyagi (2006), in a later study, showed some growth in satisfaction with the measurement of transactional Web sites; however, they concluded that more work was required to measure performance of non-transactional Web sites to determine their value.

The intent of this study was to use King and Liou's (2004) analysis as a foundation and to expand the research. For example, in the King and Liou study, the authors collected valuable first-hand information through interviews with five channel managers and three consultants located in the United Kingdom who worked with Web sites in either financial services or higher education. In this study, the author employed a similar technique of conducting interviews; however, the number of industry sectors and participants was increased. As well, this study focused on United States corporations (or global organizations that have major operations within the United States).

Other qualitative studies have had success employing the interview technique. Specifically, interviews helped researchers explore one or more topics in greater depth than allowed by quantitative methods such as surveys. For example, Ittner and Larcker (2003) gathered information about organizational strategies and performance measurement systems by interviewing senior and middle managers within manufacturing and service organizations. In addition, Korgaonkar and O'Leary (2006) used one-on-one interviews with venture capitalists, who funded e- businesses, to obtain a clearer understanding of factors that lead to success and failures of online businesses. Loiacono, Watson, and Goodhue (2007) used the model of a literature review to refine their focus and then to conduct interviews with end-users to gain insight regarding consumer evaluation of Web sites.

The problem addressed in this study is the difficulty corporations encounter when measuring performance to determine the value of non-transactional B2C Web sites. Specifically, this study investigated questions such as: 1) what aspects of the Web site, in the context of the company's business, should be considered when evaluating Web site performance to understand the site's value to the company, 2) how is Web performance currently being evaluated to determine value, 3) what barriers hinder corporations' efforts to evaluate their non-transactional Web sites, and 4) how are these barriers overcome? The overall goal of this research was to develop a practical framework to guide corporations' efforts in evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Research Methods and Procedures Employed

The approach for this study consisted of two parts: 1) semi-structured interviews conducted with employees from several corporations regarding efforts to evaluate their corporate non-transactional Web sites and 2) development of a practical model or framework that can be used to guide corporations' efforts in evaluating the performance to determine the value of their non-transactional B2C Web sites. The literature guided topics discussed during the interviews.

Role of the Literature

The academic and industry literature review helped to identify the appropriate aspects within a business that needed to be evaluated. These aspects became the themes or topics used to guide the interview process and to ensure that consistent information was collected from all the interviews. For example, the literature reflected a need for organizations to evaluate their non-transactional Web sites. The literature also stated that this need is growing, and the demand for understanding the performance of this type of site as well as the return on investment is coming from different areas of the company. As a result, the need to evaluate Web site performance to determine the value of the site was a central theme covered in the interviews.

In addition, the literature proposed three distinct approaches for evaluation of non-transactional Web sites: 1) from a business perspective, 2) from an end user's or customer's point of view, and 3) the balance of evaluating from both a business perspective and end user's point of view. Considerations for evaluating Web site performance (a set of outcomes) to determine site value (the degree to which the site contributes in helping an organization achieve its business objectives) was another theme

used to guide the interviews. As well, the literature discussed a variety of ways that organizations are evaluating the performance of non-transactional Web sites to determine the value of the sites and the many different struggles or barriers they encountered during the process. Two central themes emerged that guided the interviews: first, how a non-transactional Web site is currently being evaluated; and second, the barriers encountered when evaluating a Web site.

In summary, four discussion areas were identified from the literature research and were used to guide the interviews. They were: 1) the need to evaluate Web site performance to understand the value of the site, 2) considerations for evaluating Web site performance to determine the value of the site, 3) how non-transactional Web sites are currently evaluated, and 4) the barriers to evaluating the Web site. Saunders, Lewis, and Thornhill (2003) stated that the literature is a great source for deriving themes or discussion areas for conducting interviews.

The Interview Process

The author conducted one-on-one semi-structured phone interviews with 15 employees from several corporations to discuss their efforts in evaluating corporate non-transactional Web sites. The semi-structured interviews followed a list of themes (discussion areas) and questions to ensure consistency of coverage of topics; however, the order of questions varied, and additional questions were asked allowing the interviewer to explore a specific topic (Saunders, Lewis, & Thornhill, 2003). In describing a semi-structured interview approach, Saunders, Lewis, and Thornhill stated that it is important for the researcher to be able to vary the order of questions and, in some cases, vary the actual questions. This flexibility helps the interviewer to optimize

the flow of conversation and allows the interviewer to explore a line of questioning to gain more insight. In addition, using themes or discussion areas to guide the interviews ensured research consistency, focus, direction, and purpose (Robson, 2002; Saunders, Lewis, & Thornhill).

Each interview was 45 minutes to one hour in length, allowing the researcher to investigate, in detail, each participant's experiences related to their organization's Web site. The interviews were conducted by phone. Employing phone interviews allowed the researcher to gather data from multiple geographically dispersed corporations. In addition, phone interviews were conducted in a timely fashion while responding to the time demands of the participants. Not constraining the geographic boundaries and interview time allowed the researcher to obtain a broad variety of perspectives.

Research on the comparison of phone and face-to-face interviews is sparse. However, the studies on this topic found that the weaknesses in the areas of recruiting, not in data gathering, were problems of conducting phone interviews in place of face-to-face interviews. For example, Green and Krosnick (1999) compared the data quality of phone interviews and face-to-face interviews. These researchers found the weaknesses in phone interviews were connected to the recruiting process, which was random digit dialing and which had an effect on the sample group obtained. In particular, individuals who were socially disadvantaged were under-sampled. The authors stated that findings of studies regarding data quality and interview mode are far from definitive, and that researchers must closely consider possible trade-offs.

For this study, consideration of face-to-face versus phone interviews was considered. While both methods have their limitations, phone interviews seemed to be the best

approach for obtaining a more diverse participant pool. A face-to-face interview may be ideal because one can assess body language; however, there would have been a far greater limitation gaining the necessary access to participants in a timely and cost-effective manner. The advantages of conducting the interviews over the phone, which broadened the participant pool through removal of geographical limitations (participants' geographical location did not constrain their participation), and increased participation by accommodating participants' schedule (they were called by the researcher at the best time according to their schedule) outweighed this limitation. The recruiting constraints cited in the Green and Krosnick (1999) study do not directly apply to this study since the participant pool for this study was a highly targeted audience rather than the general public. Moreover, the phone interviews that were evaluated in the Green and Krosnick study resembled quick surveys, such as those used in telemarketing where there was minimal time to establish a rapport with the participant, thus affecting responses. In this study, the researcher had initial contact with the participant to gain agreement to participate and to set up the interview time. As well, this study's participants were on the phone a greater length of time during the interview, compared to a quick phone survey. A participant who makes a commitment to be called again for a 45 minute to one hour interview begins to develop a rapport with the researcher compared to one enlisted to participate through random digital dialing.

The Interview Sessions

At the beginning of the interview process, the researcher determined the appropriate organization and participant roles within each company. Details for selection of participants are outlined in the participant section of this methodology. Once the

organizations were identified and the appropriate employees within each company agreed to participate, the researcher arranged a convenient interview time with each participant.

Prior to the interview, the researcher acquired basic background information about the corporation where the participant worked. This included information such as a brief description of the company, the company's industry, markets the company serves, and number of employees at the company. At the beginning of the interview, before asking any interview questions, the interviewer: 1) explained the goals of the research or aim of the project, 2) provided an overview of the four topics to be discussed, 3) described how the collection of information would be used, 4) assured the participant of their privacy regarding his or her responses, 5) explained the interviewer's desire to record the discussion for note-taking purposes, 6) obtained permission from the participant to record the conversation, and 7) asked the participant if they had any questions.

Once the interview introduction was completed, the researcher began the interview by confirming the participant's company background information, which had been obtained prior to the interview. As well, the interviewer gathered some personal background information from the participant. Examples of this type of information were: 1) number of years with the company, 2) a brief description of the participant's role within the company, and 3) a brief description of the participant's involvement and responsibilities in relation to the organization's Web site. Both the company and participant background information helped to provide context to the data gathered during the interviews.

After the interviewer gathered the background information, participants were asked a series of questions intended to elicit from the participant a description of the current state of their company's non-transactional Web site, and how the site fits within the

organization's business strategy. These questions were designed to: 1) facilitate a conversation about the organization and their Web site, specifically focusing the participant on the issues they were currently addressing; and 2) provide further context to the participant's subsequent discussions of the four themes or discussion areas. The background topics, demographic questions, the four discussion areas, as well as the questions within each discussion area are provided in Appendix A.

The four discussion areas were: 1) the need to evaluate Web site performance to understand the value of the site, 2) considerations for evaluating Web site performance to determine the value of the site, 3) how non-transactional Web sites are evaluated currently, and 4) the barriers to evaluating the Web site. For discussion area one, the need to evaluate Web site performance to understand the value of the site, the researcher solicited participants' thoughts and opinions about the importance of Web site evaluation, what factors were driving the need for Web site evaluation, and what was the organization's ability to define the current economic value of their non-transactional Web site. For discussion area two, considerations for evaluating Web site performance to determine the value of the site, the researcher assessed how participants viewed their non-transactional Web site (just a Web presence or an actual component of their business processes). In addition, the researcher asked the participant to describe the purpose of their company's Web site (i.e., disseminating information, collaboration, offer services).

Combining discussion area three, how non-transactional Web sites are evaluated currently, and discussion area four, the barriers to evaluating the Web site, the researcher solicited participants' opinions about how their Web site was currently measured. In addition, the researcher gathered information regarding what participants perceived as the

most difficult barriers encountered when attempting to measure the performance of their non-transactional Web site to determine its value.

Ensuring Validity of the Questions

Prior to conducting any of the interviews, the researcher validated the set of discussion areas as well as specific questions with three industry experts. These experts were experienced in evaluating the performance of Web sites, were knowledgeable in the temperament of businesses related to online performance measurement, particularly with non-transactional Web sites, and had experience working with the types of employees who were targeted for participating in the interviews. In addition, the researcher piloted the process and the interview questions with three individuals who fit the criteria of the targeted participants for this study. The purpose of validating the questions with industry experts and piloting the interview process was to ensure that discussion areas were on target as well as to confirm that the questions would make sense to the participants.

Participants

For this study, the researcher interviewed 15 employees from four corporations. According to Leedy and Ormrod (2001), 5 to 25 individuals provide a purposeful sampling for a qualitative or exploratory study. Participants for this study were recruited in a two-step process: 1) identification of a diverse set of corporations from different industry groups, and 2) identification of a variety of roles from each participating corporation. In step one, the researcher identified the corporations within selected industry groups. The researcher used the North American Industry Classification System (NAICS), a code system comprised of numerical codes assigned by the U.S. government to identify the primary business of an establishment. NAICS classifies corporations into

the following divisions: Agriculture, Forestry, Fishing and Hunting, Mining, Quarrying, and Oil and Gas Extraction, Utilities, Construction, Manufacturing, Wholesale Trade, Retail Trade, Transportation and Warehousing, Information, Finance and Insurance, Real Estate and Rental and Leasing, Professional, Scientific, and Technical Services, Management of Organizations and Enterprises, Administrative and Support and Waste Management and Remediation Services, Educational Services, Health Care and Social Assistance, Arts, Entertainment, and Recreation, Accommodation and Food Services, Other Services (except Public Administration) and Public Administration.

To ensure the participating organizations came from diverse industries, the researcher chose organizations from four different NAICS divisions: 1) Accommodation and Food Services, 2) Manufacturing, 3) Finance and Insurance, and 4) Health Care and Social Assistance. In addition, the researcher ensured each of the four participating corporations met the following criteria: 1) was a United States business or if owned by a non-U.S. entity, had major operations within the United States, 2) had one or more non-transactional Web sites that were used as a part of their business (if the company also had a transactional or e-commerce Web site, the non-transactional Web site was separate from the transactional site), and 3) the non-transactional Web site had been operational for a minimum of three years.

In the second step of the recruiting process, the researcher obtained the names of employees from each of the four corporations identified in step one of the recruiting process. These employees were required to meet three selection criteria. The first criterion for selecting participants was that they were major stakeholders in the design, maintenance, and evaluation of the corporations' non-transactional Web site(s). A major

stakeholder was defined as an employee who had an investment in or a commitment of personnel and/or financial resources to the company's non-transactional Web site. The second criteria for selecting participants was that they had to represent a variety of corporate roles such as Information Technology, Web Management, Marketing and Communications, Human Resources, Business Development, Finance, Operations, or Sales. This was to ensure that the researcher received a mix of viewpoints. Last, the employee had to be willing to allow the researcher to record the interview so that it could be transcribed.

Gathering data from several employees who have different roles within the same corporation allowed the researcher to compare and contrast perspectives within the same corporation, helping the researcher to explore more deeply the issues related to evaluating the performance of non-transactional B2C Web sites. Therefore, the researcher obtained a minimum of three employees per each corporation for the participant sample.

It was not critical to have the same number of employees from each of the four corporations. As well, it was not critical to interview the exact same job roles from one company to another (particularly since job titles vary among organizations). The key to the success of the study was to get a variety of perspectives and viewpoints from employees with a variety of job roles within the organizations identified. However, it was critical that the interview participant sample be reasonably balanced between the two variables, the number of corporations and the total number of employees (minimum of three employees per company) who were from various job roles.

Expanding the King and Liou Study

King and Liou's (2004) initial study laid a foundation for bringing theory and practice together. King and Liou stated that their work was just the beginning and further study needed to continue. This study expanded the work of King and Liou by addressing the limitations the authors themselves noted in the original study. For example, King and Liou reported that practices for evaluating Web site performance were not as advanced in Europe as they were in the United States; however, only European-based organizations were part of their study. In addition, the original study engaged only one financial services company and three educational institutions. They interviewed only eight participants for the study.

This study built on the original study by including the following: 1) corporations based in the United States or that had at least major operations in the United States, compared to King and Liou's (2004) European-based organizations, 2) four organizations from different business industries compared to King and Liou's participants from financial services organizations and educational institutions, and 3) 15 participants compared to the eight who participated in the original study. By expanding the original study, the researcher explored further the findings of King and Liou, collecting real-world perspectives of the participants allowing the researcher to create a practical framework, which could be used to guide corporations' efforts in measuring the performance (a set of outcomes) to determine the value (the contribution the site provides an organization in achieving its business objectives) of their non-transactional B2C Web sites.

Analysis of the Data

As stated earlier, each interview was recorded with each participant's consent. The interviews were then transcribed. Transcription of the interviews ensured that the researcher did not miss any participants' comments, which could happen if the researcher relied solely on notes taken during the interview. Next, the researcher aggregated and analyzed the data. Aggregation was performed manually; no text analysis software was used. The researcher chose manual aggregation because of the size of the participant pool, as well as the level of detail participants' responses were dissected for identification of patterns within their comments.

During aggregation and analysis, the researcher compared each participant's response to specific questions within a discussion area and identified commonalities among participants' responses. In addition, the researcher investigated possible factors of why certain responses fell outside of an identified pattern. For example, in the first discussion area, the need to evaluate Web site performance to understand the value of the site, the researcher reviewed participants' perspectives on topics such as: 1) how important it was to their company to evaluate the performance of their Web site, 2) what roles within the company were driving the demand for Web site evaluation, 3) how well can the company's leadership express the economic value of the corporate non-transactional Web site, and 4) how quickly does the company expect to see results from the Web site.

In the second discussion area, considerations for evaluating Web site performance to determine the value of the site, the researcher compared responses to various topics such as: 1) how the respondents described their company's Web presence based on various perspectives found in the literature; (e.g.: Web adaption level (Teo & Pan, 2004),

business process (Nambisan, Wang, 1999; Ho, 1999), and customers' use of a Web site (Schlegel & Vollmer, 2003). For the third discussion area, how non-transactional Web sites are currently evaluated, the researcher determined common patterns and variances among participants' responses regarding how the company tracks and measures their non-transactional Web site including: tools and processes used, types of data gathered, frequency of data gathered, the roles within the company that were interpreting the data, roles that were using the data, and how the data was being used.

For the last discussion area, the barriers to evaluating the Web site, the researcher compared participant responses to topics such as: 1) areas of the non-transactional Web site that seemed the most difficult to measure and why, 2) the most difficult problems that were encountered when attempting their first Web site evaluation, and 3) the roles within the company that were true champions of a Web initiative and the level and type of support that was given. In addition, in the fourth discussion area, the researcher also compared responses to how barriers were overcome.

After delineating the patterns, the researcher expanded on the initial research of King and Liou (2004), and developed a practical framework for evaluating the performance of non-transactional B2C Web sites. Based on real-life corporate experiences discovered in the interviews, organizations can use this model to guide their efforts in evaluating the performance of their non-transactional B2C Web sites (see Figure 1).

