Please quote as: Ebel, P.; Bretschneider, U. & Leimeister, J. M. (2012): Ideas Contributors Wanted - Towards The Adaption Of the Pyramiding Approach to Recruit New Idea Contributors For An Virtual Ideas Competition. In: European Academy of Management Conference (EURAM), Rotterdam, Netherlands.

Idea contributors wanted

-

Towards the adaption of the pyramiding approach to recruit new idea contributors for a virtual ideas competition

Philipp Ebel
Information Systems, Kassel University
ph.ebel@uni-kassel.de

Ulrich Bretschneider
Information Systems, Kassel University
bretschneider@uni-kassel.de

Jan Marco Leimeister
Information Systems, Kassel University
leimeister@uni-kassel.de

ABSTRACT

In this research in progress paper we report on our efforts to recruit idea contributors for a topic-related ideas competition. Due to the narrow topic of the competition, we expected our present marketing measures to imply high spreading losses. As a consequence we adapted the pyramiding approach for use in an online-based setting. As the study that we are reporting on is at its beginning stages, the main contribution of this paper lies in the adaption of the pyramiding approach for use in a virtual social network. We describe our reasons for using the pyramiding approach, and elaborate on the supposed benefits that an adaption of the pyramiding search within an online setting would imply. We present the first results of this study, which reveal promising insights into the possibility of conducting a pyramiding search in a virtual social network.

Keywords: ideas competition; pyramiding search; open innovation

1 INTRODUCTION

This paper describes the case of SAPiens, which is an internet-based ideas community in which customers and users of SAP-software are asked for their ideas on the products of SAP. In addition to the ongoing community, there are topic-related ideas competitions on SAPiens. In the past, many promising ideas have been collected in these ideas competitions; nevertheless, the number of ideas within the actual competition which deals with the topic "SAP Business ByDesign and Social Media," has recently declined significantly. Various attempts to encourage the existing community members to contribute an idea with the help of previously used measures, such as Newsletters, News- blogs or direct correspondence, have failed. This warrants recruiting new idea contributors in order to revive the actual ideas competition.

Finding and recruiting new idea contributors for SAPiens has previously been done by a broad search for members, e.g., distribution of printed materials, promotion on conferences or exhibitions, mass-mailing via email, fan-pages or groups within social networks. All of these measures primarily focus on reaching as many members as possible, and are based on the assumption that if a certain share of individuals has been reached, some will become idea contributors on SAPiens. Although these measures are quite successful in reaching a broad range of individuals, they comprise a spreading loss. This is because idea contributors differ from other individuals according to their product-knowledge and –experience, as well as to their level of trust towards the community owner (Bretschneider, 2011). Given these differences, they form an inhomogeneous target group and cannot be fully reached by our existing marketing measures. We thus use a different approach that enables us to identify and recruit solely idea contributors. One approach to searching for people with special characteristics that has been successfully applied to searching for innovative customers is the pyramiding approach (von Hippel, Franke, & Prügl, 2009). While

this approach has been successfully used within an offline setting, using it within a virtual social network gives us the opportunity to access a big network of people in a relatively easy manner. Moreover, this approach supports conducting the search process with the help of highly standardized messages, thus lowering the required labor costs. In developing this approach we intend to contribute to the field of open innovation, by proposing an efficient approach for identifying individuals with special characteristics.

The outline of the paper is as follows. The first section introduces the problems that we faced within our actual ideas competition on SAPiens, after which we illustrate the theoretical background of the study. The third section describes our method of adapting the pyramiding approach to social networks. Next, we test the adopted process of our actual ideas competition on SAPiens. This research in progress work presents first insights into the question of whether idea contributors for an ideas competition can be effectively identified by using the pyramiding approach within a virtual social network.

2 INITIAL SITUATION:

In an ideas competition, customers or other stakeholders of a certain company are asked to contribute their ideas according to the environment or the value creation of the company within a given period of time. Apart from the fact that the different competitions vary according to the kind and quality of the user input that the companies are searching for, the several competitions can be open or topic-related (Haller, Bullinger, & Moeslein, 2011; Piller & Walcher, 2006). After the submission phase, within which the different stakeholders submit their ideas, all contributions are reviewed by a jury of experts, and the best contributions are awarded. Ideas competitions are typically executed internet-based, by which a higher number of participants can be reached in a fast way and the submitted ideas processed easier (Ebner, Leimeister, & Krcmar, 2009; Haller et al., 2011; Leimeister, Huber, Bretschneider, & Krcmar, 2009).

