REDESIGNING THE CORPORATE WEBSITE

Review of Literature

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Any time there is change, there is opportunity, so it is paramount that an organization gets energized rather than paralyzed. *~Jack Welch, CEO, General Electric*

SUMMARY

❶ Internet Synopsis
❷ Canadian Statistics
❸ Health Websites

The growth and development of the Internet has brought with it an ever increasing number of health websites. Web users have unlimited options when it comes to accessing health information on the Internet. However, not all health information presented on the World Wide Web is valid, reliable, accurate or timely. Therefore, it is imperative that government funded health institutions direct the resources necessary to correctly inform their community on local public health issues.

This review of literature was written for the management team of the Windsor-Essex County Health Unit. This is the first paper of five, explaining the immense potential a well planned corporate website could have in promoting and protecting health in Windsor-Essex County. The information provided in this report was based on a review of literature on health information and the World Wide Web. The authors have divided the information into three summarized sections.

1 Internet Synopsis

The Internet is a worldwide-interconnected computer-based information network that may link tens, hundreds, or thousands of computers, enabling them to share information and resources (Microsoft Encarta, 2000). This digital infrastructure is based on a client-server architecture between computers, where some computers act as information providers (servers), while other computers

act as information receivers (clients). This digital infrastructure is providing users with many new options in communications (e-mail & chat rooms), entertainment (videos & music), information gathering (database access), and marketing (e-commerce & corporate branding) (Boston Consulting Group, 2000), which grew from the Internet's original purpose.

During the 1960s, the Advanced Research Projects Agency (ARPA) developed the first-ever computer-based information network called ARPANET in the United States (Microsoft Encarta, 2000). Working under contract for the U.S. Department of Defense, ARPA initially connected computers at the Stanford Research Institute in California, the University of California at Los Angeles (UCLA), the University of California at Santa Barbara (UCSB), and the University of Utah. Scientists built ARPANET with the intention of creating a network that would still be able to function efficiently if part of the network was damaged. This was very important to the military because they were studying ways to maintain a working communications network in the event of a nuclear war.

In the 1970s, more and more universities and institutions were connecting to ARPANET. Because of the increasing number of users on ARPANET, a standard for data transmission over the network was necessary. To meet the needs of a data transmission standard, computer scientists developed the Transmission Control Protocol (TCP) and Internet Protocol (IP). TCP/IP is a packet-switching system that allows all data to be transmitted over the Internet. Data is divided up into small units of information called packets, each of which is labeled with a unique number indicating its place in the data stream and the flow of information between computing devices. When the various packets that make up a set of data arrive at their destination, they are re-assembled using the unique labels given them. If part of the network malfunctions, packets are rerouted so that they travel over functioning portions of the network. Also, if any data goes missing in the transmission, an automatic request will be sent to the source asking it to re-send the packets.

Although the Internet was originally designed as a communication and research tool for academic and military purposes, this radically changed with the introduction of the World Wide Web. In 1989, computer scientist Timothy Berners-Lee introduced the World Wide Web (WWW) to aid communication between physicists who were working in different parts of the world for the European Laboratory for Particle Physics (CERN). WWW is a set of programs, standards, and protocols governing the way in which files are created and displayed on the Internet. Before the introduction of WWW, various standards and types of software existed for transferring data over the Internet, with many of them still in use, such as Telnet, File Transfer Protocol (FTP), and Gopher.

WWW standardized the way information could be displayed on the Internet and allowed a large number of users, who were not part of the scientific or academic community, to begin to use the Internet. Due in large part to its ability to easily handle multimedia documents, WWW became the standard to display information on the Internet because individuals, institutions and industries could now display complex information in a user-friendly graphical interface, making surfing the Internet and finding information much easier for users. The introduction of web browsers, such as Microsoft Internet Explorer and Netscape Navigator also allowed more users to surf the Internet. In March 2002, it was estimated that the average number of users on the Internet who log on from home was 447 million people worldwide per day (Nielsen-Netratings, 2002), with Canada representing a large portion of that Internet surfing community.

2 Canadian Statistics

Canadians are surfing on the Internet in record numbers. IDC Canada (2001) discovered that in terms of percentage of a country's population that uses the Internet, Canada ranked number one in the world with half of all Canadian households having at least one member regularly riding the information highway from one location or another. Further studies showed that the biggest proportion of Web surfing occurred at home with a jump from 29 percent in the year 1997 to 40 percent in the year 2000 (Dickinson and Ellison, 2000), with predicted increases to level off in 2004.

