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**HARNESSING WEB 2.0 FOR BUSINESS TO BUSINESS
MARKETING - LITERATURE REVIEW AND AN EMPIRICAL
PERSPECTRIVE FROM FINLAND**



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Harnessing web 2.0 for business to business marketing - Literature review and an empirical perspective from Finland

Abstract

The purpose of this report is to round up current literature and other published sources on harnessing web 2.0 for business-to-business marketing and add an empirical perspective on the subject from Finland. Web 2.0 means technologies that enable users to easily communicate, and organize, create and share content. By web 2.0 tools, we mean blogs and podcasts, social networks, communities, content aggregators and virtual worlds. Based on the literature review we present pros and cons of every tool for marketing purposes. Among the examined Finnish industrial firms the utilization of web 2.0 is still low, but blogs, wikis and video sharing raised some interest. Overall, web 2.0 provides firms with benefits still largely unexplored, and we believe that the importance of internet marketing will continue to grow.

Key words: Web 2.0, Internet, Business to business marketing, Industrial marketing

Space does not permit the authors to name all the interviewees and the members of the DECCMAC project group who were of such help to them, but they would like to thank all involved. We also wish to convey our thanks to Tekes.

Executive Summary

Web 2.0 means technologies that enable users to communicate, create content and share it with each other via communities and social networks easier than before, and to have real life experiences in virtual worlds and to organize content on the internet with content aggregators. The number of web 2.0 users has been growing so rapidly that it has become an important channel for marketers to reach their customers. As B2C companies have already managed to create successful web 2.0 campaigns B2B marketers have also begun to investigate how to harness web 2.0 in their marketing efforts. In addition, B2B buyers are already using the internet as one of their main sources for information gathering. Hence, it is important to B2B marketers to be present in those channels where their customers are. Benefits and difficulties of using web 2.0 tools based on the literature review are summarized below.

<ul style="list-style-type: none"> + Strengthening and expanding customer relationships, + Brand building + Lead generation + Employee communications, + Enhancing communication in partnerships + Enhancing communication in R&D + Demand generation 	<ul style="list-style-type: none"> - Lack of support by top management - Lack of metrics of measuring effectiveness of web 2.0 marketing - Technical challenges if marketers do not know how to utilize different web 2.0 tools - Maintaining web 2.0 tools demands commitment to continuous content generation and maintenance and it takes a lot of time and effort to maintain the chosen marketing strategy
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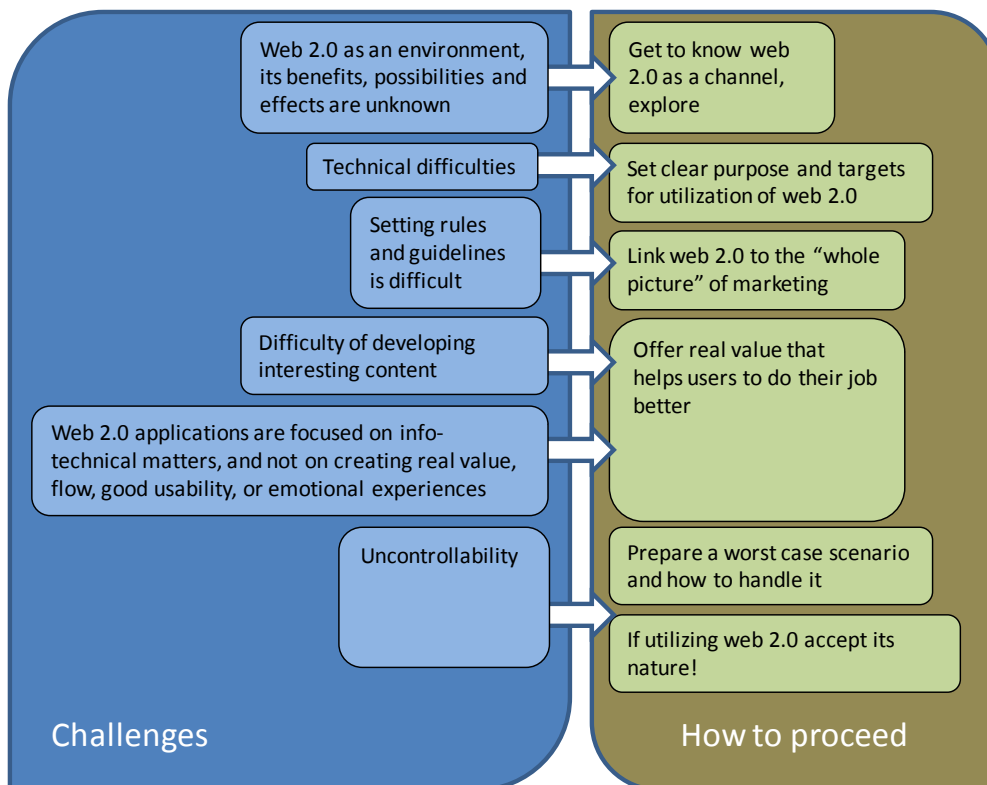
Web 2.0 tools can be grouped into blogs and podcasts, social networks, communities, content aggregators and virtual worlds, which all have different pros and cons.

Tool	Use	Strengths	Weaknesses
Blogs and podcasts	Informing of current events and new products	Easy and cheap tool to maintain	Requires time and constant updating
Social networks	Content sharing, creating and maintaining relationships	Easy to set up a profile, possible targeted advertising	How to persuade users to participate?
Communities	Maintaining customer relationships, brand building	Intense two-way communication	Requires lots of resources to maintain
Content aggregators	Informing of new products	Easy to use	Content needs to be interesting enough to be tagged
Virtual worlds	Maintaining customer relationships, brand building	Engaging customers effectively	Requires lots of resources to maintain; inducing users to participate

Only one-third or less of B2B marketers has used web 2.0 tactics in their marketing mix. Based on the interviews made for this report, the utilization of web 2.0 for marketing seems to be low among Finnish industrial firms too. Some firms had utilized video sharing sites, but more on ad hoc basis. Blogs, wikis, and video sharing were seen as the most interesting options for industrial firms. An expert opinion was that perhaps the most suitable web 2.0 tools for industrial marketing are online communities, where a firm can contribute to brand building, have direct interaction with customers and other stakeholders, gain valuable information and provide services. Communities were not, however, an appealing alternative for firm interviewees, because hosting a community requires more work than benefits and community's targeting power was considered low.

<i>Web 2.0 Tools</i>	<i>Usage among six examined firms</i>
<i>Blogs</i>	One firm has a (unofficial) management level blog, one is preparing a video blog, one is planning an internal blog or a blog to existing customers. Three firms have none.
<i>Podcasts</i>	One firm has its CEO's letter in webcast format (but there is no commenting option) and has done pilots for online teaching. Five firms have none.
<i>Social networks</i>	Four firms have unofficial groups in Facebook for internal networking. One has more official Facebook group but does not know yet what to do with it. One firm has none.
<i>Online communities</i>	One firm has done some advertising in industrial communities and joined some communities and directories. One has used communities to search information of other firms and customers. Three firms mention that customer extranets are the most important online communities for them. One firm mentions nothing.
<i>Content communities</i>	One firm had official and one had unofficial YouTube videos. Two firms plan to build a wiki and one has tried to contribute to existing ones. One firm has none.
<i>Forums</i>	Not participated or utilized actively, even though one firm takes part in some professional forums.
<i>Content aggregators</i>	One firm builds a mash-up for their website and three firms offer RSS feeds.
<i>Virtual worlds</i>	One firm is interested in social bookmarking.
	Not utilized.

Interviewees understood the benefits of web 2.0, but could not directly relate them to their business, which was one of the major obstacles for web 2.0 utilization. Firms were afraid of the uncontrollability of online discussions, negative word-of-mouth and losing confidential information. Because of the huge number of web 2.0 users and its benefits, using web 2.0 for marketing is however expected to increase. The report presents the main obstacles for web 2.0 implementation, how to cope with them, and challenges related to fundamental characteristics of web 2.0. Many interviewees thought web 2.0 inapplicable for industrial marketing as a rule although that is not so. There seems to be a need to get to know web 2.0 as a channel better and then find suitable ways to utilize its potential benefits.



PART 1 - LITERATURE REVIEW

**UTILIZATION OF WEB 2.0 TOOS FOR INDUSTRIAL
MARKETING**

1 Introduction to the literature review

Web 2.0 means technologies that enable users to communicate, create and organize content and share it with each other via communities, social networks, and virtual worlds. Web 2.0 services are becoming popular among customers and this has brought several challenges for marketers. Today customers are highly reliant on information they receive from their peers due to web 2.0 and peer-to-peer communication online. Hence, the focus of marketing communication is no longer on one-to-many but many-to-many communication where customers communicate with each other and marketers do not have that good control over the message. In addition, media fragmentation and customers' selective attention for marketing messages and communication bring marketers the problem of how to reach their customers through online channels. However, web 2.0 tools have brought companies new ways to reach their target audience and build their brand image. Weber (2007, 22) notes that a marketer's role has changed from a broadcaster pushing out messages to an aggregator who pulls together content, collaborates with its customers and participates in communities.

Using social media and web 2.0 tools is becoming more and more popular among consumers in Finland. In spring 2008 35 % of Finns used the internet for instant messaging, 38 % for reading blogs and 30 % wrote to discussion forums and newsgroups (Tilastokeskus 2008). Similarly, B2B buyers have begun to use web 2.0 tools and they are shifting to use digital media faster than B2B marketers are adopting it (Davis Kho 2008b). While the amount of people using social media increases continuously and businesses have become interested in how to harness different web 2.0 tools for marketing activities it is evident that web 2.0 will have significant effects on business environments. Since the new generation using web 2.0 everyday will use it also in working life in one way or another, presumably web 2.0 is here to stay.

Web 2.0 is a relatively new concept and marketers are interested in its potential. To date most web 2.0 technologies have been introduced within B2C markets. However, B2B marketers are increasingly recognizing the new marketing channels web 2.0 generates and businesses aim to incorporate web 2.0 in their marketing mixes. This paper examines the main concepts and conformities around web 2.0, introduces basic web 2.0 technologies and suggests, by using real life examples, how these technologies

could be used in B2B marketing. In addition, challenges and drawbacks relating to web 2.0 are addressed.

1.1 Internet and B2B-marketing

The internet has changed communication radically in industrial marketing. As the internet has become an important source of information among third-party location information (e.g. convention and visitors bureau resources), and personal and colleagues' experiences, it has also become an important channel for communicating with customers and developing relationships because of the possibility of two-way interaction on the internet. Typically, internet marketing devices like e-marketing platforms are less expensive compared to other marketing platforms and via web channels it is often possible to reach customers that would be out of reach of physical distribution channels. Due to this Sheth and Sharma (2005) state that reducing costs and enhancing reach are primary advantages of e-marketing. However, B2B companies spend more on their online marketing budgets than B2C companies. The reason for this is a less specialized approach of B2B companies when planning e-marketing activities in comparison with B2C companies. Hence more holistic online marketing planning and prioritization methods are needed. (Bach Jensen 2006.)

E-marketing has changed the focus of marketing from a "supplier perspective" to a "customer perspective" since through the web, companies can better address the individual needs of their customers and build customers' loyalty. Due to customer data collection possibilities companies can also segment customers to financially and strategically viable groups, which allows better targeting. The value of customer input to products, i.e. co-creation in the web environment, is also emphasized. Moreover, companies allowing co-creation have an advantage when compared to firms that do not. (Sheth and Sharma 2005.)

E-marketing has brought many advantages for companies but still there remain obstacles to its effective use. Samiee (2008) highlights that while the use of the internet no longer offers a competitive advantage, not having any presence on the internet whatsoever increasingly leads to a competitive disadvantage. Typical challenges that B2B companies using e-marketing face are security issues and business conducting norms. As confidentiality of personal communications is extremely important in business marketing the potential loss of proprietary data over the internet remains a critical issue. Also conducting business via personal face-to-face communication is the

norm in the B2B environment. These issues may slow down the deployment of the internet in B2B activities.

1.2 How to be found on the internet

B2B buyers use only a few primary sources for information gathering and decision making. Due to this, B2B marketers have to understand while planning their promotions which information sources and channels are considered useful by their buyers. Enquiro Research found in its “Business to Business 2007” survey that *65% of 1000 B2B buyers start their research process with a general search engine and after that move on to B2B vertical search engines* such as Business.com and company websites when progressing to the negotiation and decision-making stages (Davis Kho 2008b). Hence, it is crucial for a company to appear high in the search results. This can be achieved using web 2.0 tactics. By blogging, sharing videos and other content, social bookmarking and networking a company can get links to search engines. These above-mentioned tactics can be classified under organic Search Engine Optimization (SEO), as good search rankings are achieved without paying for them. The best known organization that offers paid SEO is perhaps Google. Yet, other services also exist such as Overture. (Bach Jensen 2006.)

Google is currently the world’s leading search engine. In July 2006, Google Sites represented the number one European online property, attracting 156.3 million visitors (ComScore 2008). Due to Google’s vast reach potential, search engine optimization is an integral part of most businesses involved in web 2.0 since by using web 2.0 tools a company can increase its visibility in its customers’ information gathering. Google offers different kinds of services for targeted advertising based on visitors’ interests. These services are Google AdWords, Google AdSense and Google Maps. *AdWords*, i.e. sponsored links, are text-based ads that appear together with Google’s search results. In addition, AdWords appear on advertising spaces of thousands of publishers belonging to Google’s content network. These ads are shown whenever a user searches information with keywords picked by the advertiser so it offers companies an effective way to advertise their products for interested users. *AdSense* is targeted for website owners and other content creators since they can sell advertising space on their own websites. The content of the site is indexed and ads are screened to the page in accordance with the content and the interests of the page visitors. Both these services help a company to advertise to users who are looking for information concerning products and services

offered by the company. When a user searches information via Google *Maps* about a certain company, a map appears on the screen showing contacts of the company in question. (Google 2008a; Google 2008b; Google 2008c.)

Google also offers a service for measuring the effectiveness of using their services. Google Analytics is a free browser based tool for analyzing ad campaign results and website traffic. It offers over 80 different reports. Due to Google's analyzing tool it is relatively easy for companies to measure an ad campaigns efficiency and return on investment (ROI). (Google 2008a.)

Google's services are widely used by marketers and it has become one of the leading companies in the web 2.0 environment. While companies can help to increase their position in search engine results by using web 2.0 tools they can also better target their advertising with these new services by Google.

1.3 Enhancing word-of-mouth (WOM) and viral marketing with web 2.0 tools

The Edelman trust barometer (Edelman 2006) illustrates the current power of word-of-mouth (WOM) communication. Today people no longer trust established institutions and figures of authority, but instead trust their peers as the best sources of information about companies. Companies need to move away from sole reliance on top-down messages toward fostering peer-to-peer dialogue among consumers and employees and hence activate a company's most credible advocates. According to this research, trust is the key objective for global companies since it creates the base for the company's operation. A company's trustworthiness can be enhanced by being transparent and engaging multiple stakeholders into a conversation via different communication channels. Web 2.0 tools bring new opportunities for this interaction.

Since communication between users constitutes the core of social media, companies can carry out effective viral marketing activities using web 2.0 tools. Viral marketing is marketer-originated WOM communication over the internet. The reference mechanism in viral marketing is similar to traditional WOM but its special characteristics are the speed and the extent of spreading messages. The main goal is to get users to spread a marketer's message to their friends by using their own networks and to get as large an audience as possible for the message. Viral marketing messages usually consist of text and pictures so that they can catch the attention of consumers with visual appearance. Along with YouTube, viral videos have also become very popular. Users do not spread the marketer's message onwards if they do not get any benefit, or if the content of the

message is not interesting enough. Viral marketing is considered an effective form of marketing, since its effectiveness is based on the same idea as in traditional WOM - trust in the sender of the message. (Helm 2000; Turban, King, Lee, Warkentin and Chung 2002, 188; Lindgreen and Vanhamme 2005.)

On the other hand, De Bruyn and Lilien (2008) found in their research that in viral marketing campaigns, close relationships between the sender and the receiver of the message can capture recipients' attention and create awareness, but they do not influence the later stages of the decision-making process, i.e. the interest and final decision stages. This means that WOM communication might not be as effective as it is often considered to be. While viral marketing can increase attention on the product, it doesn't have a straightforward effect on sales. However, it seems that networks of friends (instead of networks of professionals and colleagues) are better suited for viral marketing campaigns, since referral mechanisms require close relationships. Interestingly this research discovered also that electronic referrals from demographically dissimilar ties had more influence at each stage of decision making than referrals from demographically similar ties. This might be explained by demographic dissimilarity serving as a surrogate measure of perceived authority, social status and information-bridging potential. This kind of behavior can be explained by the presumed expertise of the message sender.

