Crowdsourcing in the Social Media Era: A Case Study of Industrial Marketers

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In recent years crowdsourcing has increased in popularity as a method of gathering new ideas and innovations outside the organization. To make crowdsourcing work, there is a basic requirement to make external parties aware of the challenges or problems that need to be solved. Various digital marketing tools, especially social media platforms, provide new ways to foster the interaction between the parties. With the use of a case study, the study develops a framework to assess how social media and crowdsourcing can be integrated in an industrial context. The results reveal significant practical challenges to overcome before social media can be effectively utilized as a fully functioning crowdsourcing enabler.

INTRODUCTION

No business today can neglect the impact of social media (SM). SM is big and getting bigger, and it has changed the way firms communicate with both existing and prospective customers and other stakeholders (Parent, Plangger and Bal 2011). According to eMarketer (2011), business is expected to invest $6 billion in social media in 2011. It is being argued that we are in the middle of a new communication landscape (e.g. Kietzmann, Hermkens, McCarthy and Silvestre 2011) as the roles of customer interaction and user-generated content (UGC) are emphasized in marketing communications (Dennis, Merrilees, Jayawardhena, and Wright 2009; Liu, Karahanna and Watson 2011). According to Smith (2009) various social platforms like Facebook, LinkedIn, MySpace, Twitter, and YouTube, which allow users to publish opinions, connect, build community, and produce and share content are creating the so-called social media revolution. However, in order for firms to fully leverage SM there are new skills and strategies marketers are required to learn (Scott 2010; Thomas and Barlow 2011).

There is also a strong shift in power emerging due to SM. There are several discussion threads and social media sites where customers express their experiences and opinions about a firm and its offerings. People not only want to share their ideas and opinions with a large audience, but also want firms to listen to them and be responsive (Kietzmann et al. 2011). According to Mangold & Faulds (2009) social media has challenged the traditional way of companies talking to their customers, as now SM enables customers

to talk directly to one another and without firm's control. This actually makes the act of listening essential for firms (Smith, 2009). Similarly, Gillin and Schwartzman (2011: 219) state that "the most essential skill of the B2B marketer has become the ability to listen." Most likely this holds true in consumer businesses, but less is known about whether this is also valid in industrial B2B context where buyers and users are often different types of entity.

According to Hoyer et al. (2010) consumers' active participation in product development is still in its infancy. The same holds true also in industrial B2B settings if 'consumer' is replaced with 'end-user'. In addition there is limited knowledge of how digital marketing communications and SM could be used in combination to facilitate innovation processes and value co-creation by activating customers and end-users to provide feedback, suggestions for improvement and even new ideas and innovation to product manufacturers and service providers. One way to organize idea collection is by applying crowdsourcing (CS). The ideology behind CS is to use the wisdom of many individuals rather than relying on only a few experts (Surowiecki 2005). While the exact origin of the term crowdsourcing is debatable (Biewald 2009), an article by Howe (2006) is often mentioned as the first reference to CS. According to Howe (2008: 280), "crowdsourcing isn't a single strategy. It's an umbrella term for a highly varied group of approaches that share one obvious attribute in common: they all depend on some contribution from the crowd." CS is related to another relatively new business concept: open innovation (Chesbrough 2003). According to Hopkins (2011), user-driven innovation, co-creation and CS are all ways to make open innovation happen. The idea that the customer becomes co-creator of value has been widely recognized in recent marketing literature (Payne, Storbacka and Frow, 2008; Edvardsson, Tronvoll, Bård and Thorsten, 2011; Vargo & Lusch 2004, 2008)..

There are several success stories in business-to-consumer (B2C) industry on the power of CS, such as Lego´s Lego Factory, Nike´s Nikeidea, Nokia´s Betalabs and Starbucks' My Starbucks Idea. In the B2B sector Dell's Ideastorm, GE's solar power community, HP communities and Salesforce's Idea Exchange are well-known examples of online crowdsourcing, but their real value to business is not that clear. In general the role of CS in co-creation is still unclear. There are some studies that doubt the value of CS (e.g. Cooper and Edgett 2008) while there is evidence supporting it too (e.g. Brabham 2008; Howe 2008). We feel that more research in this area is needed to clarify the situation

Against this background this study attempts to provide answer to the research question how end-users could be engaged to innovate new products and services in B2B via social media and digital marketing? The focus here is on discussing the potential benefits of integrating SM and CS. The concepts of SM and CS are reinforced throughout this paper and the model presented at the end of this paper ties them together.

SOCIAL MEDIA AND DIGITAL MARKETING

As a theoretical approach we consider internet marketing as a part of digital marketing. Furthermore, we consider social media as a sub-element of internet marketing, others including for instance online advertising (banners and search engine marketing), direct marketing (e-mail and SMS) and online directories. Internet is not a media, but it is collection of sub-medias. It is also difficult to draw a clear line between digital and social media concepts, as the social elements are increasingly integrated into the established interactive digital media environment in the forms of discussion forums, sharing buttons, and blogs embedded on websites. Therefore, we consider social media to represent an enhancement to, rather than a replacement for other digital media, and accordingly, we regard social media as integrated elements, platforms, and tools of digital marketing that facilitate social interaction between businesses and customer networks.

Generally speaking digital marketing and its related terms, such as Internet/online marketing, are commonly used to describe the use of technologies in marketing efforts. However, there is no agreement on what is encapsulated in each term, and in practice the terms are often used interchangeably. For example, Farrah (2010) discusses Internet marketing under the topic "Understanding digital marketing," whereas Melewar and Smith (2003) present the barriers of Internet usage under the topic "The

contentious issues with online marketing." On the other hand, Simmons, Thomas, and Truong (2010) list applications such as e-mail, web sites, digital advertising, web analytics, viral marketing, and brand communities as Internet marketing applications. In this study, digital marketing is used as an umbrella term referring to all previously listed instruments, while admitting that the concepts are tightly related and intertwined.