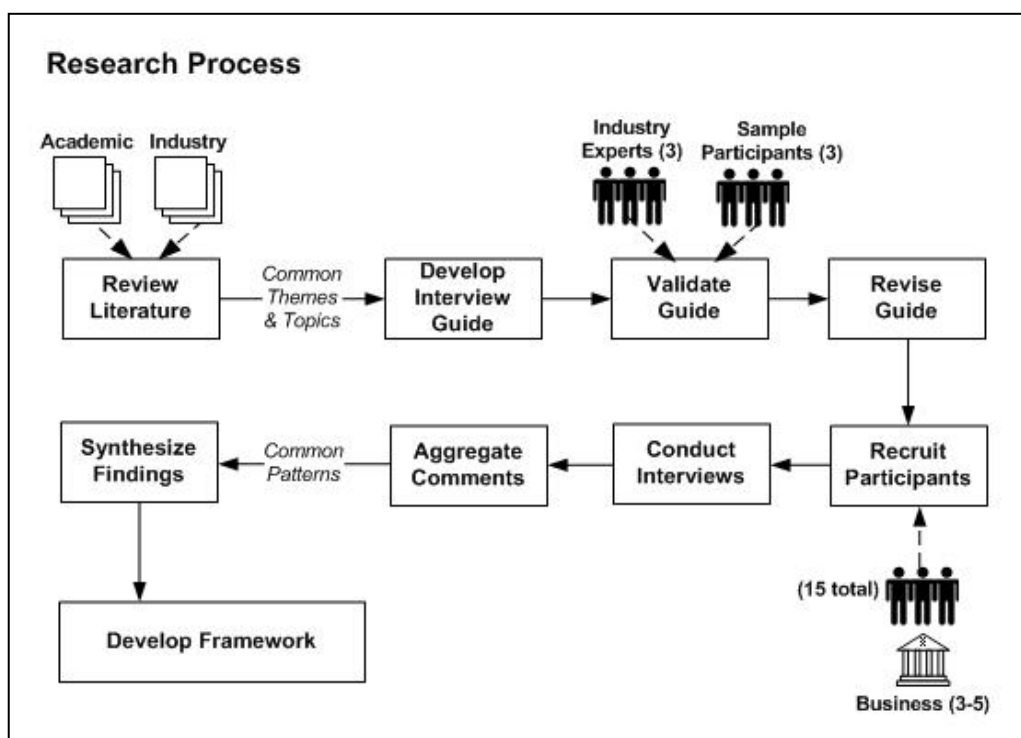


Figure 1. Data gathering process used for framework development.

Summary

Measuring the performance (set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites is not as straightforward as measuring the performance of a transactional or e-commerce Web site. Employees of large corporations who are charged with leading a corporate Web site implementation often have difficulty measuring the performance of these non-transactional sites and demonstrating to company leaders how these sites contribute to fulfillment of the company's business objectives. Studies have begun to produce theoretical measurement frameworks, yet a practical model for evaluating non-transactional B2C sites has yet to evolve (King & Liou, 2004). This study built on these theoretical studies particularly the work performed by King and Liou. Specifically the study expanded upon the research done by King and

Liou by developing a more encompassing and more practical framework. This study included two parts: 1) semi-structured interviews conducted with employees within several United States corporations (or organizations that have major operations within the United States) regarding their efforts to evaluate their corporate non-transactional Web sites and 2) the development of a practical model or framework that could be used to guide organizations' efforts in evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Chapter 4

Results

Introduction

Determining the value of transactional or e-commerce Web sites can be straightforward. However, determining the value of non-transactional sites is more complex and challenging. Organizations with non-transactional Web sites fall along a continuum from those with tools and measurement processes in place to organizations that are not sure where to begin and organizations who do not realize the need to measure their sites' performance to determine value. In this study, performance was defined as a set of outcomes and, in the context of a Web site, range from site visitor attributes and behaviors to business impacts; value was defined as the degree to which a site contributes to helping an organization achieve its business objectives. Thus, the performance of a Web site is measured in order for a business to determine the Web site's value.

No matter where organizations reside on this continuum, they still face barriers in their quest in determining the value of non-transactional Web sites. Thus, a practical framework would help these organizations measure the performance of their Web sites by guiding them on how to determine the value or the degree to which the Web site supports the organization's business objectives.

This study addressed the difficulties corporations encounter in measuring non-transactional Web sites. Primary to this investigation was obtaining the answers to four key questions. First, what aspects of the Web site, in the context of the company's business should be considered when evaluating Web site performance to understand the site's value to the company? Second, how is Web performance being evaluated currently to determine value? Third, what barriers hinder corporations' efforts to evaluate their non-transactional Web sites? Fourth, how are these barriers overcome? The outcome of this research was the development of a practical framework to guide corporations' efforts in evaluating the performance (a set of outcomes) to determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

Findings

This chapter provides details about the corporations and individuals who participated in the interviews and the results of those interviews. Chapter 5 addresses the development of the practical framework.

Backgrounds of Industry and Individual Participants

Each of the four participating organizations resided in one of the following North American Industry Classification System (NAICS) industry groups: Manufacturing, Finance and Insurance, Health Care and Social Assistance, and Accommodation and Food Services. All four of these corporations were United States-based businesses having operations in the United States. Two of the corporations also had operations outside the United States; however, their major operations were within the United States. As well, each of the four corporations had at least one non-transactional Web site that had been

operational for more than three years. Two of the organizations also had a transactional or e-commerce Web site; however, the discussions were focused on the non-transactional component (see Table 5).

Table 5. Selected Corporations and Web Sites

NAICS Group	Operations	Type of Sites	Age of Site*
Accommodation & Food Services	Global	Non-transactional & e-commerce	15 years
Manufacturing	Global	Non-transactional & e-commerce	15 years
Finance & Insurance	U.S. only	Non-transactional only	12 years
Health Care & Social Assistance	U.S. only	Non-transactional only	9 years

* approximation of age of non-transactional site supplied by participants

Three of the organizations (Finance and Insurance, Health Care and Social Assistance, and Accommodation and Food Services) had four employees from each company participate in the study. One organization (Manufacturing) had three employees participate in the study bringing the number of participants to 15.

Although similar roles were recruited across the four organizations, a specific role was never duplicated within a single company. Specifically, three participants from three of the participating organizations (Accommodation & Food Services, Finance and Insurance, Health Care and Social Assistance) were responsible for marketing activities (online and offline). As well, three participants from the same three participating organizations (Accommodation & Food Services, Finance and Insurance, Health Care and Social Assistance) managed technical resources including employees and vendors that supported their company's Web site activities. Four participants, one from each of the participating organizations, managed the development of products or services within their company. These products were presented to customers both online and offline.

Although the remaining five participants had unique Web site roles, their jobs shared certain common characteristics such as working with content, or providing technical support, with the other participants. The researcher believed these roles gave the study balance by providing additional perspectives to the study objectives. These five unique roles were: design, develop and maintain Web pages; develop corporate information; manage the content publishing process; manage online strategy and user experience; and gather and interpret Web data and trends (see Table 6).

Table 6. Participants and Company Roles

NAICS Group	Number of Participants	Responsibilities (related to the Web site)
Accommodation & Food Services	4	Manage marketing (online/offline) Manage content publishing process Manage product development Manage technical Web resources
Manufacturing	3	Manage online strategy & user experience Gather/interpret Web data & trends Manage product development
Finance & Insurance	4	Manage marketing (online/offline) Develop corporate information Manage product development Manage technical Web resources
Health Care & Social Assistance	4	Manage marketing (online/offline) Design/develop/maintain Web pages Manage product development Manage technical Web resources

The median years of tenure participants had with their company was eight; 28 years was the longest tenure and two years was the briefest.

How the Interview Comments Were Aggregated to Determine the Results

Upon completion of the 15 interviews, the recorded sessions were transcribed. Each participant was assigned a unique identifier so specific comments could be associated with other factors such as the participant's role, their industry, or another comment by

that participant to allow the researcher to compare and contrast. Next, all responses were compiled and aggregated. Since there were only 15 participants, compilation and aggregation were performed manually. The compilation process was done systematically based on a qualitative and exploratory approach described by Saunders, Lewis, and Thornhill (2003). This approach called for the responses to be grouped into their themes or discussion areas. In addition, the researcher collated the responses within each interview question under each discussion area. The discussion areas for this study were 1) company landscape in relation to the Web, 2) need to evaluate Web site performance to understand the value of the site, 3) considerations for evaluating Web site performance to determine the value of the site, and 4) how non-transactional Web sites were currently being evaluated, and the barriers encountered.

Once the author compiled all the responses within the questions under each of the discussion areas, the researcher reviewed all 15 responses and identified patterns and commonalities as well as differentiators or outlying comments. The researcher then dissected, re-ordered, and re-grouped comments according to where they fit within an identified pattern. For the purpose of this explanation, a “response” was defined as one participant’s entire answer to a question. A “comment” was defined as a segment of a response that pertained to a topic. All segments of responses extracted as a comment required that the comment be sufficiently substantial to be able to stand-alone as a statement and not change the meaning by taking the segment out of its original context. An “outlying comment” was defined as an individual comment for which there were no similar comments by other participants; or if the comment did not fall into a topic, but had enough interest or value to be maintained in the list (see Figure 2).

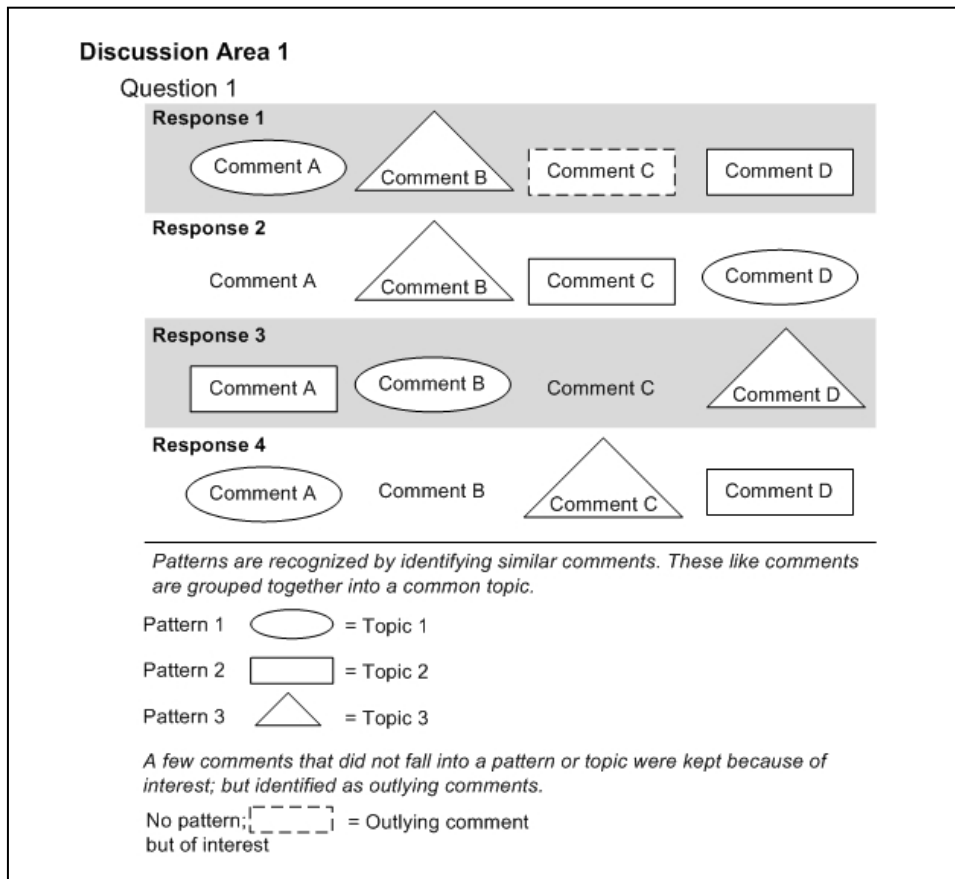


Figure 2. How patterns were identified within participants' responses.

For example, under the discussion area, “company landscape,” in relation to the Web, all 15 responses to the question, “what is your company’s corporate vision or strategy for your Web site,” were collated. Next, the researcher reviewed each response identifying similarities and repetition of comments and categorized them into one of five topics (noted as patterns). The topics were: 1) brand, 2) learning about the company, 3) customer needs and experience, 4) monetary or process improvement, and 5) information. The researcher then dissected individual comments and organized them into one of the five topics or patterns while maintaining a unique identifier for each comment so the comment could be matched to a participant. This exercise helped the researcher identify patterns within the responses and to view a stream of similar comments within a pattern.

The researcher repeated this process for all questions within each discussion area. In order to provide a deeper analysis, the researcher examined all the comments within an identified pattern again, and then reviewed other related factors tied to the participants such as their industry, role in the company, or years of experience (all possible by maintaining the unique identifier that matched the participant to a comment) to see if a sub-pattern or trend emerged. Determining a sub-pattern helped the researcher identify factors that may have influenced a response. Although in this type of analysis inferences are made, it did prompt the researcher to examine a topic in more depth giving the results of this study more interest and insight.

For example, within “brand,” a topic identified in the previous example, the researcher performed a second analysis of all the comments listed within the brand topic by examining the roles of the participants who made the comments. Specifically, the researcher investigated whether participants who made comments about brand were from marketing-related roles compared to non-marketing related roles. This enabled the researcher to identify whether or not brand is a high consideration only to marketing personnel. In turn, the researcher could make inferences, such as suggesting that brand measurement was a priority to only marketing personnel compared to the organization as a whole. The researcher noted the instances where a second tier of analysis was applied.

Discussion Area One: Company Landscape in Relation to the Web

In this discussion area, the researcher focused the interviews on what participants thought their company’s corporate vision or strategy was for their non-transactional Web site and how they associated Web site initiatives to their company’s business strategy. In addition, the researcher explored how participants’ non-transactional Web sites were

managed, as well as their thoughts regarding when their company first implemented a non-transactional Web site compared to their Web site today. Some of the participants had enough tenure with the company to remember the organization's first site and to compare the current Web site to it based on personal experience. However, others who were not employees of their company at the time of the organization's launch of their first Web site, based their comparative observations on either company historical documentation (such as archived original Web files of the site or screen captures with annotations) or on conversations with other employees who witnessed the launch of the first site.

Based on participants' responses to questions related to business vision and strategy for a non-transactional Web site, five topics emerged: 1) brand, 2) learning about the company, 3) customer needs and experience, 4) improving process, and 5) providing information. As well, two key observations were made. First, the five topics spanned a continuum of experiential or less tangible to tactical or more tangible. Second, some topics overlapped other topics along the continuum (see Figure 3).

In describing the company's Web site vision, brand was discussed in context of the site being able to help promote and establish the brand. After probing further, brand establishment and promotion was described as the Web site's capability to communicate the promises that the company makes to their customers, their commitment to fulfill those promises, and the uniqueness of the company so customers can differentiate in a positive manner the company from competitors. Participants also expressed the belief that communicating these factors helped an organization establish credibility, instill trust, and convey strength in their industry, which helps to drive business.

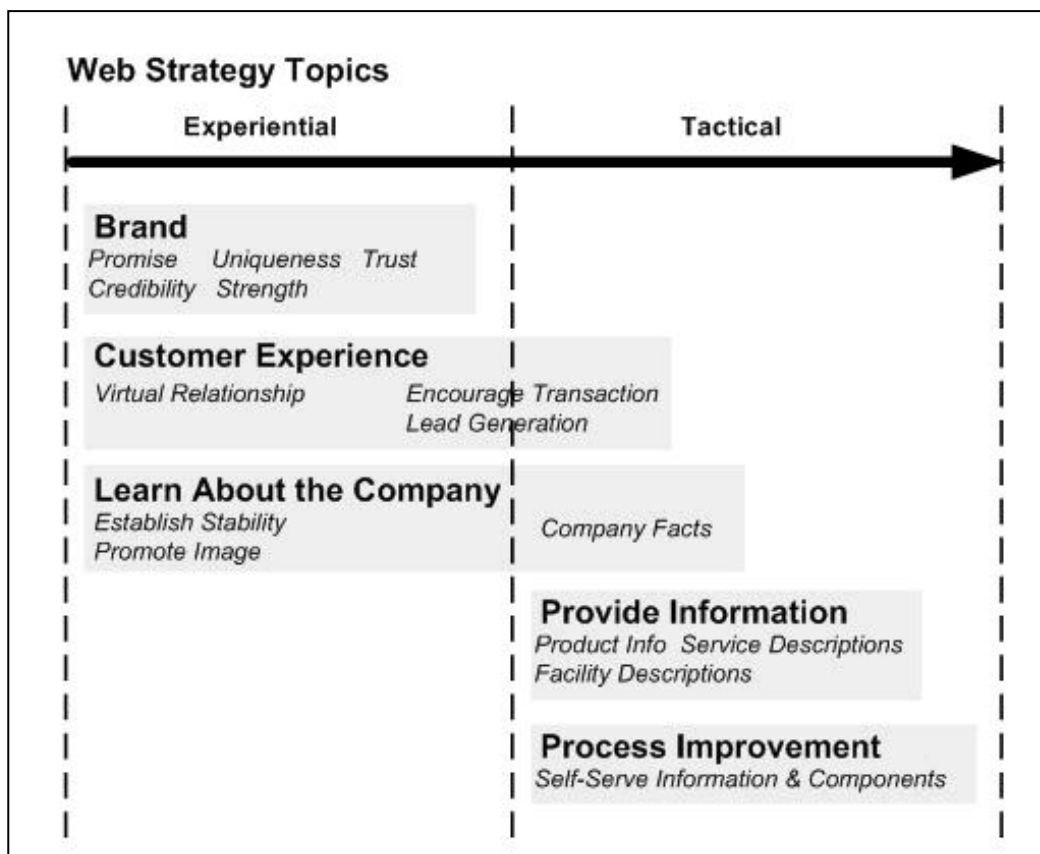


Figure 3. Continuum of Web strategy topics identified as experiential, tactical, or both.