Access to the Internet has historically been dominated by higher-income households or households whose members had higher levels of education (Dickinson & Ellison, 2000). However, the segment of the population, with the greatest increase in Web use from 1997 to 2000, was among lower income households who had children. The Internet penetration rate was 59%, which compared to the overall population was 41.8%. The following table is the breakdown of Internet penetration rates, by location of use and family use.

Table 1.0 - Internet Penetration Rates By Location of Use and Family Type

	Home			Work			School			Other			Any Location		
	1997	1998	1999	1997	1998	1999	1997	1998	1999	1997	1998	1999	1997	1998	1999
									%						
All Households	**16.0**	**22.6**	**28.7**	**19.9**	**23.3**	**21.9**	**9.4**	**12.1**	**14.9**	**6.3**	**6.9**	**8.4**	**29.4**	**35.9**	**41.8**
SF, children	21.7	31.0	40.6	26.0	30.0	30.0	16.5	22.8	30.3	9.7	10.2	13.2	38.2	7.6	59.0
SF, no children	15.5	22.5	28.3	18.8	22.4	20.6	6.5	8.4	9.0	4.9	5.5	5.9	27.7	34.2	38.7
One-person	7.1	10.5	12.6	11.5	14.3	12.5	2.3	2.2	2.7	3.5	3.7	5.0	16.5	20.4	22.1
Multi-family	24.6	26.2	36.7	27.7	28.3	27.0	15.8	14.5	21.9	11.0	11.8	15.2	43.7	45.5	55.1

SF= Single-family household. "Children" refers to unmarried children under the age of 18 living at home,
Source: Dickinson & Ellison, 2000

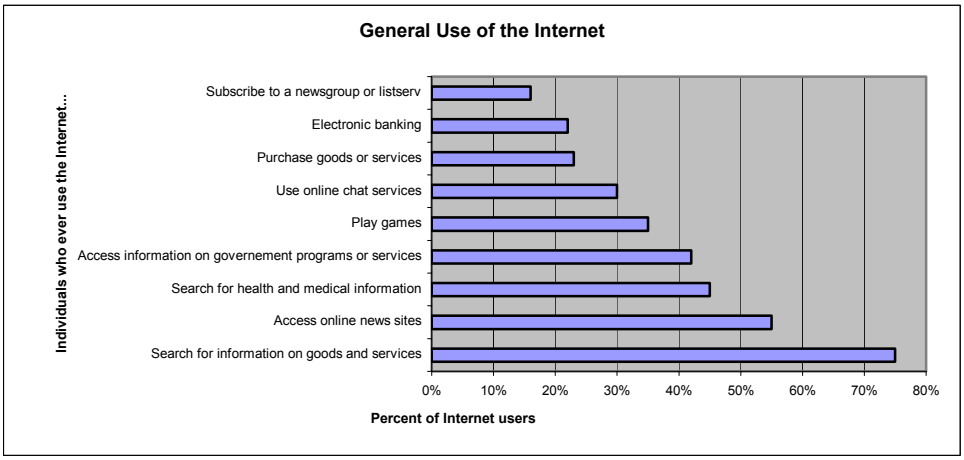
Older adults are also getting connected. They make up the fastest growing PC-user market for the intent of surfing on the Internet (Jaffey, 2001). In comparison, the segment of the population with the greatest access to the Internet is Canadian children.

Between 1997-1999, an estimated 82% of all Canadian children between the ages of 5-18, regardless of family income, had access to the Internet. Broken down, children between the ages of 5-9 (48%), 10-14 (93%) and 15-18 (96%) have access to the World Wide Web. Simply put, web surfing in Canada is increasing in popularity in all segments of the population. Roughly thirteen million Canadians (53%) surf the Internet on a daily basis, including close to half of the population in Windsor-Essex County.

In Windsor-Essex County, Web use for area residents took its biggest jump ever in the year 2000, with 47.5% of all households having at least one member regularly riding the information highway. Local Web penetration rates jumped from 25.5% in the year 1997 to 47.5% in the year 2000 (Beauchesne, 2001), and these numbers are predicted to continue to rise as new technologies make it easier for people to access information and become more affordable.

There are 166,409 people living in Windsor-Essex County that regularly ride the information highway. Based on the number of Windsor-Essex County residents on the Internet and the general use of the Internet by Canadians, a well-planned website should be a core function of any Canadian organization that: 1) offers products or services, 2) promotes news worthy topics, 3) works in the health and/or medical industry or, 4) is a government agency.