Social media provides a way to share ideas, content, thoughts and relationships online (Scott 2010: 38). Halligan and Shah (2010: 85) state that in SM people are connecting, interacting and sharing online with each other. SM differs from Web 1.0 applications by offering everyone a platform for content creation, content upload, networking, conversing, media sharing, and bookmarking (Parent et al. 2011).

Interactive digital channels enable more flexible customer-seller discussions, which challenges the idea of one-way marketing communications (Ozuem et al. 2008). Customers can be cultivated, so that they develop from passive receivers into active influencers – which actually is the power behind social networks. It has been stated that social networks have economic impact to online sellers as they enhanced accessibility and make connectivity easier (Stephen and Toubia (2010). They also increase learning and knowledge sharing (Walters 2008). Palmer and Koeneg-Lewis (2009) propose that user generated content (UGC) enables a new kind of marketing communication, but it also challenges companies to give power to customers and loosen their own control over the discussion. In the same vein, Hening-Trurau et al. (2010) argue that traditional media companies may formulate and control their marketing communication messages in the way they want, but in social media they are only participants in the conversation. Weinberg and Pehlivan (2011) state that social media has properties that empower consumers and give them influence, enabling relationship building between organizations and customers.

The Interactivness of Social Media

During the last ten years we have seen a shift from what was called the Web 1.0 era to Web 2.0 era. The 'old' Web has been replaced by an interactive and multidimensional Web. Social media has transformed the Web from a platform for information to a platform for influence (Hanna et al. 2011). Social media users seek opportunities to influence and engage more with their preferred brands (Parent et al. 2011). The two key characteristics of social media are UGC and customer interaction (van Zyl 2009; Riegner 2007; Muñiz and Schau, 2011)

Social media is often used as a synonym for the term Web 2.0 (Weinberg and Pehlivan 2011; Palmer and Koeneg-Lewis 2009; Levy 2009; Riegner 2007). According to Constantidines and Fountain (2008), Web 2.0 refers to digital communication platforms, while the term "social media" refers to the social characteristics (participation, openness, conversation, seamless, communal) of those platforms. Kaplan and Haenlain (2009) even suggest that the term 'Web 2.0' was not originally meant to describe a new technical era of the Internet, but acquired such a meaning later, which is why the term 'social media' should be preferred. As Weinberg and Pehlivan (2011) state, "simply, and in a broad sense, Web 2.0 is comprised of computer network-based platforms upon which social media applications/tools (referred to social media, for short) run or function."

Social Media in B2B Industries

The term social media is not strictly defined and is often understood too narrowly. In B2B context, social media is much more than mainstream applications such as blogs, Facebook, Twitter, YouTube or discussion forums. Kho (2008) proposes that SM tools enable fast and personalized communication with customers, and that SM can enhance corporate credibility and deepen the customer relationship. Michaelidou et al. (2011) state that B2B companies can use SM to both attract new customers and cultivate existing relationships. SM provides a new tool for an organization to create a unique brand identity and to differentiate itself from its competitors. SM tools make it easy for a B2B company to stay connected with its partners, distributors and manufacturers (Weber 2009 26). However, B2B companies have been quite slow to adopt SM in their marketing communications (Michaelidou et al. 2011), and according to Jussila et al. (2011) there is a significant gap between the potential and the actual use of social media in B2B business. These authors also discovered that academic research is very limited in the

field of social media use in the B2B sector. This is surprising given that B2B companies' investment in SM continues to grow incrementally (Forrester Research 2010), and that according to Ramos and Young (2009), 91% of business buyers read blogs, watch user-generated videos or participate in other social media. Additional studies of how social media can be used in business include Benson, Filippaios and Morgan (2010) who studied SM on career planning and Cooke & Buckley (2008) who state that social networking can also provide new avenues for market research. Thus there is perhaps a potential to engage B2B firms to apply crowdsourcing in their business too.

It seems likely that digital environments can be used to achieve many kind of goals in the B2B sector such as decreasing communications costs (Sharma, 2002; Walters, 2008), provide information about a B2B firms and its brand, products and services (Berthon, Lane, Pitt, & Watson, 1998; Welling & White, 2006), and by doing so create awareness, improve brand attitude, and increase purchase intentions (Drèze & Hussherr, 2003; Manchanda, Dubé, Goh, & Chintagunta, 2006). In addition, increasing sales is another possible goal of the digital marketing for B2B firms. Sales to existing customers can be increased by facilitating the transaction process (Sharma, 2002) and sales to new customers can be boosted by gathering leads (Welling & White, 2006). Finally, the digital channels are ways to interact with customers and develop customer relationships (Bauer, Grether, & Leach, 2002; Hennig-Thurau et al. 2010).

Even though it is stated that SM is adopted slowly by B2B industrial companies, there are many good examples of different kind of SM invocation in B2B sector. There are several popular B2B focused social media marketing blogs as well as few well-known case stories. A good example of B2B Facebook usage is an industrial company called SteelMaster Buildings (Steelmaster, 2012). On their Facebook page they have an active fan base, as well as lot of both customer generated content and company generated content. Another good example is Salesforce.com´s Facebook page where thousands customers and fans are active.

B2B companies are using YouTube as a platform for webpage video integration and as a channel to boost viral marketing effect. One a good example of platform usage of YouTube is Finnish stock listed industrial company called Rautaruukki Ltd., which has embedded most of their YouTube videos to their webpage´s product demonstrations. An example of viral-oriented usage in B2B is from company called Corning Incorporated. Their video series called "a Day made of glass… made possible by Corning" has gained around 20 million views (by 31st of October 2012) on YouTube. Many early adopters from B2B industry, such as Oracle, Intel and Avaya are using Twitter too. These companies are not just followed by many, but they are also actively tweeting. B2B companies from different industries have also adopted blogs for marketing purposes. Bodnar and Cohen (2012) praise a company called Indium Corporation, whose blog (Indium, 2012) is a good example of customer oriented and active industrial B2B blog with an active reader base and many call-to-action elements aiming to bigger sales and better conversions. Additional example of B2B blog usage is from a company called Cree, whose main product is industrial lighting solutions. Their blog is also famous, interactive and full of balanced content in different formats (Cree, 2012).