On the experiential to tactical continuum, the brand topic resided on the experiential side. Also on the experiential side of the continuum and overlapping with brand, was the topic of customer experience. However, a few aspects of this topic moved through the continuum to the tactical side. Comments that were grouped into the customer experience topic were based on the concept that a customer's relationship, interaction with, and thus, their impression of the company, must be the same in a physical world and a virtual world. The comments indicated that the strategy of the non-transactional Web site was to represent this experience online and to help sell the company experience as a whole. Some participants placed importance on truly understanding customer segments so the appropriate online experience could be created. This entailed understanding what each

customer segment needed and being able to provide them with the appropriate information and tools to do business with the company. A few participants even addressed the importance of matching customers with the appropriate marketing channel. If certain customer segments were not really represented on the Web, they should continue to use offline methods. However, if other customer segments were represented online, the company needed to be willing to shift the appropriate emphasis from offline to online interactions with the company to meet these customer preferences.

Participants expressed a tactical strategy of pushing the customer towards a transaction called by some, “brokering the transaction,” even if the transaction was offline. This is accomplished by creating a good experience that could have an influence on customers’ decision-making regarding conducting a transaction with the company (online and offline). Some participants discussed the idea that non-transactional sites could possibly be considered transactional in that all content on a site should lead to some sort of transaction whether online or offline. Those that supported this idea referred to activities, such as promotion of products and a good customer experience, as lead generation mechanisms. This idea also tied the customer experience topic to the brand topic in the area of trust. A non-transactional site becoming a trusted source to customers increases the chances of the customer conducting a transaction with the business (offline, or online in the cases of businesses who also have a transactional Web site).

Moving across the continuum is the topic of learning about the company. The researcher observed that comments within this topic overlapped with the brand topic, thus placing it on the experiential side of the continuum. Yet, other comments on this topic extended to the tactical side. For example, participants responded that the purpose or

vision for a non-transactional Web site was to help visitors learn and expand their knowledge about the company. Some of these comments had a connection to the brand discussions in that participants believed that learning about the company helped to establish its strength and stability (or helped customers perceive the organization's strength), as well as to promote and to maintain their corporate image. Alternatively, other comments related to learning about the company consisted of sites providing general company information or facts that site visitors may desire.

Continuing from learning about the company and moving to the tactical side of the continuum is the topic of providing information. This topic extends from the general company information discussed in learning about the company to more specific information such as providing product or service descriptions. Discussions on this topic were all tactical in nature in that participants expressed that the strategy of the company Web site was to provide quality information regarding the company's products, services, facilities, or essentially anything that is a revenue-generating component. Some participants indicated that providing product, service, and facility information were supported by the corporate strategy by creating awareness.

On the far side of the tactical area of the continuum was the topic of process improvement. Comments regarding this topic centered on the Web site's capability to improve an organization process and to save the company money. Cost savings centered on providing "self-serve" type components or information on the site so that visitors could answer their own questions instead of calling the company or using a third-party Web site. In some instances, this cost the company money based on the company having a fee-for-use agreement with a third-party vendor.

When participants were asked to compare their company's first Web initiative to the present one, two prominent topics emerged from three out of the four organizations (Manufacturing, Finance and Insurance, and Accommodation and Food Services). The first was that these organizations generally had an increased understanding of the Web and an interest in using it as a business channel. Specifically, participants talked about the growth of the Web and the online channel being used more as a marketing driver than just an afterthought. These same participants believed non-transactional sites could be used to drive customers and potential customers toward transactions, even if the transactions occurred offline. The second prominent topic was that all four organizations reported an increase in the volume of information provided on the Web site. Some suggested that there were more self-service tools and information provided today compared to the company's first generation Web site.

A few of the participants also opined that their company had improved in connecting the non-transactional Web site to transactional components of the business. Lastly, one company's participants spoke about tremendous internal changes related to the Web. Specifically, they spoke of infrastructure related issues, such as the establishment of technological and governance platforms, as well as the adoption of a measurement system—all considered great improvements to their Web initiatives (see Table 7).

Table 7. Changes from First-Generation Web Site to Current

Stated Change	Company
Increased understanding of Web	ACM, MAN, FIN, HLTH
Increased interest in Web as a business channel	
Believe the Web is a viable business channel	ACM, MAN, FIN
Believe the non-transactional site is a driver for online transactions	ACM, MAN
Believe the non-transactional site is a driver for offline transactions	ACM, MAN, FIN
Increase in volume of content provided online	
Provides more information	ACM, MAN, FIN, HLTH
Provides more “self-service” tools	ACM, MAN, FIN
Better integration of non-transactional sites with transactional sites	MAN
Implementation of stable infrastructure	
Establishment of common technical platform	ACM, MAN
Establishment of governance platform	MAN
Adoption of online measurement system	MAN
ACM - Accommodation & Food Services	
MAN - Manufacturing	
FIN - Finance & Insurance	
HLTH - Health Care & Social Assistance	

When participants were asked how their Web initiatives were managed, all participants from three of the four organizations (Finance and Insurance, Health Care and Social Assistance, and Accommodation and Food Services) responded that they were centrally managed; however, they outsourced certain aspects of their site ranging from creative conceptualization and design to development of pages and sites. All four organizations host their Web site in-house, which they believed to be a common practice for large organizations. In addition, even though the Web development and maintenance process may have been managed centrally, many departments and business units were involved in the decisions related to the site. Participants from one company (Manufacturing) did not describe their Web management process as centralized. They explained their structure as a “quasi-federation” in that the company was comprised of

many business units that operated independently. As well, this company was also the one that expressed the tremendous growth in the establishment of technological platform, governance, and measurement systems.

The researcher conducted a second-tier analysis of this discussion area to determine if other demographic factors, such as role or years with the company, influenced emerging patterns of comments and topics. However, in this area, these factors did not seem to have any influence. Participants' comments matched those of their peers.

Discussion Area Two: The Need to Evaluate Web Site Performance to Understand the Value of the Site

Conversations in discussion area two focused on participants' opinions regarding the level of importance their company placed on the evaluation of Web site performance of the company's non-transactional Web site(s). In addition, the interviews also explored participants' thoughts on where within the company the demand for evaluation originated, and how quickly results were expected. Regarding the importance of evaluating Web site performance, the responses readily fell into two groups: those that believed it was important and those that did not.

The researcher then performed a second-tier analysis and reviewed the role of the participant as well as the company or industry of the participant in relation to their response to whether Web site evaluation was important. A clear distinction was immediately evident. All responses from three of the four participating organizations (Manufacturing, Finance and Insurance, and Accommodation and Food Services) indicated the importance of evaluating the company's non-transactional Web site.

Conversely, the majority of the responses from the fourth participating company (Health Care and Social Assistance) indicated that Web site evaluation was unimportant.

Representatives from the Health Care and Social Assistance organization reported that Web site evaluation was not a high priority within the company and thus, was not considered important. This organization placed importance on offline scoring and evaluation systems, such as ratings of their physical facilities, medical offices and hospitals. While not a majority from any of the organizations, a few participants from the other three organizations (Manufacturing, Finance and Insurance, and Accommodation and Food Services) indicated that Web site evaluation was not important. The reason given was that non-transactional pages and Web sites were viewed as a marketing expense and, in general, considered an annual loss of money.

For participants from Manufacturing, Finance and Insurance, and Accommodation and Food Services organizations who believed assessing how much a Web site contributed to the business of an organization was important, two patterns emerged as reasons for evaluation. The first reason was related to spending budgeted money on the site and the second reason was related to making site improvements. Those whose opinions fell into the first pattern discussed a need to justify spending on their efforts to create and to maintain a non-transactional Web site, as well as to ensure that a budget for this type of spending was granted for the following year. Participants discussed budget justification and allocation for non-transactional Web sites at two levels: an overall budget for the entire company, and a budget for a specific business division within the company. Participants gave certain examples of an overall corporate budget when they referenced corporate-wide Web pages (e.g. careers, about the company, and general

corporate information). In other examples, participants were referencing specific product/service Web pages that pertained only to a certain business division; thus, the budget was in reference to that division.

Two of the organizations (Manufacturing, and Accommodation and Food Services) owned multiple brands under the overall brand of the company, and three of the organizations (Manufacturing, Finance and Insurance, and Accommodation and Food Services) had multiple business divisions that offered distinct products and services per division; therefore, these products and services were marketed to distinct target audiences. Those whose opinions fell into the second group believed evaluation was important for making improvements to the site. In addition, these participants expressed site evaluations that helped them to determine areas of the site that needed to be expanded to provide additional content to meet their customers' needs (see Table 8).

Table 8. Level of Interest for Site Evaluation

Interested: Reasons Given	Not Much Interest: Reasons Given
<p>Finance Focused Need to justify spending (creation/maintenance of site). Ensure budget is obtained for following year.</p>	<p>No Benefit Recognized Company places importance on offline measurement systems (seen as a better gauge for their business). Non-transactional pages/sites are viewed as a marketing expense.</p>
<p>Customer Focused Ensure site is working properly for customers. Understand where to make content/functionality enhancements (based on customer needs).</p>	

When participants were asked their opinions regarding from where the demand for Web site evaluation was being driven and how tolerant was the company before seeing results, participants from the Health Care and Social Assistance company expressed the opinion that there was no specific demand. This corresponds with their expression of

evaluation not being important to the company. However, for the other three organizations (Manufacturing, Finance and Insurance, and Accommodation and Food Services), the responses to demands for the evaluation seemed split between senior-level management and personnel who have a direct interest in the content on the site such as lower-level managers or employees of specific business groups such as sales, marketing, or human resources.

In a second-tier analysis of those who listed senior-level management demanding site evaluation, the researcher looked at the industry and noticed that senior management was defined by participants from the Accommodation and Food Services sectors as senior managers from both the corporate level and within individual business divisions. Participants from the other two organizations, Manufacturing and Finance and Insurance, indicated that senior managers who cared about Web site evaluation as only the managers within a specific division, not those over the entire company.

Most of the participants, excluding the ones from the Health Care and Social Assistance organization, indicated that typically employees interested in Web site evaluation were impatient for the results from their non-transactional Web site. Many put this in the context of a non-transactional site contributing or supporting customer actions that lead to transactions (either online or offline). In other words, in the current business climate, company personnel wanted to see non-transactional pages contribute to the business, and they wanted to see these results quickly.

Discussion Area Three: Considerations for Evaluating Web Site Performance to Determine the Value of the Site

Discussion Area three focused on participants' thoughts and opinions related to evaluating Web site performance of their non-transactional sites. In particular, the researcher concentrated on gathering participant comments about how they dealt with measuring such intangible success factors as customer satisfaction. Since the term, "success," can be subjective, participants' definition of success was an important matter.

When participants were asked what success meant to them in the context of their Web initiatives, three distinct types of responses emerged. On one end of the continuum, Web site success was defined as the site's ability to maintain an organization's presence online without interruption. If the site was functioning and the content was accurate, the site was a success.

In the middle of the continuum, site success was defined as the site's achievement of "softer accomplishments." These soft achievements were determined by the company's ability to provide information to customers, or to showcase the company compared to more defined accomplishments of the business, such as generating revenue. As well, participants expressed the opinion that these softer accomplishments made an indirect contribution to the company.

Although the second type of response (site success related to showcasing the company) was similar to the first response (site success related to maintaining a Web presence), there were variations in participants' perceptions that differentiated the two groups. The first group, "Web presence," was described as more functional in nature, meaning the goal of the site was to be available at all times. The site was created with the

expectation of representing the company virtually and maintaining its digital presence or image. This idea was similar to an organization's expectation that their offices or buildings, maintain a consistent physical presence. Once a building was completed, it required maintenance expenses; however, there was no expectation that the building would contribute to the company's bottom line.

Participants who held this perspective did not use the term, "expense"; however, their descriptions of the purpose of their non-transactional Web site fit into this line of thinking. Furthermore, participants who supported other perspectives of a Web site contributing to an organization described the expense versus contribution philosophy. Ironically, some of participants referenced this during Discussion Area Four, Barriers to Measuring Web Sites, when they were describing their own situations. They talked about how certain leaders in the company struggled to see any financial gain from having a non-transactional Web site, and inadvertently fostered the idea that the site was an expense making it difficult for the Web site to be viewed as a channel for contributing to the company's bottom line. All reported that this behavior occurred within their own company's situation; however, these participants unknowingly described the thoughts and perceptions of some of their co-participants.

The second group who defined site success as the capability of the Web site to be a virtual showcase of the company treated the idea of "Web presence" as an assumption and believed a non-transactional site was not just an expense, but was capable of contributing to the company. These participants further explained that while the non-transactional site may not be able to be associated directly with generating revenue for the company, they perceived the site as one of continual accomplishments by providing

various types of information, such as product, service, or corporate information. Making information available not only maintained the company's digital presence, but also fulfilled customer needs. This resulted in actively contributing to the company, albeit in an indirect manner.

The last set of responses emerged from participants defining success as sites having a direct tie to or influence in revenue generation. During the discussions, this concept was described with terms such as "lead generation," "brokering the transaction," "teeing up the brand experience," "establishing trust and credibility," "increasing brand awareness," and "driving customers down a path" to revenue-generation. Although there was some overlap in opinions between the second group and this third group regarding their view of non-transactional Web sites contributing to the company, the researcher found sufficient distinction to differentiate the two. Both groups claimed the site contributed to the company's bottom line; however, the second group described this contribution as indirect, while the third group claimed the contribution to be direct (see Figure 4).

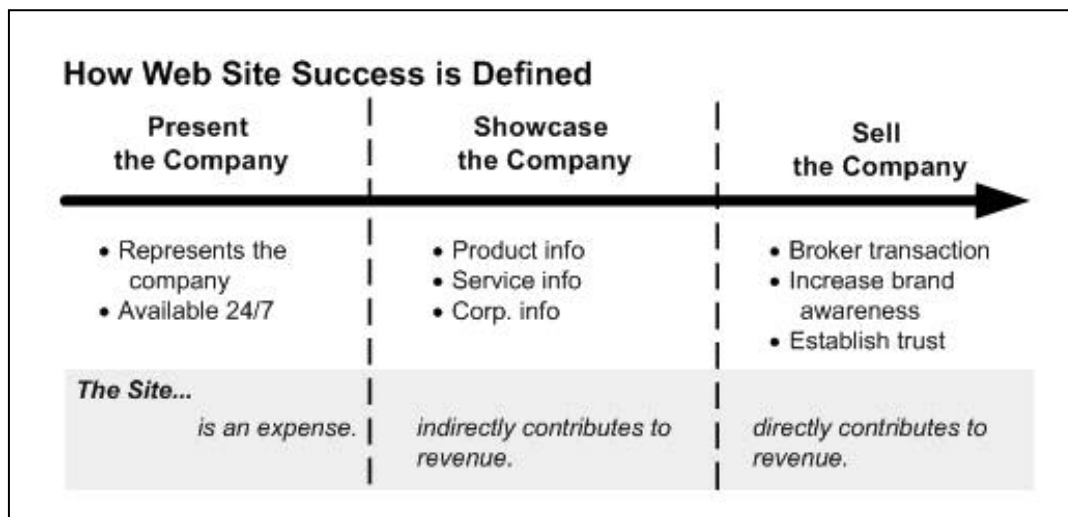


Figure 4. Continuum of how participants defined Web site success.

When participants were asked how their company dealt with measuring success of intangible or subjective factors, all discussed similar methods, such as online user surveys and focus groups, to help them gauge customer satisfaction or similar measures. Some even discussed usability testing, which has tangible results in perspective to the design and function of the site. However, this was an intangible concept when related to the contribution toward an organization's bottom line.