Figure 1.0 – General Use of the Internet



Source: Dryburgh, 2000

Dryburgh (2000) indicated that 75% of all Web surfers searched the Internet for information on goods or services. The second most popular search topic on the Web was accessing online news sites, such as those offered by newspapers or other news providers (55%). Male web users are much more likely to go online for this purpose than women (62% versus 48%), however women are much more likely than men to search for health and medical information (52% versus 41%).

Of those looking for health information on the Web, the largest percentage said that they visited Health Canada's site (36%). Other health websites visited were commercial health websites (32%), professional health association sites, such as other non-profit health agencies and universities (around 25%) and other government sites for health information (16%).

The fourth most popular search topic on the Web was accessing government programs and services, with 42% of those surveyed indicating that they had surfed the Internet for such information. The statistics are portraying a clear picture. The majority of Canadians are surfing the Internet for information on goods or services, news, health, and government programs and services. As a nation, we are getting connected, and the federal government of Canada is facilitating the process.

The federal government of Canada has invested 1.9 Billion dollars in Internet innovation and infrastructure and is continually investing in Internet technology (Boston Consulting Group, 2000). The federal government is not only investing in Internet technology, but they have publicly stated that by the year 2004, all of their services will be up and running on the World Wide Web and all communities in Canada will have broadband Internet access (Boston

Consulting Group, 2000). The reason why the federal government is investing so heavily in Internet technology is because it dramatically improves an organization's ability to develop and act on strategic opportunities (Gates & Hemingway, 1999). Today's digital economy is predicated on gathering, managing, and using information more effectively and efficiently to reach clients and/or customers. This strategic direction includes public health organizations.

Public health is an "information-intensive industry that is dramatically under-invested in information capabilities. The web offers rapid, versatile, inexpensive communications and information exchange" (Fotsh, 1996). The web also offers empowerment through information and building community participation (Robertson & Minkler, 1994), both of which are core principles of public health. However, we need to plan on avoiding the mistakes of other health websites.

3 Health Websites

Most health websites fail to match the customer's viewpoint by using technical jargon that is cryptic and paradoxical (Stateman, 2001; Joubert, Fieshi & Fieshi, 1998 & Kim & Kelly, 1996) or use complex designs that only make sense if you understand an organization's hierarchal chart (Rudolph & Quade, 1998 & McGrath, 1997). Customer-driven health websites need to provide the user with the opportunity for interaction and to make contributions, while allowing organizations to monitor trends, provide pertinent information to the end-user and increase the probability of developing long-term successful marketing strategies (McMillan, 1999). Designing a customer-driven website is like "putting a meal together, you want to impress your guest with an abundance of dishes, but you don't want to overwhelm them so that they can't find what they want" (Klein, 2001, p.36). You want to emphasize things over concepts and emphasize simple concepts versus complicated, convoluted or institutional ones. The top ten mistakes in web management are:

1. Not knowing why you are building the site.
2. Designing a website for management and not the customer.
3. Letting the site structure mirror your organizational chart.
4. Outsourcing to multiple agencies.
5. Forgetting to budget for marketing & maintenance.
6. Treating the web as a secondary communication medium.
7. Wasting linking and affiliate opportunities.
8. Treating the Internet and Intranet as the same thing.
9. Not testing and evaluating the website and budgeting time for maintenance.

10. Underestimating the strategic impact of the web (don't just treat it as a virtual pamphlet, it is a new way of providing information to clients.)

Source: Jakob Nielsen, 1997

The secrets to a successful health website are 1) content, 2) usability, and 3) accessibility.

CONTENT

When writing website content, it should be written so that the reader gets the information as quickly as possible, because online reading is really only a form of scanning (Tittel, Pitts, & Valentine, 2000). What makes good print content does not always make good web content. Website authors need to write short sentences and paragraphs, have minimal jargon and language and the information needs to match language, logic and experience of each target group (Oermann & Wilson, 2000). No matter how useable or accessible a website is, without great content, people will not return. Two key elements to creating great content are the uniqueness of the information and how often the information is being updated (Tittel, Pitts, & Valentine, 2000). Static sites that do not change or do not have unique characteristic will not entice web users to return. Appendix A is a detailed checklist on website content, describing how health organizations should write for their website, which was presented to most departments in the Windsor-Essex County Health Unit.