While there are contrary opinions about the total effects of viral marketing, there are still many examples of successful viral campaigns that have managed to catch the public attention. These include the 'Will It Blend' -campaign on YouTube by Blendtec (see *Content communities*) and the Aquafina campaign in MySpace (see *Social networks*). In Finland, YouTube has been used for viral marketing successfully with music artists like *Tea Hilloste* and *Lissut* (whose music videos were huge hits on YouTube) and with the tv-show *Ketonen & Myllyrinne*. Hence, web 2.0 tools are an opportune channel for viral marketing since people tend to spread interesting content via them.

2 Web 2.0 and social media

2.1 Definition of web 2.0 and social media

Although there is no specific definition for the term web 2.0, it can be described in many ways. The term was originally coined in 2005 by O'Reilly (2005), and one can say that web 2.0 is a set of technologies as well as a new way of thinking that enables new imaginative operations and business models. Social media is a term that refers to services based on a sense of community, information generation and sharing (Hintikka 2008) and it also includes web 2.0 technologies (Kangas, Toivonen and Bäck 2007) and tools (see Figure 1). However, Constantinides and Fountain (2008) view web 2.0 as an umbrella term of web applications, including social media. *In this paper, social media is considered the new information channel on the internet and web 2.0 tools are applications for using this channel. Thus, key words of social media are a sense of community, user generated content, and web 2.0 tools, which then result in network effects, many-to-many communication and collective intelligence.*

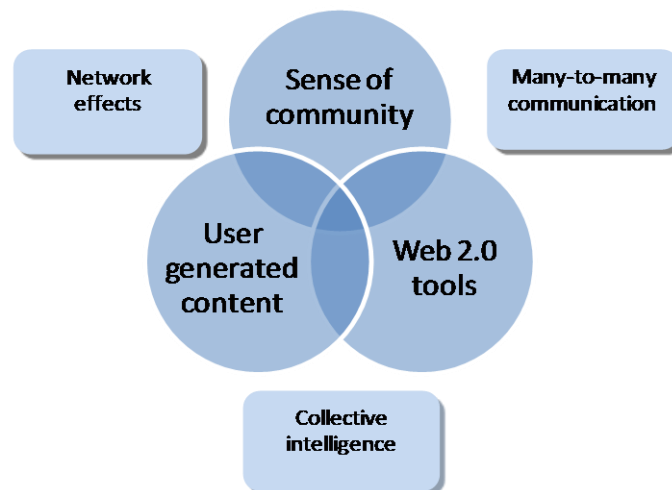


Figure 1. The formation of social media/web 2.0.

At the core of web 2.0 is collective intelligence and wisdom of crowds where users (private people, organizations) have the key role. User-generated content is the basis of the success of web 2.0 (Constantinides and Fountain 2008; Frampton 2008) since actions of users have a significant impact on the value of the service/application (Kangas *et al.* 2007). However, it is argued that some content generated by users like

anonymous amateur videos and music remixes posted to YouTube and other shared-content sites violate intellectual property rights and thus harm professional artists and the entertainment industry in general (Constantinides and Fountain 2008). Hence, copyright problems are one of the biggest issues when discussing the future of social media and the central role of user-generated content in it.

Web 2.0 tools benefit from network effects; the more people attend different communities and social networks and generate content into them, the more people are tempted to join them. Thus, network effects and peer usage are important motives for customer lock-in and loyalty. (Constantinides and Fountain 2008.) Businesses can utilize this by introducing their own communities and profiles/groups in social networks. This is discussed in chapter three.

2.2 Web 2.0 tools

Adapting a classification by Constantinides and Fountain (2008) we divide web 2.0 tools into five main categories (see Table 1).

- 1) *Blogs and podcasts*. Blogs are public diaries in the internet and vlogs are blogs in video format. Blogs are combined with podcasts or videocasts, i.e. digital audio or video that can be streamed or downloaded to portable devices.
- 2) *Social networks* are applications allowing users to build personal profiles through which it is possible to communicate and exchange content and network with other users, and maintain existing relationships with friends.
- 3) *Communities* can be divided into online communities, content communities and discussion forums / bulletin boards. *Online communities* can be formed around members' mutual interests or a certain brand / organization. *Content communities* refer to websites in which particular types of content (e.g. video or photos) are organized and shared. As wikis are software enabling multiple people to edit websites and are they are often used for content sharing (Tapscott and Williams, 2008, 18), wikis can be placed in the category of content communities. *Forums/bulletin boards* are sites for exchanging ideas and information typically revolving around special interests. They are also one form of communities because of the sense of community among members. Due to this, it is reasonable to position them as a subcategory of communities.

- 4) *Content aggregators* refer to applications that enable users to customize the web content they wish to access. These are RSS feeds (Real Simple Syndication or Rich Site Summary), widgets, bookmarks and tagging services.
- 5) *Virtual worlds* are internet sites where users communicate and interact via avatars and it is this that distinguishes virtual worlds from other social media. They are considered to be substitutes for the real world and businesses have also entered into virtual worlds.

Table 1. Categorization of web 2.0 tools.

CATEGORY	TOOL	FOCUS	EXAMPLES
1. BLOGS AND PODCASTS	Traditional blogs, vlogs, podcasts, videocasts	Informing of current events and novelties	Blogs by Dell, podcasts from interviews
2. SOCIAL NETWORKS	Social networks	Content sharing, maintaining relationships, networking	MySpace, Facebook, IRC-Gallery, LinkedIn, ITToolbox
3. COMMUNITIES	<u>Online communities</u>		
	Member-initiated	Members' mutual interests and reciprocal interaction	Communities formed around similar interests e.g. Aukea.net (photography)
	Organization-sponsored	Business transactions, brand building, interaction among organization and customers, co-creation of products	Communities by Mozilla, Fiscars, Dell and Salesforce.com
	Third-party established	Enable communication and transactions between buyers and sellers	eBay
	<u>Content communities</u>		
	Content sharing sites, wikis	Content sharing	YouTube, Flickr, Picasa, Pikeo, dotPhoto, GoogleVideo, Wikipedia
<u>Forums/bulletin boards</u>			
		Discussion of mutual interests	B2Bexchanges, Alibaba, Zentrada, Go4worldbusiness
4. CONTENT AGGREGATORS	RSS, widgets, bookmarks, tagging services etc.	Categorizing and customization of web content	Delicious, Yahoo! Widgets
5. VIRTUAL WORLDS	Virtual worlds	Substitute for the real world	Second Life, World of Warcraft, Kaneva, Universe, Habbo

3 Marketing in social media

Companies' websites have traditionally been the place for interactive marketing communications. Marketing communication activities linked to manufacturers' websites include advertising, sales promotion, public relations and direct marketing. Tools for two-way communication on websites include feedback mechanisms such as direct email links, signups, surveys and questionnaires. (Perry and Bodkin 2002.) Web 2.0 tools however bring new ways for interactive marketing communications as they help to deepen the conversation between customer and seller. The terms social media marketing (SMM) and marketing 2.0 refer to marketing actions using web 2.0 tools in order to leverage conversation online, to increase product awareness and brand equity, and to reach new customers. As web 2.0 tools make possible deeper interaction between marketers and customers it is easier for marketers to get feedback on their actions and know their customers better. Web 2.0 channels can also be seen as "engines" that energize and add power to the marketing messages and spread them in a viral fashion. Web 2.0 can be seen to have changed power structures and shifted market power from marketers to consumers. Hence, marketing in social media needs to be both honest and transparent since deceptive means are usually exposed.

Despite the hype around web 2.0, there is still skepticism. Users can generate harmful content in social media about the marketer and hence damage reputation. For example Comcast Cable Communications Inc. reputation as a good customer server was jeopardized when one of their technicians fell asleep on a customer's couch and the frustrated customer posted a hit video about it to YouTube (Bernoff and Li 2008). Customers can also discuss the marketer in a negative way in communities and social networks. Hence, marketers cannot control their brand image in web 2.0 because of the active role of the customers but they can try to affect it by participation. By actively listening and participating in online conversations, a marketer can improve the conversation about the brand and at the same time learn what the customers actually want and care about.

B2B marketers are beginning to introduce web 2.0 tactics to their marketing efforts, since buyers, partners, distributors, resellers and other third-party entities along the value chain are becoming more involved in social media. However, Laura Ramos from

Forrester Research (InSight24 2008) reminds us that B2B buyers are more conservative and therefore industry specific magazines, trade shows, and websites are also very important sources of information. In addition, WOM communication with peers greatly affects their business decisions and B2B buyers tend to be groups rather than individuals. That is why B2B marketers have not adopted web 2.0 tools as widely as B2C marketers have. *An interest in web 2.0 marketing exists but the activity level is still low.* Only one-third or less of B2B marketers uses blogs, podcasts, videos or other web 2.0 tactics in their marketing mix (eMarketer 2008a; Ferrante 2007). In addition, only 29% of B2B marketers sponsored an online discussion or community site and 18% advertised in virtual worlds (eMarketer 2008a).

Due to the ease of use and inexpensive nature of web 2.0 marketing, companies have introduced web 2.0 tools for their marketing mix without a strict plan or goals for these efforts. Although signing up for most web 2.0 applications is free, keeping up with them requires time and resources (Frampton 2008). Moran (2008) highlights the possibility of experimenting with web 2.0 tools. If the web 2.0 strategy is not working, it is fast and simple to fix it. By experimenting, a marketer learns quickly which the most appropriate tools for his marketing efforts are. However, in order to gain the possible benefits, marketers need to do more than experiment. They should create a web 2.0 marketing plan with specified goals which should blend seamlessly into the whole marketing mix and to other online marketing tactics (InSight 24 2008; Davis Kho 2008b). When planning to introduce web 2.0 tools to marketing efforts it is critical to learn about web 2.0 and to know which tools are appropriate for the company.

There are many problems facing companies implementing web 2.0 tools for marketing. According to McKinsey Quarterly (2007) and Avana (2008) problems with web 2.0 marketing include:

- Lack of support by top management
- Lack of metrics to measure the effectiveness of web 2.0 marketing
- Technical challenges: marketers do not know how to utilize web 2.0 tools
- Maintaining web 2.0 tools demands commitment to continuous content generation and maintenance and it takes a lot of time and effort to maintain the chosen marketing strategy

Bernoff (2008) emphasizes the importance of success metrics to ensure business goals are accomplished. Since it is also hard to measure the results and effectiveness of

web 2.0 marketing, B2B marketers should measure the interaction level and engagement of the customers. The use of tools such as blogs, communities, social networking sites and viral videos requires dialogue and extended relationships with customers. If blog entries appear high in search results, marketers can target some of their search engine marketing budgets at blog funding. Similarly, the amount of visitors contributing content (videos, photos, documents, wiki entries) to a marketer site tells about the interactivity level and engagement of the customers.

While attitudes towards using web 2.0 tools for marketing are cautious among B2B marketers there are already some successful results from using them. Research conducted in the spring of 2008 by Coleman Parkes Research and Avanade reveals that early adopters of social media marketing reported improved customer relationships and increased sales as well as achieving better corporate reputation. Companies using social media technologies also reported improved feedback and greater customer satisfaction as well as reductions in resolution times for support issues. Using social media marketing was also seen to create a perception of the company as forward-looking and to improve its market reputation. (Avanade 2008.)

According to research by the IT consultancy firm Avanade and Coleman Parkes (Tieke 2008), for which Finnish managers were interviewed, nearly all of the interviewees feel that they understand the benefits of social media for business, whereas over a half of respondents do not believe that the top management understands the benefits of social media in customer relationship management. This can explain the low adoption rate of web 2.0 in marketing. However, only 25 % of the interviewees believed they were at risk of losing customers to companies using social media more effectively, when world-wide, 38 % believed this. Thus, in that sense Finnish managers do not yet generally see social media as an important competitive advantage or a must.

But on the other hand, the interviewees estimated social media to increase the sales more than interviewees in other countries (56 % of the Finnish respondents, 40 % world widely) and that using social media gives a forerunner image to a company (83 % in Finland, 75 % in the other countries). In addition, it is estimated that using social media improves customer feedback (78 % and 78 %) and customer satisfaction (72 % and 66 %). However, there were only 30 people interviewed in Finland while globally there were over 500 interviewees. According to Petri Ketola, the Country Manager of

Avanade Finland, in the light of these research results it is difficult for any industry to ignore the benefits of using social media.

When examining the communication and interaction related *benefits provided by utilizing web 2.0 in B2B marketing*, we conclude, that it can be utilized for:

- 1) Strengthening and expanding customer relationships,
- 2) Brand building (with blogs, RSS feeds, podcasts, video on demand, wikis, mobile, viral video, social networks and virtual worlds (Madden 2008)),
- 3) Lead generation, (some authors suggest that this should be the only use, e.g. Keulenaer 2007),
- 4) Employee communications,
- 5) Enhancing communication in partnerships,
- 6) Enhancing communication in R&D (Weber 2007, 23-24, 32),
- 7) Demand generation (especially by using email marketing, online ads, SEO and webinars) (eMarketer 2008a).

So the main benefits are related to getting customers' interest and attention, but apart from simple products or services, sales processes are not likely to come online widely in B2B markets (Keulenaer 2007).

3.1 Implementing web 2.0

When implementing web 2.0 the first thing is to know the environment and its possibilities, which are several. Companies can harness web 2.0 for marketing efforts by banner advertising in popular communities or blogs or communicating desired messages to new online opinion leaders, i.e. bloggers, podcasters etc. Companies can also utilize the discussion of their products that happens in social media for their marketing efforts. For example Coca Cola discovered a range of amateur videos posted on YouTube that featured experiences of customers dropping Mentos mints into Diet Coke bottles. The company made use of this free publicity by launching a "Coca Cola Challenge" campaign that encouraged people to post videos that showcased creative uses of everyday household items. Finally, companies can engage in web 2.0 by introducing their own content for social media, establishing communities, or otherwise using web 2.0 tools for their marketing communications. (Constantinides and Fountain 2008.) Table 2 below summarizes other issues involved in planning web 2.0 marketing.

Table 2. Main issues when planning marketing with web 2.0 tools.

Know the environment	The main thing is to know which kinds of tools are appropriate for the company and how to use them properly.
Creativity and content	In social media it is all about content and creativity. Only content interesting enough lures users in to participate and share the content forward in a viral way.
Committed personnel and support of the management	Since web 2.0 tools require constant updating and new content, devoted personnel are required.
Continuous content generation	New content needs to be generated continuously in order to keep customers interested.
Measurement	Measuring the interaction level and visitor amounts is quite simple with web 2.0 tools.
Specified goals	There should be specified goals set up in order to measure benefits reached with web 2.0 tools.
Listening and discussion	Through interaction with customers a company can get useful feedback to enhance its operations and to maintain customer relationships.

Creativity is at the core of a successful social media campaign as well as having *personnel committed to maintaining social media tools*. Marketers should provide *content* on their website that customers can use, bookmark or share online. This is one way to increase viral marketing efforts since website content that is easily spreadable is easier for the visitors to pass on, and this may include interesting stories spread by emailing, linking, blogging or social bookmarking that page. (Moran 2008, 91.)

In addition, it is important to have *fresh content available continuously*. Weber (2007, 38) argues that in social media marketing the best websites combine professional and user-generated content. A company can pay or develop professional content for its sites and users can then comment and share their views about the subject. Companies are also urged to create content such as whitepapers or podcasts and encourage interested people to register by supplying their contact information. However, the problem with this approach is that content behind registration does not appear in search engine results, which might diminish corporate visibility. Visibility in search engines can be increased by actively sharing content with other sites too. (Optaros 2007.)

An alternative approach for companies to harness web 2.0 is by providing customers with personalized products. First-movers in this strategy are companies such as Kleenex (mykleenextissue.com), photostamps.com that allows consumers to create stamps from their own photos, Heinz (myheinz.com) that invites customers to create personalized labels for ketchup bottles and M&M (mymms.com) allowing customers to select favorite candy colors and have personalized messages printed on them. Pepsi and Nike

also offer similar sorts of personalized products for their customers. Online communities and virtual worlds enable users and members to become product developers. Lego was one of the first companies to harness customers as product developers in their community.

Many companies start to explore social media and communities by establishing their own internal communities to improve their knowledge management. If the community proves to be successful, it can be implemented for marketing efforts too. According to a research by Association of National Advertisers and B2Bonline.com *the most effective Web 2.0 tools perceived by B2B marketers are viral videos (23% of respondents), podcasts (21%) and blogs (17%)*. Only 10% of respondents perceived social networks as effective marketing tools and 8% rated Second Life to be an effective marketing tool. On the contrary, B2C marketers consider viral videos and social networks to be the most effective web 2.0 tactics (32% and 36% of respondents) and only 13% see podcasts and 6% see blogs as effective. (eMarketer 2008a.)