As the examples show, B2B firms from various industries are able to exploit SM as part of their digital marketing mix. However, it is not known how important their role in the B2B sector is perceived to be, but based on these examples and the growing interest towards using SM also in B2B setting, it is clear that there is a hidden potential for broader CS oriented SM usage.

CROWDSOURCING

"Crowdsourcing is thus a powerful resource for innovators. … A world of people and organizations is available to assist you, if you have the commitment and care to engage them properly." (Chesbrough 2011)

As mentioned in the introduction, CS is relatively new concept in management literature. While the actual idea of approaching anonymous sources for solving wicked problems can be traced long back to history (cf. Spencer, 2012) there is still no consensus of the contemporary definition of CS. For more details about terminology and typology see for instance Estellés-Arolas and González-Ladrón-de-Guevara

(2012), and Piller, Ihl and Vossen (2010). In addition, a recent literature review is conducted by Zhao and Zhu (2012).

CS can be applied to various business sectors. One approach is microtasking, referring to a method of dividing a workload into pieces which are then distributed en masse. An example of this is Amazon's Mechanical Turk. There are also several websites that aim to engage freelance designers such as 99design.com, Mycroburst.com and Crowdspring.com. One of the most famous examples is Threadless.com, which not only seeks out product design ideas for new T-shirts, but also uses an online community to vote for the best ones, which are then sent for manufacturing (Howe 2008). Other examples of crowdsourcing initiatives are various question-and-answer sites such as Quora.com and many more, ranging in subject matter from cooking to software development, that can be found listed at Stackexchange.com/sites. Microfunding is also new phenomenon where intermediaries such as Kickstarter.com help inventors to raise funding for their project. While those CS initiatives may not be particularly attractive to a B2B firm, that is not to say that B2B could not benefit from CS and the power of communities. Li and Bernhoff (2008) state that B2B customers typically have more in common as they have similar goals, whereas consumers may or may not feel any affinity with each other.

Crowdsourcing Initiatives and Applications

Idea competitions have been found to provide new concepts for a firm's innovation process (Piller and Walcher 2006). According to Poetz and Schreier (2012) ideas generated by users score higher in terms of novelty and customer benefit in comparison with those created by professionals. These competitions can range from relatively easy, conceptual ideas to extremely difficult challenges. As an example, the North European construction company Lemminkäinen organized an idea competition to celebrate their 100th anniversary, and awarded prizes worth €50,000 for new living concepts. Cisco has run an i-Prize competition where prizes worth $250,000 were awarded to ideas that could lead to major new business for them.

For CS to work there is a need to set up a system or a tool to manage the process. Doan, Ramakrishnan and Halevy (2011) state that a crowdsourcing system is one that enlists a crowd of people to help solve a problem defined by the system owners. Companies can set up these idea competitions themselves or they can use intermediaries which bring companies faced with a challenge in touch with potential innovators wanting to provide answers to that challenge. Typically this is a private firm that runs a website where companies can set up a challenge and individuals can act as problem-solvers. An example of this is Innocentive.com, which has built an online network of more than 200,000 people, and thus can be seen as distributed R&D (Chesbrough 2011). The challenges in Innocentive are technical in nature and often demanding. On the other hand, the rewards for solvers can also be lucrative; Innocentive typically offers prizes that start at $5,000 and go up to $1 million, and the company has awarded prizes totaling more than $28 million since 2001 (Claburn 2011).

But what are the motivations and reasons for individuals to participate in various CS efforts? Competitive prizes provide an obvious incentive to spend time solving a problem or thinking of ways to improve an existing product, but there are other motivations too.

The wider community is present in many open source initiatives but can be leveraged in other product development too. For example Quirky.com combines product development and crowdsourcing. As Parent et al. (2011) point out, there is a growing number of customers who are willing to engage and participate with certain brands outside of just buying the products. LEGO enthusiasts have created a community around the product where the most influential members are included in product development and design (Li and Bernoff 2008). In many cases recognition among the peers is the key motivation to participate. Recognition can be received within a community, but also beyond it if one manages to contribute towards the common good. The X PRIZE Foundation is a nonprofit organization which aims to bring about radical breakthroughs for the benefit of humanity via large-scale and high profile challenges. Another example is Planet Hunter, where people help astronomers locate potential planets by examining data from the Kepler space mission. These examples reflects the customer-oriented crowdsourcing – naturally the situation is a bit different with B2B firms.

CS seems to be becoming mainstream for innovation processes and value co-creation. While many of the CS sites (especially in consumer business) only depend on the users having general knowledge as a basis for their contribution, some of them require certain level of expertise. An example of the latter is GrabCad.com for people with engineering skills. Thus it seems likely that there is increasing potential for B2B to apply CS too. As an example, DARPA (the Defense Advanced Research Projects Agency) has created a program called Fang, which aims to use crowdsourcing to design a new infantry fighting vehicle. One of the objectives is to compare how a crowdsourced model performs against the Army's conventionally sourced Ground Combat Vehicle. This initiative clearly has a B2B dimension, as the project's spokesperson assumes that small businesses lacking the critical mass to build a complete vehicle themselves can now get together without traditional subcontracting. The prize offered for that project is up to $1 million for the winning design, which should make it inviting for businesses to enter.

METHODOLOGY

Our approach is an interpretive sense-making form of research (Welch et al. 2011), where we want to understand and explore the possibility of integrating social media and crowdsourcing. Current knowledge does not provide clear answers as to how industrial B2B firms could use social media and crowdsourcing in their operations. The research applies abductive reasoning (Dubois and Gadde 2002; Yin 1994), which means that reasoning during the creation of the theoretical framework, empirical fieldwork, and case analysis evolve simultaneously. This approach makes it particularly useful for the development of new theories (Dubois and Gadde 2002; Miles and Huberman 1994).

Several sources of empirical data have been collected for this paper. We have collected notes during cross-industry research project's workshops and steering group meetings and had general discussions with the firms in a two-year time span (2010-2012). The researchers also participated in seminars where this topic was discussed by industry experts and consultants. For the purposes of the case study we also collected survey data from industrial firms (N=145), and interviewed three managers from large Finnish industrial B2B firms. The interviewees were selected to represent global manufacturers with products that are visible and observable to potential end-users. The number of employees in their businesses varied from 10,000 to 30,000, and annual revenue from €1.5 billion to €5 billion.