USABILITY

Web usability focuses on the design and structure of the entire website.
The ease of learning, the efficiency of use, the error frequency and severity and the subjective satisfaction of a web user's experience need to be considered when designing a corporate website (The Health Communication Unit, 2000). If users can't find what they are looking for within 3 clicks, they will not return to your site and will go elsewhere for the information. Web design is very different from print design. Print material is based on letting the eyes walk over the information, selectively looking at information objects and using space to make page elements enhance and explain each other. Web content functions by letting the hands move over the information (by scrolling and clicking), where information relationships are expressed through interaction and user movement. It is important not to confuse market research and usability engineering. The only way to evaluate the usability of your corporate website is to conduct research. Market research does assist with usability, but it should be predominantly used for the development of content and accessibility of the website.

ACCESSIBILITY

Web accessibility focuses on the user and the technical components of the website. The user's browser & plug-in compatibility, modem speed, search engine retrieval success rate, server capabilities and the users demographic and psychographics need to be considered when designing a corporate website that

is accessible for all populations (The Communication Health Unit, 2000). Web design based on market research and proper planning should account for accessibility issues.

The Communication Health Unit (2000) indicated that usability and accessibility are to websites, what reliability and validity are to research. If your website is unusable, inaccessible and provides poor content, your organization will have a serious customer relationship problem. Disgruntled web users will not return to the website and they will not hesitate to tell their friends, family and co-workers about their negative experience on the website, negating short term and long term corporate marketing strategies. An organization has to provide the leadership necessary to carefully plan, market, maintain and evaluate their website. The website is an expression of your organization, what would you like it to say?

Next Papers

Paper #2 – Results of Internal Focus Group Testing

Paper #3 – The Website Development Plan

Paper #4 – The Website Marketing Plan

Paper #5 – Results of General Population Focus Group Testing

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Appendix A

Website Content

Based on 2 Checklist for Health Content on the Internet (Canadian Health Network Quality Checklist & Health On the Net Code)

Know thy Audience – The residents of Windsor-Essex County are our audience and this means that your content needs to have a local focus to it. However, within Essex County, there are always some subgroups. You need to determine your target market and what messages they will likely respond to. Always think of the audience and put a local spin to the service so that people feel a connection to the content.

Organize content – Just like any document you need to create an outline. Consider these pointers:

- List the topics and major elements in your document.
- Identify the relationship between your main topics; make notes on what other information sources on the Web may enhance them.
- Experiment with the order of topics till you find the clearest and most engaging sequence.
- Assess possible uses for graphics, sound or other multimedia; pare them down later to no more than the essentials.
- Consider what visual cues could help your users read and navigate your document (remember, go easy on the graphics where possible).
- Think of the outline as a blueprint that you'll come back to as you construct the document.

Title
- **Catchy title**
- **Main graphic**

Body
- **Compelling introduction**
- **Text and primary links.**
- **Secondary links**

Footer
- **Author**
- **Date last revised**

- **Link to home page**
- **Copyright & URL**

Catchy titles - Your title shows why users should look at this page. Do not use jargon. Catchy titles can also bring people to our site even if we are the last website listed on a search engine. Titles are the most important text in your web page because they are the first things that people notice. If you do not have an attractive and instantly informative title, users won't click on it. Use your imagination and keep your audience in mind when developing titles.

Appropriate images & logos – Do not use more than one image and/or one logo per web page because they take a long time to load and should always be used sparingly. If the web page takes longer than 30 seconds to download on a 28 K modem, people will not bother opening it up. Also the logos and images need to correlate to the content. So, if you are just putting an image to fill space, we should not post it. This is not a contest to post as much stuff as you can. Remember, white space is always a good thing in design.

Compelling introduction – Include information that tells the user why your page is important, what it contains and how the information is broken down. Always start with the most important information at the top of the document.

Be succinct with your text - By definition, online reading means keeping your online writing succinct. Write and design for scanning: don't require users to read long continuous blocks of text. If you have too much information, use hyperlinks to split up information on multiple pages. Your job is to give your readers the information as quickly as possible. Help them cut to the chase by using – lean, informative text and consider the use of tools like hyperlinks or hypermedia (MP3s, MPEGs, PDF, etc. …). One good presentation rule is: "One slide for every 3 to 5 points." The same holds true for web pages; you should not have more than 3 to 5 short, well-written paragraphs. The result will be a reader that will probably scan the entire document and return to the site.