In order to reach their customers B2B marketers should find out what social media tools customers are using and become part of that conversation, wherever it is taking place. This can be considered a guiding rule when planning web 2.0 marketing activities. *“It’s really who your audience is,”* says Kira Purdue, executive vice president of Trevelino/Keller Communications Group in Charleston. *“If you’re a really niche B2B business, Facebook is probably not for you. But maybe you should create a network on Ning.”* (Frampton 2008). Davis Kho (2008a) argues that corporate strategy and cultural standpoint should be taken into consideration when choosing social media applications and technologies. Although marketers need to have an open mind about new marketing channels, Davis (2006) emphasizes that web 2.0 tools should be selected in accordance with target groups. This view is supported by marketing practitioners too. It is important to understand and profile buyers’ digital footprints online, where they look for information. Moreover, it is important to understand how buyers use the searched information in the physical world of their sales organization. This study next discusses this challenging issue of choosing the right web 2.0 tools.

3.2 Blogs and podcasts

Blogs are one of the first forms of web 2.0 and they include many of the core ideas of web 2.0: collective producing and sharing of content as well as new policies on the internet (Hintikka 2007). Currently blogging is one the most common forms of web 2.0.

The Pew Internet and American Life Project estimates that 11 % of adults living in the US read a blog on a daily basis, and 33 % say they have read a blog (Frampton 2008). Blogs are an example of collective intelligence since they are usually strongly linked with each other. Blogging has also expanded in the form of video blogging (vlogs). In the blogosphere information flows extremely fast and widely, due to the interrelated nature of blogs. Due to this blogs often appear at the top of search engine results. Blog readers often actively comment on blogs, which makes the form a social medium. (Hintikka 2007, 27-28.)

For companies blogging offers a new way of informal communication and bring out the company's humanity. When a blog is successfully implemented in use it can help to strengthen customer relationships (due to both the informal nature and interactive capabilities of blogs), build the brand, generate leads, improve customer service (keeping customers informed through the blog among other channels as well), enhance the reputation of the company (by displaying expertise), and improve search engine rankings. Companies can also get reputation by commenting on blogs that are popular and relevant to the business. In this way, companies can participate in the blogosphere and promote their thoughts in the field.

There can be several blogs for different target groups and authors can be executives, experts or the whole work community. Many of the popular company blogs are written by top executives since they act as the face of the company. Successful blog authors have been for example Sun Microsystem's CEO, Jonathan Schwartz; CEO of Apple Computers, Steve Jobs and the McDonalds Vice President, Bob Langert. Other enthusiastic employees can also write the company blog, the main thing is that the content is useful for the readers so that they subscribe to the blog and want to engage in a conversation with the marketer. It is advisable for bloggers to concentrate on creating dialogue with readers and to discuss subjects that readers are interested in, as a blog is not an advertisement. By blogging, a company can demonstrate its expertise, the collected knowledge and converse with customers. It is fundamental that everything written in blogs is truthful and honest. For example, Wal-Mart faced a scandal when it was revealed that a blog praising Wal-Mart was actually written by two of its employees although it was supposed to be written by unrelated authors (Weber 2007, 15-16). In addition, blog postings need to be regular in order to be effective channels of interaction with readers. A good example of well-worked blogging is provided by Dell who

managed to change its reputation from being a bad customer service provider to being a customer-oriented company that contributes to true conversation with its customers by becoming a part of the blogosphere. Dell has a group of bloggers writing about product launches, promotions and answering questions from customers to enhance the dialogue with its customers and to improve its products and services.

The success of blogs can be measured by the number of subscribers and their comments. However, the number of subscribers does not tell the whole truth, since not all subscribers see every blog post. The success of the blog also depends on how much it has been referred to. When starting a company blog, there are several rules that need to be considered for creating a corporate blogging policy. Blogs should be evaluated before posting and there should be common rules for what kinds of goals are expected to reach with blogging. There is also the question of responsibility; is the blog personal or does it speak for the company? Who are the authors and what are their positions in the company? Blog authors have also a responsibility for not revealing any confidential information and securing that content is proper and does not insult anyone.

However, blogging is challenging and there are many obstacles to succeeding with it. According to a report by Forrester Research (Tietoviikko 2008) most of the blogs concentrated on business customers do not reach their goals. Blogs do not inspire readers to comment and take part in the conversation and they also have problems gathering sufficient audience. The reason for this is the content of blogs. Most blogs concentrate on repeating the same messages as the companies' other communication without presenting any new ideas. Consequently, the blogs rarely get any comments but some B2B bloggers have mentioned that they get feedback by email and phone from their readers since they do not want to give it publicly. The amount of new business blogs has also decreased. One further problem with blogging is the difficulty in getting publicity. According to Jon Miller from Marketo (Miller 2007), who is author of the Modern B2B Marketing blog, one has to write about popular and trendy topics to get links instead of writing of everyday tactics in B2B marketing.

Podcasts are audio files that can be streamed or downloaded over the internet. They usually include interviews, commercials or other informative content. Thus, they can be considered audio newsletters. Moran (2008, 46-47) and Weber (2007, 23) discuss the opportunities of using podcasts in marketing communication. Podcasts are preferred to

radio air time because of their immediacy, low cost and flexible time duration. Videocasts are essentially similar to podcasts except that they include video.

Podcasts can be used to inform customers about new products and current events in the industry. A marketer can for example do a podcast interview with some interesting personality concerning a topic close to the company or include customers to discuss their opinions about some current topics or products. The podcast can then be published on a company website where the message is in everyone's reach. For example Sun Microsystems continuously offers podcasts on their page about the latest news from Sun and interviews with Sun engineers and executives. In one podcast, Sun CEO and an expert on sustainable development discussed "how the internet and technology can enable communities and environmental solutions". (Weber 2007, 181.) *The success with company podcasts can be measured by download counts but it does not tell if it was actually listened to after downloading* so measurement of its effectiveness is difficult.

Blogs and podcasts seem to be attractive web 2.0 tools for B2B marketers, as by using these companies can provide useful information for their customers. Only viral videos are considered more effective (eMarketer 2008a).

Table 3. Summary of benefits and drawbacks of blogs and podcasts.

<ul style="list-style-type: none"> + Giving the company more human and informal image about + Conversation with customers + Displaying company's expertise in the industry 	<ul style="list-style-type: none"> - Difficult to measure the benefits - Continuous content generation is needed - What kind of content is relevant for the customers?
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3.3 Social networks

Boyd and Ellison (2008) define social network sites (SNS) as web-based services that allow individuals to construct a public or semi-public profile within a bounded system. Individuals can also articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system. Salmenkivi and Nyman (2007, 106-110) note that with these profiles users give desired impressions of themselves to others and the opportunity to view other users' profiles strengthens the trust between users. Boyd and Ellison (2008) make remark that networking with strangers is not the primary practice on many of the SNSs. Instead, users most often communicate with people who are already a part of their extended social network. This is the case with for instance Facebook. Conversely, MySpace and LinkedIn are also used for making new friends and connections with people never met offline. (Shuen 2008, 92.)

Social networks have become popular among users. According to the Pew Internet and American Life Project, an initiative of the Pew Charitable Trusts, 13 % of adults use an online social networking site daily and 29 % of adults say they have used a networking site (Frampton 2008). Still globally social networks are not yet that common while 58 % of adults in 17 countries do not know what social networking is. However, 26 % of 13000 respondents belong to social networking sites. (eMarketer 2008c.)

Most SNSs provide commenting and messaging features, although they are not universal. Some have also other features such as photo-sharing, video-sharing, blogging, instant messaging or support for mobile use (Boyd and Ellison 2008). These kinds of services provide users with tools for data recording and communality (Hintikka 2007, 28). Social network sites can be classified into various subtypes depending on the purpose. Passion centric SNSs (e.g. Dogster) help strangers connect based on shared interests. MySpace, Facebook, LinkedIn and the Finnish IRC-Gallery are examples of social networks that focus on building and maintaining relationships. Websites that originally focused on media sharing (e.g. Last FM, Flickr, YouTube) later began to implement SNS features (see Figure 2).

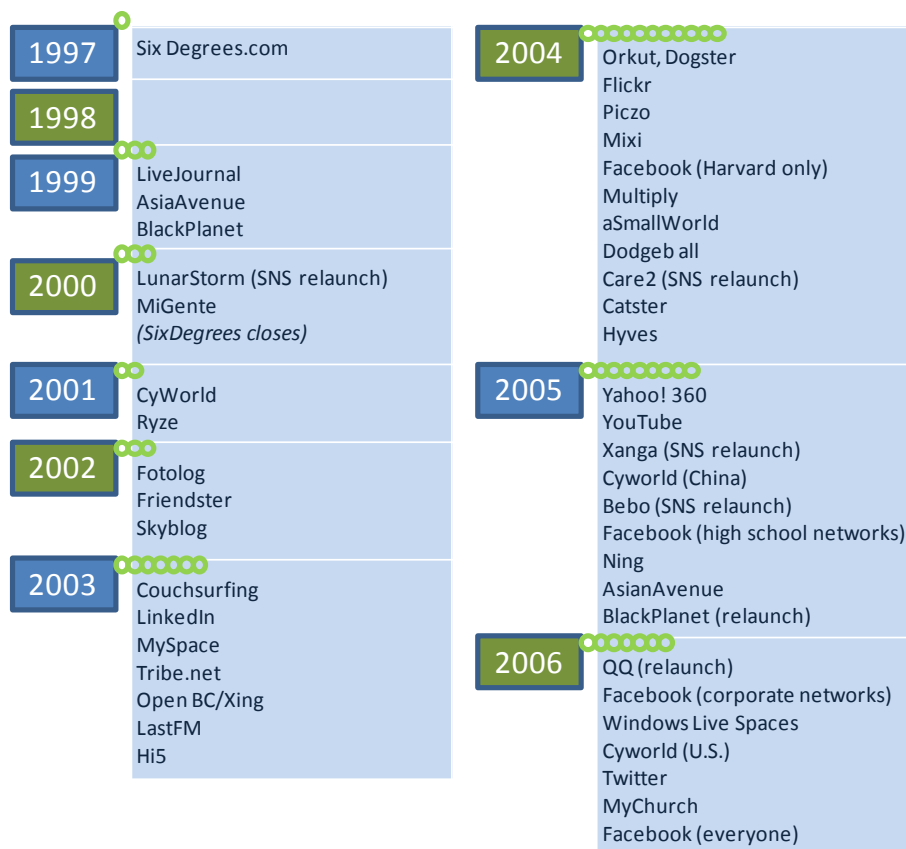


Figure 2. Timeline of SNS and community site launches (based on Boyd & Ellison 2008).

The amount of SNSs launched has been growing especially since 2003. After 2006 numerous new social networks have emerged but they haven't reached the levels of success enjoyed by the most popular SNSs, MySpace and Facebook, and so they are not mentioned in the list. There are new SNSs also in Finland like Jaiku, Dopplr and Xiha in addition to IRC-Gallery.

3.3.1 MySpace and Facebook

MySpace was launched in 2003 and started as an open networking environment for bands and their fans. Both private people and companies can create MySpace profiles. The service is particularly popular among the youth, who use it for virtually engaging with people of shared interests. MySpace is still strongly music centered but it aims to widen its focus to other areas too such as the fashion and motion picture industries. Advertisers on MySpace try to enhance product value by giving consumers an opportunity to tag products as *friends*. By the end of 2007, there were over 100 million profiles at MySpace. (Salmenkivi and Nyman 2007, 114, 118–120; MySpace 2008.)

Examples of firms in MySpace

- ✓ Aquafina: The company launched a contest in which users had a chance to win a trip to Sundance Film Festival by making the winning Beastie Boys video.
- ✓ Dunhill Staffing Systems: Having video clips of staff members introducing themselves in MySpace. The purpose of this is to bring employees closer to clients. The company has also considered adding job postings and events to its profile. This enables a company to introduce itself to its customers in a new way when compared to a traditional company website.

Facebook is a networking service enabling users to create a profile and network with each other. It has already about 120 million registered users (Siltala 2008) and in 2007 there were over 50 000 networks or groups consisting of students, company employees or circles of friends (Salmenkivi and Nyman 2007, 121). Detailed information about users and the ability to create one's own groups in Facebook have attracted companies to join too. Reaching out to customers through Facebook allows the company to catch customers' attention in a new way. This is perceived as an important tactic in the age of information overload, when even sorting through personal e-mail can be a chore. (Frampton 2008.)

“Frankly, I think people are more attentive to Facebook than to their own e-mail at this point. A big (e-mail) blast, they might just skip over.” (Siegel in Frampton 2008)

A successful campaign in a social network site integrates the advertisement and brand into the community experience while enabling users to participate and create content to the campaign.

Examples of firms in Facebook

- ✓ B'zar clothing boutique: Facebook pages for their store allows them to send new merchandise updates and other information directly to almost 750 customers.
- ✓ Fiery Ron's Home Team BBQ: A Facebook page keeps the restaurant's over 550 Facebook fans up-to-date on specials and events through a group page
- ✓ Andiamo started a campaign in Facebook (see Figure 3) in spring of 2008 by introducing its own application which anyone could join. At the moment, the application has 344 monthly users but there are only a few posts on the wall and the bulletin board so the application's interactivity level is low. Andiamo in Facebook: (<http://www.facebook.com/apps/application.php?id=8040211415>).



Figure 3. Andiamo group in Facebook.

Different groups in Facebook and MySpace can be considered to be online communities too since in them members can interact with each other, post comments on the group's wall and bulletin board and also post their own photos and videos to the group profile. As is the situation in online communities concentrated on a specific mutual interest of members, members have to be engaged in the subject in order for them to participate in groups regularly. When considering communities of products and services, enthusiasm for participating in a community arises from brand loyalty. The discussion of using communities for marketing also applies to marketing in social networks. It can be said that the difference between social networks and online communities is that SNSs are organized around people and communities around interests.

3.3.2 LinkedIn and ITtoolbox

In the B2B environment, LinkedIn and ITtoolbox are the most important social networking sites. LinkedIn is a social networking site for business where professionals can connect each other easily. It has over 30 million members (LinkedIn 2008) and the user-base is growing steadily. Members' existing networks and business information are available for other members. Therefore business networking and making new connections is easy and safe since a user can get recommendations from other members. LinkedIn is often used for creating new business contacts or career opportunities. Another famous professional networking site is ITtoolbox, a vertical industry network for 1.3 million information technology professionals.

3.4 Benefits and drawbacks of social networks

Social networking services can provide SEO and reputation management benefits for the company and at best, these sites can help to make valuable new business connections. According to a report by eMarketer social networks are increasing their position among B2B marketers, while in 2008 nearly \$40 million will be spent on social network advertising in the US (eMarketer 2008d). Because so many businesspeople are joining these networks to make professional connections, it also attracts B2B marketers to join and make these connections. Researchers expect the B2B social marketing trend to grow to \$210 million by 2012 (eMarketer 2008d).

Morrison (2006) reminds us that the LinkedIn and ITtoolbox types of professional networks focused on professional topics are generally more structured than other kinds

of social networks (e.g. MySpace and Facebook) and may have a higher degree of moderation. This allows them to remain professionally productive which can result in a safe and predictable advertising environment for a B2B marketer. In professional networks, the conversation may often relate to the products that B2B marketers are offering and hence are effective spaces for advertising. In ITtoolbox, for example, it is possible to match white papers to the conversations users are having with its own proprietary contextual matching system.

Shuen (2008, 100) also highlights that social networks for business are effective WOM channels. While a company can get recommendations and find new business partners via social networks as well as spread the word about new products, bad news about the company also spreads widely.

Many academics view banner advertising as inefficient marketing (Chatterjee, Hoffmann and Novak 2003; Briggs and Hollis 1997). Users of MySpace and Facebook spend on average three and a half hours per month on navigating between different profiles. A lot of time is spent checking friends' pages and updating one's own profile and therefore users do not have time to click banner ads. On the other hand, as ads featured in networking services can be tailored relevantly to different target groups, users' urge to click ads might increase. (Hamilton 2007.)

The success of groups on social networking sites can be measured by counting fans and members of the groups and estimating the value of the extended engagement or exposure they generate. Members' comments and postings as well as user-generated content are the basis for evaluating the success.

Table 4. Summary of benefits and drawbacks of social networks.

<ul style="list-style-type: none"> + Networking possibilities, getting new business connections + Targeted banner advertising for different groups + Easy way to create an own "community" (group) in there and hence leverage conversation with customers 	<ul style="list-style-type: none"> - Bad news spread fast - Difficult to generate interesting content to lure users to the group or spread the word about the group.
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3.5 Communities

3.5.1 Online communities

According to Kannan, Chang and Whinston (2007) online communities have existed for a relatively long time since they originate with researchers discussing and cooperating online while working for projects. Many online services also offered local bulletin

boards for groups interested in specific technology issues so they could share content and discuss using the bulletin boards. The World Wide Web brought many real life communities online where members could more easily stay in touch with each other and communities could expand without geographical limits. There were also emerging communities operating only online, and as e-commerce began to grow, business oriented communities started emerging too.