Participants from all four organizations placed a high value on measuring customer satisfaction as data an organization must have. They viewed customer satisfaction often as a barometer of the pulse of the customer. Most of the participants readily acknowledged that because satisfaction information was a soft measurement, many of their top leaders did not pay attention to satisfaction scores because their focus was on revenue-related metrics.

When participants were asked to elaborate on their thoughts regarding measuring subjective aspects of non-transactional sites, another continuum of responses emerged. On one end of the continuum were those who believed their company did little to measure any aspect of the Web site since the Web was not considered revenue generating. Next on the continuum were those who had comfort in measuring non-transactional Web sites even though the interpretation of the measurement data was considered subjective. They believed many who struggle with subjective measurement make the mistake of desiring to extract specific revenue-related data from a site that is not an exact science to measure. They continued to describe that this flawed thinking was due to having the same revenue expectations as a transactional site, not matching the

appropriate goals to the non-transactional site, and not communicating these goals clearly to all interested parties.

Last on the continuum were those who partially agreed with the previous group. This group shared the idea that they were measuring non-transactional Web sites even though there was a level of subjectivity and that non-transactional Web sites should be divorced of the expectation of producing direct revenue numbers. However, they believed that there was a strong relationship between the results of these intangible factors and the company's tangible goals such as revenue or return on investment. In other words, they believed the non-transactional Web sites contributed to the company's bottom line; however, this information typically was inferred from measurement assessments. Nevertheless, they believed the inferences must be based on sound thinking and, if conducted appropriately, could carry validity and credibility (see Figure 5).

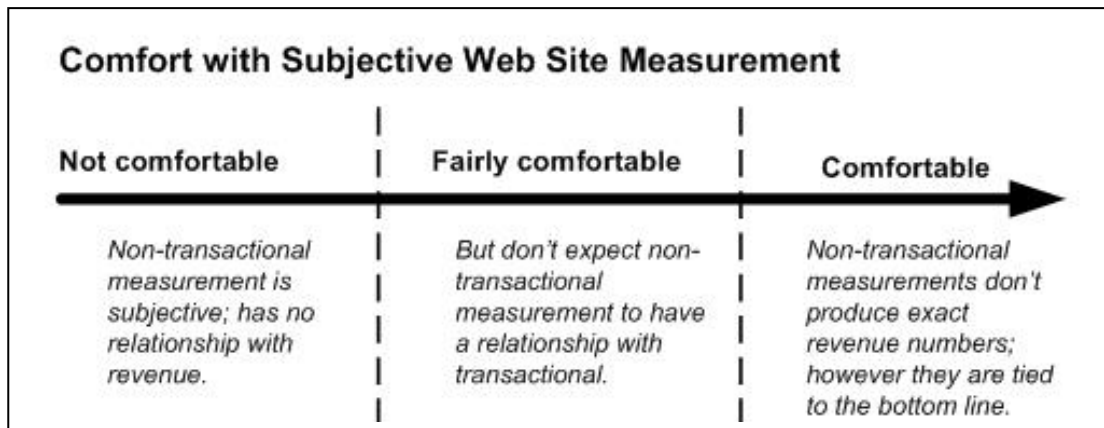


Figure 5. Continuum of participants' level of comfort with subjective Web site measurement including their view of the relationship between non-transactional and transactional measurements.

For example, content pages of a non-transactional Web site, such as product information pages, could be considered integral and valuable to the customer's decision-

making and purchasing process (even when the purchase is completed offline). These pages provided the channel or pathway to an offline or online transaction (with transaction being defined as an actual purchase of a product or service, or the generation of a lead for sales contact depending on the industry.)

Overall, participants' comments regarding the subjectivity of measuring non-transactional sites fell into one of three categories. The first category was that measurement of non-transactional sites had little value because the results were not related directly to company revenue. The second category was that measurement of non-transactional sites had merit if held to more applicable standards instead of revenue related measurements. The third category found company revenue and return on investment directly correlated to the contribution of non-transactional Web sites; however, these results had to be inferred (see Figure 6).

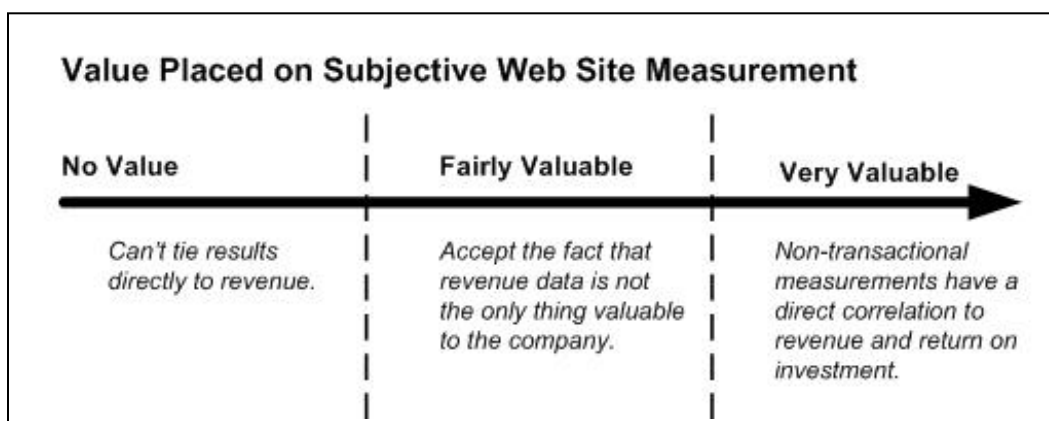


Figure 6. Continuum on how participants rated the value on subjective Web site measurement.

In addition to insight gleaned from the interviews, the researcher observed that while most supported making inferences with subjective measurements, there was one participating company that believed inferences could be taken to the next level, which

was audience segmentation and modeling. They believed that measurements of site satisfaction at the overall level was insufficient and that, in some instances, such general inferences could mask revenue-robbing situations.

When they examined high overall-satisfaction scores, they were left with the impression that the Web site was performing well for everyone. However, through deeper investigation of the satisfaction data, they noticed a drop in satisfaction when related to a specific persona or customer segment. Upon further investigation, the company found the needs of this particular audience were not being met. These customers were coming to the Web site looking for certain types of product information with the intent to buy products (albeit the purchase would be offline). Because the information was not available, this company believed they were losing potential purchases.

After analysis of this audience, the company was able to determine ways to fulfill the needs of this customer segment. Providing the appropriate information increased the satisfaction rate of this audience segment and in the long-term increased sales of certain products. Their conclusion was that satisfaction was a behavioral measurement, which provided more understanding about the customer than traffic data. As well, they believed satisfaction behaviors can vary among audience types and the key was to perform different types of analyses to be sure that the distinctions among audiences were gauged and that needs were addressed. Several types of analyses were mentioned. First, was site path analysis, which examined paths users take through a site, where they drop off, and other Web traffic behaviors. Second, was the integration of customer satisfaction analysis with path analysis to get a picture of user behavior. Third, was comparison analysis of satisfaction scores with scores across other industry index scores (typically requiring

outside vendor tools and expertise). The last type of analysis mentioned was customer behavior modeling, which uses intent to buy, to infer, and to calculate actual offline customer purchases.

Discussion Area Four: How Web Performance is Currently Being Evaluated and the Barriers Encountered

Interviews in the final discussion area focused on how participants' organizations evaluated their non-transactional Web sites, as well as participants' thoughts about barriers to measuring non-transactional Web sites. Specifically, participants shared how they tracked and measured their sites, the frequency site evaluation reports were shared with company leadership, including the degree to which top leaders understood this information. Participants also discussed their most difficult problems related to site evaluation. After examining the interview results, the researcher identified several patterns. As well, one difference emerged in this topic compared to the other topics. There was less disparity among participating organizations in this area. In essence, participants shared similar thoughts with minor distinctions when the discussion leaned toward a tactical level. The researcher noted these minor distinctions where appropriate.

When discussing how non-transactional sites were tracked and measured, participants typically started at a tactical level, naming a variety of tools. These tools ranged from site performance (physical server performance such as page loading, etc.), page detail and trending, online surveys, usability testing, and software that provides overall online landscape data such as traffic and behaviors from organic search, paid search, media display, or email into the site.

In general, participants representing Manufacturing and Accommodation and Food Services industries seemed to use the most tools and made the most vigorous attempts to integrate the data from the various tools. Finance and Insurance was close behind with the use of fewer tools and less integration. Health Care and Social Assistance participants seemed to use even fewer tools with little or no integration between them. As well, this company, while using tools, similar to the other, seemed to collect less detailed data.

When participants were asked about how the results and the reports were shared with corporate leaders, all participants claimed the reports were distributed on a monthly basis. In addition, participants stated that their company did not have a formal process for disseminating reports to top leaders and that executives rarely or never initiated a request for a report. As well, some of the participants commented that there were not any specific discussions around these reports with top executives and that they could not state definitively whether the executives were reading the reports. All participants had the perception that the executives did not have an understanding of the data. Most spoke of their top leadership not really having an understanding of the Internet; however, some stated that this trend was slowly changing as top leaders with online exposure and experience were hired from the outside.

These results may initially appear to indicate that the data and reporting of non-transactional Web sites was not used by the organizations examined in the study; however, the researcher found the contrary. While all four organizations lacked corporate leaders who were overtly interested or maybe even understood the data collected about the company's non-transactional site, the discussions revealed that middle management and other personnel who have a direct role in the company's Web site use the information

frequently. In this vein, the researcher found that participants from Manufacturing and Accommodation and Food Services industries used the data the most frequently for decision-making with Finance and Insurance close behind and Health Care and Social Assistance participants using the data the least.

When asked what were the most difficult problems encountered when evaluating Web initiatives, again, there were no major distinctions among the four organizations. Participants had similar perceptions of the obstacles in the areas of technical implementation. In addition, most of the participants shared common views regarding a lack of effort to view the data holistically and little in-house expertise to perform solid data analysis and interpretation.

All participants spoke passionately regarding technical obstacles that hindered their ability to evaluate their company's Web site. Specific barriers were performance-related items such as obtaining the data easily and timely and noting that the process can be cumbersome, particularly when gathering and merging data from different systems. Others listed a lack of data accuracy due to page tagging and tracking mechanisms not being set appropriately. In addition, a few noted that some of their measurement tracking systems were implemented after Web sites were launched; therefore, certain pages lacked the proper tagging due to lack of personnel to go back and add the tagging. This left participants with legacy pages without data collection capabilities, which, in turn, left gaps in their data analysis. A few also noted that they had too many data systems and had difficulty getting the data from these systems integrated effectively. They spoke of a need for a common technical architecture and how painful the interim was while their company worked to build a common technical platform. Overall, participants spoke about

how the selection and set up of their data collection tools seemed to have been done in a silo. They offered the suggestion that the process would have been far more effective and efficient if there had been clarification of the types of analysis needed as well as communication between personnel who implemented and maintained the tool and the staff who actually used the tool or the output of the tools.

When discussing these problems, participants noted that their statements applied to both internal technical support as well as technical support from outside vendors. In addition, many participants noted that a contributing factor to data collection not being set up appropriately was that at the time of the installation, those who were going to use the data did not really know the information they wished to collect. This left too much leeway during the data tool's implementation phase. Overall, many attributed their less than stellar Web data tool implementation to a rapidly changing Internet environment, built on a concept of Web data analysis that was still in its infancy. However, many expressed hope that their situation would eventually improve.

Participants noted another barrier as the company's lack of a holistic view of the data. Participants referenced compartmental reporting, which represented their company's decentralized business model. Employees focused either on their business division; or on someone in sales. Consequently, they were only interested in measurements that pertained directly to these areas. Participants saw this as a problem in instances where customers cross over divisional lines. As for data reporting by business activity (such as sales), many saw thinking as flawed. If the data were analyzed over the entire range of possible customer activities, then the company would have a clear picture of customers' actions and intentions with the company. One of the main reasons cited for this

compartmentalized approach to the data was that the reports often were used to justify budgets and expenditures. Typically, middle managers focused on justifying only that for which they were responsible, their business division or area.

The final barrier discussed was lack of expertise in analyzing and interpreting the data. Expertise ranged from using tools to extract data for reports to the skills for interpreting and providing meaningful insights. Participants shared scenarios where they lacked dedicated resources to gather and analyze the data. They also spoke about instances where the tools and data reports were available for those who wanted to gather the data themselves; however, there was a lack of interest in the do-it-yourself approach because of lack of time, lack of recognition of its importance, or fear of interpreting the data inaccurately.

Summary of Results

Several studies, one by King and Liou (2004), and the other by King, Barnes, and Tyagi (2006), concluded that even though academic studies have begun to produce theoretical measurement frameworks, a practical model for evaluating non-transactional B2C Web sites was still needed. In an effort to build a practical model, this study was built upon the works of these two studies, using interviews to gather first-hand information from employees who were involved in their company's non-transactional Web site. To gain a broader and more experienced perspective than earlier studies, which used participants from the United Kingdom, this study included participants from corporations in the United States. King and Liou stated that United States corporations were more advanced in evaluating non-transactional Web sites.

For this study, 15 participants from four organizations of different industries were recruited. Each company resided in one of the following industry groups established by the NAICS. These four industry groups were: Manufacturing, Finance and Insurance, Health Care and Social Assistance, and Accommodation and Food Services. Each of the 15 participants met the criteria established for this study. Employees who participated in the study had a variety of responsibilities relating to their company's non-transactional Web site. Three participants were responsible for marketing activities both online and offline. Four participants were responsible for managing the development of products or services. Three participants were responsible for managing technical resources including employees and vendors that supported their company's Web site activities. The remaining roles had one participant each: design, develop, and maintain Web pages; develop corporate information; manage content publishing process; manage online strategy and user experience; and gather and interpret Web data and trends.

Upon conducting the interviews with the 15 participants, the researcher compiled and aggregated the responses in a systematic way using a qualitative and exploratory approach described by Saunders, Lewis, and Thornhill (2003). This methodology called for responses to be grouped into themes or discussion areas.

In the first discussion area, company landscape in relation to the Web, the researcher focused on gathering what participants thought their company's corporate vision or strategy was for their non-transactional Web site and how they associated Web site initiatives to their company's business strategy. In addition, the researcher explored how participants' non-transactional Web sites were managed, as well as their thoughts regarding when their company first implemented a non-transactional Web site compared

to their Web site today. Regarding business vision and strategy, the researcher found that responses could be categorized into the following topics: 1) brand, 2) learning about the company, 3) customer needs and experience, 4) improving process, and 5) providing information. Regarding comparison of their company's first Web initiative to the current Web site, two topics emerged: 1) organizations generally had an increased understanding of the Web and an interest in using it as a business channel, and 2) there was an increase in the volume of information and self-service tools provided on the Web. Regarding how Web sites were managed, three of the four organizations stated they were managed centrally and one company reported a "quasi-federation" model.

In the second discussion area, the need to evaluate Web site performance to understand the value of the site, the researcher focused on gathering participants' opinions regarding the level of importance their company placed on evaluation of Web site performance of the company's non-transactional Web site(s), participants' thoughts on where within the company the demand for evaluation originated, and how quickly results were expected. Regarding the importance of evaluating Web site performance, the responses easily split into two groups: those that believed it was important and those that did not. Those who believed Web performance evaluation was important cited the following reasons: 1) justify spending on the site and 2) obtain insights to make site improvements. Those who indicated Web site evaluation of a non-transactional Web site was unimportant expressed the following as reasons: 1) the company used other offline mechanisms to measure their business, and 2) non-transactional Web sites were viewed as a marketing expense and considered an annual loss of money.

In the third discussion area, considerations for evaluating Web site performance to determine the value of the site, the researcher focused on gathering participants' opinions about how they dealt with measuring success for intangible matters such as customer satisfaction, and since the term "success," itself, can be subjective, how participants actually defined success for their Web initiatives. Regarding what success meant to the participants, the researcher discovered a continuum of responses that could be grouped into three major areas. These three areas were: 1) present the company (the site is considered an expense and is always available to represent the company), 2) showcase the company (the site indirectly contributes to the company's revenue by providing customers product, service, and corporate information), and 3) sell the company (the site directly contributes to the company's revenue through activities that broker transactions, establish trust, and increase brand awareness). Regarding participants' level of comfort about measuring subjective aspects of their non-transactional Web site, the researcher found another three-area continuum. The areas of this continuum were: 1) not comfortable because non-transactional measurements have no relationship to the company's revenue; 2) fairly comfortable, however, the company must accept the measurements for what they are and not project any revenue-related expectations; and 3) comfortable because they believe that even though the non-transactional measurements failed to produce exact revenue numbers, the measurements can be tied to the bottom line. Finally, regarding the value participants placed on non-transactional Web site measurement, the researcher identified a third continuum. The areas of this continuum were: 1) no value, since results cannot be tied to revenue, 2) fairly valuable if the company can accept the fact there is data other than revenue that is of value to the

company, and 3) very valuable since non-transactional measurements have a direct correlation to the company's revenue.