The survey was conducted in October 2011 in Finland. Respondents were sourced via a database of Finnish industrial companies. The survey was administered in Finnish, and contained questions concerning digital marketing usage, social media tools and crowdsourcing activities. Around two thirds of the respondents worked in small and medium enterprises (SMEs) and one third in large industrial corporations. Most respondents were either the CEO or held some other managerial position.

RESULTS

Survey

Results from the survey indicate that customer-oriented open crowdsourcing is rare among Finnish industrial SMEs. Close to 90% of the respondents reported never having organized an open innovation contest, and likewise the usage of digital communication channels for innovation purposes is at a low level. Half (52%) of the respondents claimed that they have never received R&D ideas from their customers through any digital channel, and around 70% said they have never tried to use digital channels to collect R&D information from their products´ end-users. If, however, we look at these numbers from the other direction, one third have contacted end-users through digital channels at least sometimes, and half have received R&D ideas from customers through digital channels at least once. Based on this analysis, only a small minority of respondents uses digital channels constantly for crowdsourcing purposes, whether we look at communication with customers, end-users or subcontractors.

In the survey we also asked an open question: "What are the biggest challenges faced in exploiting digital communication channels for R&D?" Almost unanimously respondents stated that the most

important obstacle was resources, referring to time, money and know-how. Other challenges included highly customized products, conservative decision-makers, confidential information and legal matters.

Analysis Based on Three Industrial Case Examples - Current Challenges

Social media tools were used, but not to their full potential, in the interviewed firms. SM was also seen mainly as being for marketing purposes, rather than for evoking ideas or for innovation co-creation among people outside the organization. Companies had published YouTube videos for marketing purposes, some firms participated in LinkedIn group discussions and some level of Facebook and Twitter presence had been established. However, no external CS was established in practice in these firms. Thus it was not meaningful to investigate whether SM played any role in helping the firms to better utilize CS. We therefore concentrated on understanding the potential of CS and its role in these firms.

While all the firms had internal idea-management tools in place, and some had opened or were planning to open up these tools to certain trusted partners, there were no publicly open platforms to collect ideas or new initiatives. In other words, external innovation work was done in meetings with some partners but not with a large audience. According to one informant, if some individual had a good idea he or she should then just call, send an email or fill out a form on the company website. One of the interviewees admitted that the people working on the customer interface sometimes came up with great ideas, but there had been no methods to harness that power systematically. One of the firms had organized a special campaign where employees had spent one day out in the field observing their products' users and providing feedback on what they had learned. One of the case firms had collected video material of how their products were used in the field by harnessing service personnel to do this.

The case firms agreed that input from end-users is important. One of the interviewees admitted that verbal feedback from service reps and sales managers was the main return channel. However, with the current method the message could get distorted as it travelled through. In addition, a good salesman is typically good at promoting his customers' ideas within a manufacturer, which sometimes makes it difficult for R&D departments to prioritize between presented ideas.

Industrial purchasing processes (IPPs) were mentioned as creating some problems. The purchasing department may want components to be designed as generically as possible for tendering purposes, and therefore they may dislike a co-created component if there is only one supplier capable of delivering it. Also the role of ownership of Intellectual property rights (IPRs) in general created some worries. In particular IPR questions were considered problematic if customers' employees were harnessed to CS. On the other hand, if the idea collection campaign were not targeted directly towards the employees of the customer, then that would circumvent the problem.

One main issue hindering CS was the opinion that products are complex and require technical know-how. One firm stated that their products are governed by several strict standards and legislation. They claimed that a typical end-user, not to mention a layman, does not have a sufficiently deep knowledge of that product. In that sense, a CS campaign would only provide random ideas without providing any significant benefits for the firm. According to one statement, the core product was quite mature and it would be hard to come up with novel ideas. On the other hand, it was still agreed that there can be certain parts which could benefit from more ideation power in general.

One of the obstacles identified was that people in organizations are already busy and there are no resources to conduct CS. One of the interviewed firms expressed the worry that if they ran a global idea competition it would provide too many ideas. At the moment there were just not enough resources to go through them.

Leveraging user communities created some variety of opinions. One firm considered that often the challenges their customers faced were quite different depending on where they were, even if the basic product was the same. One of the interviewees agreed with the idea that ultimate end-users could form a user group or community, but he saw some potential risk in it too. For example, the manufacturer wanted to receive information about product flaws and failures, but did not necessarily want to share it openly in a community. It was not considered that a community could be used to provide solutions to technical

problems, as IPR ownership would be difficult to resolve. Communities were also seen as problematic since the ideas created there could be also visible to competitors.

Analysis Based on Three Industrial Case Examples - Future potential

The managers interviewed viewed their industries quite traditional and the innovation culture was seen immature. It was stated that whether crowdsourcing could come into use was more a question of company culture than of technical implementation. Similarly, industrial customers were considered quite conservative. On the other hand, it was also anticipated that actual end-users would become more 'computer savvy' in the future, and perhaps the field workforce would be using more social media when the next generation enters the workplace.

While the one-to-one ideation sessions with some key partners were considered to provide more quality ideas than the general ones generated with CS, it was also seen that combining these approaches would be useful. In other words, CS could provide ideas related to trends and visions, which could work as a basis for workshops with key partners. One of the interviewees also acknowledged the role of CS as it could provide a way to bypass rigid processes from the problem-solving point of view.

There were also questions about the right incentives for customers to participate in innovation creation. Related to that, one interviewee stated that while monetary incentives are good, there are others too. For example, the opportunity for an individual to really see his or her idea being implemented was often rewarding in itself. In addition, internal kudos is an incentive to participate in internal CS. One of the firms had actually implemented 'Supplier Innovation Awards', which did not provide monetary awards but kudos.

Idea competitions organized via subcontractors were also seen as a good potential option, but none of the case firms had implemented any yet. It was stated that in order for CS to work it should be easy both ways; a manufacturer should be able to communicate what the problem is and a solver should be able to provide the idea easily.