As in many other successful examples, such as IBM's Innovation Jam (Bjelland & Wood, 2008) or OSRAM's LED Design Contest (Hutter, Hautz, Füller, Mueller, & Matzler, 2011), it is possible to collect many innovative ideas with the help of our virtual ideas community SAPiens, within which several topic-related ideas competitions have been conducted (Ebner, 2008; Ebner, Leimeister, Bretschneider, & Krcmar, 2008). Despite this positive contribution, the number of ideas within the actual competition that deals with the topic of Social Media has declined significantly.

Insert Figure 1 about here

Various attempts to encourage the existing community members to contribute an idea with the help of previously used measures, such as Newsletters, News- blogs or direct correspondence, failed. One possible explanation for this phenomenon can be found in the results of Bayus (2010), indicating that individuals who contributed an awarded idea are unlikely to post innovative ideas again. While they can still be productive on the same topic, they struggle when contributing ideas to a different topic. According to Bayus (2010), this phenomenon is due to the effect of motivational crowding, describing the phenomenon of intrinsic motivation of participants being undermined by external rewards such as monetary prices or external recognition (Frey & Jegen, 2001). The author purports that it is unlikely that existing community members will then contribute innovative ideas to a different topic (Bayus, 2010). This finding calls for the need to recruit new idea contributors for SAPiens in order to revive the actual competition and to give our existing community members the possibility to discuss and share their experiences with new individuals (Adamczyk, Haller, Bullinger, & Moeslein, 2011; Bullinger, Neyer, Rass, & Moeslein, 2010).

To attract new idea contributors for SAPiens, we have previously used a set of different marketing measures. Our present marketing mix comprises offline measures such as mailing of promotional material, the representation of SAPiens on events, as well as direct communication with selected members of the target group. Further, we used several online marketing measures, e.g., emailing, fan pages within social networks as well as newsletters. All of these marketing measures are based on the assumption that a certain share of the reached individuals will be attracted by the ideas community and become idea contributors on SAPiens. While these approaches are valuable instruments for building up a new community, each contains a certain spreading loss (Hass & Willbrandt, 2011), since idea contributors differ from other individuals according to

their product-knowledge and –experience, as well as to their high level of trust towards the community owner (Bretschneider, 2011).

Product knowledge implies knowledge about the functions, as well as the effects, of a certain product (Lüthje, 2004; Ulrich & Eppinger, 2011). A person with high product knowledge has extensive knowledge about the physical structure of a product, its components, as well as the materials of which the product is made. Additionally, product knowledge implies certain knowledge about the processes that are necessary to generate the product. We can thus say that product knowledge is one of the mayor prerequisites of developing an innovative idea.

Product experience describes the practice of use related to a given product that a person possesses (Lüthje, 2004). Given this description, the only way to develop product experience is through the personal usage of the product. Only by using the product will a person be able to experience the modes of operation as well as the characteristics of the product which are said to be necessary to identify a need for innovation (Habermeier, 1990).

The third characteristic of an idea contributor in an ideas competition is trust in the host of the competition. An individual develops this kind of trust if the host of the competition is perceived as being competent, honest, fair and responsible (Soll, 2006). Trust towards the host is a basic requirement for an individual's participation in an ideas competition. Taken together, these three characteristics implicate that idea contributors are a scarce resource for every host of an ideas competition. Furthermore they are responsible for the fact that idea contributors are forming a specific target group, which cannot be fully reached by our existing marketing measures. Therefore we intend to use a different approach to identify and recruit solely idea contributors in order to reduce the spreading losses. In doing so we want to answer the following research question:

RQ: What is a suitable approach for identifying and recruiting idea contributors for a virtual ideas competition in an efficient manner?

3 THEORETICAL BACKGROUND

According to Bretschneider (2011), idea contributors of a virtual ideas competition can be characterized by three personality traits: a surpassing product knowledge, -experience and a high level of trust towards the host that is executing the competition. Given these characteristics, idea contributors of an ideas competition can be classified as rare individuals. In order to avoid spreading losses when recruiting them for existing ideas competitions, it is necessary to find approaches that enable the host of an ideas competition to identify particular individuals and then attract them to participate in the competition.