In the fourth discussion area, how non-transactional Web sites were currently being evaluated and the barriers encountered, the researcher found the least disparity across the comments from the participants. Regarding how Web performance was being evaluated, participants listed a variety of tools they used for purposes such as: physical site performance (page load), page detail and trending, online surveys, usability testing, traffic patterns to the site from online referrals such as organic search, paid search, media display, and email. Regarding barriers encountered, participants listed the following: 1) technical implementation, including no easy way to retrieve data, lack of integrated data systems, poor data accuracy caused by insufficient tagging and tracking; 2) the company's inability to view the data holistically, including issues with compartmental reporting, decentralized desire for data, and not gaining a clear picture of customers; and 3) lack of expertise to interpret the data, including skills to use the tools to provide insight. The results and findings discussed in this chapter provided the foundation for the development of the practical framework described in chapter 5.

Chapter 5

Conclusion, Implications, Recommendations, and Summary

Introduction

The author expanded the scope of King and Liou's (2004) research by increasing the number of industry sectors, focusing on large United States corporations, and collecting first-hand information from major stakeholders associated with the design, maintenance, and evaluation of their organizations' non-transactional Web sites. This study addressed the difficulties corporations encounter when measuring the performance of their non-transactional Web sites to determine their value. In this study, performance was defined as a set of outcomes and, in the context of a Web site, range from site visitor attributes and behaviors to business impacts. Value was defined as the degree to which a site contributes to helping an organization achieve its business objectives. Therefore, the performance of a Web site is measured in order for a business to determine the Web site's value. As reported in the previous chapter, four discussion areas emerged: 1) company landscape in relation to the Web, 2) need to evaluate Web site performance to understand the value of the site, 3) considerations for evaluating Web site performance to determine the value of the site, and 4) how non-transactional Web sites were currently being evaluated and the barriers encountered.

Insights gleaned from the findings in the previous chapter, combined with both academic and industry literature, formed the basis for the development of a practical framework to guide corporations in the evaluation of their non-transactional Web sites. Specifically, the intent of this framework is to: 1) help organizations manage perceptions of the intangible aspects of performance measurement of non-transactional sites, 2) give corporate employees responsible for measuring non-transactional sites a process, 3) provide practical tools that can be used as guides for performance measurement of non-transactional Web sites, and 4) help organizations determine the value (the degree to which the site contributes toward the company achieving its business objectives) of non-transactional Web sites.

Conclusions: A Practical Framework

The practical framework resulting from this research was designed to guide organizations in evaluating the performance (a set of outcomes) and to determine the value (the degree to which a site contributes to helping an organization achieve its business objectives) of their non-transactional B2C Web sites. The framework includes a three-phase process as well as several tools to help direct Web site performance evaluation. The three phases of the framework are: 1) define and agree, 2) select and collect, and 3) synthesize and respond. Eight components within the three phases are discussed in detail. While these components were created based on the research, they were generalized to address non-transactional sites in any industry. In addition, while the study focused on non-transactional Web sites for corporations, the framework may have application to non-corporate entities that have non-transactional Web sites.

Phase One – Define and Agree

The Define and Agree phase of the practical framework contains four components: 1) identify the company's Web belief system, 2) clarify the company's level of expectation for a non-transactional Web site, 3) determine which point of view (business, customer, or both) the company will use to evaluate the effectiveness and success of the site, and 4) identify the purpose of evaluating the performance of the Web site. These four components represent decision points with specific tactical steps occurring later in the framework (see Figure 7).

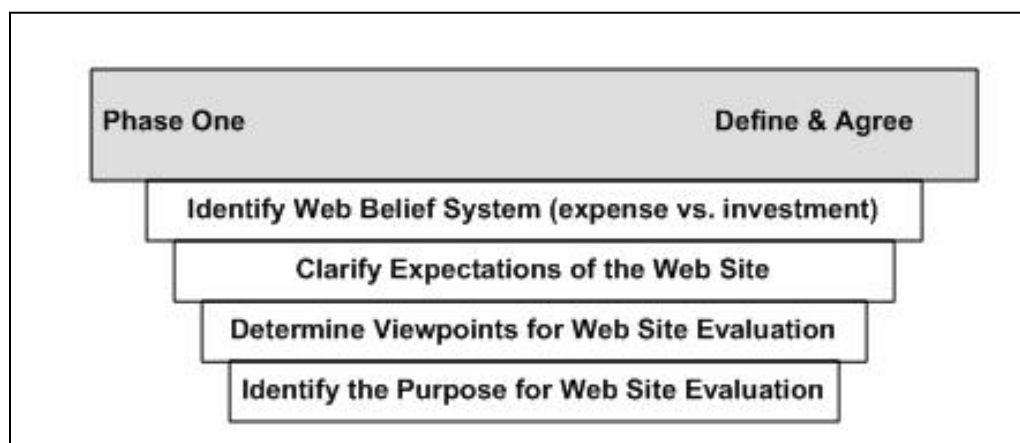


Figure 7. Components in phase one: Define and agree.

The four components in phase one were intended to reduce misconception regarding evaluation of a non-transactional Web site. Specifically, these components addressed common barriers and struggles related to evaluation of non-transactional Web sites such as lack of agreement on the purpose of the site, inability to articulate the role the site plays in an organization's business strategy, and other areas where lack of clarity and agreement within an organization negatively affects the measurement process. As well, the outcomes from these decisions made during phase one provided filters or considerations for actions and decisions made during the remaining phases.

Identify the Web Belief System (Phase One – Define and Agree)

The first step was to identify the company's Web belief system. This was defined as an organization's position on its non-transactional Web site in the context of its business goals. At a high level, an organization's Web belief system can be determined by the answer to one question: Does the company view the Web site as an expense or an investment (see Figure 8)?

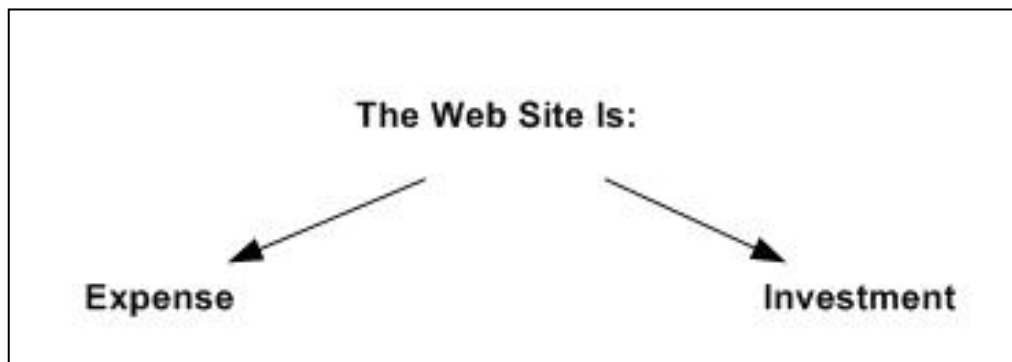


Figure 8. Web belief system: How the organization views its Web site.

While this question may appear simple, the answer, which is an opinion, has a significant effect on the evaluation and measurement process. The answer to this question revealed attitudes and opinions that influenced expectations of the site, selection of specific measurement metrics, and the general approach to Web site performance evaluation to determine site value. Because of the waterfall effect each of these components has on other factors, identifying if the site is viewed as an expense or an investment provides clarity for other decisions and actions within the process of the framework. In addition, the question may prompt internal discussions between employees who have varying roles and who are critical to the communication of the evaluation process. In the cases where no appropriate parties within a business can agree on a belief system, the company should work to eliminate discrepancies.

Clarify Expectations of the Web Site (Phase One – Define and Agree)

The second component of phase one is to clarify the company's expectations for a non-transactional Web site. Web site expectations will vary, and directly affect the selection of metrics in phase two. Corporations devote time and resources formulating goals, expected outcomes, and strategies for their business; however, some fail to do the same for their non-transactional Web site. Author and creator of the Applied Information Economics methodology, Douglas Hubbard (2007), found that many corporations struggle with measurement because they have failed to identify what they want to measure and why. Such is also the case for measurement of non-transactional Web sites. The inability of an organization to articulate Web site expectations hinders the selection of appropriate metrics and fosters misconceptions about the specific business functions of a site (Hubbard; Ittner & Larcker, 2003; Jacoby & Luqi, 2007; Obrey, 2003; Swamy, 2002; Walter & Scott, 2006).

During the study, the author discovered a range of expectations that businesses had for their Web sites. As part of the development of the framework, these expectations were organized on a continuum from No Expectation to Brokering a Deal, which relates to driving an action. The intent for plotting each expectation onto the continuum was to help corporations determine where expectation of their company's Web site resides. Accurate identification of a company's expectations regarding its Web site will help organizations select the applicable metrics and collect appropriate data (components of phase two). A letter (A-G) represented each expectation (see Figure 9).

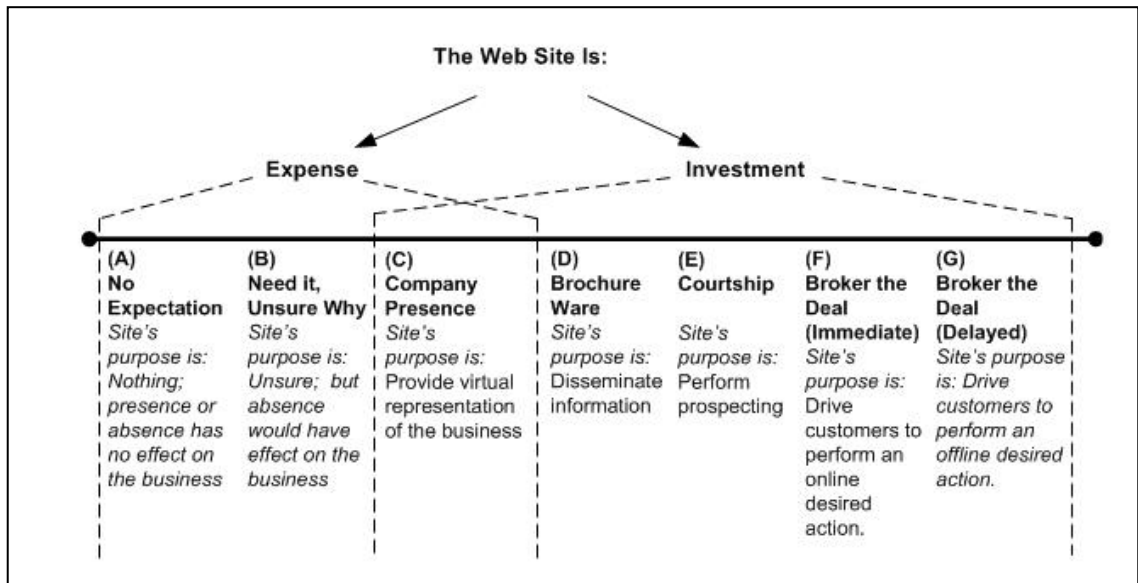


Figure 9. Continuum of Web site expectations reflecting the range of views participants have regarding their organization's non-transactional Web site.

The first expectation (A) reflects an organization's opinion that its Web site's presence or absence has no effect on the business (titled "no expectation" in Figure 9). Next on the continuum (B) is the perception that the site has some effect on the business. In other words, the site's absence would have some negative effect on the company's business goals (titled "need it, unsure why" in Figure 9).

The third expectation on the continuum (C) is the perception that the Web site's purpose is to represent the company in the virtual world, just like an organization's building(s) establishes a presence in a physical world (titled "company presence" in Figure 9). The fourth expectation on the continuum (D) is the perception that a Web site's purpose is to present basic information about the company (titled "brochure ware" in Figure 9). The fifth expectation on the continuum (E) is the opinion that a Web site's purpose is to initiate customer interest. In other words, a Web site would be an indirect prospecting tool (titled "courtship" in Figure 9).

The sixth expectation on the continuum (F) is the opinion that a Web site's purpose is to drive customers from the non-transactional site (or pages) to an online desired action (titled "broker the deal, immediate" in Figure 9). The seventh expectation on the continuum (G) represents an organization's opinion that a Web site's purpose is to drive customers to an offline desired action with the company (titled "broker the deal, delayed" in Figure 9).

Some of the expectations on the continuum have only slight differences. The author purposely delineated these expectations since each can be tied directly to a different choice or selection in some of the steps in later phases. For example, the second expectation, "Need it, unsure why," is slightly different from the first expectation, "No expectation," believing they could live with or without their Web site. However, this subtlety may influence subsequent decisions in later components, such as identifying the need to evaluate Web site performance and to select applicable metrics. Therefore, one could argue that the first expectation, "No expectation," represents no true purpose for site evaluation and thus no reason to select metrics. However, compared to the second expectation, "Need it, unsure why," there is a belief that the site has some impact on the business. Therefore, the purpose for site performance evaluation could be to reduce the uncertainty of not having a site and would use some metrics to measure.

Determine Viewpoints for Web Site Evaluation (Phase One – Define and Agree)

Identifying a point of view or a combination of points of view in phase one was critical to the activities in phase two of the framework. A point of view is the perspective through which success or failure can be gauged. Viewpoints have the most influence in instances where measurement requires some subjectivity. For example, outside of the

context of the Web, the quality of a product may be determined from several viewpoints, the business itself, or the customer. The criteria used to determine the quality of a product might differ between the perspective of the business compared to the perspective of its customers. In essence, what a business deems as contributing to the quality of a product may be different from the attributes customers value. Because of the difference, an organization would benefit by collecting information from both perspectives when determining what makes a quality product (see Figure 10).

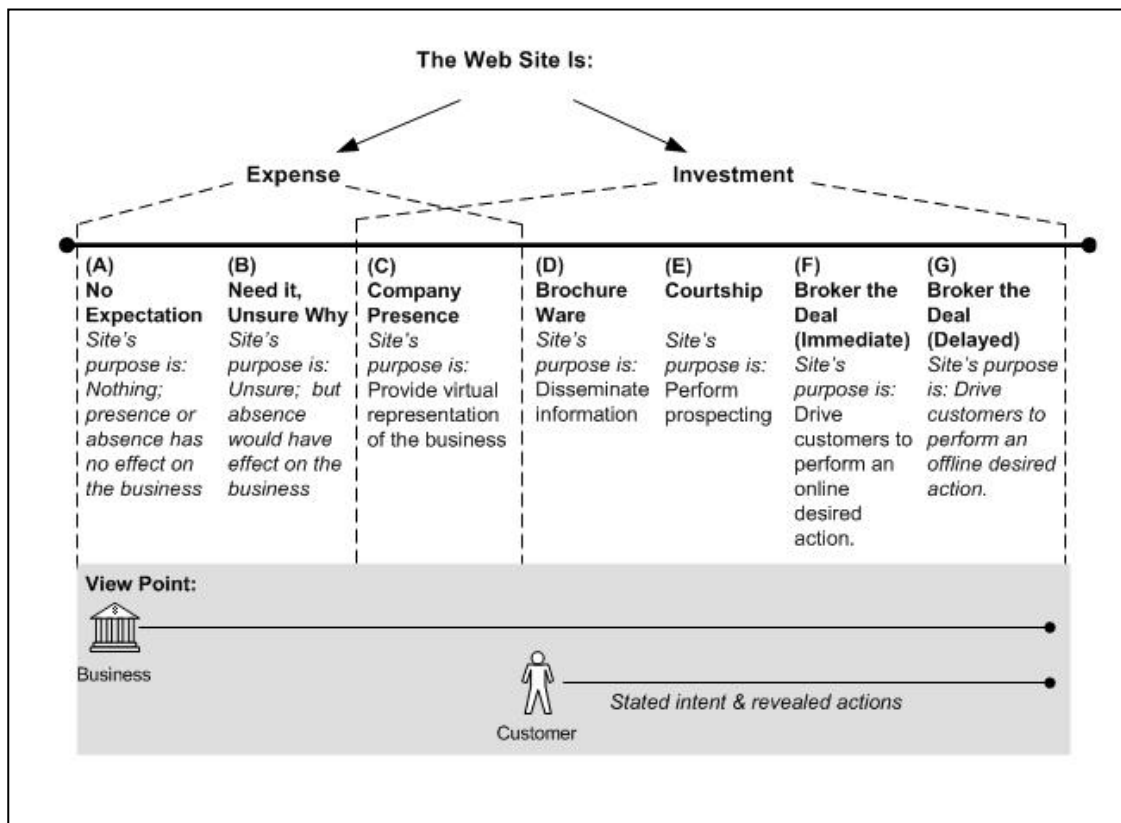


Figure 10. Continuum of Web site expectations and their relationship with business and customer measurement viewpoints used for evaluation.

