

## Using Social Media for Service Innovations

### Challenges and Pitfalls

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# Using Social Media for Service Innovations: Challenges and Pitfalls

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## ABSTRACT

*This article investigates how social software such as blogs can be used to collect ideas generated by the users in the service innovation process. After a theoretical discussion of user involvement and more specifically user involvement using social software and interactive web-tools, the article reports the results from a field experiment at a university library. In the experiment, a blog was established to collect ideas for service innovations from the library users. The experiment shows that blogs may generate a modest, but very useful amount of ideas. The experiment furthermore reveals that blogs might be useful to provide the institution with an image of openness and willingness to listen to customer input.*

*Keywords: Blogs, Innovation, Libraries, Services, Social Media*

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## INTRODUCTION

Concepts like Open Innovation (Chesbrough, 2003) and User-driven Innovation (Alam & Perry, 2002) are receiving growing attention. The concepts indicate that innovation is not confined to internal organizational processes but involve interactive processes, where organizations interact with external partners including customers and users. Research within innovation has traditionally focused on innovation within the industrial sectors. However, service innovation is becoming increasingly important as services form a significant part of economical and societal activities.

Libraries, and especially research libraries, are facing considerable challenges as their services are getting increasingly digitalized (Carr, 2009) and the Internet poses a threat to the services they provide. Thus, libraries face challenges to innovate their services to stay competitive (Scupola & Nicolajsen, 2010; Scupola & Nicolajsen, 2012). According to Brindley (2006) library service innovation must happen in close contact with the users. Rutherford (2008) argues that such user involvement can be supported through new social software. The aim of this article is, therefore, to investigate the potentials of using social software for user involvement in service innovation in libraries.

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In doing so we limit ourselves to focus on the ideation phase of the innovation process in which the involvement of users has been found to possess particular potentials (Alam & Perry, 2002). Therefore, the following research question is addressed in this paper: To what extent can social software such as blogs be used in academic libraries to involve users in the idea generation process of service innovations?

In order to investigate the research question we conducted an in depth case study at an academic library, Roskilde University Library (Yin, 1994). The research design consisted of three steps. First a pilot study investigating existing innovation processes and user involvement in the innovation process at Roskilde University Library was conducted; then a field experiment was conducted in which social media such as blogs were set up on the library web page to collect innovation ideas from the users; finally the third step consisted of follow-up interviews and workshops to get feedback and evaluate the experiment's results. All in all, the blog was considered by the library management as a useful tool to communicate with the users and to generate a manageable amount of useful ideas.

The paper is structured as follows. First, we theoretically discuss user involvement in service innovation and in particular user involvement through social software with focus on the use of blogs. Then we present our research method and the analysis and results. Finally we provide a discussion of the results and some concluding remarks.

## **THEORETICAL BACKGROUND**

### **User Involvement in Open Innovation**

Chesbrough (2003, p.26) defines open innovation as "a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology".

Later research has focused on user involvement in relation to innovation, also in service innovation (Alam & Perry, 2002). This has

resulted in a more detailed understanding of different types of user involvement. For example the so-called 'lead users' are users who develop new products/services due to specific needs they meet before the rest of the market (von Hippel, 1986; Morrison et al., 2004). These lead users include users who investigate new design opportunities (Baldwin et al., 2006) whereas "Co-innovators" are advanced users that combine existing products in new ways (Chesbrough 2003). Often the resulting innovations are neither owned nor controlled by organizations. However organizations may potentially commercialize these innovations if they can develop the prototypes invented by users and (mass) produce them. In addition, organizations may proactively involve customers/users in the innovation process (Alam & Perry, 2002; Nicolajsen & Scupola, 2011). In relation to this, Nambisan (2002, 2008) differentiates between three roles that customers may play: 1) as a source of innovation in the idea generation phase, 2) as co-creators in the development phase or 3) as potential users in the test or implementation phase. The three roles are rather different as are the requirements for both the organizations and the customers/users.

Alam and Perry (2002) have developed a 10 stages model of the service innovation process, going from idea generation to implementation and marketing and present and discuss user involvement in each of these ten stages. They conclude that it is most profitable to involve users in the earlier and later innovation phases. The reason probably being that these phases are closest to the role as "service user". This role does not demand particular expertise from the customers, but only that the customer/user provides insights on their own needs and wishes or evaluates an existing or potential service. The phases in between are more work-intensive and typically demand professional qualifications. Research shows that if the users have to contribute in these stages, they either need a high professional level or they need further education (Nambisan, 2002; Alam & Perry, 2002). Educating the customer/user may be rather costly and it may easily become a risky

investment, as it may be difficult to hold on to the collaboration (Nambisan, 2002). According to Alam (2006), customer activities in the ideation phase include describing needs, problems and solutions. Customers may suggest wanted features and preferences or they may evaluate existing services, lackings in the market or wishes for new services.