Online communities consist of individuals with congruent social needs. Personal relationships confirm the feeling of engagement that is a base for the certain level of loyalty to the community. Members' contributions to the community consists of the information content they produce i.e. comments, feedback, attitudes and beliefs as well as informative needs. (Kannan *et al.* 2007.) Users also generate other sorts of content to communities like photos, music and videos.

Communication in online communities happens via instant messaging, blogging, voting and newsletters. In addition, messages can be sent to private mailboxes, discussion boards and e-mail (Turban, King, Lee, Warkentin and Chung 2002). Forums and message boards can also be seen as types of community since they are the places for the conversation among customers where they send *threads* about different topics and also about products and services. WOM communication has a significant position in online community interaction. It is consumer-intensive marketing communication where the sender of the message is independent of the marketer. For other users, a sender is thus considered to be a more reliable and more credible source of information than a marketer. (Brown, Broderick and Lee 2007.) According to Hagel and Armstrong (1997) and Kozinets (1999) a community has an influence over its members' opinions, purchase decisions and consumption of products and services. Ratings and reviews about products and services in the community can create positive WOM, as customers' recommendations often influence others which in turn can lead to sales increases. Algesheimer and Dholakmia (2006 via Weber 2007, 112) researched eBay's customers and found out that customers participating in eBay's online communities bid and buy more than non-participants and also pay higher final prices. According to the research, eBay earned several million dollars in profit because customers were more active in the communities and hence trading more.

Online communities can be divided into member-initiated, organization sponsored or brand centered and third-party established communities (Table 5).

Table 5. Classification of online communities (Porter 2004; Kannan *et al.* 2007).

<i>Type of community</i>	<i>Focus</i>	<i>Examples</i>	<i>Why consumers participate</i>	<i>Why companies participate</i>
Member-initiated communities	Mutual interests of members (like hobbies), maintaining relationships	Aukea.net, KonsoliFIN BBS	Bonding with each other, information and content sharing, emphasizing one's own individuality	Opportunity for targeted advertising
Organization-sponsored communities/ Brand communities	Brand building, business transactions, maintaining customer relationships	Community by Dell and Salesforce, Mozilla community	Product information, information and content sharing, emphasizing one's identity with community membership, participating in product development	Reaching one's target audience, getting feedback from members about products and services, product development with customers, increasing loyalty of their customers
Third-party established communities	Business transactions; marketplaces maintained by intermediaries	eBay	Safe environment for business transactions	Opportunity for targeted advertising

Companies join online communities since they can approach their target audience through them. Companies can either solely settle on banner advertising in different online communities or then establish their own communities. Online communities bring together users with similar interests and hence it is easy for marketers to target their marketing messages at different interest groups instead of according to demographic factors. Targeting for group is more cost-effective than one-to-one targeting (Weber 2007, 37). But people most often want to have control over what sort of media content they are exposed to. Therefore, consumers may perceive even well targeted marketing campaigns as annoying. (Salmenkivi and Nyman 2007, 105).

Consumers' reason for joining a community is usually the content delivered by the community and hence the quality of this content is the key issue. If the administrators of the community provide the content, they are responsible for the quality. However, if the content is created by the members, administrators are responsible for supervising the content and ensuring that it will not bother the members. (Kannan *et al.* 2007.) It is imperative for the community to generate new and interesting content continuously in order to retain the existing members and attract new members (Rothaermel and Sugiyama 2001). Antikainen (2007, 162-163, 170) argues that even though members are the focus in online communities, the maintainer also has a significant role. A maintainer needs to enhance discussion by offering interesting themes and related content. The

maintainer's role is highlighted in professional communities, where members want answers to their problems and the maintainer cannot remain passive.

In this review, the organization sponsored/brand communities are discussed next in more detail since those are the ones companies have established for their customers. B2B marketers seem to be using communities more than social networks. Research and development communities are becoming popular and for example Mozilla Corporation and Dell in cooperation with Salesforce.com have managed to introduce such communities successfully. Both are using their communities to get new ideas and feedback from customers for creating and developing their products and services. In the community managed by Dell and Salesforce.com participants can give ideas and talk about issues and then vote as a community about those ideas that should be implemented. Hence, company online communities can be a valuable channel of customer information such as demographic factors, attitudes and preferences as well as customers' buying behavior (Antikainen 2007, 169; Kannan *et al.* 2007). These communities can also be used for relationship marketing purposes because of the enhanced two-way communication.

There are four types of relationships in organization sponsored/brand communities (Antikainen 2007, 120), which are presented in Table 6.

Table 6. Relationship types in organization sponsored/brand communities (based on Antikainen 2007).

Types of relationships in brand communities	Member-member relationship	Member-maintainer relationship	Member-brand relationship	Member-service (used technology) relationship
Attraction factor	Opportunity for knowledge exchange with others and entertainment features such as discussing and gaming with one another	knowledge exchange with maintainers	Reputation of the community	Content, service variety and usability

When planning an organization sponsored/brand community, a company needs to take into account how to concentrate on these different sorts of factors. However, encouraging interaction between members by enhancing discussion and offering effective services as well as encouraging positive WOM, companies can influence how these relationships evolve. (Antikainen 2007, 123, 133, 135, 170.)

Organization sponsored communities are also called brand communities. Higher levels of participation in a brand community seem to foster loyalty towards the preferred brand in new product adoption and oppositional loyalty towards competing

brands, if there are comparable products from the preferred brand. When a desired product is only available from a rival, a higher level of participation in the preferred brand community does not affect the likelihood of adopting products from competing brands. However, belonging to several competing brand communities can reverse the relationship between participation and the adoption of rival products. *Higher levels of participation in a brand community can surprisingly increase the likelihood of adopting a new product from a rival. This means that the motivation for participating in a brand community can also be dissatisfaction with the brand.* In the situation of overlapping participation in brand communities marketers have to be careful, since efforts to increase customers' participation in a brand community can benefit rival communities. In these cases, it is essential to identify those members who do not hold overlapping memberships and promote participation to them. (Thompson and Sinha 2008.)

As is the case with social networks, *the success of an online community is measured by evaluating the engagement of members*, i.e. the amount of comments posted and the content generated by them as well as the popularity of the community.

Table 7. Benefits and drawbacks of online communities.

+ More feedback from customers	- Needs a lot of resources to maintain
+ Maintaining relationships and gathering information	- How to take the negative comments and posts by customers?
+ Increasing brand loyalty	- How to get customers to participate?

3.5.2 Content communities

Content communities are sites that concentrate on distributing photos, videos and other content created by users. The sense of community is only a by-product. These communities are effective tools for viral marketing efforts. The video sharing site YouTube, the photo sharing site Flickr and on wiki-based site Wikipedia are the most famous examples of these communities.

3.5.2.1 Video sharing sites

YouTube, founded in 2005, is a content sharing site that has become the most popular forum for user-generated videos as well as advertising videos. YouTube is an excellent channel for viral marketing efforts since users can easily spread video links via email, social networking sites and other web 2.0 tools. The content of the video is in the key, since it has to get the attention of the public to spread in networks. According to research by eMarketer (2008b) online video advertising is currently reaching a critical

mass, as 67% of internet users view some form of video advertising (in-stream, in-banner or in-text) at least once a month. One reason for the success of video advertising is the increase in professional-quality video content.

Viral videos used to market a company's product or service can be successful if their content is interesting enough for the public. *Nearly 25 % of B2B marketers considers viral videos to be the most effective web 2.0 tool (eMarketer 2008a)*. A company can use YouTube to get a large audience for its advertisement video. A video posted on YouTube can also be linked and shown on the company's website, at tradeshows and in presentations and therefore one video can be used in a variety of ways in the company's marketing activities. While viral videos have mainly been popular among B2C marketers in their brand building efforts, B2B marketers have started to use viral videos too. *Viral videos can be measured by views and by engagement i.e. marketers should look for comments, ratings and people who have tagged a video as favorite.*

Examples of video campaigns in YouTube

- ✓ *Will It blend?* campaign by Blendtec. The company shot videos where the founder of the company, Tom Dickson, attempts to blend different kinds of objects such as iPhones and golf balls in a blender to show off its power. These videos spread virally via YouTube attracting a over 5 million viewers. Consequently people also began to make their own versions of *Will it blend?* videos to send to YouTube. According to Dickson the campaign had a significant impact on sales (Squid News 2007, Wikipedia).
- ✓ Software producer Solid Works made a successful viral video where a famous origami artist competes against their software in making a robot.
(<http://www.solidworks.com/pages/programs/torimoto/index.htm>.)
- ✓ An advertising video by wind energy company Epuron has also attracted a great number of views (some 75.000) in YouTube due to its brilliant idea and content.
- ✓ Tandberg advertises its online conferencing tools in YouTube using a more traditional content. Tandberg's viral videos have been viewed some 6.000 times.
- ✓ SONY, Frito-Lay's and Sunkist have partnered with talented amateurs who create viral films or television commercials for the companies (Constantinides and Fountain 2008).

3.5.2.2 Photo sharing sites

Photo sharing sites are concentrated on photos that members can upload on the page. Users can add captions and comments to photos and also tag them with different keywords that makes the photos easily searchable. Users can also create groups for different subjects and in these communities, members are also able to chat with each other. Flickr has become the most popular photo sharing site among users and now companies have started to create their own groups on Flickr. In addition to Flickr there are other photo sharing services such as Pikeo, dotPhoto and Picasa.

- ✓ Ford sponsors a group in Flickr with over 2 000 members asking for imaginative images that can be later used by Ford in other sites.

[\(http://www.flickr.com/groups/thisisnow/\)](http://www.flickr.com/groups/thisisnow/)

3.5.2.3 Wikis

Wikis are software applications that enable multiple users to edit websites. Perhaps the most famous example of an application built on wiki software is Wikipedia — the largest encyclopedia in the world functioning in an open source community fashion, as users can edit the entries. (Tapscott and Williams 2008, 18, 71.) According to Moran (2008, 51) wikis offer a new way of information sharing in public and with customers. Marketers can use wikis for discussing product plans, solving support problems and generating ideas. Wikis can also be used for more private discussion with customers by limiting the access to the wiki. It is also possible to collect feedback and create a feel of communality among businesses and customers. This web 2.0 tool has been trialed in B2B environments over the past few years.

- ✓ In an attempt to unravel the genetic basis of type 2 diabetes, the Swiss drug maker Novartis released all of its raw data on the internet for free. The aim of this maneuver was to share some intellectual property in order to contribute to the pharmaceutical industry's growth.
- ✓ IBM has handed over software and resources, worth hundreds of millions of dollars, to Linux thus saving in development costs and generating billions in revenue from Linux-related services.

Sharing resources can indeed be productive, especially for large corporations. However, if a relatively small company operating in extremely competitive markets

decides to share its expertise, it could very easily lose its competitive edge to larger players in the industry. (Moran 2008, 51; Tapscott and Williams 2008, 161, 253.)

Table 8. Benefits and drawbacks of content communities.

+ Effective for viral marketing efforts	- Difficulty of creating content interesting enough for viral marketing
+ Brand building	- Difficulty of activating users to spread the message and participate
+ Information sharing with customers	

3.5.3 Forums and bulletin boards

Forums and message boards are places for conversation among customers who can send *threads* about different topics and about products and services. Marketers need to be aware of what customers are saying about their products in these forums and what kind of feedback they are giving. It is advisable to join the conversation since the company's reputation on message boards can affect sales. (Moran 2008, 51.)

Companies can also display their expertise by participating in the conversation. Apart from the interaction with customers, it is also possible to generate leads on bulletin boards and target advertising. *To measuring the effectiveness of its participation in forums, a company must evaluate responses and comments of users and how useful the forum is for acquiring new customers.*

There are numerous portals and forums devoted to B2B markets. In these forums, it is possible to interact with other companies and do business. Examples of B2B market portals and forums:

- B2bexchanges (<http://www.b2bexchanges.com>),
Alibaba (<http://www.alibaba.com>), Zentrada (<http://www.zentrada.eu>),
Go4worldbusiness (<http://www.go4worldbusiness.com/>) (Samiee 2008).

Table 9. Benefits and drawbacks of forums and bulletin boards.

+ Conversation with customers	- Needs continuous follow-up of the discussion
+ Acquiring new customers	- How to protect the company's image on forums?

3.6 Content aggregators

Content aggregators are RSS feeds, social bookmarking sites, other tagging services and widgets.

RSS feeds are newsfeeds that report the changes on a certain website. Readers can subscribe to RSS feeds in order to get timely updates from websites they favor without having to visit them continuously. RSS feeds are also an easy way for the content provider to notify about new information on websites. RSS feeds are commonly used to

report news headlines and blog updates but they are also used for press and stock exchange releases, as well as to publish information about new products. *Traditionally newsletters have been used for this purpose but RSS feeds are easier and more real time in nature.* RSS feeds represent two of the cornerstones of web 2.0: dynamics and interactivity. With RSS feeds, it is easy to reach a target audience that is willing to receive news from the publisher. (Hintikka 2007, 25-26.)

Direct marketing by email has become challenging since it can be easily considered spam and customers may ignore it. RSS feeds offer another way of direct marketing because customers subscribe to the content they are interested in without having to give any personal information about themselves, such as an e-mail address. This lowers the barrier to acceptance of direct marketing messages. (Moran 2008, 42-43.) Despite the advantages of RSS feeds, they are not widely used by B2B marketers yet. *A marketer can estimate his success by how many subscribers there are for RSS feeds.*

Table 10. Benefits of RSS feeds.

-
- | | |
|---|---|
| + | Easy and cheap to report the news from the company |
| + | Direct marketing for interested subscribers without giving personal information |
-

Social bookmarking sites help to organize interesting content on the internet. The idea behind social bookmarking is that users can determine which stories get publicity on the web by tagging and reviewing news and stories and bookmarking them in order to find them easily. Marketers can tag posts they publish (e.g. blog postings) with particular words in order to show the posts in search results for those people looking for information about the subject in question. (Moran 2008, 92-93.) An example of a social bookmarking site is Delicious.com in which users' bookmarks can be stored online. *A marketer can estimate his success by how much of his content is bookmarked in social bookmarking sites.*

Table 11. Benefits and drawbacks of social bookmarking.

+ Help to increase the audience for marketer's content	- Difficult to create content interesting enough that would be tagged and would get recommendations
--	---

Widgets are mini applications that provide a single utility or service to the user like the current weather or a dictionary. They can reside either locally on a computer (like Yahoo!Widgets that need to be downloaded onto the computer) or on HTML (like those provided by Typepad for its bloggers). The difference between these two formats is the amount of users. Widgets that reside locally are useful only to the person who installed

them. Ten thousand installs means an engaged audience of ten thousand. On the contrary, widgets that appear on a personal site or blog are seen and potentially used by all of that site's visitors. Here, ten thousand installs could mean that actually the application is used by hundreds of thousands. When the widgets are intended to sit on web pages, like some popular blogs, it is important that the visitors of the site are the target group for the marketer, as with banner advertising. Widgets can be used for brand building efforts since they can give precise information about products. Their function is less to drive traffic on the website but more to engage users to the brand (Pishevar 2006). *The success of a widget can be measured by the amount of downloads and usage.*

Examples :

- ✓ **Acura:** Developed the Acura RDX Traffic widget that delivers real-time information about traffic flow, traffic incidents, road construction, and traffic speed of specific area to a user's computer.
- ✓ **The Rijksmuseum in Amsterdam:** Has developed a widget that is updated daily with a new picture from the museum's collection. An icon on the picture spins it around when clicked, revealing the piece's title, artist, date, some historical background, and of course a link back to the museum's website.

Table 12. Benefits of widgets.

-
- + Content rich and interesting widgets get users and engage them with continuously updated content.
 - + Easy to measure their popularity since widgets usually include a mechanism reporting back on when they are used (Bernoff 2008).
-

3.7 Virtual worlds

Henttonen (2008) describes virtual worlds as a medium in which users communicate and interact in real time. Users communicate via avatars, which distinguishes virtual worlds from other social media and networking platforms, making them a separate type of social media. Henttonen defines avatars as virtual bodies of users that allow interaction and communication with other users. Messinger, Stroulia and Lyons (2008) describe avatars as 3D representations of people and their alter egos in virtual worlds. Virtual worlds also typically include commercial elements such as a “local” currency, many different marketplaces and communities (Barnes 2007).