Each viewpoint—business and customer—provides a different lens or filter for evaluating a non-transactional Web site (Amit & Zott, 2001; King & Liou, 2004; Schlegel & Vollmer, 2003). An understanding of these filters has a direct effect on which

metrics should be selected to evaluate the performance of a non-transactional Web site. This, in turn, influences the choice of measurement methods and techniques used to collect data, and influences how the results are applied to running the business. Thus, establishing these points of view in phase one of the framework is critical to maintaining clarity in phase two.

The points of view that need to be considered evaluating the performance of non-transactional sites are business and customer (Amit & Zott, 2001; King & Liou, 2004; Schlegel & Vollmer, 2003). However, there may be instances where other points of view, such as vendor or partner, need to be included. In addition, one point of view may be too broad and should be divided into sub-groups. For example, to obtain effective viewpoints, an organization may need to divide its customer group into more distinct or targeted segments. As well, in the case of large diversified organizations, the business viewpoint may need to be divided into sub-groups.

Another aspect that organizations should consider when applying certain points of view, such as a customer, a vendor, or a partner, is that the method used to collect data from each of these groups can influence the results or interpretation of the results. Some data gathering techniques, such as surveys, collect stated opinions, while other methods collect revealed information. For example, customer viewpoints can either be stated or revealed. Stated perceptions are derived from what consumers say about the non-transactional Web site such as what they like, dislike, and how satisfied they were with the site. Revealed perceptions are derived by analyzing what customers do on the site such as where they go on the site, and the actions they perform on the site. It is important for an organization to understand the difference between stated and revealed viewpoints

and how these two variables affect the selection of metrics, as well as the selection of measurement methods and techniques.

Identify the Purpose for Web Site Evaluation (Phase One – Define and Agree)

The last component of phase one may appear to be straightforward. However, it is not easy to achieve given the complexities of a large corporation. Nonetheless, this component identifies the purpose for Web site evaluation. It is intended to help organizations eliminate irrelevant evaluation requests and to develop specific, clear, and purposeful evaluation goals, which will help focus evaluation efforts in phase two.

The results of the study as well as industry reports indicate that requests for Web site evaluation originates from company personnel with various roles and motivation within an organization (Ittner & Larcker, 2003; Mason, 2007; Sterne, 2004a). These individuals and motivations may include, for example, middle managers responsible for the Web site or certain portions of the Web site; those seeking information to justify budgets or to obtain additional funding; or the motivation may be as simple as demonstrating the value of the existing Web site. Senior executives sometimes request evaluation information to help them understand the online aspect of the business; operations and accounting areas may continually push for quantifiable numbers.

Identifying the true purpose in evaluating the performance of an organization's non-transactional Web site is tied closely to, and can be seen as an extension of, the second component, clarifying expectations. These two components provide direction for selecting appropriate metrics and applying appropriate data collecting techniques. There is a difference in evaluation approaches when the goal is to reduce uncertainty compared to a goal of understanding the level of contribution a site makes to an organization's

bottom line. The four components in phase one of the framework are intended to provide clarity for decisions that must be made in phase two.

Phase Two – Select and Collect

The outcomes from phase one guided the activities within the components in phase two. This phase of the practical framework, titled Select and Collect, consist of two components: select applicable metrics and collect appropriate data. Various tools and guidelines were developed as part of this phase of the framework. They were introduced within the description of the related component (see Figure 11).

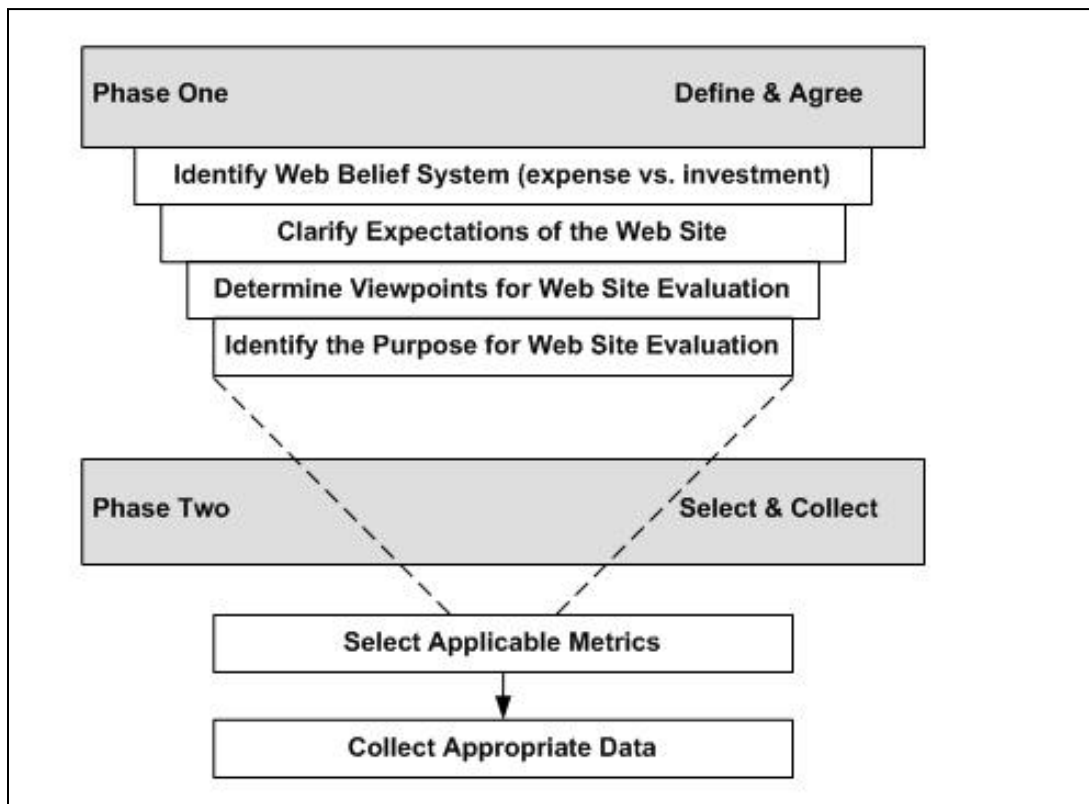


Figure 11. Components in phase two: Select & Collect; in the context of phase one.

Select Applicable Metrics (Phase Two – Select and Collect)

The amount of data that can be collected about a Web site is almost endless. Either organizations have too many metrics driving the collection of so much data that the

business does not know what to do with it, or organizations use the wrong metrics and produce results that do not answer their questions. Selecting the appropriate metrics is key to successful measurement of the performance of an organization's non-transactional Web site (Atchison, 2007b; Burby, 2004; Ittner & Larcker, 2003; Symons, 2004).

As stated in phase one, organizations struggle with selecting appropriate metrics because they fail to articulate the purpose for evaluating their non-transactional Web site (component 4 of phase one), fail to clarify their expectations of the Web site (component 2 of phase one), fail to determine which viewpoints (business, customer) they want to use to evaluate the site (component 3 of phase one), or they have not identified if they view their non-transactional site as an expense or an investment (component 1 of phase one). The results from phase one guide the selection of appropriate metrics by helping the organization narrow what it wishes to measure that would be most appropriate for their particular situation.

For example, an organization's belief regarding whether the Web site is an expense or an investment (component 1) narrows the options for its expectations (component 2). If the Web site is believed to be an expense, the choices of expectations fall within areas A (no expectation), B (need it, unsure why), or C (company presence). If the Web site is viewed as an investment, the choices of expectations fall within C (company presence) through G (broker the deal, delayed) (see Figure 9).

The Expectations/Evaluation Considerations Matrix, a tool integrated into the practical framework, is designed to assist organizations in their selection of appropriate evaluation metrics (see Figure 12).

Expectations/Evaluation Considerations Matrix		
Site Expectation	Metric Considerations (by Viewpoint)	
	Business Viewpoint	Customer Viewpoint
Site's purpose is: (A) No Expectation <i>Nothing; presence or absence has no effect on the business</i>	No real compelling reason to measure & evaluate this perspective	No real compelling reason to measure & evaluate this perspective
(B) Need it, Unsure Why <i>Unsure; but absence would have effect on the business</i>	<i>Primary measurements:</i> site maintenance costs (e.g.: site hosting, content updates, staffing, etc). <i>May also consider:</i> traffic stats	No real compelling reason to measure & evaluate this perspective
(C) Company Presence Provide virtual representation of the business	<i>Expense Belief:</i> site maintenance costs, & traffic stats <i>Investment Belief:</i> lost opportunity analysis	No real compelling reason to measure & evaluate this perspective
(D) Brochure Ware Disseminate information	Impact measures (e.g.: communication impacts such as online publishing vs. offline printing and calling, employee reduction, workload decreases, etc.) traffic stats, basic visitor attribute/behavior stats, and referral resource stats	Brand awareness
(E) Courtship Perform prospecting	Traffic stats, basic visitor attribute/behavior stats, and referral resource stats	Brand awareness, satisfaction
(F) Broker the Deal (Immediate) Drive customers to perform an online desired action.	Traffic stats, basic visitor attribute/behavior stats, intermediate visitor attribute/behavior stats, and referral resource stats	Brand awareness, satisfaction, <i>stated</i> intent (intent to buy, intent to refer, intent for return visit), <i>revealed</i> actions (path/action analysis) (may also be combined with stated intent)
(G) Broker the Deal (Delayed) Drive customers to perform an offline desired action.	Traffic stats, basic visitor attribute/behavior stats, intermediate visitor attribute/behavior stats, and referral resource stats	Brand awareness, satisfaction, <i>stated</i> intent (intent to buy, intent to refer, intent for return visit), <i>revealed</i> actions (path/action analysis), (may also be combined with stated intent) offline behavior modeling

Figure 12. Expectations/Evaluation considerations matrix.

The matrix classifies various evaluation considerations based on the outcomes of the decision related to site expectations in phase one. Since each organization may have unique needs, evaluation considerations and suggested sets of metrics are not definitive.

The matrix is intended to provide a foundation to help focus evaluation efforts based on the outcomes determined in phase one.

In addition, the matrix provides suggestions based on several levels of hierarchy as determined from phase one outcomes. The primary driver should be expectations for the site; the remaining three components (belief the site is an expense versus investment, business and customer viewpoints for measurement, and purpose for evaluating the site) being secondary influences for the suggested considerations. For example, while working through phase one, an organization determines if it views its non-transactional Web site as an expense. Next, the organization must conclude if their site expectations matched B, “Need it, unsure why,” and determine if it wants to evaluate their site from a business viewpoint only. Using the Expectations/Evaluation Considerations Matrix, the company might conclude the need to evaluate the site using site maintenance metrics such as the costs of hosting the site and the costs of staff and materials related to updating the site. In addition, the matrix demonstrates that there are no compelling reasons to collect additional metrics from a business viewpoint such as site visitor attributes and referral resource statistics. As well, there may be no compelling reasons for the company to collect metrics related to customers’ point of view such as brand awareness, satisfaction with the site, stated intent, or revealed actions.

There are many examples of specific metrics within the metric types listed in the Expectations/Evaluation Considerations Matrix. To lend clarity to the framework, descriptions of the metric types and sample metrics are provided. Still, the sample metrics are examples and not an exhaustive list.

For the business viewpoint, seven types of metrics are listed in the matrix. The first type, site maintenance costs include all costs related to maintaining the Web site. Examples range from hosting and hardware costs, including staff to maintain the technical infrastructure to costs of any personnel and materials needed to maintain individual site pages, including developing and maintaining the content on the site. The second type of metrics traffic includes overall traffic volume or visits reviewed from the perspective of specified timeframes (weekly, monthly), as well as average time spent on the site. The third metric is lost opportunity analysis, which is an evaluation of the business impact if a site were removed.

The fourth metric is impact measures, which includes communications-related items such as costs of online publishing compared to offline publishing and costs of fielding calls, and possibly call reduction. Other examples of how an organization may evaluate communications-related impacts are to determine whether the provision of information on the Web decreases certain employee workloads or reduces the need for specific employee roles. The fifth type of metric is basic visitor attributes and behavior statistics. Examples of metrics in this category are number of new visitors, number of returning visitors, average frequency of returning visitors, percent of new and returning visitors, site abandonment rate, average cost per visit, and average cost per visitor. The sixth type of metric is referral resource statistics, which is the examination from where traffic to the site is coming including referring domains, URLs, and search engine rankings and results. The seventh type of metric is intermediate visitor attributes and behavior. Examples of specific metrics are top pages requested, average visit prior to conversion,

average cost of conversion, and call to action completion rate. Examples of metrics for the business viewpoint have been summarized (see Figure 13).

Example Metrics – Business Viewpoint	
Site Maintenance Costs	
Hosting & hardware costs	Technical architecture costs
Site maintenance costs	
Traffic Stats	
Overall traffic volume over specified timeframes (visits)	
Average time on site	
Lost Opportunity	
Evaluation of the impact to the business if the site was removed	
Impact Measures	
Cost of online publishing vs. offline	
Cost of fielding customer calls	Savings of reduced calls
Reduction of employee workloads	Reduction of staff roles
Basic Visitor Attributes/Behavior	
Number of new visitors	Number of returning visitors
Average frequency of returning visitors	Ratio of new to returning visitors
Avg. visits per visitor	Avg. page views per visit
Avg. cost per visit	Avg. cost per visitor
Percent of time spent on visits	Percent of new & returning visitors
Percentage of high, medium, & low spent visits	
Percentage of high, medium, & low click depth visits	
Percentage of high, medium, and low frequency visitors	
Percentage of high, medium, and low recency (time between visits) visitors	
Abandonment rate	
Referral Resources Stats	
Referring domains	Referring URLs
Search Engine Ranking/Results	
Percent of traffic sources to this page (direct URL, organic search, etc.)	
Intermediate Visitor Attributes/Behavior	
Top pages/content requested	Average visits prior to conversion
Conversion rate	Average cost per conversion
Call to action completion rate	Call to action abandonment rate
New & returning visitor conversion rate	
Call to action (download, form, etc.) start rate	
Information find conversion rate (viewed support content-did not call or contact)	
Information find conversion rate (viewed support content-did not call or contact)	

Figure 13. Examples of metrics for business viewpoint.

For the customer viewpoint evaluation, the matrix reflects five different areas, which are brand awareness measurements, satisfaction measurements, customer-stated measures, customer-revealed measures, and offline behavior modeling. Brand awareness is related to a customer's ability to know or recognize a brand, as well as his or her ability to associate a brand in relation to a product or service. An in-depth analysis and explanation of brand awareness is not within the scope of this research, however, given its relevance to an organization's non-transactional Web site, it is noted as an area of measurement that should be considered. Customer satisfaction is related to individuals' opinions and perceptions of how well the Web site supported them in their visit. Typically, satisfaction data are collected through various online survey tools.

Customer-stated measures involve the customer providing information regarding their intentions to perform an action. Sample actions that would be of interest are intent to buy, intent to refer, and intent to return to visit the site. Customer revealed actions require path and action analysis to determine how far the site led a customer down a path and the actions they performed. Usability testing examines the level of success of customers' interaction with the Web site. In many cases, organizations may want to perform a combined analysis of stated-and-revealed-customer data to get a clearer picture of their non-transactional Web site.

The last customer viewpoint metric, offline behavior modeling, is intended to address the connection the Web site has to an organization's physical operations, particularly the influence and the role the Web site may play in a customer's offline behavior. Behavior modeling can be performed using various tools and outside data. The goal is for an organization to make educated inferences regarding the behaviors of their customers. For

example, an organization may review customer data, including path analysis and stated customer intent information, and determine trends and patterns that match revenue or sales increases in their physical stores or business locations where products or services are provided. In addition, there are organizations that provide consumer index behavior data, which a business may use to help them make their online/offline inferences.

Behavior modeling is a large field of study in itself; the point in this framework is to present it as an option for an organization to consider when evaluating the performance of their non-transactional Web site to determine the value of the site. Descriptions of the metric types for the customer viewpoint have been summarized (see Figure 14).