A FRAMEWORK FOR COMBINING SOCIAL MEDIA AND CROWDSOURCING

It seems plausible that the usage of social media is still in its infancy in many industrial B2B firms. The empirical study reveals that the studied firms do not have a CS strategy either. It seems that organization culture has been seen as preventing taking SM and CS into use. Similarly, resource constraints such as time, money and know-how were mentioned as obstacles. However, most probable resource constraints can be addressed if top management takes a step towards prioritizing value co-creation via SM and CS. It is likely that the issues of IPRs are also possible to resolve. For instance, the key point in idea competitions is that rules and intellectual property ownership are clear and disclosed to the public (Claburn 2011). In general it is likely that both social media use and crowdsourcing in the B2B sector will grow in the future.

There are many examples, which have demonstrated the power of social media and crowdsourcing separately (e.g. Li and Bernhoff 2008; Parent et al. 2011; Howe 2008). Even though our limited empirical data does not fully support the idea that SM and CS could be used to facilitate innovation processes and value co-creation in industrial markets today, based on some well-known cases and previous research we propose a framework that could potentially be utilized by industrial B2B firms in the future. We also propose that SM has a major role in feeding CS initiatives in future. While the respondents assumed that the sectors where CS could be used were narrow, and that many CS projects are perhaps more about driving the brand than actually getting reasonable ideas back, it was still acknowledged that the end-users could provide input for product development purposes in some areas.

The figure 1 illustrates the current situation of interaction with the customer and end-user. In that setting a customer receives information via traditional marketing channels, but there is no direct interaction. Separate training session may be in place to educate customer's employees i.e. the actual end users. The feedback from users to manufacturer is typically channeled through service and maintenance department. The proposed new model presented in figure 2 takes more holistic approach and encourages

firms to fully leverage social media not only as a marketing and marketing communications tool, but also as a trigger for CS initiatives. Various social media channels and tools can be used to be in contact with customers and end users. However, as the actual end user may have the most knowledge about the products of a manufacturer, their input is valuable. And this is where crowdsourcing can add value. In other words by combining social media and crowdsourcing a manufacturer is able to generate new ideas and solutions from the right target group. While firms naturally collaborate with their direct customers and their input (dotted line) is available via traditional interaction, we propose that B2B firms could reach out more towards the end-users of their products via SM and CS.

FIGURE 1
TRADITIONAL INFORMATION FLOWS BETWEEN PARTIES IN THE INDUSTRIAL B2B NETWORK

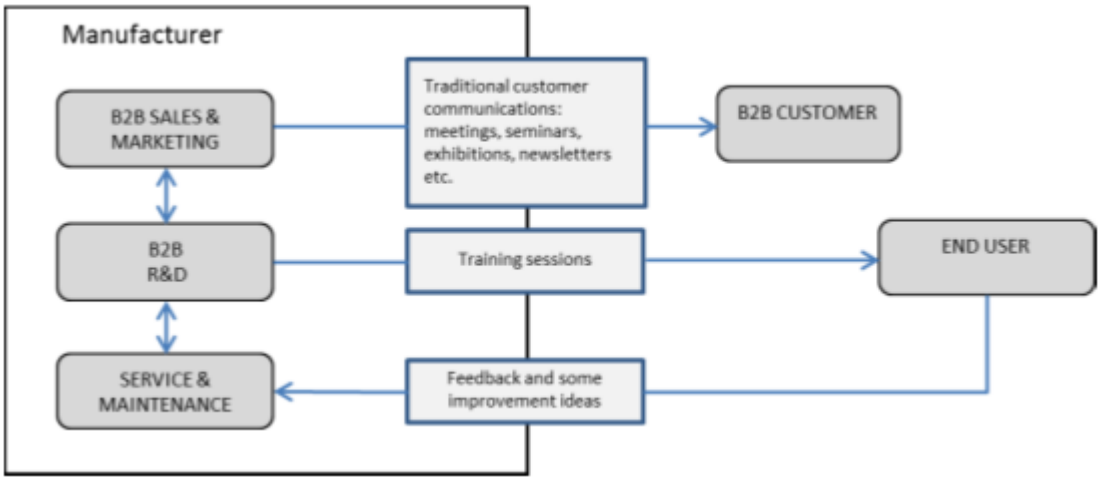
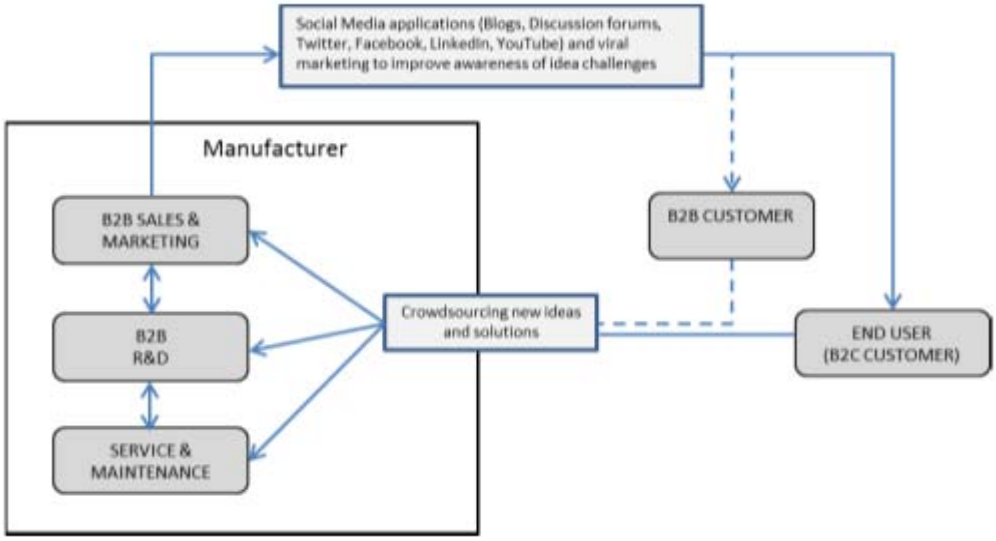