A characteristic of a virtual world is that it is often a substitute for the real world. However, this varies depending on the type of world in question. In Second Life, for instance, virtuality is mixed with the reality of the physical world. Henttonen (2008)

argues that it is often difficult to draw a line between virtual worlds and online games. Messinger *et al.* (2008) suggest that virtual worlds are a blend of elements related to 3D gaming environments and online social networking. The origins of virtual worlds can be traced back to the development of video gaming industry. Later social networking sites then influenced the development of virtual worlds.

Messinger *et al.* (2008) present a categorization model for virtual worlds adapted from Porter's (2004) typology of virtual communities. Virtual worlds can then be categorized based on their 1) purpose (content of interaction), 2) place (location of interaction), 3) platform (design of interaction), 4) population (pattern of interaction), and 5) profit model (return of interaction). This typology helps in identifying future applications and research topics revolving around virtual worlds, and to analyze which kinds of virtual worlds could be the most interesting for a firm to engage in.

Although virtual worlds are typically associated with gaming and used for entertainment purposes, much activity is growing in the realms of business. Numerous, prominent real life brands from various industries have gained presence through Second Life. According to Barnes (2007) there are over 100 real life brands in this particular world. Second Life also features retailing and service businesses and users can, for instance, own stores, rent real estate or manage clubs (Messinger *et al.* 2008). For instance, Reuters has assigned a technology reporter to Second Life to cover stories happening there. The reporter's avatar has become the news supplier for millions of Second Life members. (Weber 2007, 93).

As with web 2.0 solutions in general, business applications within virtual worlds mainly revolve around B2C marketing. Barnes (2007) has researched virtual worlds as a medium for advertising. Possible modes of advertising include product placement of 3D objects, billboards, radio, musical performances, movies and videos, 'advergaming' and cross-promotional offers and activities. *The benefit is that all these advertising modes can be embedded into one channel.* However, a lack of proper metrics exists — as is the case with other social media too. Therefore, it is extremely difficult to evaluate the effectiveness of advertising in virtual worlds.

Although current marketing in virtual worlds is consumer-based, applications for B2B environments are also possible. Messinger *et al.* (2008) forecast mechanisms facilitating supplier-manufacturer or manufacturer-retailer relationships as one possible future B2B application within virtual worlds. *Virtual worlds are ideal environments for*

including customers in product development activities since vivid experiments on products can encourage customers to offer versatile suggestions for product improvements. However, it might be difficult to get users to participate and make the effort. Kohler (2008, 193-201, 207-210) found in his research that in order to attract users (avatars) to join the co-creation process a company needs to provide media rich, desirable and interactive virtual places for them. It is vital for the environment to encourage visitors' creativity and inspiration. A collaborative dimension is essential for a compelling co-creation experience since consumers seek to interact with like-minded users as well as with the company. Creating events for avatars for enhancing social interaction among them and offering opportunities to get feedback from others, engage users in an intensive co-creation process. The perceived usefulness of the co-creation addresses motivations that draw users in to participate and engage. The chance to challenge one's skills, learn, and get recognition from other avatars motivate users and entertaining and playful features and a compelling storyline make the experience fun and engaging. Usability is also a core factor in determining a compelling co-creation experience since good navigation and clear structure simplify users' virtual experience. Although it is not a dimension that engages participants to the same degree as the other dimensions, it is vital, since good usability removes many of the negative aspects. Companies should focus on offering users an active role in the virtual world and make the co-creation entertaining and motivating.

Kadavasal, Dhara, Wu and Krishnaswamy (2007) introduce a mixed reality model for enhancing business communications using virtual worlds. The goal is to use communications in bridging the gap between real and virtual world services. The authors argue that *by bringing customers an experience closer to reality, it is possible to provide good customer service using virtual worlds.* This is achieved by using advanced communication technology that is currently still not widely used within virtual worlds.

Research shows that 9 out of 10 virtual world projects started by companies fail. A common reason for failure is strong focus on technology at the expense of user needs. In addition, virtual world projects are often launched solely on the basis of corporate image. When this is the case companies fail to consider both project objectives and user expectations. Nevertheless, the Gartner Research Company believes that intrinsic company virtual worlds will become common in the future. (Digitoday 2008.)

Popular virtual worlds are, among others, Second Life, World of Warcraft, Kaneva, Entropia Universe, Google Earth, Webkinz, Neopets, Club Penguin, Whyville, TyGirlz and Habbo (Henttonen, 2008; Messinger *et al.* 2008; Barnes, 2007). The best known virtual world is Second Life. In March 2007, 1.3 million people ran the official software and logged into Second Life. This represents an increase of 46 % in the number of active residents from January 2007 (ComScore 2007).

Table 13. Benefits and drawbacks of virtual worlds.

+ Real life kind of experiences of products/services	- How to allure people into virtual worlds?
+ Joint product development and collaboration with customers	- The difficulty to keep the virtual world simple and easy to use

3.8 Summary of web 2.0 tools

Web 2.0 tools help a company to inform customers of the latest news and new products and in acquiring new customers. In addition, the tools offer new ways for brand building and customer relationship management and improving product development activities. Benefits related to different web 2.0 tools are summarized in Table 14.

Table 14. Benefits of different web 2.0 tools.

	Blogs, podcasts	Social networks	Communities	Content aggregators	Virtual worlds
Information about the company, new products and latest events	X	X	X	X	X
Brand building	X	X	X	X	X
Lead generation	X	X	X		
Research and development	X		X		X
Strengthening customer relationships	X	X	X		X

Different web 2.0 tools bring different marketing communications opportunities for companies (see Table 15). While blogs, podcasts and content aggregators are used to inform customers about the latest news in the company, communities, profiles in social networks and virtual worlds provide opportunities for a deeper interaction between marketer and customer.

Table 15. Using different web 2.0 tools.

Tool	Use	Strengths	Weaknesses	Measuring
Blogs and podcasts	Informing of current events and new products	Easy and cheap tool to maintain	Requires time and constant updating	Number of viewers, comments, downloads
Social networks	Content sharing, creating and maintaining relationships	Easy to set up a profile, possible targeted advertising	How to persuade users to participate?	Amount of members/fans in the profile; amount of UGC in the profile
Communities	Maintaining customer relationships, brand building	Intense two-way communication	Requires lots of resources to maintain	Amount of members; amount of UGC in the community
Content aggregators	Informing of new products	Easy to use	Content needs to be interesting enough to be tagged	Number of subscribers/tags/downloads
Virtual worlds	Maintaining customer relationships, brand building	Engaging customers effectively	Requires lots of resources to maintain; inducing users to participate	Users' participation activity

4 The future of web 2.0

When discussing the future of web 2.0 and possible business models based on web 2.0 applications, some ideas and visions were found, but it is still largely unclear how these business models relate to industrial markets, because these presented ideas are still more on a general level.

Business models are expected to evolve in direction where users have an even more central role than before. Unfortunately, internet users take more and more of the services for granted and are not willing to pay for them, so real value should be offered in order to make profits. What will also be valuable in the future are high quality content, good usability and user interface design. The facility for the customer on the internet to customize the products will be even more important, and that can be done by the customer on the internet. Now even technology platforms are provided free. Industrial firms could offer their expert services, or consulting, on the internet to a broader market. Firms could benefit from active users through crowd sourcing. Active and innovative users could provide ideas and designs and would then be recompensed for them. Widgets could be utilized more to automatize repetitive tasks such as orders or FAQs. Mobile technologies will enable a variety of services to be developed, for example by utilizing location information for offering services.

The discussion of what happens after web 2.0 is ongoing. Some expect the evolution of the internet to continue with web 3.0. What then would web 3.0 look like? Would it involve social media integrating more tightly with businesses? Will it mean ubiquitous media? Will it be mobile internet? Or will it be all that with artificial intelligence added? Or physical browsing? That view highlights the possibility of a semantic web, meaning more intelligent internet applications which can help users to get more accurate information more easily because of the applications' information processing capability. Mobile devices would investigate the surroundings and then connect to available services, and by using location information with the information it has about its user's preferences, for example, it would then suggest the kind of information and services that could interest the user. It is all aimed at supporting the individual in what she or he is about to do and at providing further ideas and suggestions. However, there are doubts about the term web 3.0 and its introduction in the near future. While there is still no

specific definition for web 3.0, it is impossible to say how it will be different from web 2.0. Web 2.0 is evolving anyway and while new services are created for users and companies, we can assume that web 2.0 tools will become integral parts of companies' internet marketing actions in some way or another. Moreover, it is believed that the significance of the internet in general will continue to grow in the future.

Some think that the internet will be increasingly based on videos rather than texts and pictures. Real time communications will continue to grow including question and answer services, intervention chats (e.g. starting a conversation with a visitor to the firm's website), offering customer support and services, making internet communication more efficient and personal. Overall, users will continue to produce and utilize content and engage with internet communities and forums to an even greater extent. Perhaps there will be two kinds of communality: one based on users' own ideas and stories, and the other communality based on sharing knowledge and facts, developing open knowledge bases. Some think that there are no technological breakthroughs in sight; that html will rule the near future as well. It is good to remember that on a global level, the sophistication of IT infrastructures, especially internet connections, varies remarkably; there exists a great digital divide. To make the internet really explode will require the rest of the world to catch up with pacesetters' internet connection speeds.

Thus, the key words for future are real time communication, integration, location information, and transparency. Many of them are happening already, but no-one knows how things will evolve.

- Marketing communications will be happening more in **real time** and in direct contact with the customer offering real time knowledge of customer needs. In addition to usability, feeling will be an equal part of the communication or usage experience in direct real-time communication.
- All services currently requiring a log in with different user names and passwords, will be **integrated** under a single log in making it easier to use and move between services, but also safer. There are new emerging services called *social aggregators* that integrate popular social networks together so that updating users' profiles in different social networks can be done through this one site (Hipp, 2008). In addition, Google has addressed this issue through its OpenSocial project that to transport social graphs between networks. The company is also developing "universal" avatars that can move between virtual

worlds (Messinger *et al.*, 2008). Everyone will have their own portal, ubiquitous ID. On the other hand, this ubiquitous society and semantic web have been envisaged since the 1990s, but still they are not reality.

- An interesting type of **integration** happens when social media are integrated as a part of businesses. That is a challenge but also a huge opportunity, but the type of business models are is hard to envisage in advance.
- **Integration** happens between internet and mobile devices. The internet will be ubiquitous, however, the experts do not see the internet and services adapting to mobile devices, but quite the contrary: mobile devices will be developed to better suite “normal” internet browsing. The interaction between the user and their surroundings increases. The answer is not to develop “mobile only” services or a “mobile internet”, but service packages, where the mobile is just another channel. The idea is that usability is of high quality no matter which device you use to connect to the internet. The role of the current operators is still unclear in this picture, and it is believed that their role will change.
- **Location information** will be more openly available and used. Now it is not actively used even though it would already be possible to get some services for your mobile phone depending on whether we let service providers use our location information or not. Location information will be utilized for providing mobile services, campaigns, information search, queries, and buying. However, it is believed that location information has a greater role in consumer than business markets, especially concerning triggering buying, but perhaps it will be utilized in offering location based services.
- **Transparency** is initiated by social networking being based on real identities, and companies are expected to follow suit. From there comes the communality: the firm stands in the same line with its suppliers, customers, general public and other stakeholders. The company has an environmental and social responsibility covering its whole value chain. Everything a firm does will be transparent and a firm is responsible for and to every other stakeholder. A firm can be grilled publicly about any observed fault. Transparency also means more opportunities for open innovation and sharing knowledge and skills if firms have the courage to open up. That might require some reforms in IPR legislation.

PART 2 - INTERVIEW SUMMARY

**A FINNISH PERSPECTIVE ON INDUSTRIAL WEB 2.0
MARKETING PRACTICE**

5 Internet, web 2.0 and industrial marketing in the Finnish context

5.1 Interviews

Marketing personnel from six Finnish industrial firms and four web 2.0 experts were interviewed for this summary (see Table 16). The themes raised in the interviews were similar to the themes on the literature review. The purpose was to gather and compare the views from Finnish industrial companies and web 2.0 experts. Interviews took place between November 2008 and January 2009. The industrial firms' interviewees had only limited experience with web 2.0 at work, because social media is still a newcomer in industrial marketing, but that makes their views on the obstacles of utilizing web 2.0 even more interesting. Next, the insights from the interviews are presented to provide a view on current state of web 2.0 in the Finnish industrial setting.

Table 16. Interviewees and their related experience.

<i>Interviewees in no specific order</i>	<i>Marketing experience</i>	<i>Work related web 2.0 experience</i>
1. Manager, marketing communications	About 5 years	Not much
2. Manager, product marketing	About 10 years	Not much
3. VP, web communications	About 5 years	Some
4. Officer, external communications	Under 5 years	Not much
5. Strategist, a marketing agency	Under 10 years	Under 5 years
6. Analyst, consulting company	Under 10 years, not marketing but internet related technologies	Under 5 years
7. Manager, marketing	About 10 years	Some
8. Researcher	Over 10 years of internet research, not marketing	About 5 years
9. Manager, consulting company	(not known)	About 3 years
10. Three managers	(not known)	Under 3 years

5.2 Changes in marketing communications

Besides the growing importance of the internet for marketing, our interviewees have experienced other kinds of changes in marketing communications too. The price of internet marketing has increased at the same speed as the internet has gained a foothold in the marketing channels. Search engine marketing is essential. Firms find it easier to get their messages published than before due to the internet. Recruiting has almost completely moved to the internet. 3D technologies are also more often used in marketing communications to visualize offerings that are built to order and this service can be provided through the internet. Marketing communication in B2B fields has slowly shifted from a technology orientation toward a more customer-oriented way of

presenting the products and their benefits. Several of the industrial firm interviewees felt that marketing communication in general is now a more difficult field to manage, because there are so many channels, and inside the channels there has been growth and fragmentation. For example, the number of professional and industry related publications has grown.

When discussing changes in internet marketing communications, the key word is interaction, which is mainly a product of the exponentially growing number of internet users involved in social media. Discussion forums and bulletin boards were the prelude for web 2.0. One big change with web 2.0 discussed by an interviewed expert has been that it is based on real identities and that sets conditions around firms' communications too. The firm has to have, even more than before, a clear and unified corporate "voice" and manner of communication, and it has an increased responsibility to adhere to its corporate values in every act of communication, because if it should not, the word would spread very quickly through communities and networks. The borders of the company are more transparent than ever before. In the examined industrial firms this same topic presents a brand management challenge caused by increasingly open communication with individual customers and viral marketing, but currently these phenomena concern consumer marketing more than B2B marketing. However, B2B firms have also had to prepare themselves to deal with negative WOM, for example. Thus, the first quakes caused by the internet made firms transform their marketing communications into digital form, but now web 2.0 affects how marketing communication is done and what the message is.

5.3 The role of the internet for Finnish industrial marketing

The impact of the internet and investments in internet marketing have been growing in industrial markets, but traditional marketing communication channels and personal contacts have maintained their position, especially when unique, complex solutions are sold and the number of potential customers is low. It was stated that when the targeted market is narrow, the quality of marketing is more crucial than the selected channels to do that. As one interviewee said, the reality has broadened to include several media, and therefore it is important to utilize multiple channels and their benefits.

Personal contacts, direct marketing, all kinds of printed and digital promotional materials, exhibitions and seminars, advertising in professional journals and magazines, white papers, scientific articles and extranets are used by nearly all the surveyed firms.

In the field of internet marketing, firms have built corporate websites, optimized search engines, commissioned banner adverts on industry related portals and communities, sent newsletters and customer magazines, and carried out extranet services for existing customers, but web 2.0 tools have not been utilized to any remarkable degree. The internet is seen as a channel through which contact new prospective customers and to do international marketing, because realizing international print-based marketing campaigns is expensive.

The experts' view is that the role of the internet will be even greater in the future and even though it might not seem so now, business marketing may experience the transformation from traditional channels to the internet even faster than consumer marketing. However, referring to our firm representatives, the opportunities and the importance of the internet as a communication tool - its use for customer acquisition, communications and marketing - are not as clear to some firms as to others, thus the attitude toward utilizing the internet for marketing purposes varies between firms.

There was consensus among interviewees that the ultimate benefits (see Table 17) for benefits and drawbacks) that the internet offers are cheap, easy and fast communication to large audiences all over the world, and that targeted communication is cost efficient. However, internet marketing is not thoroughly planned or systematic, which makes these benefits harder to attain, as one interviewee said: *“Ten years we have been doing this web marketing, especially in business-to-business markets. So it is still like we throw the nets into the water and if there is no fish, we just throw it to another place tomorrow and wish that we have better luck.”* On the other hand the literature seems to encourage experimenting as a good way to find the most suitable internet marketing options for a firm, because it can be done fast and the costs of that kind of learning are low when using the internet.