Several researchers (e.g. Narver et al., 2004; Alam, 2006; Magnusson, 2003) argue that the direct interaction between customer and employee provides an occasion to get both ideas and an understanding of customers needs. For example, Magnusson (2003) argues for the benefits of face-to face meetings between professionals and customers because face-to face meetings may provide the professionals with insights into the customers needs and understanding and, conversely, the users may get a better understanding of the requirements allowing them to suggest more realistic ideas. Customer-employee collaboration is fruitful as users' suggestions are found to be more creative and valuable than suggestions provided by expert professionals. On the other hand often there is a need for professional elaboration of the users' ideas to make them implementable (Magnusson, 2003). Other ways to get ideas from users include monitoring of user data such as complaints, returned products, observation of customer behavior in the so-called 'service encounter' (Narver, 2004, p.336), company visits or integration of customers in development teams (Alam, 2006), innovation labs or virtual communities (e.g. Prandelli et al., 2008).

At a more general level, the choice of method to involve customers need to be based on a number of considerations, such as whether there exists a desire to develop existing products/services or if there is a need for more radical developments, which again depends on the market - and on the situation in this market - of the organization in question. In this respect by looking at different types of input from users, Narver et al (2004) distinguish between responsive and proactive approaches. In the responsive approach the focus is on the conscious and expressible needs of the customer.

In the proactive approach the focus is on the latent needs, which are unknown to the customer himself. These two different approaches are described as separate by Narver et al (2004), though in reality it could be argued that they are not. The responsive approach leads primarily to incremental innovations. The proactive approach has per se the greatest potential for more radical innovations but the resulting ideas will be harder to implement.

## **Use of Technology to Support User Involvement**

The use of technology provides both potentials and challenges for involving users in the innovation process. Prandelli et al. (2006) have for example identified 28 different web tools that can be used in the different stages of product innovation. These web based tools range from surveys and 'complaint areas' used in the idea generation phase to 'virtual product tests' in the product test phase. In addition, Prandelli et al. (2006) found that the web-based tools are mainly used by larger corporations, and are mainly used in the first and last stages of the innovation process and are mainly considered as substitutes for offline practices. Many of such tools have been investigated in other studies as well. For example, Franke and Piller (2004) describe the use of simple toolkits to create user-adjusted design of watches, while Piller and Ogawa (2006) report the use of idea competitions for t-shirts design and Franke et al (2008) describe user design of ski equipment. Virtual communities are another example where customers help organizations to innovate products or service development by using web-based interactive tools. Lego Mindstorm and online gaming are well known examples (Jeppesen & Molin, 2003). These communities may be user or company initiated. In both cases, user involvement is based on the users' own interest and prestige in the community. Some organizations develop online user communities for users to exchange knowledge, which can be seen as extensions of the services delivered as in the case of Netdoctor's baby club. The

interaction between an organization's customers can be an important source of knowledge regarding customers' challenges, discontent and needs relevant for new service or new product development.

### **The Use of Blogs for User Involvement in the Ideation Phase**

As discussed above, the Internet has created many opportunities for organizations to interact both directly and indirectly with their users (e.g. Prandelli et al., 2008). However, so far blogs have received rather limited attention as a technology to collect and discuss ideas for service innovation, even though a few studies have investigated the potential of blogs for innovation especially in the field of new product development (e.g. Droge et al., 2010).

Blogs were initially used by persons or organizations to chronologically write posts about a particular theme: their life, products etc. (Newson et al., 2009). However changes in the technology, growing experiences, combination with other tools, easy access to free platforms as well as an increasing accept and use of user-created content has opened up for new use forms including professional, medical, political, industrial and product related issues (see Droge et al., 2010). The possibility to comment what other has written has created a shift towards more interaction and discussion on the blogs, making them more interesting (Bar-Ilan, 2007 in Aharony, 2009). In addition, Kuhn (2007) argues that blogs' transparency and documentation leads to accountability as well as the blogs' easy and cheap access promotes equality. Anonymity may also be a factor of relevance as it may affect the content in good or bad ways. It might result in more inputs especially if the content concerns tabus (Tyler, 2002). On the other hand anonymity or lack of knowledge about the senders might provide challenges such as difficulties in understanding the input or it might result in irrelevant or harsh input. Despite the fact that the blog provides for interaction among users and between users and organization's members it may be argued that this sort of interaction is limited compared to

a real life situation. The feedback mechanisms (comments) are there, but may be characterized as limited, as they are asynchronous (Lipnack & Stamp, 1997) and the number of participants is many and somewhat unlimited (Ibid.). The communication on the blog becomes partly impersonal - if the contributors are anonymous or if limited knowledge of the communicators exist. On the other hand, the blog and its written form provides for well-formulated thoughts and input as nothing is published until the communicator decides so. The capability is called "revisability" by Clark and Brennan (1991). It may be hypothesized that blogs could sustain both responsive and proactive approaches to idea generation.