FIGURE 2
THE PROPOSED MODEL THAT COMBINES SOCIAL MEDIA AND CROWDSOURCING WITH AN AIM TO IMPROVE B2B MANUFACTURER'S INNOVATION CAPABILITY IN THE INDUSTRIAL NETWORK



DISCUSSION AND LIMITATIONS

This study contributes to the discussion of digital and social media marketing by taking the industrial B2B point of view. While taking a broad approach in digital marketing, the study is primarily focused on interactive digital channels, which are here concerned as social media applications and digital channels with interactive social features. In this paper we considered social media as integrated elements, platforms, and tools of digital marketing that facilitate social interaction between businesses and customer networks. Accordingly, digital marketing refers to the use of all kinds of digital and social media tools that allow companies to foster interactions with customers. Ideally the digital marketing is two-way, personalized dialogue with each customer (Wertime & Fenwick, 2008, 30) which can potentially be a source for innovations too.

Marketing practices of firms have become more and more relationship-oriented and traditional transaction-oriented marketing is standing aside (Eyuboglu & Buja, 2007; Vargo & Lusch 2004; 2008). According to social network and exchange theories (Morgan & Hunt, 1994; Siguaw, Simpson, & Baker, 1998) the value of the relationships between firms originates from topics such as trust, commitment, norms but recently also the number and density of interfirm contacts (Palmatier, 2008) has been shown to have an important role. There are also studies related to monitoring of these relationships (e.g. Heide, Wathne & Rokkan, 2007). There are however, less studies of how social media could be best utilized in idea and innovation generation especially in industrial business to business context. According to Kärkkäinen et al (2010) there is a gap between perceived potential of social media and its usage in innovation activity in B2B companies. In any event social media has provided new tools and strategies for firms to communicating and interact with their customers (Mangold & Faulds, 2009) and assume crowdsourcing to become more important and valuable tool in B2B context in future.

To summarize, digital channels and crowdsourcing platforms enable flexible customer-seller interaction, which challenges the idea of one-way marketing communications (Ozuem et al. 2008), so the marketing communication should be integrated, targeted and measurable through digital technologies, which helps to acquire, retain and engage with customers as well as building deeper relationships and innovating with them.

The implementation and putting SM in use is still lacking behind and firms hesitate due to potential risk of backfiring and harming brand. Industrial B2B firms seem to be hesitant to start applying SM tools. The risks firms fear are for instance, required time resources, personnel and security risk as well as information's obsolescence and misinterpretation possibilities (Chiş & Talpoş, 2011). In other words, social media can improve internal communications (Brennan, 2010) but there are many potential pitfalls of SM in external communications. For example employees needs to be careful for not intentionally disclose confidential information. That issues seems to play a role with crowdsourcing initiatives and limit the potential of employees to participate public crowdsourcing initiatives if they are too close to their employees business domain.

According to Sosnow (2011) there are pragmatic questions of what kind of content a firm should provide to their customers and which channels should be used to convoy the message; and should the message be differentiated by channels. This is related to the proposed model. It is left for future studies to investigate what kind of messages works best for firms to be able to invite users to their CS initiatives.

As with any research project, it is important to consider the study limitations and potential improvements. First, the survey was only a snapshot and there were no specific models or hypotheses tested. Second, the number of interviewees was small and there is a potential of bias in using only one informant per firm (Ernst and Teichert 1998). Naturally more interviews should be conducted to make the analysis more rigorous. Third, we focused on the industrial end-users only. Of course this represents only one potential stakeholder group playing a role in value co-creation. There are other relevant stakeholders, such as suppliers, partners and students, who could be invited to participate in CS campaigns. We suggest that the role of the other stakeholders should be investigated in future too.

REFERENCES

Acker, O., Akkad, F., & Yazbek, R. (2011), Social CRM: How companies can link into the social web on consumers, *Journal of Direct, Data and Digital Marketing Practice*, *13*(1), 3-10.

Bauer, H. H., Grether, M., & Leach, M. (2002). Building customer relations over the Internet. *Industrial Marketing Management*, *31*(1), 155-163.

Benson, V., Filippaios, F., & Morgan, S. (2010). Online Social Networks, *International Journal of e-Business Management*, *4*(1), 20-33.

Berthon, P., Lane, N., Pitt, L., & Watson, R. T. (1998). The world wide web as an industrial marketing communication tool: Models for the identification and assessment of opportunities. *Journal of Marketing Management, 14*, 691-704.

Brabham, D. C. (2008). Crowdsourcing as a Model for Problem Solving. An Introduction and Cases. *Convergence: The International Journal of Research into New Media Technologies*, *14*(1): 75–90.

Brennan, V. (2010). Navigating social media in the business. *The Licensing journal*, *30*(1), 8-12.

Chesbrough, H. W. (2003). *Open Innovation - The New Imperative for Creating and Profiting from Technology*. Harvard Business School Press, United States of America.

Chesbrough, H. W. (2011). Foreword. in Sloane, S. (ed.) *A Guide to Open Innovation and Crowdsourcing: Advice from Leading Experts*. Kogan Page Limited, Great Britain and United States.

Chiş, L., & Talpoş, M. F. 2011. Pro and Cons of Corporate Social Networking, *Review of Management & Economic Engineering*, *10*(2), 83-92.

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.

Cooke, M., & Buckley, N. (2008). Web 2.0, social networks and the future of market research. *International Journal of Market Research*, *50*(2), 267-292.

Cooper, R. & Edgett, S. (2008). Ideation for product innovation: What are the best methods. *PDMA Visions Magazine*, 1 (March): 12–17.

Dennis, C., Merrilees, B., Jayawardhena, C., & Wright, L. T. (2009). E-consumer behavior." *European Journal of Marketing*, *43*(9), 1121-1139.

Doan A, Ramakrishnan R., & Halevy A.Y. (2011). Crowdsourcing systems on the World-Wide Web. *Communications of the ACM*, *54*(4),86-96.