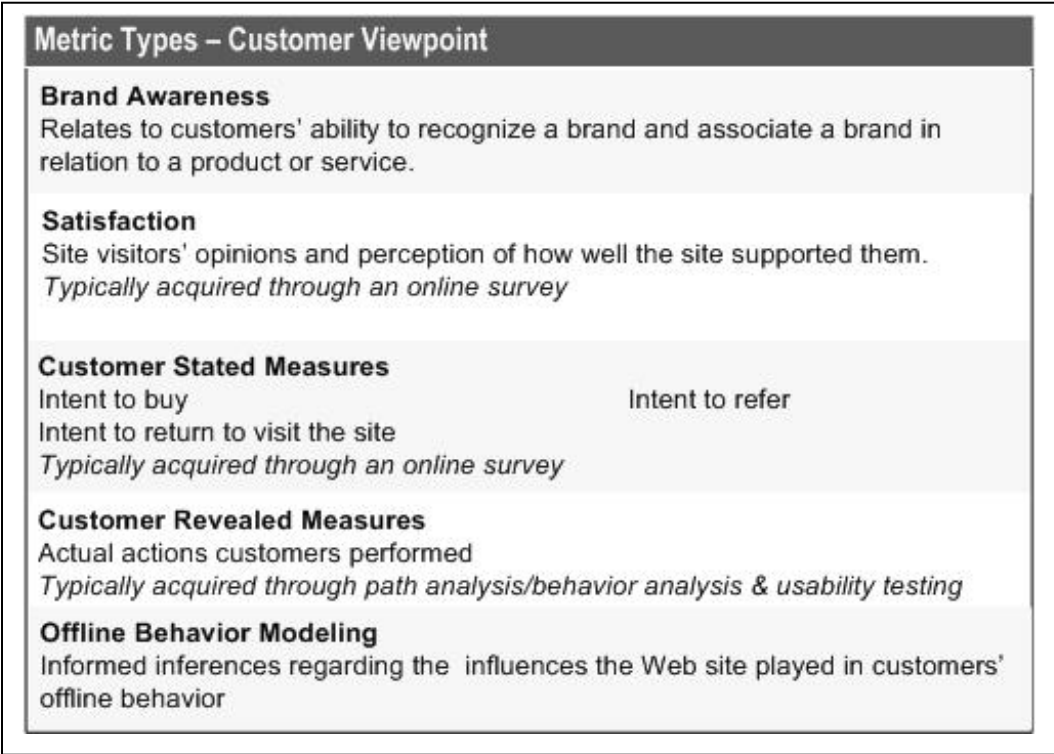


Figure 14. Metric types for customer viewpoint.

Collect the Appropriate Data (Phase Two – Select and Collect)

As indicated in the findings of the study, participants discussed struggling either currently or in the past with how to collect appropriate data for evaluating their non-transactional Web sites. Many participants discussed technical issues such as tool or data integration, improper tracking due to insufficient page tagging, and difficulties retrieving data. As a result of the study, the author concluded that many participants believed a contributing factor to data collection difficulties was due to lack of coordination between implementation of the measurement tool with organizations' measurement needs. The literature supported this conclusion (Peterson, 2004; Sterne, 2004a).

Following the components in phase one in the framework (identify Web belief system, clarify expectations of the Web site, determine viewpoints for the Web site evaluation, and identify the purpose for Web site evaluation) and the first step of phase two (select applicable metrics), will provide businesses with a direction for what the organization desires to measure and the metrics needed to support such measurements. This, in turn, will allow a business to coordinate data collection activities with business needs, including how data collection tools are implemented for data access and various pages should be tagged to allow necessary information to be collected.

An organization may choose to set up its Web site data collection tools without understanding what needs to be measured. As revealed in the research, this lack of clarity can be a barrier to obtaining the appropriate information to evaluate properly their non-transactional Web site. The practical framework has been designed to guide organizations through the appropriate processes, which, in turn, will help them collect the appropriate

data for businesses to evaluate accurately the performance of their non-transactional Web site so they can determine its value.

Phase Three – Synthesize and Respond

Phase three is comprised of two components: analyze the data and identify insights, and act upon the results (see Figure 15).

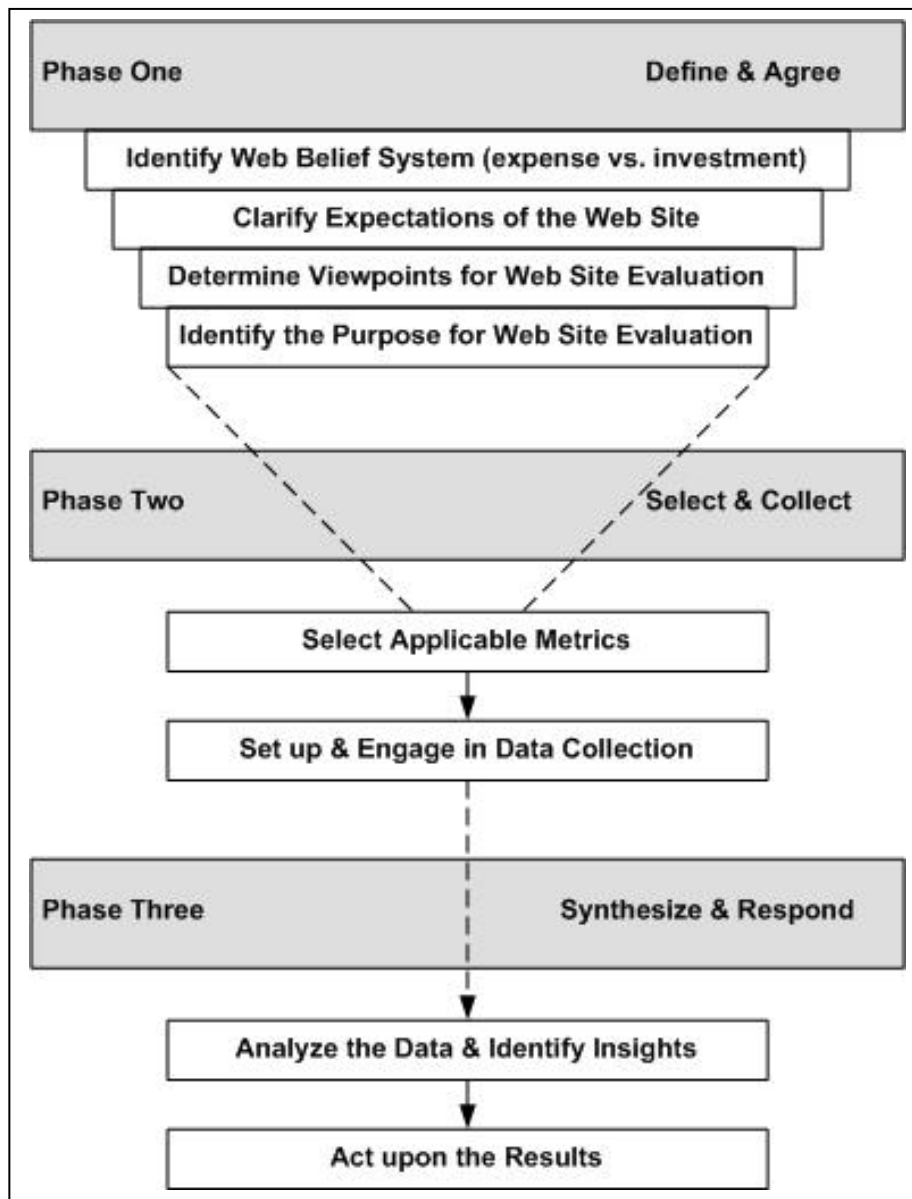


Figure 15. Components in phase three: Synthesize and Respond; in context of phases one and two.

During the research, participants identified several evaluation barriers related to the analysis of data. Specifically, participants noted that organizations did not take a holistic view of data, reporting that the information was collected in a compartmentalized fashion and from a perspective of certain business roles. In addition, participants believed organizations lacked the requisite expertise to retrieve data easily from the tools used and lacked the appropriate skills necessary to interpret the data to provide meaningful insights. The literature also reflects the lack of appropriate skills and expertise as an obstacle to evaluating the performance of a non-transactional Web site (Atchison, 2007a; Burby, 2007; Chatham, 2005; Peterson, 2004; Sterne, 2004a).

The barrier of lacking proper skill sets and expertise to interpret and provide insights can be resolved by hiring appropriate personnel or training current personnel (Atchison, 2007a; Burby, 2007; Chatham, 2005; Peterson, 2004; Sterne, 2004d). The remaining barriers can be resolved, or at least reduced, by following the processes provided in the framework. For example, establishing expectations, viewpoints, and purposes for site evaluation up-front as recommended in phase one will assist in synthesizing information that is collected. The outcome of phase one not only provides guidance for completion of phase two components, but also provides clarity to the insights needed for a business to evaluate effectively the performance of their non-transactional Web site.

The framework presented is intended to prompt businesses to take a more holistic view of data evaluation, and to encourage the assessment of the site from a customer point of view to lead to improved analysis of the data and more applicable insights. As well, the framework has the flexibility to be adapted to various levels of experience. As was the case in the participating organizations in the study, there is likely a wide variance

of experience in evaluation of Web site performance. Thus, whether an organization is further along in the implementation of a successful site performance process, as was the case of the organizations represented by the Manufacturing and Accommodation and Food Services groups, or in the beginning stages, such as those in the Health Care and Social Assistance groups, the framework provides a thorough set of processes and tools to support any level of site performance and value evaluation effort.

Implications

This research has both academic and professional implications. The study extended the work of earlier researchers, helping to shape theoretical ideas regarding the evaluation of non-transactional Web sites into practical models that may be used by industry.

Impact of the Work on the Field of Study

Building on the original work of King and Liou (2004), this study expanded the research in several ways. The author expanded the scope of King and Liou's methodology by increasing the number of industry sectors examined. In addition, in response to King and Liou's stated belief that United States corporations were further along in practices of evaluating the performance of Web sites, the author focused on large United States corporations rather than those from the United Kingdom.

The research confirmed that certain factors discovered in the King and Liou (2004) study still exist in Web site evaluation today. For example, King and Liou found that businesses must address measurement of the Web site performance both from the perspectives of their business as well as their customers. The current research found these two perspectives remain important to site evaluation today. As well, this research expanded on the topic by finding that customer viewpoint may also need to be divided

into specific segments or customer types to address accurately the evaluation needs of an organization. The research also revealed that because Web use within organizations is expanding into other areas of business operations, additional viewpoints, such as vendor perception, might need to be included in the assessment.

The current research also expanded on the King and Liou (2004) study by exploring topics that King and Liou explicitly introduced as areas to be addressed later. For example, King and Liou stated that businesses should focus on well-known concepts (illustrated in their final framework as Set A and Set B), and the more subtle items or subjective judgments (illustrated as Set C), should be introduced later (see Figure 16).

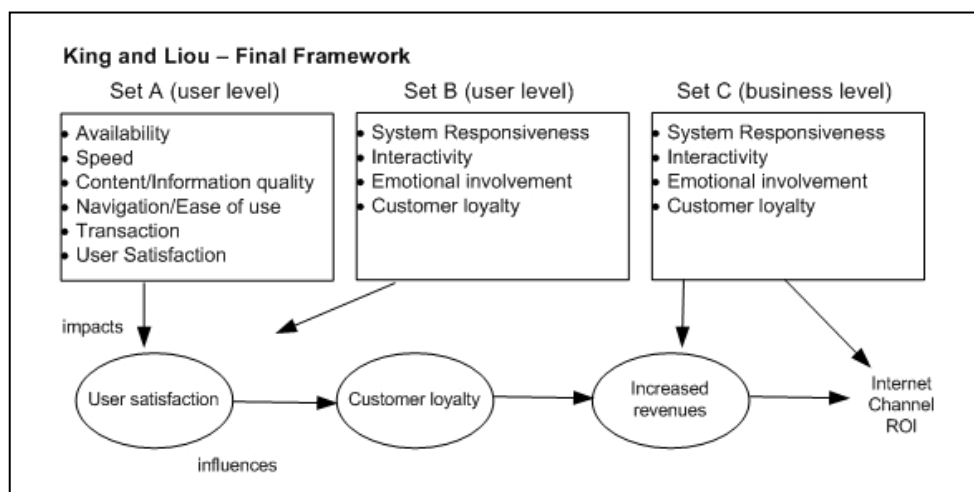


Figure 16. King and Liou’s final framework.

Note: From “A framework for internet channel evaluation,” by S.F. King and J.S. Liou, 2004, *International Journal of Information Management*, 24, p. 485. Copyright 2004 by Elsevier Ltd. Reprinted with Permission.

The current research explored these subjective judgments, specifically those related to an organization’s strategic position. The current study gathered participants’ thoughts and opinions regarding subjects such as Web site success and how they felt about measuring subjective areas of their site. This line of probing resulted in discoveries in the areas of how participants defined Web site success, their comfort levels with subjective

measurement, and the value placed on subjective measurement. This guided development of the practical framework and the decision tools, which are results in this study.

Contributions to Knowledge and Professional Practice

The outcomes of this study were a practical framework as well as several tools that corporations can use to guide their non-transactional Web site evaluation process. Included in the practical framework is a three-phase process listing specific components within each phase. As well, several decision-making tools and guides are also included. For example, during phase one of the process (Define and Agree), a diagram to guide an organization through the four components: 1) identifying whether their site is considered an expense or an investment, 2) clarifying the company's expectations of the site, 3) determining the viewpoints for Web site evaluation, and 4) identifying the purpose for Web site evaluation was developed. The decisions made in phase one sets the foundation for an organization's site evaluation efforts.

For phase two of the process (Select and Collect), the author developed tools that corporations can use to guide their selection of appropriate metrics. First is the Expectations/Evaluation Considerations Matrix, which matches the expectations established in phase one to areas of metric consideration for both business and customer viewpoints. For further guidance during the metric selection process, two diagrams containing metric examples were developed; one contains sample metrics for the business viewpoint and the other contains sample metrics for the customer viewpoint.

Recommendations

This research suggests two areas for future research. The first relates to the framework. Because the framework in this research shifted from theoretical models

identified in the literature to the development of a practical framework, future study should apply this framework and use the decision-making tools to an organization's real-world Web site. Other areas of related interest would be to compare the results of applying the framework to an organization that is more advanced in the integration of a non-transactional Web site into its business processes with an organization whose non-transactional Web site is less integrated into its business. Such a study could determine if the framework works well for both situations or if the framework and tools require tailoring to specific needs. The outcomes of this type of study could lead to further expansion in the use of the practical framework approach.

The second area of suggested research relates to the content that resides on non-transactional Web sites. The current study addresses non-transactional Web sites as a whole. Future research might investigate evaluation of non-transactional Web sites at a more granular level, perhaps examining performance evaluation approaches related to certain groups of pages within a site or even specific content types that reside on a page. This suggestion could also result in further expansion of the practical framework by providing additional components in the phases, as well as the construction of more tools and guides for organizations to use in evaluating the performance (a set of outcomes) to help determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of their non-transactional B2C Web sites.

In relation to online content, future research could explore content granularity even further by investigating the evaluation of digital content beyond the context of a Web page such as digital channels (social media and mobile) and digital devices (iPads and mobile phones). With these channels and devices integrating into the way businesses

operate, studies for how organizations should evaluate the performance (a set of outcomes) to help determine the value (the degree to which a site contributes in helping an organization achieve its business objectives) of online content that resides on these channels and devices is needed.

Summary

The demand for understanding the performance and ultimately the value of a corporation's Web site is increasing. Organizations want to know the value of the site, or the degree to which the site contributes towards an organization achieving its business goals. While progress has been made in how to measure and understand *transactional* Web sites, measuring the performance of *non-transactional* Web sites where a business provides information or content to support the business (i.e., products and services are not sold directly online) is more complex. Academic and industry literature supported the need for measuring the performance of non-transactional B2C Web sites to understand their value (DeLone & McLean, 2004; Eisenberg, 2005; King & Liou, 2004; Mason, 2007; Sterne, 2004a). Academic literature, in particular, has produced numerous models for measuring transactional or e-commerce Web sites; organizations use many of these models or variations of these models (Amit & Zott, 2001; Ho, 1997; Kim, Lee, Han, & Lee, 2002; King & Liou; Nambisan & Wang, 1999; Palmer, 2002; Peterson, 2004; Rayport & Sviokla, 1996; Schlegel & Vollmer, 2003; Skadberg & Kimmel, 2004; Teo & Pian, 2004; Torkzadeh & Dhillon, 2002). In contrast, published research for measuring the performance of non-transactional Web sites remains minimal (King & Liou).

As academic literature has begun to focus more on non-transactional components of Web site evaluation, a few theoretical frameworks have emerged; however, a practical

model for evaluating non-transactional B2C Web sites remains elusive (King & Liou, 2004; Mason, 2007). Researchers, such as King and Liou have brought together academic theoretical measurement frameworks and metrics established by Internet industry leaders to establish a rudimentary initial framework for measuring performance of non-transactional Web sites. King and Liou noted that their effort was just the beginning and that more study was required. This research continued the efforts of King and Liou by expanding the scope of their study by increasing the number of industry sectors, focusing on large United States corporations, and by collecting first-hand information from major stakeholders related to the design, maintenance, and evaluation of their organizations' non-transactional Web sites.

Fifteen participants from four organizations, with each company from a different industry group were recruited for this study. The four industry groups, defined by the North American Industry Classification System (NAICS), represented were Manufacturing, Finance and Insurance, Health Care and Social Assistance, and Accommodation and Food Services. Each of the 15 participants met the criteria established for this study. The criteria for inclusion was: 1) a major stakeholder (have an investment in or a commitment of personnel and/or financial resources related to the company's non-transactional Web site), 2) be one of at least three participants from their company, and 3) willing to have the interview recorded so it could be transcribed. Participants represented a variety of roles relating to the company's non-transactional Web site.