### **RESEARCH METHOD**

In order to investigate the research question we conducted an in depth case study at an academic library, Roskilde University Library (Yin, 1994). The research design employed in this study consists of three steps. First a pilot study investigating existing innovation processes and user involvement at Roskilde University Library was conducted to get an understanding of the innovation processes at the library and especially to understand whether and how library users were involved. The pilot study was then followed by a field experiment in which social media such as blogs were set up on the library web page to collect ideas from the users concerning library services innovations. The experiment and its specific set-up is described in detail in the following section. Finally the third step consisted of follow-up interviews and workshops with library personnel in order to get feedback and evaluate the experiment of using of social media to generate new ideas for library service innovations.

Semi-structured qualitative interviews as well as a number of meetings and workshops lasting between 1 and 2 hours with top managers, middle managers, and 'front-line' librarians were the main data collection methods used in the pilot study. Based on the results of the pilot study, showing that there was almost no



direct involvement of the library users in the innovation process of the library services, an agreement was made between the researchers and the library management to conduct an experiment where social media should be used to collect ideas from the users. Given the library's previous experience with a blog used for internal communication and discussion of several topics of relevance to the library personnel, it was decided to implement a blog on the library website, entitled "RUbminds". The establishment of the blog and its use to collect innovative ideas from the customers is here defined as a so-called field-experiment, that is an experiment carried out in a natural context rather than in a laboratory. In this type of experiment, some control over the experiment itself is lost (compared with the traditional laboratory experiment), but the advantage is that the "natural settings ensure that the results will tell us something useful about the real world, not just some contrived laboratory setting" (Green & Gerber, 2003, 94). In spite of being a rarely applied method in innovation research such field-experiments have been argued to possess the capability of providing practically applicable knowledge about innovation processes while solving real life innovation problems (Sørensen et al., 2010). Field experiments are similar to other practice oriented methods such as action research, action learning and reflexive practice (Baskerville & Wood-Harper, 1996). As already said, semi-structured interviews and workshops with the library employees that had been involved in the blog experiment were conducted to evaluate the experiment and the results obtained. Other data collection methods used in this study includes library reports, minutes of top management meetings as well as click stream analysis.

### **The Experiment: RUbminds' Process**

After having agreed with the library top management that the social media to be used to collect innovation ideas from the users had to be a blog, a small team was established to design

and implement the blog. The team comprised four employees from different library departments as well as the authors of this paper. The team met on an ongoing basis for a period of six months. In this period the blog was designed and set up and a small test was conducted by inviting a small group of computer mediated communication experts to look at the blog and provide some feedback before the launch of the blog to the public. This group of experts provided some suggestions that were incorporated in the final version. In addition we had lengthy discussions on how best to meet and engage the users in order to make them contribute with innovative ideas.

Different blog names and layouts were discussed inspired by other blogs regarding content, tone etc. After some discussions and meetings, a decision was made to formulate four topics within which innovative ideas were solicited. Such topics were formulated by the library personnel based on their innovation needs.

The topics were formulated in such a way as to get a feedback on the services provided by the library as well as on the library physical settings. The topics were formulated as questions on the blog: 1) "Do we comply with your wishes?"; 2) "If you should furnish the library...?"; 3) "Is Rub your favorite library?"; and 4) "The future of the library – give us your suggestions". It can be argued that the questions overlap, however the different formulations sought to motivate for different answers. In addition to the questions a small piece of text giving examples of the kind of input looked for was put on the first page of the blog.

The blog experiment was advertised in several ways both online and at the university campus. For example a direct link to the blog was put at the FrontPage of the library homepage; posters describing the blog experiment were hang in campus buildings and book markers with the blog address were handed out to the library users when they loaned books.

To motivate library users to participate in the experiment two gift vouchers were promised at the end of the experiment to two randomly drawn blog contributors. This was written on

the main page of the blog. The blog experiment was conducted for a period of three months. To increase credibility of the initiative, the blog introduction also stated that the library would follow up on the ideas provided on the blog and report back on this to the users. During the experiment, the library employees had the possibility to comment and respond to the users' postings, since the idea was that the blog should function as a web-based interactive platform between the users and the employees. At the end of the experiment period, the ideas collected through the blog were analyzed and discussed by library management in relation to their relevance and implementation potential at a management meeting.