Table 17. Benefits and drawbacks of internet marketing as seen by the interviewees.

<i>Benefits</i>	<i>Drawbacks</i>
Easy and fast to change and update information	Offers same benefits to competitors too
Information delivered fast and broadly with low costs	Information is fragmented: you must know what to look for and how to be found
Communication independent of location	Other channels are still needed
Global mass media, potential audience is huge	Unreliability: hard to correct wrong information, anyone can publish anything
Cost-effective global targeted communication	Uncontrollable: no-one controls information on the internet, negative WOM, difficult to erase information once put there
Reaches audiences difficult to reach otherwise	Uncertainty of whether internet really reaches the targeted audience
Operates 24/7	Still difficult to get support for developing internet solutions and services due to lack of proof of financial results
Good measurability compared to print	Ease of contacting may also irritate - means of initiating contact must be carefully thought out for every target
Good traceability (e.g. of website visitors)	
Good contacts: a website visitor is already interested in the firm	
People spend more time with web pages than with brochures	
Interactivity	
Possibility to put links to more information or buying options	

The position of company websites as the major internet marketing avenue has not been threatened. The corporate website is a collective medium integrating all central information on the firm, and other channels guide internet traffic to the website, where more information and contacts are available. At the same time, many of the surveyed industrial firms have considered making their websites more interactive. This reflects the overall change from an internet based on monologues to one built on dialogues. It is still unclear to many firms who actually visits their website and who are the targeted audience. Some firms think that websites are mostly visited by students and so fail to attract potential customers. Personal contact is more important to existing customers than web-based communication (but many firms offer extranet services to existing customers), therefore company websites are mostly aimed at new customers, investors, and potential employees, hoping to lead to a personal contact with those who do not know the firm yet or who are not known by the firm. Therefore, in addition to corporate websites, firms have been taking care that they are found, and put the firm into different directories, search engines and listings. Communities and the opportunity to create awareness of the firm through them have raised some interest but efforts in that area have been modest so far.

6 Web 2.0 tools and their use

Some interviewees believe that web 2.0 is fad that will quickly pass and doubt whether it is that important for industrial marketing, or at least, in their field of business; and others think that it is here to stay. The expert interviewees were in general more positive toward web 2.0 and its possibilities than interviewees from the industrial firms were.

The examined firms had limited or no experience of utilizing web 2.0 tools in marketing (see Table 18), but many of them were very interested in and currently exploring its possibilities. Firm interviewees had used web 2.0 applications in their private lives but not at work, and many firms had until recently blocked access to online communities, content sharing and social networking sites. Among the examined firms, campaigns that have really utilized web 2.0 have not been conducted. The interviewees thought that to be the situation in their industry in general. Many firm interviewees were aware of internet communities, blogs and forums related to their field, but real examples of viral B2B marketing campaigns, or how to utilize web 2.0 efficiently (or at all) in industrial marketing were barely mentioned. Web 2.0 marketing was thought to be more relevant to consumer than industrial marketing, which was seen as a conservative field of marketing. Firms already familiar with the digital world, in the IT industry for example, were also thought to adapt faster to web 2.0 than industrial firms.

Table 18. Web 2.0 tools and their use among examined firms.

<i>Tools</i>	<i>Usage among six examined firms</i>
<i>Blogs</i>	One firm has one (unofficial) management level blog, one is preparing a video blog, one is planning an internal blog or a blog to existing customers. Three firms have none.
<i>Podcasts</i>	One firm has its CEO letter in webcast format (but there is no commenting option) and has done pilots for online teaching. Five firms have none.
<i>Social networks</i>	Four firms have unofficial groups in Facebook for internal networking. One has a more official Facebook group but does not know yet what to do with it. One firm has none.
<i>Online communities</i>	One firm has done some advertising in industrial communities and joined some communities and directories. One has used communities to search for information on other firms and customers. Three firms mention that customer extranets are the most important online communities for them. One firm mentions nothing.
<i>Content communities</i>	One firm had an official and one had unofficial videos on YouTube. Two firms plan to build a wiki and one has tried to contribute to existing ones. One firm mentions nothing.
<i>Forums</i>	Not participated in or utilized actively, even though one firm takes part in some professional forums.
<i>Content aggregators</i>	One firm builds a mash-up for their website and three firms offer RSS feeds.
<i>Virtual worlds</i>	One firm is interested in social bookmarking. Not utilized.

Blogs, video sharing services, and wikis attracted the most interest and some firms had plans to utilize those, but none of them had already heavily invested in them. Many firms expressed an interest in using social media applications to make internal communication in the firm more efficient and to enhance cooperation and content sharing. Some had already done that and planned to try that with partners too. An expert opinion was that perhaps the most suitable web 2.0 tools for industrial marketing are online communities, where a firm can directly interact with customers and other stakeholders, gain valuable information and provide services. That could be seen as contributing to imago building too. Communities were not, however, considered as a very appealing alternative among interviewees from industrial firms. Overall, different channels should be managed as a whole, so the question is not how to utilize web 2.0 or which tools to use, but what can web 2.0 add to firm's whole marketing strategy.

A major obstacle to exploring the opportunities presented by web 2.0, is having a limited view of web 2.0 as being just Facebook and YouTube. If that preconception is overcome, there is then often uncertainty as to where to start. In addition, some firms do not even see any need to deepen or broaden the communication with their customers, which could be possible by utilizing web 2.0 tools. In their opinion, the most relevant information received from customers is feedback, and customers' needs, wants and wishes, and the interviewees feel that they have no reason to increase other kinds of bidirectional communication. Most of those interviewed do not know whether the firm's most important internet marketing channel, the company website, reaches the targeted audience or not, or who actually visits it, or how to make the right people visit the page. That is just the place where web 2.0 could provide some help - targeting and getting better understanding of customers through truly interactive communication! Those web 2.0 tools and their usage in the examined firms, pros and cons, and some expert opinions of the tools are presented in more detail below.

6.1 Blogs and podcasts

Podcasts were not utilized for marketing purposes, although some of the firms had piloted podcasts for internal educational purposes. Experts believe that the role of podcasting in arranging trainings will continue to grow due to cost savings and the ability to make training courses independent of time and location. Podcasts can be used for customer training and support.

The interviewees in general consider *blogs* as a possible channel to communicate the firm's professionalism, but none of the firms had an official blog and only one had even an unofficial blog. One has considered using blogs for internal communications. Many of the interviewees are aware that blogs related to their industry exist and that they are really focused, but that utilizing them for marketing purposes in their field of industry is uncommon. Industrial blogs were described as technical and focused. The industrial blogs that are strictly focused are often the best ones, but because they are focused they are also hard to find and interviewees fear that they do not reach the targeted audience.

The potential benefits that the interviewees saw as linked to creating discussion about the firm's products and firm related subjects were similar to those brought out by the literature. Relevant discussion means user generated reference stories (especially when they succeed in involving opinion leaders in commenting on blogs), sharing knowledge and experiences about the products or projects with the firm, and assistance in problem solving. User generated content is considered reliable by other users, which multiplies the effects of each positive comment. The blog provides the firm with an opportunity to present a face and voice of the company; a more personal and down to earth communication channel compared to traditional, sometimes rather smooth, marketing communication. Added benefits include the opportunity to react quickly to emerging discussions, and most of all, an efficient channel to communicate the firm's professionalism and knowledge. By all these means, blogs can then contribute to brand and product marketing.

Difficulties linked to having a blog and reasons for not having one were several and it was considered more tempting to comment on other blogs rather than to start one's own.

- Uncertainty about the benefits of blog's, especially in a business where the usage experience is not "personal" (e.g. a production process), or where a group makes the buying decision. It is not known what would be a realistic expected number of readers or time spent on reading blogs, or how to reach the targeted readers.
- Uncertainty about who the blog should be aimed at. Should it be existing customers, potential customers, investors, or just anyone? Should it be open or restricted?
- Writing a blog requires resources allocated for regular updating, modifying, controlling and follow-up, and those are not appreciated tasks, so it is difficult to find not only writers but also the other resources.
- How to come up with interesting and relevant content?

- Technical difficulties in setting up a blog.
- Conservative field of business, where blogs are not commonly used for marketing.
- Fear of personalizing a firm too much on one or few persons (the blogger).
- Difficult to get customer's acceptance on writing about projects.
- Uncontrollability: 1) Fear of negative WOM. 2) Fear of spreading confidential information. 3) Bureaucracy of a listed company makes blogging difficult, because everything that is written should be signed off. These three problems lead to the conclusion, that rules are needed for blogging about company matters, but it is difficult to set them. To what extent should blogs be moderated, especially blogs written by employees?

These difficulties, especially the last one, are quite similar to the difficulties seen in the literature review in utilizing web 2.0 tools in general. There is a conflict between wanting to show off professional knowledge and fear of losing confidential information. How can we create an expert image and not reveal our knowledge at the same time? As one expert put it, *"it's like you have some tongue-tied guy in a class or at work, so no-one knows how smart he might be until he opens his mouth"*. So if blogging is used for brand building and marketing, some guidelines or rules are needed, but making regulations too strict might negate the possible benefits of blogging.

6.2 Social networks

Facebook and LinkedIn were not utilized for business purposes at a firm level in the examined firms even though some firms had (mostly unofficial) groups in Facebook, which were used for internal, relaxed communications between employees. These networking services were seen as internal networking tools enhancing cooperation or something that an employee might personally use, but the firm has no role in it.

However, the respondents did raise potential business benefits. Benefits might result from having good connections that are publicly seen on the internet, which might bring more connections and, thus, business. This was considered to be relevant for small and medium sized enterprises. Thus, connections would work as a reference. Nevertheless, some interviewees from larger firms find it difficult to even think of a possibility to make their networks visible on the internet and see no benefit in it, because that could easily put the customers into unequal positions.

Some respondents see social networking sites as having potential for recruitment or new customer acquisition. It was also acknowledged that through social networks, WOM works efficiently, and they have a great power to mobilize people. For instance events can be announced through a relevant network, and some firms use representatives to create a fuss about new products in online networks. The interviewees did not cite these as activities fun by their firms but mentioned them as examples drawn from consumer marketing.

The expert view was that Facebook, for example, could be utilized in communicating with close, long-term customers, in a more relaxed way, including also business talk, comparing it to taking a customer out for a dinner. Social networking sites can be used also for targeted marketing campaigns, but the problem for industrial firms is to find the right networks, because the best-known networking services are mostly for private use.

6.3 Communities

6.3.1 *Online communities*

The representatives of the industrial firms do not report much use of online communities. They were of the opinion that if a firm had its own community, it would have to be carefully monitored, in order to ensure a positive portrayal of the firm's image and the business in general. Hence, building a community is not a tempting option because it requires a lot of work, just like blogs, and is hard to target to a certain audience from the marketing perspective. Getting users committed to a community was also thought to be difficult. How to make industrial decision makers and active opinion leaders visit communities regularly? Even though communality has always been a part of doing business, it is about who you know and who knows you, the surveyed firms do not consider it a natural way to build networks in an online community moderated by some single party. Some firms think that they might also encounter technical difficulties in establishing a community.

Nevertheless, many interviewees mention that if they found a suitable existing community, they might join and contribute. One firm had done some advertising in field-related communities and joined some communities and directories. Advertising has been done for example in a community newsletter, where the advertisement links to an article summary or a white paper, which in turn includes a link to the company website, where the full document can be read. Therefore, the aim has been to guide

online traffic to the company website. But many of these communities linked to some journal or field related association, for instance, are not based on discussions or user generated content, but they are more one-to-many types of communities.

The online community type most relevant for these firms was a closed extranet with customers, not necessarily a web 2.0 phenomenon, but which can be so if it includes user generated content, communality and interactivity. Many examined companies were actually developing their extranets to have more interaction, services and user generated content, aiming to create even closer relationships with existing customers. Benefits gained by hosting an open community are unclear and many firm and expert interviewees believe closed extranet provides better chances to communicate with industrial customers and provide them with valuable services, because it is a safe environment for discussions, ideas and information exchange. So the uncontrollability and fear of losing confidential information is related to communities too.

One firm had used communities to search for information on other firms and customers. A common reason for joining a community or a directory is to enhance the opportunity to be found on the internet and to get information on other members in order to initiate communication, which then happens mostly off-line. Field related communities are usually restricted and with a membership fee. Firms get many contact requests from diverse communities and directories and it is difficult to know, which are worth joining. A company can commit to a limited number of communities. If customers are registered to a community, it provides a direct contact link, but that link seldom leads to online buying in industrial markets because of the complexity of the offerings. Some surveyed firms organize online communities for their live conferences and topical work groups to provide a discussion board for those who meet regularly in conferences or are otherwise interested.

6.3.2 Content sharing

Even though this subject provoked a lot of discussion, the utilization of content sharing applications for marketing purposes was low among the examined firms. The most discussed content sharing applications for marketing purposes in the interviews were YouTube and wikis. YouTube was mentioned in relation to viral marketing, brand communication and recruiting. Wikis were interesting for their brand building potential, and as a way to show the expertise of a firm, and due to the possibility of creating an open knowledge-sharing forum. Cooperative tools, which integrate office

communications and make it possible to quickly find the right person and right information, to easily share documents, and to organize meetings and trainings were also of interest, but were not really utilized with customers or for marketing.

6.3.2.1 YouTube

Some of the examined firms had videos on YouTube, but many of the interviewees do not think that YouTube is a relevant channel for them because it is for personal use and entertainment, and therefore viral videos were also not of great interest. Thus, the main reason for not using YouTube is that it is not considered as a way to reach the targeted audience. Other reasons are that it is not regarded as a serious channel option, negative attention and WOM are feared, and it is difficult to create interesting enough videos. Some firms find it awkward that they have found firm related videos on YouTube, which have been added by partners or some other parties, and those videos are not always of the best quality, having possible negative effects on the firm's image. As with almost all web 2.0 tools, one of the greatest risks is uncontrollability.

If the firms were to put videos on YouTube, they should be of high quality, perhaps general presentations of a firm, or videos for recruiting purposes. Basically many of the firms already have such general presentations and brand animations that they show at customer events, but they have just not put them on YouTube. As was pointed out by one interviewee, videos cannot be added just because it would be nice to have something on YouTube, instead there should be a clear motivation behind it. One major motivation for putting videos on YouTube is to enhance internet search results for the firm. Other benefits were the broadness of the potential audience, low cost per contact, free video hosting and broadcasting, the opportunity to build brand with visual aids, the opportunity to guide visitors to a company website, the fast spreading of interesting videos, and the opportunity to present material not suitable for television.

One issue discussed was using humor in viral videos. Many firm interviewees thought that humor is not suitable for videos made for business purposes, while others thought that humor is the only way to create a phenomenon on the internet also in industrial marketing, because it guarantees the spread of a video. People search videos for fun, not for information. That is also why mishaps spread so efficiently. However, when using humor, it must not insult anybody or any businesses' practices. The opposing argument was that it is more important to get the video to the targeted audience than to spread it as broadly as possible with the help of humor. Even though a

video would get an enormous audience, it might not reach the targeted groups and thus not bring financial results for the firm.

It was suggested that video sharing could be integrated as a part of a company's website, then videos would be more certain to the target audience. For recruiting, open positions could be introduced in a more realistic way in video format. Video sharing could be utilized more for product marketing, training purposes, and product support. Advertising can be added to videos made by others too, before or after a video, but that idea had not yet gained much interest in the examined firms.

The experts thought that video sharing sites will not see as many industrial product launches and marketing as consumer product launches, and consider communities more suitable for industrial firms, because they reach potential customers better. YouTube could, however, be used for testing advertisements and getting comments on them. One expert stressed, however, that there is room for innovative thinking when making business marketing videos: *“everyone has seen those videos, zoom in on a factory chimney, and it has this dum-di-dum background music, there are this kind of company videos, but no-one wants to watch them.”*

6.3.2.2 Wikis

Half of the examined firms were interested in contributing to wikis, either by starting their own one or by contributing to existing ones. The main purpose of that, from the interviewees' perspective, is to present the expert knowledge and professionalism of a firm for brand building purposes, and to create an open knowledge sharing and creating community, linking the firm into the top-of-the-field discussions. The key word is not so much a community but the best possible database. The targeted audience for wikis is wider than existing and potential customers, incorporating all the firm's stakeholders.

The problem with firm-moderated wikis is that readers might consider them less reliable than wikis moderated by independent parties. That is why additions that might be made by firms to Wikipedia are often removed. Firms have tried to follow what has been written about the firm in different countries' Wikipedias.

The expert opinion according to the interviews was that wikis are, as a knowledge-based application, ideally suited for industrial marketing purposes. Wikis are easier to control than open discussions, and they can be used for group ideation. One firm interviewee mentions that they are going to be truly open with their forthcoming white papers - they are sharing visions that they cannot realize by themselves.