A 45-minute to one-hour semi-structured phone interview was conducted with each of the 15 participants. Prior to the interviews, an interview guide was developed based on

both academic and industry literature research. The guide outlined four discussion areas on which specific interview questions were based. The four discussion areas were: 1) company landscape in relation to the Web, 2) need to evaluate Web site performance to understand the value of the site, 3) considerations for evaluating Web site performance to determine the value of the site, and 4) how non-transactional Web sites are currently being evaluated, and the barriers encountered.

To ensure the objectives of the study were met, and the questions were understandable, three industry experts reviewed the guide. The researcher then piloted the interview sessions with three individuals who fit the participant profile. Revisions were made to the interview guide, based on the feedback from both the industry experts and the pilot interviews. Upon conducting the interviews with the 15 participants, the researcher compiled and aggregated the responses using a qualitative and exploratory approach described by Saunders, Lewis, and Thornhill (2003). This methodology called for responses to be grouped into themes or discussion areas.

Findings

In the first discussion area, company landscape in relation to the Web, the researcher focused on gathering what participants thought their company's corporate vision or strategy was for their non-transactional Web site and how they associated Web site initiatives with their company's business strategy. In addition, the researcher explored how participants' non-transactional Web sites were managed as well as their remembrances regarding when their company first implemented a non-transactional Web site compared to their Web site today. Regarding business vision and strategy, the researcher found the responses clustered around the following topics: 1) brand, 2)

learning about the company, 3) customer needs and experience, 4) improving process, and 5) providing information. In comparing their company's first Web initiative to the present Web site, two topics emerged: 1) organizations generally had an increased understanding of the Web and an interest in using it as a business channel, and 2) there is an increase in the volume of information and self-service tools provided on the Web. Regarding how Web initiatives were managed, three of the four organizations stated they were managed centrally and one company reported a "quasi-federation" model.

In the second discussion area, the need to evaluate Web site performance to understand the value of the site, the researcher focused on gathering participants' opinions regarding the level of importance their company placed on the evaluation of non-transactional Web site performance, participants' thoughts on where within the company the demand for evaluation originated, and how quickly results were expected. Regarding the importance of evaluating Web site performance, the responses easily split into two groups: those that believed it was important and those that did not. Those that thought Web performance evaluation was important cited the following reasons: justify spending on the site and obtain insights to make site improvements. Those who indicated Web site evaluation of a non-transactional Web site was not important expressed the following as reasons: 1) the company uses other offline mechanisms to measure their business, and 2) non-transactional Web sites are viewed as a marketing expense and considered an annual loss of money.

In the third discussion area, considerations for evaluating Web site performance to determine the value of the site, the researcher focused on gathering participants' opinions about how they dealt with measuring success for intangible matters such as customer

satisfaction. Given that the term “success” itself, can be subjective, participants were asked to define success for their Web initiatives. Responses to the definition of success ranged across a continuum, but concentrated in three areas. These three areas were: 1) present the company (the site was considered an expense and was always available to represent the company), 2) showcase the company (the site indirectly contributed to the company’s revenue by providing customers product, service, and corporate information), and 3) sell the company (the site directly contributed to the company’s revenue through activities that brokered transactions, established trust, and increased brand awareness). Regarding participants’ level of comfort about measuring subjective aspects of their non-transactional Web site, the researcher found another three topics across a continuum. The areas were: 1) not comfortable because non-transactional measurements had no relationship to the company’s revenue; 2) fairly comfortable, however, the company must accept the measurements for what they were and not project any revenue-related expectations; and 3) comfortable because they believed that even though the non-transactional measurements did not produce exact revenue numbers, the measurements could be tied to the bottom line. Last, regarding the value participants placed on non-transactional Web site measurement, the researcher identified a third three-area continuum. The areas of this continuum were: 1) no value, since results cannot be tied to revenue; 2) fairly valuable if the company can accept that there is data other than revenue that is of value to the company; and 3) very valuable since non-transactional measurements have a direct correlation to the company’s revenue.

The fourth discussion area covered how non-transactional Web sites were currently being evaluated and the barriers encountered. Regarding how Web sites were being

evaluated, participants listed a variety of tools they used for aspects such as: physical site performance (page load); page detail and trending; online surveys; usability testing; and traffic patterns to the site from online referrals such as organic search, paid search, media display, and email. Regarding barriers encountered, participants listed the following: 1) technical implementation including no easy way to retrieve data, lack of integrated data systems, poor data accuracy caused by insufficient tagging and tracking; 2) the company's inability to view the data holistically, including issues with compartmental reporting, decentralized desire for data, and not gaining a clear picture of customers; and 3) lack of expertise to interpret the data including skills to use the tools, and skills to provide insight.

Results

The results of the research led to the development of a practical framework to guide corporations in the performance evaluation of non-transactional Web sites. The framework includes a three-phase process, as well as a several tools to help guide Web site performance evaluation. The three phases of the framework process are: 1) define and agree, 2) select and collect, and 3) synthesize and respond.

The Define and Agree phase of the practical framework contains four components: 1) identify the company's Web belief system, 2) clarify the company's level of expectation for the non-transactional Web site, 3) determine which viewpoint (business, customer, or both) the company will use to evaluate the effectiveness and success of the site, and 4) identify the purpose of evaluating the performance of the Web site. These four components are decision points, not specific tactical steps, which occur in later phases.

The first component of phase one, identify the company's Web belief system is defined as an organization's opinion or position on whether their non-transactional Web site is considered an expense or an investment. The second component, clarify the company's expectations for a non-transactional Web site, directly affects the selection of metrics in phase two. The framework provides a range of seven suggested expectations plotted on a continuum and identified in Figure 9 with the letters A through G. The first expectation (A) reflects an organization's opinion regarding whether the Web site's presence has any effect on the business at all. The second expectation (B) is the perception that the site has some type of effect on the business and that the site's absence would have an impact on the company's business. The third expectation on the continuum (C) is the perception that the Web site's purpose is to represent the company in the virtual world, just as if the company's building(s) establish its presence in a physical world. The fourth expectation on the continuum (D) is the perception that the Web site's purpose is to disseminate basic information about the company. The fifth expectation on the continuum (E) is the opinion that the Web site's purpose is to initiate customer interest or perform indirect prospecting. The sixth expectation on the continuum (F) is the opinion that the Web site's purpose is to drive customers from the non-transactional site (or pages) to an online desired action. Last on the continuum (G) is the seventh expectation, which represents an organization's opinion that the Web site's purpose is to drive customers to an offline, desired action with the company.

For the third component, determine viewpoints for Web site evaluation, the framework provides two primary viewpoints for consideration: business and customer. Viewpoints are defined as a lens or filter for evaluating non-transactional Web sites. The

selection of viewpoints has a direct effect on the selection of metrics as well as the choice of measurement methods.

The last component of phase one, identify the purpose for Web site evaluation is tied closely to expectations and together provide direction for selection of metrics and data collecting techniques. Overall, the four components in phase one of the framework are intended to guide an organization in its site evaluation process, which will provide clarity for decisions that must be done in phase two.

Phase two of the practical framework, titled Select and Collect, contains two components: 1) select applicable metrics and 2) collect appropriate data. These two components are straightforward in definition; however, they should be guided by the choices made in phase one. Additional tools and guidelines were also developed to support the selection of metrics and collection of data. For example, the Expectations/Evaluation Considerations Matrix was designed to help organizations narrow their selection of applicable site evaluation metrics. The matrix classifies various evaluation considerations according to the outcomes of phase one, particularly site expectations. Since each company may have unique needs, the evaluation considerations and suggested sets of metrics are not definitive. However, the matrix is intended to provide organizations with a foundation to help them focus their evaluation efforts based on the outcomes they determined during each of the components in phase one. The matrix suggests seven metric types for the business viewpoint (site maintenance costs, traffic statistics, lost opportunity analysis, impact measures, basic visitor attributes and behaviors, referral resource statistics, and intermediate visitor attributes and behaviors) and five areas of measurement for the customer viewpoint (brand awareness

measurements, satisfaction measurements, customer stated measures, customer revealed measures, and offline behavior modeling). To provide clarity to the metric types suggested in the matrix, sample metrics for both business and customer viewpoints are also provided.

Phase three is comprised of two components: 1) analyze the data and identify insights, and 2) act upon the results. This phase addresses several barriers identified by participants in the study related to data analysis. Examples of these barriers are: 1) inability to view data holistically, 2) reporting information compartmentally and from the perspective of certain business roles, and 3) lack of proper skill sets and expertise to retrieve and interpret the data.

The intent of this framework is to prompt businesses to take a more holistic view of data evaluation and to encourage assessment of the site from a customer point of view, which should lead to improved analysis of the data and more applicable insights. Whether an organization is further along in the implementation of a successful site performance process as the organizations represented by the Manufacturing and Accommodation and Food Services groups or in the beginning stages such as the Health Care and Social Assistance, the framework provides a thorough set of processes and tools that support any level of site performance evaluation effort to determine the value of the site.

Appendix A

Original Interview Guide

Purpose

The purpose of this document is to guide the flow of the conversation. During the course of the interview, the researcher may vary the order of the questions or ask additional probing questions to help the flow of the discussion as well as to get the interview participant to elaborate on a specific response.

Welcome

- 1) Thank the participant and introduce yourself.
- 2) Communicate the length of the interview: maximum 1 hour.
- 3) Mention that you will be taking notes and ask for permission to record the conversation for transcription purposes. If permission is given, begin recording.
- 4) Describe the purpose: to get as much input as possible from the participant.
- 5) Provide an overview of types of questions:
- 6) Ask if the participant has any questions.
- 7) Begin.

Questions

Company Background

- 1) Brief description of the company
- 2) Industry the company is in.
- 3) Markets the company serves.
- 4) Number of employees at the company.

Personal Demographics

- 5) How many years have you been with your company?
- 6) Briefly describe your role with your company.
- 7) Briefly describe your involvement and responsibilities in relation to your company's Web site(s).

Company Landscape (in relation to the Web)

- 8) What is your company's corporate vision or strategy for your Web site?
- 9) How is each of your web initiatives tied to a corporate strategy?
- 10) How has your company adapted traditional business environment to an online environment?
 - a) What were some of the issues that had to be resolved?
 - b) What were some of the surprises?

- 11) Describe what has changed in your company since the implementation of the company's first Web initiative compared to now.
- 12) How are your company's Web initiatives managed? (centralized/decentralized; developed internally or use external resources)
- 13) Describe the business case that was made for justifying starting each of your Web initiatives?

Need to Evaluate Web Site Performance

- 14) What would you say is the economic value of your web initiatives? Do you feel your company's leadership can state the economic value of your Web initiatives?
- 15) How important is it to your company to evaluate the performance of your Web site?
- 16) From where has the demand for Web performance evaluation been driven (top down, bottom up, etc.)? Who is pushing for performance evaluation?
- 17) How tolerant is your company before they want to see your Web site produce results (short-term goals, quick wins)?

Considerations for Evaluating Web Site Performance (aspects/categorization)

- 18) How would you describe your company's Web presence today?
 - a) Describe your Web presence using one of the following levels (Teo & Pian)
 - Level 0 – email Adoption**(company engages in electronic connectivity with customers and business partners through email; company does not have a Web site)
 - Level 1 – Web presence** (own a domain name, implementation of a site is still in progress or a minimal site exists providing no more information than can be found on the company's brochure; site is not tied to a business strategy)
 - Level 2 - Prospecting** (Web site is used in a limited fashion, offering customers basic product information and news; the site is rarely tied to the company's business strategy)
 - Level 3 – Business Integration** (company Web site is incorporated into the business model and business processes and the objectives of the site are related directly to the company's business strategy; sites typically contain cross-functional links between customers and suppliers)
 - Level 4 – Business Transformation** (company focuses using the Web site to transform the overall business model throughout the organization; focus is about building relationships and seeking new business opportunities)
 - b) Which business process best describes the purpose of your Web site (Nambisan & Wang; Ho)
 - Information ace, provision of information
 - Work collaboration
 - Core business transactions, processing of business transactions
 - Promotion of products and services

c) How would you describe how your customers use your Web site? (Schlegel & Vollmer)

Community
Information
Service
Commerce.

How Web Site Performance is Currently Being Evaluated and the Barriers Encountered

- 19) When implementing your first attempt at evaluating your Web efforts, what were the most difficult problems your team encountered?
 - a) How were they resolved?
- 20) What issues when evaluating your Web efforts have had the greatest potential impact?
 - a) How was this issue handled?
- 21) How have you tracked or measured the success of your Web initiatives?
 - a) What tools do you use?
 - b) What process do you use?
 - c) On what types of things do you gather information?
 - d) Who uses this information?
 - e) How is the information used?
 - f) Who interprets the data (roles)?
 - g) How is the data interpreted?
- 22) What frequency do you measure your Web initiatives?
 - a) Is it calendar driven (quarterly, monthly, etc.) or event driven?
- 23) How often do you report measurement or success information to your top leaders?
- 24) Describe areas of your Web initiatives that have been the most difficult to measure or gather data about.
- 25) How do you deal with measuring success for intangible or subjective things (e.g.: customer satisfaction, return on investment)?
- 26) How do you define success for your Web initiatives?
- 27) How do you measure success for your offline initiatives?
- 28) What decisions or changes have you made because of findings from success measurements?
- 29) Who (describe their roles) are your true champions for your company's Web initiatives?
 - a) How do they provide support?
 - b) What do they not provide that you wished they did?
- 30) Describe how your top leaders are involved with your Web initiatives.
- 31) How much do you think the top leaders in your company understand about the Internet?

Wrap Up

- 1) Thank the participant.
- 2) Ask the participant if he or she has any questions. Are there any questions we missed?
- 3) Ask for permission to call or e-mail with follow-up questions, preferred medium, etc.

- 4) Ask if interested in seeing the results when the study is finished.
- 5) Thank the participant again.
- 6) Stop recording.

Appendix B

Revised and Final Interview Guide

Purpose

The purpose of this document is to guide the flow of the conversation. During the course of the interview, the researcher may vary the order of the questions or ask additional probing questions to help the flow of the discussion as well as to get the interview participant to elaborate on a specific response.

Welcome

- 1) Thank the participant and introduce yourself.
- 2) Communicate the length of the interview: maximum 1 hour.
- 3) Mention that you will be taking notes and ask for permission to record the conversation for transcription purposes. If permission is given, begin recording.
- 4) Describe the purpose: to get as much input as possible from the participant.
- 5) Provide an overview of types of questions:
- 6) Ask if the participant has any questions.
- 7) Begin.

Questions

Company Background

- 1) Brief description of the company
- 2) Industry the company is in.
- 3) Markets the company serves.
- 4) Number of employees at the company.

Personal Demographics

- 5) How many years have you been with your company.
- 6) Briefly describe your role with your company.
- 7) Briefly describe your involvement and responsibilities in relation to your company's Web site(s).

Company Landscape (in relation to the Web)

- 8) What is your company's corporate vision or strategy for your Web site?
- 9) How is each of your web initiatives tied to a corporate strategy?
- 10) Describe what has changed in your company since the implementation of the company's first Web initiative compared to now.
- 11) How are your company's Web initiatives managed? (centralized/decentralized; developed internally or use external resources)

- 12) Describe the business case that was made for justifying starting each of your Web initiatives?

Need to Evaluate Web Site Performance

- 13) How important is it to your company to evaluate the performance of your Web site?
 14) From where has the demand for Web performance evaluation been driven (top down, bottom up, etc.)? Who is pushing for performance evaluation?
 15) How tolerant is your company before they want to see your Web site produce results (short-term goals, quick wins)?

How Web Site Performance is Currently Being Evaluated and the Barriers Encountered

- 16) When implementing your first attempt at evaluating your Web efforts, what were the most difficult problems your team encountered?
 a) How were they resolved?
 17) How have you tracked or measured the success of your Web initiatives?
 a) What tools do you use?
 b) What process do you use?
 c) On what types of things do you gather information?
 d) Who uses this information?
 e) How is the information used?
 f) Who interprets the data (roles)?
 g) How is the data interpreted?
 18) How often do you report measurement or success information to your top leaders?
 19) Describe areas of your Web initiatives that have been the most difficult to measure or gather data about.
 20) How do you deal with measuring success for intangible or subjective things (e.g.: customer satisfaction, return on investment)?
 21) How do you define success for your Web initiatives?
 22) How much do you think the top leaders in your company understand about the Internet?

Wrap Up

- 1) Thank the participant.
- 2) Ask the participant if he or she has any questions. Are there any questions we missed?
- 3) Ask for permission to call or e-mail with follow-up questions, preferred medium, etc.
- 4) Ask if interested in seeing the results when the study is finished.
- 5) Thank the participant again.
- 6) Stop recording.

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