Building strong paragraphs – A great tip for writing for the web is to write one paragraph at a time as if it were separate units of composition. Then, omit needless words. Don't get rid of all the details, just scrutinize your paragraphs. Follow these 7 steps to build better paragraphs:

1. Create an outline for your information.
2. Write one paragraph for each significant point; keep the sentences short, direct, and to the point.
3. Edit your text mercilessly, omitting all needless words and sentences.
4. Proofread and spell check.
5. Ask for volunteers to evaluate your work, preferably individual's who have no knowledge of your topic.
6. Revise your text and then re-edit it as you revise it.
7. Solicit comments when you publish a page.

If you can't place all the information in a paragraph, simply put it in a list. Just make sure you use the KISS principle (Keep It Simple, Sillyhead).

Hyperlinks – Break down information into different web pages. You rarely create a stand-alone web page with all the information on one page. Take advantage of HTML because you aren't forced to go in a linear pattern. Many pages can be linked together; you just need to keep track of all the relationships. Note: The more scrolling required, the slower the experience of reading your Web page becomes. Your user will probably fly away to less wordy climates.
Hyperlinks should only be added to a web page if the:

- Link is a relevant source of information and it enhances our sites content;
- The information on the hyperlink is NOT a duplication of the content on our site and;
- The author provides the hyperlink (www.wechealthunit.org), a description of where the link is to (The Windsor-Essex County Health Unit, the Windsor-Essex County public health agency) and why (because we are the leading public health agency in Windsor-Essex County).

Footers – The following information should be provided in the footer.

- The author and his/her position in the organization.
- Source of information.
- Customer support - Please provide customer support for the user. An e-mail address, telephone number and mailing address should always be provided. Also, same day e-mail or phone replies take customer service to the next level.

REMEMBER:

Caution statements - Make sure that you put clear caution statements about a service or program. For example, if you are promoting a physical activity, you might want to recommend that individuals consult their family physician before starting an exercise program.

Transparency of authorship – The authors need to make sure that the content they provide is suitable for the audience. If the author is promoting an event, there needs to be transparency of sponsorship. If you are promoting an event, make sure you let the user know your involvement**.** Also, **NEVER** belittle or pass judgment on the user. Be honest about your point of view or look at both sides of the issue. Would you take advice from someone who told you that your behaviour, lifestyle or decision-making process is flawed? We should write in a manner that gives the surfer information that is neutral and does not pass judgment. If you are going to assign a stigma to a group make sure that there is transparency of authorship.

Interactivity – Taking static information and turning into dynamic information can take a website to the next level of customer-organization relationship, however consideration of the return on investment (time, money and energy) should take place before development of interactive tools begin. Ideas like an online calculator, feedback forms,

online surveys, flash or shockwave animation, chat rooms or video games always take time to develop, maintain and evaluate.

A teaser - A statement of upcoming information is a good idea to bring the customer back. We want the user to be tempted to return in the near future. For example, if you enjoyed this article on *10 tips to having a safe picnic,* please revisit our site next week when we will highlight the *5 safest beaches to swim in Windsor-Essex County.*

Connect people – Attempt to connect people with other people that have similar concerns. For example, if you are talking about the smoke-free restaurants, you could point to public to the known smoke-free restaurants, or have a map that includes all the smoke-free restaurants. Another example would be to put testimonials on your site. For example, – Paul D., a restaurant owner in Leamington, wrote that the health unit staff that worked with him was; "… pleasant, honest and answered all of my questions. She was great!"

Big picture - Make sure that the content reflects a broad view of health and supports numerous activities. Think about the Health Unit's mandatory programs and service guidelines and beyond, taking into consideration the other needs of a customer. Look at what our partner agencies are doing that may provide the service that the web user is looking for and we can provide a hyperlink to their site. Also remember that health goes beyond lifestyle & medical issues and includes:

- Social support
- Amount of control we have over our lives
- The quality of our lives
- The environment we live in

Timeliness - Do not wait a week to respond to news stories or post information at the last minute. Everyone should strive to respond to stories within 24 hours of release and should give the web designer ample time to post and test pages.

Benefits – Think of the website in terms of an extension of your programs and services and not as an additional responsibility. If you just throw the content together, it will be apparent to the end user and he/she will not return to the website. The World Wide Web has many advantages; here are some of them:

- Enhance current campaigns, programs or services.
- 2-way communication - instant feedback from users.
- Reduce printing & mailing cost – all printed materials available online.
- Build a consistent and reliable brand identity.
- Reduce staff time answering frequently asked questions.
- Build a solid client base with demographic profiles.
- Easier to evaluate campaigns, site efficiencies and problems in organizational content.
- The only staff member that works 7 days a week, 24 hours a day at relatively no cost.
- Connect people to community groups with similar interest