6.3.2.3 Online customer trainings

Another important application for content sharing is online teaching and learning. That provides firms with lower costs, because the duration of live-teaching periods can be reduced, fewer personnel are involved, material is easy and affordable to hand out, and easy to repeat regardless of time and space. For learners this offers an opportunity to get to know the materials beforehand, discuss matters with other participants online before, during and after the course, a more stable quality of teaching, and less travelling. One examined firm had already piloted this kind of online learning community internally. Online teaching and learning can be used both internally and with customers. The challenge is to provide applications that really result in enhanced efficiency, quality and innovativeness. Without true benefits this kind of community will not live long.

6.3.3 Forums and bulletin boards

Forums or bulletin boards were basically not utilized for marketing purposes in the examined firms, although they raised a little interest. One firm had taken part in some field related professional forums, which are often linked to professional journals or magazines, or to some technical niche.

An acknowledged benefit of forums and bulletin boards for the firms was reliability from the customer's point of view when making a buying decision or needing help, so customers do the marketing job. Evidence of this kind of utilization of peer-customer reviews and recommendations is also seen in business markets in the form of field specific comparison and reference forums, but larger established companies openly recommending each other is not happening, at least not yet.

The experts interviewed think that industrial firms could utilize forums more efficiently to collect feedback and knowledge of customers' needs and wants if they could only find the right forums to do that. In fact, that seemed to be the main obstacle to utilizing forums more. One option is to create an independent forum by oneself. Some services offer an option of using a readymade platform for creating an online channel to collect customer feedback, which is a more interactive channel for feedback than email. When feedback systems are integrated with CRM systems, it is easier to respond to the feedback personally.

6.4 Content aggregators

The examined firms did not utilize RSS feeds, social bookmarking sites and other tagging services or widgets for marketing, except that a couple of firms offered some RSS feeds and one firm has tried to create a mash-up for the firm's website. RSS feeds were criticized for being disturbing, but on the other hand they are delivered only to those who order them, and in that sense the message can be really well targeted to those who are already interested, and feeds can be read whenever it is convenient for the receiver.

6.5 Virtual worlds

Virtual worlds were not utilized by the examined companies. Potential forms of utilization mentioned in the interviews were product launches and product marketing, and arranging virtual meetings. Interviewees feel that examples from consumer marketing are not usable as such for industrial marketing. The main reason for this is that it might be difficult to reach the targeted audience in open virtual worlds such as Second Life, which are based more on personal avatars and consumer markets. Virtual worlds require good internet infrastructure IT equipment, which might also be a problem hindering wider utilization. Usability of those worlds is also still developing.

7 Implementing web 2.0 for marketing

7.1 Difficulties in implementation and the other side of the coin

When compared to the main obstacles to web 2.0 utilization found in the literature, these interviews revealed many different kinds of challenges, and the issues raised were consistent between the firm interviewees and the experts. Thus, there seems to be a consensus on what are the clearest difficulties in utilizing web 2.0. The following listing also summarizes the discussion of web 2.0 tools' pros and cons, as many general difficulties of implementation were common for several web 2.0 tools. Some of those difficulties are hard to overcome totally, because they are connected to fundamental characteristics of web 2.0 and those characteristics do not only provide difficulties but benefits too. Thus, some difficulties and benefits are very closely linked. If those links are not fully understood, in avoiding those difficulties a firm loses the opportunity to benefit too. Nevertheless, some difficulties stand alone. They are basic level challenges, which should be handled when starting web 2.0 marketing.

Before going any deeper into those challenges, we should address one issue that was often mentioned but was also considered to be a state of mind more than a real obstacle. Many interviewees felt that web 2.0 is more beneficial to consumer than to business marketing and that the special features of business markets make it difficult or pointless to utilize web 2.0 for industrial marketing. It seems that the lack of clarity of the potential benefits of web 2.0 tools for business marketing is one reason for that statement, but there were several other explanations mentioned by the interviewees:

- a) Open social media does not reach targeted industrial customers.
- b) Industrial networks and communities cannot be based on total openness due to the strict need for confidentiality.
- c) There is no time or resource for updating and monitoring web 2.0 applications.
- d) Business customers have no time for or interest in participating in several social media applications.
- e) The buying decision and the purchase are not like buying a book from Amazon. The reference group for the decision is usually found inside the company. The products sold are often customizable large investments. Thus, social media has no great power over industrial buying decisions.

However, these are all considered excuses. The expert view was that more than operating in industrial markets, the corporate culture, age distribution among personnel, and attitudes have a greater influence on utilization of web 2.0. So web 2.0 tools are not necessarily inapplicable for industrial firms. Some of the excuses given for not utilizing web 2.0 tools are patently weak. Why should personnel in industrial firms be busier than their counterparts in consumer firms (explanation c)? Why would customers not use social media applications if they provide them with real benefits and make their work easier? Nevertheless, there are some realistic and fundamental difficulties, which are discussed next.

7.1.1 Fundamental obstacles for web 2.0 utilization

Web 2.0 as an environment, and its benefits, opportunities and effects are unknown, thus hindering its use. It is not clear whether the task of getting acquainted with web 2.0 should fall to IT or of marketing personnel, so there is no staff dedicated to it. Perhaps because it is an unknown area, the threats seem bigger than they are in reality. Firms find it difficult to find relevant communities, forums or blogs to contribute to. They do not know where to start. Even though some web 2.0 tools might be familiar, the whole picture of web 2.0 is unclear, and it is hard to make well-informed decisions as to whether to utilize it or not and if so, how. Knowledge is limited to one or two tools, such as content sharing on YouTube, instead of thinking what would most benefit the firm or how web 2.0 tools could fit into the set of other marketing channels.

Setting rules and guidelines is difficult. Since discussions on the internet (and their effects) are beyond the control of firms, they feel that they need to have agreed rules of communication on blogs, forums and communities. This is especially a concern for listed companies; which find it difficult to participate in open social media while all communications of a listed company should be controlled. The lines should be drawn for example on whether or not to control personal writings on company matters, whether communities and blogs are to be left truly open or restricted, and to what degree a firm monitors discussions.

The difficulty of developing interesting content that offers real value for its users. The only way to keep members of a community or readers of a blog committed is to have interesting content and many interviewees find that difficult. Many interviewees thought that the only way to provide valuable services for business customers is via an extranet

and not through public applications or services. Users are increasingly demanding concerning contents and services.

Technical difficulties. Some firms are also finding technical difficulties in carrying out web 2.0 initiatives such as having a blog or establishing a community. Integrating many services so that a user has only one interface is also difficult. Therefore many applications are still complex and inefficient to use. It was also stated that in certain parts of the world IT infrastructure and equipment are not so well developed so those audiences cannot be reached by sophisticated web services.

Web 2.0 applications are focused on technical functionality and providing information, and not on creating real value, flow, good usability, or emotional experiences. Even though the idea of an application is good, the user might get frustrated or bored and then an application will not fulfill its purpose. Concerns about how to utilize mobile technologies or to create mobile services for customers are an example of this focus on technology. Instead of just wanting to use a certain channel, the value that can be provided to customers via that should be the main concern.

7.1.2 Challenges that come with benefits

The difficulty in controlling discussions on the internet results in fear of negative WOM, or the spread of false information, which can quickly have strong negative effects on a firm. This challenge was the most discussed and it was linked to discussions on the power of communities to spread (mis)information, the popularity of hate groups, the difficulty of erasing information from the internet, and the opening up of the company's borderlines. For these reasons companies hesitate to make their websites more interactive, or to offer open feedback channels for customers, for instance.

- + On the other hand, utilization of WOM is one of the main benefits of web 2.0. Communities are powerful tools to spread information in an interesting format and mobilize groups of people with similar interests.
- + Uncontrollability also brings the possibility of having a more relaxed, "human" communication channel.

Fear of losing confidential information due to an increased amount of open, interactive communication. Firms see many risks in opening up communication and the risk of losing confidential information often came up on the interviews. Industrial firms based on technical expertise have traditionally been closed fortresses. If open innovation kinds

of activities are the aim, a firm needs to decide how open it wants to be. Open online communication can reveal, which relationships are the most important for the firm, just as Facebook does with personal relationships. How to balance sharing knowledge and securing confidential information? Experts think this risk is overrated, slows down the development of industrial web 2.0 applications, and firms will gain more than they lose by sharing professional knowledge and cooperating with other firms and stakeholders, but also understand that opening up requires a giant leap in attitude.

- + Openness speeds up ideation and problem solving with better results through open innovation, knowledge sharing and creation in open communities. Openness brings benefits hard to achieve otherwise that are based on gaining access to external knowledge resources.
- + Web 2.0 provides ways to integrate customers into product ideation and development.
- + Web 2.0 can be used for creating networks (and contacts) that enhance business.

Firms are more transparent to the public so they need to act in a more responsible manner, reflecting the true values of the brand in every move they make. A customer can perhaps be yelled at once on the phone but if the same happens on the internet the word will spread quickly. Web 2.0 is based on real identities unlike the chat rooms of the past. For industrial firms this is a challenge meaning creating a face and a voice for the company. Increased open interaction with individuals and the company is seen as actively affecting the firm's brand and the communication of it. Even consumers, who are interested in the origins of products, are now closer to industrial firms.

- + This interactive communication can be utilized for brand building, as well as WOM.
- + Interactivity provides enhanced real-time communication opportunities with customers offering a better understanding of customers' needs and wants and strengthening the relationship.

Many web 2.0 tools require continuous updating and monitoring, hence, resources from both the moderator and from the participant. Many interviewees said that they have no efficient ways to monitor discussions about the firm, because there are an endless number of communities, blogs and forums, so they do not know which to monitor. If a firm establishes a community or a blog, it should be continuously updated, monitored and moderated, and coming up with interesting and relevant content is always a

challenge. In other words, it would need devoted employees and IT resources, time and money. These requirements apply to community members too, so they cannot actively participate to several of them, and applications should be easy to use.

- + The expert view was that there is no need for specified web 2.0 personnel but a need to train current staff. When a firm makes an agenda for web 2.0 the most relevant communities and forums to follow will become clearer.
- + And even if some more resources are needed, web 2.0 provides low costs of interactive and open communication and hosting of internet content.

The measurability of web 2.0 marketing results is considered a weakness and therefore it is difficult to get budget approval for web 2.0 developments. Measurability is a common problem in marketing. Measures are often indirect and lack the capability to evidence financial results. It is inevitably more difficult to show how forum visitors or community members contribute to customer acquisition, increasing sales or strengthening relationships than to just show numbers on visitors on a forum or members of a community.

- + Measurability is quite good and factually based when compared for example to print media, because internet traffic is easily automatically observed and traceable. The number of visitors to a website (campaign measure) and actual readers of an e-brochure, how much time visitors spend on a website, the sites visitors arrive on a website from, what visitors do on a website, and how many open a certain link are examples of the precise information available. Through widgets it is possible to monitor activities performed through them, e.g. orders. Efficiency of utilizing web 2.0 software platforms and applications can be estimated by comparing their costs to a corresponding inbound system. Perhaps the problem is more poor knowledge of suitable measures and how to use them than a total lack of them.

Does not reach industrial customers. According to the interviews one major reason not to get involved in web 2.0 was that interviewees believed that the tools do not reach the targeted audience, which, for an industrial firm, is usually a niche. Bar one expert, our interviewees believe that industrial customers or potential customers are not well reached by web 2.0 applications because most of them are aimed at consumers. If a community, blog or a forum is targeted at a niche, it usually makes it harder to find on

the internet. The question remains, how to create lively discussions or forums for specified topics.

- + Making good contacts through targeted communication is enhanced by web 2.0, because communities are already organized by interests. Web 2.0 also offers ways to increase search engine results for the company, when marketing communication reaches those who are already interested in topics relevant to the firm.

7.2 Suggestions on how to proceed

This short list of suggestions summarizes the interviewees' views on how web 2.0 could be implemented more effectively than it is now. It is not a roadmap, but reflects the emphasis given to the themes in the interview material.

- Get to know web 2.0 as a channel, explore. Start with baby steps with the customers you know and trust. Add services and actions gradually and bring other stakeholders in one by one. Make the first moves in a controlled environment, and increase openness later. Before making any major marketing efforts on web 2.0, thoroughly understand its pros and cons. With a gradual approach, the uncontrollability of web 2.0 becomes a little more bearable.
- Set clear purposes and targets for the utilization of web 2.0. The question to be asked is how web 2.0 can help the firm to serve its customers better. Define the targeted audience. Define the expected results.
- Link web 2.0 to the “whole picture” of marketing. Web 2.0 is not an island. When its characteristics as a marketing channel are familiar in a firm, it can find its place among the other channels. For certain firms it might not be useful at all. Marketing personnel should have good knowledge of web 2.0 if utilizing it, but it is not necessary to have resources devoted solely to web 2.0 marketing to get started. A work group with a broad spectrum of knowledge and experience can handle it together with other channels. However, the group should include someone who is responsible for web 2.0 marketing.
- Offer real value. Think how web 2.0 can make your or customers' work more efficient. Interesting content that benefits its users is a powerful way to get community members committed.

- Prepare a worst case scenario and plan how to handle it. Set common rules for web 2.0 communications in a firm and understanding of how open the firm wants to be in its communications. Evaluate all possible risks and define how to cope with them.
- If utilizing web 2.0 accept its nature. If there is no room for openness, sharing, interactivity, or user generated content, maybe there is no room for web 2.0. If the strongest needs are to control, monitor, and moderate discussions and to protect information, the possible benefits of web 2.0 are hard to attain.

7.3 Summary of web 2.0 implementation based on the interviews

Based on the interviews, it can be said that web 2.0 is not yet widely utilized by Finnish industrial companies. Company websites remain the most important internet marketing communication forum. Among the examined firms the only real web 2.0 marketing effort was to share promotional videos on YouTube, but that was more ad hoc than a systematic step towards utilizing web 2.0 for marketing purposes. Firms have utilized web 2.0 more for internal communication e.g. in the form of community groups, sharing content for online learning and group work, and communicating with customers via extranets, than for external communications. Interviewees were most interested in blogs, video sharing, and wikis, and mainly for brand building purposes, communicating with existing and potential customers, and sharing knowledge.

Both the interviewees and the literature brought out similar benefits, but the interview analysis of the obstacles to web 2.0 utilization provided some interesting findings, especially in terms of how the mindset seems to be the main factor hindering utilization of web 2.0 for industrial marketing (see Chapter 7.1). There are many fundamental challenges in web 2.0 utilization identified in the interviews, especially those faced at the beginning of implementation, that just have to be solved somehow (see Figure 4). It must be remembered that these illustrations are based on the interviews, not on more general findings, but they seem to be quite common to all examined firms.

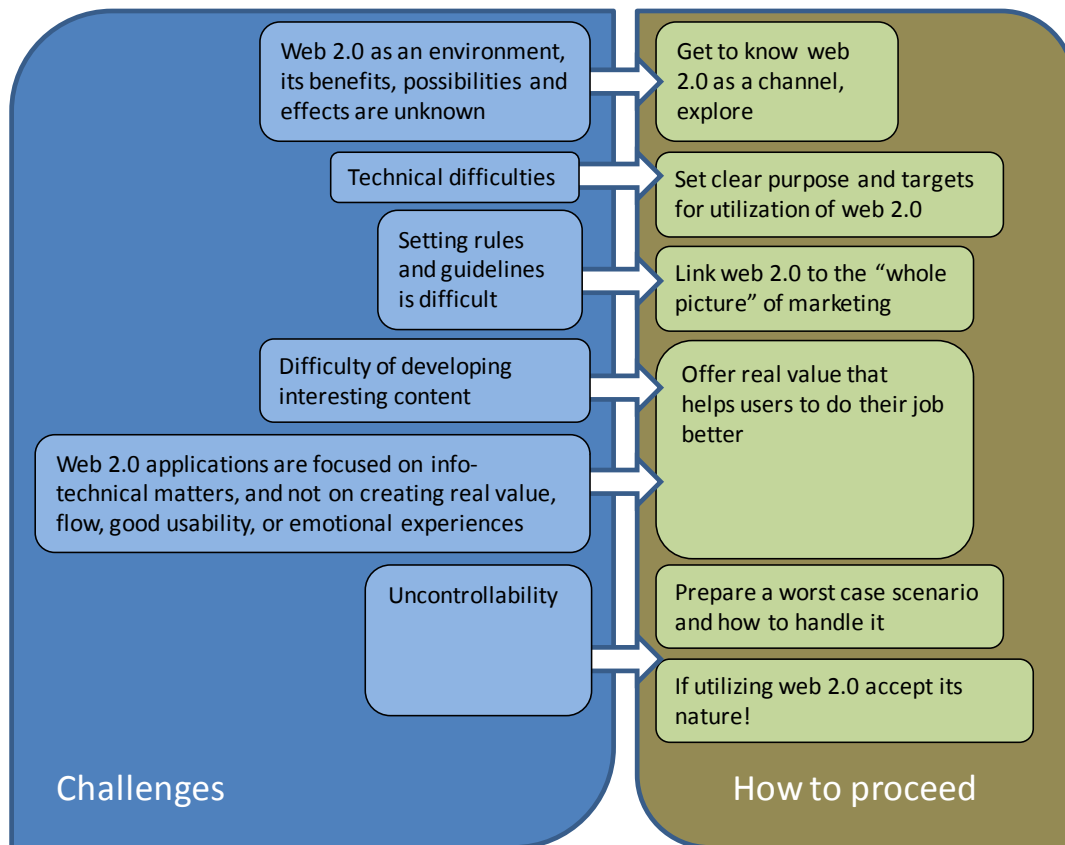


Figure 4. Challenges of utilizing web 2.0 seen by examined firms and tips on how to move-on from starting difficulties.