The success criterion for the field experiment was that the blog (the independent variable of the experiment) could function as a medium for idea generation by library users and that these ideas could result in implemented service innovation at the library (the dependent variable of the experiment). In this article we primarily look at the first part – how useful is the blog to involve users in the ideation phase from the perspective of the library.

## ANALYSIS

The blog, directly allowing library users to provide ideas for service innovation that could be shared instantaneously with many other users, has challenged the existing approach to innovation at the library. Underneath we first present the results of the pilot study briefly showing the traditional approach to innovation at RUB, then we present the outcome of the blog experiment and finally we provide some findings that show important side effects of the experiment at the library.

### User Involvement in Service Innovation at RUB- the Traditional Way

The results of the pilot study show that the library's traditional approach to innovation

processes is mainly based on the use of 'internal development plans' where most ideas come from top management, collaboration with external partners and competitors but also, even though to a lesser extent, from employees. Traditionally, users have not been directly involved in the innovation process at RUB, but have been only indirectly represented through the employees understanding of the users' wants and wishes, likes and dislikes. This understanding is gained through mainly face-to-face interactions in the provisions of services like courses on how to use the library resources, library consultation services and other services. These service provisions, even though not specifically focusing on innovation, are the basis for ad hoc and indirect collection of ideas on users' needs and wants. These inputs often result in small changes in the practices of the employees, or the ideas may be sent to top management for evaluation and further action. Such service encounters, traditional user satisfaction surveys and complaint/satisfaction boxes have been the main ways for the library to collect opinions and wishes from the users. Web-based interactive tools in the form of online chat had just recently been adopted at Rub on an experimental basis to establish contact with users. However, this type of customer contact was just a virtual version of the face-to-face encounter and at the time of the study still limitedly used. RUB thus had very little experience with web-based interactive tools at the time of the study. For RUB, meeting the users through a blog interface was new and different. Direct ways to involve users in the idea generation phase of the service innovation process had not been tried out at the library yet. Therefore, traditionally at RUB the users were only an indirect source of innovation and a source of limited importance.

### The Results of The Experiment

During the short period in which the experiment was conducted, 1.011 visits were made to the blog and 2572 pages were looked at. On average, the visitors stayed for 1 minute and



35 seconds. A total of 27 “useful” ideas were provided during the period the experiment run. The ideas generated by the users on the blog were very different in nature and covered a wide range of topics as illustrated by the examples provided in Table 1. Some ideas are visions of a whole new way of seeing the function of the library - as for example the library as cultural event place. Some are suggestions for new services such as an EndNote course, others suggest big or small changes in the services already offered such as access to computers in the library reading areas. A few comments just criticize the present service offerings, without providing suggestions for improvements.

### Library Assessment of The Results of the Blog Experiment

In interviews conducted after the three months experiment period evaluating the experiment process and the results, RUB management stated that the blog had been a good way to get input from the users and especially to communicate online with the users. According to the library management some ideas provided suggestions for radical innovations, while others required incremental changes of what was presently done. Furthermore, a few ideas posted on the blog addressed problems that were well known to the library but that had been forgotten or put

aside. Reading such ideas again on the blog and knowing that many potential users could read the comments posted on the blog and become aware of the problems, had motivated the library management to find a solution and to fix the problems that had been neglected in the past. In a way, the library personnel felt a pressure from the blog to do something about the implementation of the ideas, both those pointing to well-known problems as well as those pointing to problems/ideas that the library was not previously aware of. Some ideas needed further investigation before the library could evaluate to what extent they should implement them or not; a few were completely dropped due to implementation requirements such as the establishment of open-air library services during summer time.

For RUB, the relative low activity on the blog has been an advantage because the resources needed to manage the blog were contained. According to the blog manager, they would have probably closed the blog if they got overwhelmed by a huge number of posting/ideas that would have required a huge amount of resources both in terms of employees time to handle the blog and money/other resources to investigate and eventually implement the ideas suggested by the bloggers. As of today, all the suggested ideas have been implemented by RUB.