Drèze, X., & Hussherr, F.-X. (2003). Internet advertising: Is anybody watching? *Journal of Interactive Marketing*, *17*(4), 8-23.

Dubois, A., & Gadde L. (2002). Systematic combining: an abductive approach to case research. Journal of Business Research, *55*(7): 553-560.

Ernst, H., & Teichert, T. (1998). The R and D/Marketing interface and single informant bias in NPD research: an illustration of a benchmarking case study. *Technovation*, *18*(12): 721-739.

Edvardsson, B., Tronvoll, B., Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: a social construction approach. *Journal of the Academy of Marketing Science*, *39*(2), 327-339.

Eyuboglu, N., & Buja, A. (2007). Quasi-Darwinian Selection in Marketing Relationships, *Journal of Marketing, 71*(4), 48-62,

Estellés Arolas, E.; González Ladrón-de-Guevara, F. (2012) Towards an integrated crowdsourcing definition. *Journal of Information Science*, *38*(2), 189-200.

Farrah, M. (2010). Understanding digital marketing. *The British Journal of Administrative Management, 71*, 12-14.

Gillin, P. & Schwartzman, E. (2011). *Social Marketing to the Business Customer. Listen to your B2B market, generate major account leads, and build client relationships*. Wiley & Sons, Inc., Hoboken, New Jersey.

Halligan, S. & Shah, D. (2010). *Inbound marketing: get found using Google, social media, and blogs*. New Jersey: John Wiley & Sons.

Hanna, R., Rohm, A., and Crittenden, V. L. (2011). We're all connected: The power of the social media ecosystem. *Business Horizons*, *54*(3), 265-273.

Heide, J., Wathne, K., Rokkan, A. 2007. Interfirm Monitoring, Social Contracts, and Relationship Outcomes. *Journal of Marketing Research*, *44*(3), 425-433.

Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A and Skiera, B. (2010). The Impact of New Media on Customer Relationships. *Journal of Service Research*, *13*(3), 311-330.

Hopkins, R. (2011). What is Crowdsourcing? in Sloane, S. (ed.) *A Guide to Open Innovation and Crowdsourcing: Advice from Leading Experts*. Kogan Page Limited, Great Britain and United States.

Hoyer, W. D., Chandy, R., Dorotic, M. Krafft, M., & Singh, S.S. (2010). Consumer Cocreation in New Product Development. *Journal of Service Research*, *13*(3), 283-296.

Howe, J. (2006). The Rise of Crowdsourcing. *Wired Magazine*, June.

Howe, J. (2008). *Crowdsourcing: Why the Power of the Crowds is Driving the Future of Business*. Three Rivers Press, New York.

Huston, L., Sakkab, N. (2006). Connect and develop: Inside Procter & Gamble's new model for innovation. *Harvard Business Review*. *84*(3), 58–67.

Jussila, J., Kärkkäinen, H & Leino, M. (2011). Social Media's Possibilities for Improving Business-to-Business Customer Interaction and Understanding. In The Proceedings of the XXII ISPIM Conference.

Kaplan, A., and Haenlain, M. (2009). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*, 59-68.

Kho, ND. (2008). Successfully Surfing the Marketing 2.0 Wave. *Econtent*, *31*(4): 28-32.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., and Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, *54*(3), 241-251.

Kumar, N., Stern L. W., & Anderson J. C. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, *36*(6), 1633-1651.

Kärkkäinen, H., Jussila, J., & Väisänen, J. (2010). Social media use and potential in business-to-business companies' innovation, *Proceedings of the 14th International Academic MindTrek Conference: Envisioning Future Media Environments*, Tampere, Finland.

Levy, M. (2009). WEB 2.0 implications on knowledge management, *Journal of Knowledge Management*, *13*(1), 120 – 134.

Li, C. & Bernhoff, J. (2008). *Groundswell: Winning in a World Transformed by Social Technologies*, Harvard Business Press, Boston.

Liu, Q. (Ben), Karahanna, E., and Watson, R. T. (2011). Unveiling user-generated content: Designing websites to best present customer reviews. *Business Horizons*, *54*(3), 231-240.

Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix, *Business horizons*, *52*(4), 357-365.

Manchanda, P., Dubé, J.-P., Goh, K. Y., & Chintagunta, P. K. (2006). The effect of banner advertising on Internet purchasing. *Journal of Marketing Research*, *43*(1), 98-108.

Melewar, T. C., & Smith, N. (2003). The Internet revolution: some global marketing implications. *Marketing Intelligence & Planning*, *21*(6), 363-369.

Michaelidou, N., Siamagka, N. T. & Christodoulides, G. (2011). Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands. *Industrial Marketing Management*, *40*(7), 1153–1159.

Miles, M. B., & Huberman, A. M. (1984). *Qualitative Data Analysis. A Sourcebook of New Methods*, Sage Publications, Inc. CA.

Morgan, R. M. and Hunt, S D. (1994). "The Commitment–Trust Theory of Relationship Marketing," *Journal of Marketing*, *58*, 20–38.

Muñiz Jr., A. M., & Schau, H. J. (2011). How to inspire value-laden collaborative consumer-generated content. *Business Horizons*, *54*(3), 209-217.

Ozuem, W., Howell, K. E., and Lancaster, G. (2008). Communicating in the new interactive marketspace. *European Journal of Marketing*, *42*(9), 1059-1083.

Parent, M., Plangger, K., and Bal, A. (2011). The new WTP: Willingness to participate. *Business Horizons*, *54*(3), 219-229.

Payne, A. F., Storbacka, K. & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, *36*(1), 83-96.

Piller, Frank, Christoph Ihl, and Alexander Vossen. (2010). "Introduction : The Idea of Open Innovation. A Typology of Customer Co-Creation in the Innovation Process (December 29, 2010). Available at SSRN: http://ssrn.com/abstract=1732127 1-26.

Piller F.T., & Walcher, D. (2006). Toolkits for idea competitions: A novel method to integrate users in new product development. *R&D Management*, *36*(3), 307-318.

Palmer, A., Koeneg-Lewis, N. (2009). An experiential, social network-based approach to direct marketing. *Direct Marketing: An International Journal*, *3*(3), 162-176.