There are also difficulties that come with benefits, so you get both of them and just have to find a way to balance their effects. The glass may be viewed as half-full or half-empty, because those challenges and benefits are linked to the basic characteristics of web 2.0: user generated content, sharing of it and interaction. Those challenges and benefits are presented in Figure 5.

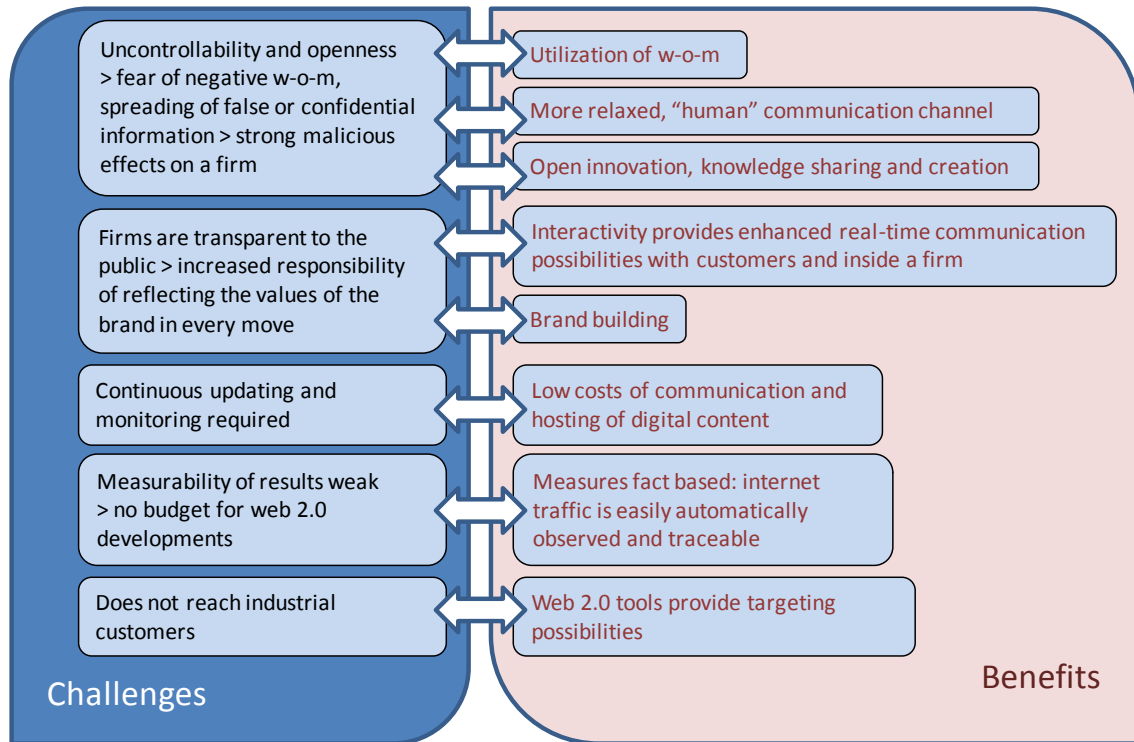


Figure 5. Challenges of utilizing web 2.0 that relate to central benefits and characteristics of web 2.0 communications.

Based on the interviews it can be seen that there are still many unexplored opportunities for Finnish industrial firms that web 2.0 marketing can offer. Consumer marketing among web 2.0 is perhaps not the most fruitful benchmark for industrial firms, because it restricts the view of potential benefits, as has perhaps happened among these interviewees. Nevertheless, innovative initiatives are definitely needed, because even globally web 2.0 is not yet widely used for B2B marketing. However, as the internet continues to evolve (and it seems certain that the role of the internet in marketing will grow further), it is better to at least keep up with what is going on.

One main trend speaks for industrial firms paying attention to web 2.0 marketing opportunities: consumers are getting closer and closer to the first parties in the value chain. Therefore communities with consumer users discussing products and their origin are not irrelevant for industrial firms, but have an increasing role especially concerning brand management and communications. Transparency is already evident on environmental issues and the scope is broadening. It is not advisable to ignore the effects that the end-users have on the whole value chain. Web 2.0 tools provide industrial firms with an opportunity to market directly to the end-users.

References

- Antikainen, M. (2007) The Attraction of Company Online Communities – A Multiple Case Study. *Acta Universitatis Tamperensis* 1290. Tampere: Tampere University Press.
- Avanade (2008) CRM and social media: maximizing deeper customer relationships. White paper.
http://www.avanadeadvisor.com/CRMsocialmedia/docs/Coleman%20Parkes%20Research%20Findings%20Summary_final.pdf (9.9.2008)
- Bach Jensen, M. (2006) Characteristics of B2B adoption and planning of online marketing communications. *Journal of Targeting, Measurement and Analysis for Marketing*, 14 (4), 357 - 368.
- Barnes, S. (2007) Virtual worlds as a medium for advertising. *The DATA BASE for Advances in Information Systems*, 38 (4), 45 - 55.
- Bernoff, J. (2008) How To Choose The Right Social Technologies. Forrester.
- Bernoff, J. & Li, C. (2008) Harnessing the power of the oh-so-social web. *MIT Sloan Management Review*, 49 (3), 36 - 42.
- Boyd, D.M. & Ellison, N.B. (2008) Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13, 210 - 230.
- Briggs, R. & Hollis, N. (1997) Advertising on the web: Is there response before click-through? *Journal of Advertising Research*, 37 (2), 33 - 45.
- Brown, J., Broderick, A.J. & Lee, N. (2007) Word of mouth communication within online communities: Conceptualizing the online social network. *Journal of Interactive Marketing*, 21 (3), 2- 20.
- Chatterjee, P., Hoffmann, D.L. & Novak, T.P. (2003) Modeling the clickstream: Implications for web-based advertising efforts. *Marketing Science*, 22 (4), 520- 540.
- ComScore (2007) ComScore finds that Second Life has a rapidly growing and global base of active residents.
<http://www.comscore.com/press/release.asp?press=1425> (10.11.2008)
- ComScore (2008) Google holds top spot in European site rankings, according to ComScore world metrix.
<http://www.comscore.com/press/release.asp?press=988> (23.10.2008)
- Constantinides, E. & Fountain, S.J. (2008) Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice*, 9 (3), 231-244.
- Davis, R. (2006) B2B Online marketing strategies. Changing with the emergence of web 2.0.
<http://www.b2bmarketingtrends.com/abstract.asp?groupid=5&id=240> (26.10.2008)
- Davis Kho, N. (2008a) B2B gets social media. *EContent*, 31 (3), 26 - 30.
- Davis Kho, N. (2008b) Successfully surfing the marketing. *EContent*, 31 (4), 28 - 32.
- De Bruyn, A. & Lilien, G.L. (2008) A multi-stage model of word-of-mouth influence through viral marketing. *International Journal of Research in Marketing*, 25 (3), 151 - 163.
- Digitoday (2008) Firmat epäonnistuvat virtuaalimaailmoissa.
<http://www.digitoday.fi/bisnes/2008/05/19/firmat-epaonnistuvat-virtuaalimaailmoissa/200813568/66> (24.10.2008)
- eMarketer (2008a) B2B checks out marketing 2.0.
<http://www.emarketer.com/Article.aspx?id=1005860> (24.9.2008)
- eMarketer (2008b) Online video advertising starts looking good.
<http://www.emarketer.com/Article.aspx?id=1006567> (24.9.2008)

- eMarketer (2008c) Social networks are not yet universal.
<http://www.emarketer.com/Article.aspx?id=1006513> (16.9.2008)
- eMarketer (2008d) Social networks get down to business.
<http://www.emarketer.com/Article.aspx?id=1006482> (16.9.2008)
- Ferrante, A. (2007) B2B marketers struggling to integrate web 2.0 strategies into marketing mix.
<http://www.demandgenreport.com/archive.php?codearti=1145> (11.9.2008)
- Frampton, A. F. (2008) Businesses use social media as marketing tools.
http://www.charlestonbusiness.com/current/14_21/news/13017-1.html (23.10.2008)
- Google (2008a) Näin markkinoit yritystäsi Internetissä. Provisa.
- Google (2008b) The website.
<http://www.google.com> (23.10.2008)
- Google (2008c) The website.
https://www.google.com/adsense/login/fi/?hl=fi&sourceid=aso&subid=ww-fi-et-ads1_D&medium=link (29.10.2008)
- Hagel III, J. & Armstrong, A.G. (1997) Net Gain – Expanding Markets through Virtual Communities. Boston, Massachusetts: Harvard Business School Press.
- Hamilton, A. (2007) Is Facebook overrated? Time Inc.
- Hipp, M. (2008) 35 + social media tools that make life easier.
<http://freelancefolder.com/35-social-media-tools-make-life-easier/> (26.11.2008)
- Helm, S. (2000) Viral marketing - Establishing customer relationships by 'word-of-mouse'. *Electronic Markets*, 10 (3), 158 - 161.
- Henttonen, T. (2008) Exploring Virtual Worlds: Key Success Factors in Virtual World Marketing. Helsinki: Helsinki School of Economics.
- Hintikka, K. (2007) Web 2.0 – Johdatus Internetin Uusiin Liiketoimintamahdollisuuksiin. TIEKE publication series. Helsinki: TIEKE Tietoyhteiskunnan kehittämiskeskus ry.
- InSight24 (2008) The modern b2b marketing podcast: Laura Remos, VP and principal analyst at Forrester research.
http://www.insight24.com/webcasts/content-111255_1 (11.9.2008)
- Kadavasal, M. S., Dhara, K.K., Wu, X., Krishnaswamy, V. (2007) Mixed reality for enhancing business communications using virtual worlds. Proceedings of the 2007 ACM Symposium on Virtual reality Software and Technology.
- Kangas, P., Toivonen, S. & Bäck, A. (2007) ”Ads by Google” and other social media business models. VTT Research Notes 2384. Helsinki: VTT.
- Kannan, P.K.; Chang, A-M. & Whinston, A.B. (2007) E-business and the intermediary role of virtual communities. In: Barnes, Stuart (edit.). *E-Commerce and V-Business – Digital Enterprise in the Twenty-First Century*. Oxford: Butterworth-Heinemann, 79-94.
- Keulenaer, H.D. (2007) B2B and Web 2.0 — a match made in heaven?
<http://www.20four.net/b2b/archives/59> (24.10.2008)
- Kohler, T. (2008) Avatar-Based Innovation – Facilitating Compelling Co-Creation Experiences. Doctoral Thesis, University of Innsbruck.
- Kozinets, R.V. (1999) E-tribalized marketing? The strategic implications of virtual communities of consumption. *European Management Journal*, 17 (3), 252 - 264.
- Lindgreen, A. & Vanhamme, J. (2005) Viral marketing: The use of surprise. In: Clarke III, I. & Flaherty, T.B. (ed.). *Advances in Electronic Marketing*. Hershey: Idea Group Publishing, 122-138.
- LinkedIn (2008) The website.
http://www.linkedin.com/static?key=company_info&trk=hb_ft_abtli (26.11.2008)

- Madden, N. (2008) B2B in a web 2.0 world, Part 1: Digital media relations.
<http://www.ecommercetimes.com/story/62935.html?wlc=1225888930> (5.11.2008)
- McKinsey Quarterly (2007) Building the web 2.0 enterprise.
http://www.mckinseyquarterly.com/building_the_web_20_enterprise_mckinsey_global_survey_2174 (17.9.2008)
- Messinger, P. R., Stroulia, E., Lyons, K. (2008) A typology of virtual worlds: Historical overview and future direction. *Journal of Virtual Worlds Research*, 1 (1), 1 - 18.
- Miller, J. (2007) What's wrong with social media for B2B marketing.
<http://searchengineland.com/what%E2%80%99s-wrong-with-social-media-for-b2b-marketing-11395.php> (16.9.2008)
- Moran, M. (2008) *Do It Wrong Quickly - How the Web Changes the Old Marketing Rules*. New Jersey: IBM Press, Pearson plc.
- Morrison (2006) How to use social media in B2B marketing.
<http://www.imediconnection.com/content/10017.asp> (16.9.2008)
- MySpace (2008) <http://www.myspace.com> (22.10.2008)
- Optaros (2007) What is a web 2.0 corporate website?
<http://www.optaros.com/blogs/what-web-20-corporate-website> (24.10.2008)
- O'Reilly, T. (2005) What is web 2.0.
<http://www.oreillynet.com/lpt/a/6228> (18.9.2008)
- Perry, M. & Bodkin, C.D. (2002) Fortune 500 manufacturer web sites. Innovative marketing strategies or cyberbrochures? *Industrial Marketing Management*, 31, 133 - 144.
- Pishevar, S. (2006) Widget marketing: Engage audiences. *iMedia Connection*, September 12, 2006.
<http://www.imediconnection.com/content/11135.asp> (20.11.2008)
- Porter, C.E. (2004) A typology of virtual communities: A multi-disciplinary foundation for future research. *Journal of Computer-Mediated Communication*, 10 (1).
<http://jcmc.indiana.edu/vol10/issue1/porter.html> (13.11.2008)
- Rothaermel, F.T. & Sugiyama, S. (2001) Virtual internet communities and commercial success: Individual and community-level theory grounded in the atypical case of TimeZone.com. *Journal of Management*, 27 (3), 297 - 312.
- Salmenkivi, S. & Nyman, N. (2007) *Yhteisöllinen Media ja Muuttuva Markkinointi 2.0*. Helsinki: Talentum Media Oy.
- Samiee, S. (2008) Global marketing effectiveness via alliances and electronic commerce in business-to-business markets. *Industrial Marketing Management*, 37, 3 - 8.
- Sheth, J.N. & Sharma, A. (2005) International e-marketing: opportunities and issues. *International Marketing Review*, 22 (6), 611- 621.
- Shuen, A. (2008) *Web 2.0: A Strategy Guide*. Sebastopol: O'Reilly.
- Siltala, T. (2008) Suomalainen Xiha laajenee kiinalaisrahalla. *Tivi.fi* 20.11.2008.
http://www.tietoviikko.fi/kaikki_uutiset/article171281.ece?s=u&wtm=tt-20112008 (26.11.2008)
- Squid News (2007) Will it blend? - The interview with Tom Dickson.
<http://www.squidnews.com/2007/02/09/will-it-blend-the-interview/> (27.11.2008)
- Tapscott, D. & Williams, A.D. (2008) *Wikinomics. How Mass Collaboration Changes Everything*. London: Penguin Books Ltd.
- Thompson, S.A. & Sinha, R.K. (2008) Brand communities and new product adoption: The influence and limits of oppositional loyalty. *Journal of Marketing*, 72(6), 65 - 80.
- Tieke (2008) Ylimmän johdon ei koeta ymmärtävän sosiaalista mediaa.
<http://www.tieke.fi/?x10915=25252> (9.9.2008)

- Tietoviikko (2008) Tutkimus: Yritysblogit ovat tylsiä.
http://www.tietoviikko.fi/kaikki_uutiset/article133432.ece (9.8.2008)
- Tilastokeskus (2008) Internetin käyttötarkoitukset keväällä 2008.
http://www.stat.fi/til/sutivi/2008/sutivi_2008_2008-08-25_tau_001.html
(15.10.2008)
- Turban, E., King, D., Lee, J., Warkentin, M. & Chung, H. M. (2002) Electronic Commerce – A Managerial Perspective. New Jersey: Pearson Education, Inc.
- Weber, L. (2007) Marketing to the Social Web –How Digital Customer Communities Build Your Business. New Jersey: John Wiley & Sons, Inc.
- Wikipedia (2008) Will it blend?
http://en.wikipedia.org/wiki/Will_It_Blend%3F#cite_note-9 (27.11.2008)

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