*Table 1. Examples of ideas contributed to the blog*

• Suggestion for RUB to provide students and employees with short courses on End Notes software
• Suggestion to change copy machines so that the same copy card could be used both at the University and the Library, thus improving the copy services
• Suggestion to extend the time period users can keep the books loaned from other libraries through the Interlibrary Loan.
• Increase the number of full text resources provided in electronic form
• Establish a Silent room with computers
• Establish small rooms where student groups conducting project work could meet and work instead of only having open space areas
• Establishment of a cozy lounge area with newspapers, a coffee machine, sandwiches and candy
• Establish open air library services, outside the library building, including Internet access, shadow and shelter in the summer
• Decrease the noise level generated by the air condition system in the silent area

In addition, the blog manager said that the blog had had several internal positive spin-offs such as increased collaboration among employees of different departments both in order to find appropriate answers to the blogs' questions/postings and to investigate/implement solutions. The blog had overall increased collaboration and communication among the library employees. Finally, the blog gave the library also the image of an institution that was open to ideas and critique from the users.

In a top management meeting to evaluate the outcome from the blog experiment and the usefulness of the blog to communicate online with the library users and to generate ideas for innovation purposes, the library decided to keep the blog on their website because "The blog invites for open discussion of suggestions and opinions in opposition to just e-mails" (Minutes from a RUB meeting). The blog keeps developing and is still used by the library to engage into online communication, idea generation and discussion with the library users.

## DISCUSSION

Our study shows that the blog is perceived by RUB management to be a useful social media tool in order to communicate with the library users and to engage them in the idea generation phase of the service innovation process. So our study supports, even though with big caution, the results of the study conducted by Droge et al. (2010) that found that blogs can be useful in the field of new product development. Most of the contributed ideas suggested incremental innovations, some provided more radical suggestions, while a few comments just criticized the present service offerings, without providing suggestions for improvements. This broadness of topics is in line with Alam (2006) who argues that input can have many different forms.

However, our experiment shows that it is difficult to engage a big amount of users to contribute ideas and therefore to generate a huge amount of ideas on the blog. There could be several reasons for this. For example, the library

users might not really burn to provide ideas about how to improve the library services and they are in general uncritical of the services received. It could be that RUB users are in general satisfied with the quality of service received. Finally it could also be due to the technical characteristics of the blogs and in particular the design of the RUBminds blog.

Nevertheless, the ideas generated by the library users during the three months experiment were considered important by library management. Such ideas were an eye opener for the library concerning what services the library users might wish from them, and library management further investigated and implemented several of them. However, some ideas that required major changes in the library interior decoration or architecture were considered but put on stand-by by the library. For RUB the relative low activity on the blog was seen as an advantage because they could manage it with relatively low resources. This was also the reason for making the decision to keep it on the web page and continue to use it to engage into a dialogue with the users. The library received not many, but nevertheless good and valuable insights into what users like, dislike, what they need and some suggestions about what to do. Some ideas pointed to implementable solutions. Others pointed to problems or needs that needed further investigation. Some critiques and needs even needed further inquiry to understand what the problem was. These results are in line with what is argued by Magnusson et al. (2003). Finally the library felt obliged to take into serious consideration the ideas posted on the blog, due to the transparency, documentation and archiving function of the blog as also stated by Kuhn (2007).

## CONCLUSION AND LIMITATIONS

This article has investigated the following research question: To what extent can social software such as blogs be used in academic

libraries to involve users in the idea generation process of service innovations?

The answer to the research question is: it depends on the expectations from the blog. If the blog has to be used to generate a modest, but useful number of ideas, then the blog has potential to engage users in the idea generation phase of service innovations. If the purpose is to generate a huge number of ideas or engage a huge number of users, then the answer is that probably blogs are not a good tool. Blogs can eventually be used in combination with other more traditional tools for involving users in idea generation process of service innovations as for example future workshops.

In addition, our results show that establishing social software such as blogs to collect innovation ideas from the users may generate a number of spin offs advantages such as increasing internal collaboration among the organization employees and giving the organization an image of a more “open to critique and new ideas” kind of organization.

### Limitations and Future Research

Our study provides some useful insights about the use of web-based interactive tools in the idea generation phase of service innovations in one specific case organization, a university library. However, this study presents a number of limitations implying that the results have to be taken with caution. First of all, the study has been conducted only in one organization. In addition, only one experiment was conducted, which lasted for a very limited time, making it difficult to generalize from these results. Finally, the results of the experiment could have also been influenced by the overall user satisfaction with the present quality of the services provided by the library.

In future research, more experiments in the same library could be conducted in order to validate the results obtained in this study. In addition, several experiments in several different libraries could also be conducted in order to understand the applicability and usefulness of blogs for user involvement in library service

innovations. Alternatively, a survey could be conducted to identify libraries that have engaged in similar kinds of experiments and interview them to get insights into their experiences. Also other types of social media for user involvement in libraries could be investigated. Finally, more research in other service sectors as well could be carried out in order to fully exploit the potential of blogs and other social software for user involvement in the service sector.

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