Phillips, J., (2011). Open Innovation Typology. in Sloane, S. (ed.) *A Guide to Open Innovation and Crowdsourcing: Advice from Leading Experts*. Kogan Page Limited, Great Britain and United States.

Poetz, Marion K., and Martin Schreier. (2012). The Value of Crowdsourcing: Can Users Really Compete with Professionals in Generating New Product Ideas? *29*(2), 245-256.

Riegner, C. 2007. "Word of Mouth on the Web: The Impact of Web 2.0 on Consumer Purchase Decisions." *Journal of Advertising Research*, *47*(4): 436-447.

Rollins, M., Bellenger, M., Johnston, D.N., & Wesley J. 2011. Customer information utilization in business-to-business markets: Muddling through process? Journal of Business Research. *Journal of Business Research*, 65 (6), 758-764.

Siguaw, J. A., Simpson, P.M., &a Baker, T.L 1998. Effects of Supplier Market Orientation on Distributor Market Orientation and the Channel Relationship: The Distributor Perspective, *Journal of Marketing*, 62 (July), 99–111.

Scott, D., M. 2010. The New Rules of Marketing and PR: How to Use Social Media, Blogs, News Releases, Online Video, and Viral Marketing to Reach Buyers Directly. Wiley & Sons, Inc., Hoboken, New Jersey.

Sharma, Arun. (2002). Trends in Internet-based business-to-business marketing. *Industrial Marketing Management*, *31*(2), 77-84.

Simmons, G., Thomas, B., & Truong, Y. (2010). Managing i-branding to create brand equity. *European Journal of Marketing*, *44*(9), 1260-1285.

Smith, T. (2009). The social media revolution. *International Journal of Market Research*, *51*(4), 559-561.

Sosnow, E. (2011). Social media faux pas: Digital marketing mistakes you are making right now. *Public Relations Tactics*, *18*(6), 14.

Surowiecki, J. (2005). *The Wisdom of Crowds*, Random House, Inc. New York.

Stephen, A., & Toubia, O. (2010). Deriving Value from Social Commerce Networks. *Journal of Marketing Research*, *47*(2), 215-228.

Tapscott, D., Williams, A.D. (2006). *Wikinomics: how mass collaboration changes everything*. New York, Penguin Group.

Thomas, D.D. & Barlow, M. (2011). *The executive's guide to enterprise social media strategy. How social networks are radically transforming your business.* Wiley & Sons, Inc., Hoboken, New Jersey.

Van Zyl, A. (2009). The impact of Social Networking 2.0 on organizations. *The Electronic Library, 27*(6), 906-918.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing, 68*, 1–17, (January).

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science, 36*, 1-10.

Walters, P. G. P. (2008). Adding value in global B2B supply chains: Strategic directions and the role of the internet as a driver of competitive advantage. *Industrial Marketing Management*, *37*, 59–68.

Weber, L. 2009. *Marketing to the social web How digital customer communities build your business*. Wiley, New Jersey.

Weinberg, B. D., & Pehlivan, E. (2011). Social spending: Managing the social media mix. *Business Horizons*, *54*(3), 275-282.

Welch, C., Piekkari, R., Piakoyiannaki, E, Paavilainen-Mantymäki, E. (2010). Theorising from case studies: Towards a pluralist future for international business. *Journal of International Business Studies*, *42*, 740-762.

Welling, R., & White, L. (2006). Web site performance measurement: promise and reality. *Managing Service Quality*, *16*(6), 654-670.

Wertime, K. & Fenwick, I. (2008). DigiMarketing: the essential guide to new media & digital marketing. Singapore: Wiley.

Yin, R. K. (1994). *Case Study Research. Design and Methods (2nd ed.). Applied Social Research Methods Series Vol. 5* Thousand Oaks, California: Sage Publications. Beverly Hills.

Zhao, Y., & Zhu, Q. (2012). Evaluation on crowdsourcing research: Current status and future direction. *Information Systems Frontiers*. Published online: 11 April 2012.

ONLINE REFERENCES

Biewald, L. (2009). Crowdsourcing the origin of the word "Crowdsourcing". Available at: http://blog.crowdflower.com/2009/02/crowdsourcing-the-origin-of-the-word-crowdsourcing/, accessed 29.10.2012

Claburn T. (2011). Google's Prizes.org Awards Cash For Ideas, InformationWeek. Available at: http://www.informationweek.com/news/internet/google/231001168, accessed 29.10.2012

Cree. (2012). Available at: http://www.creeledrevolution.com/blog/, accessed 29.10.2012

Das, A. (2011). Competition Provides Solution for Stopping Uncooperative Vehicles. Office of Science and Technology Policy. September 1, Available at: http://www.whitehouse.gov/blog/2011/09/01/competition-provides-solution-stopping-uncooperative-vehicles, accessed 29.10.2012

eMarketer. (2011). Worldwide Social Network Ad Spending: 2011 Outlook. Available at: http://www.emarketer.com/Report.aspx?code=emarketer_2000757, accessed 29.10.2012

Forrester Research. (2010). B2B Interactive Marketing Spending To Hit $4.8 Billion by 2014, Michael Greene´s Blog For Interactive Marketing Professionals, Forrester Research, Available at: http://blogs.forrester.com/michael_greene/10-03-04-b2b_interactive_marketing_spending_hit_48_billion_2014, accessed 29.10.2012

Indium. (2012). Available at: http://blogs.indium.com/, accessed 29.10.2012

Procter and Gamle. (2011). PG Connection Portal. Available at: https://secure3.verticali.net/pg-connection portal/ctx/noauth/PortalHome.do, accessed 29.10.2012

Ramos, L. & Young, O. (2009). Social Technographics of Business Buyers. Forrester Research, Inc. Available at: http://www.rbrdatasolutions.com/ACTblog/wp-content/uploads/2009/03/2009_forrester_social_technographics_of_business_buyers_0209.pdf, accessed 29.10.2012

Steelmaster (2012), available at: http://www.facebook.com/SteelMasterBuildings, accessed 29.10.2012