According to von Hippel et. al. (von Hippel et al., 2009), the identification of individuals with special characteristics within a large population can be carried out by two different approaches. One very common approach is called screening, which requires the researcher to collect information from every subject within a population in order to identify those with the desired characteristics (Sudman, 1985). This screening approach is used within a variety of applications, such as marketing, biology, as well as innovation management (Chen, Pavlov, & Canny, 2009; Herstatt & Von Hippel, 1992; Shrivastava, Boghey, & Verma, 2011). The other approach of identifying individuals with rare characteristics is based on the principle of social recommendation (Spreen, 1992). These approaches make use of the social networks of a predefined sample to provide new recommendations to the researcher. This is implied in von Hippel et al.'s (2009) pyramiding approach - a variant of snowball sampling that has been commonly used in the past (Atkinson & Flint, 2001; Frank & Snijders, 1994; Griffiths, Gossop, Powis, & Strang, 1993; Sudman, 1985).

With snowball sampling, an individual with special characteristics is asked to identify another individual with the same amount of these characteristics (Vogt & Johnson, 2011). In contrast, pyramiding requires that a given individual knows another individual with a higher number of the searched characteristic. Pyramiding is useful if someone wants to identify an individual with a high number of a given attribute in an efficient manner, as it requires only about one third of the effort of screening approaches (von Hippel et al., 2009). This saving justifies the pyramiding approach when searching for new idea contributors for SAPiens.

The pyramiding approach is based on the assumption that people with a high interest in a given field are likely to know other people that do know more than they do about the same topic. In our case, we assume that a person who is very interested in the field of social media will be very likely to know other persons that are even more sophisticated within the field of social media. A pyramiding search typically starts with a list of individuals which possess a high number or level of a certain attribute that the person or company executing the search process (hereafter called researchers) is searching for. In the next step every individual is asked for another person that has a higher number of the searched attribute. The researcher then follows this recommendation and interviews the recommended person to find out whether the person really possesses a higher level of the searched attribute. If the recommended person turns out to have a sufficient level of the desired attribute, the company asks the person for the next expert within the given field. This procedure is repeated until the desired person with a predefined level of the searched attribute is found (von Hippel et al., 2009). Figure 2 illustrates the approach.

Insert Figure 2 about here

While the pyramiding approach has been successfully employed within an offline setting, we adapt the approach for use in an online setting. In doing so, we can access a big network of people without being forced to carry out telephone interviews, which are part of the present pyramiding approach, clearly requiring a high amount of skilled labor; for example, the cost of identifying one individual is about $1,500. (von Hippel et al., 2009). Although this is only one third of the cost of the screening approach, it is too expensive to use this procedure when identifying idea contributors for an ideas competition.

To our knowledge, there is no prior work conducting a pyramiding search within an online setting. However, there are comparable works within the scientific literature that provide insights for our research project. The most similar work to our endeavor has been carried out by Dodds et. al. (2003). The authors conducted an email-based "small world" procedure, in which they attempted to reach 18 persons from 13 countries by forwarding messages from acquaintances. The participants of this study were told to reach a predefined subject by forwarding an email to a social acquaintance that they supposed to be closer to the subject than they were. As a result of this work, Dodds et. al. (2003) found that successful search chains are primarily conducted through relatively weak ties. Moreover, these chains do not require highly connected hubs, nor are they bounded to a certain type of network structure, which is in contrast to prior research within the field of network theory (Newman, 2003; Newman, Strogatz, & Watts, 2001; Strogatz, 2001).

Another important finding is the fact that successful chains primarily made use of professional relationships. We employ this finding within our work by trying to access business networks when searching for idea contributors for a virtual idea competition. We thus hope to overcome the relatively low participation rate of online-based surveys, which in 1999 decreased to 31%

(Sheehan, 2001). Another major problem occurs when the completion rate of Dodds et. al. (2003) is taken into account. The authors reported only 1.6% of their search chains reaching the target.

However, our pyramiding search differs from the study of Dodds et.al. in two aspects. First, we do not rely on personal acquaintances when searching for idea contributors; rather, we advise the participants of the search to pass the message to every person within their professional network, regardless of whether they know each other personally. Further, pyramiding requires the researcher to follow the chain in order to control whether the identified individuals' possess a sufficient level of the desired criteria (von Hippel et al., 2009). Thereby, the researcher has the possibility of actively supporting the completion of the search chains by motivating the identified persons to participate. The way we incorporated the mentioned findings into our research endeavor will be part of the next section, which describes the way we adapted the pyramiding approach for use in an online setting.

4 EVALUATION

4.1 Methodical approach

Looking at the existing procedure of conducting a pyramiding search, two principles can be identified. First, pyramiding requires the researcher to move up the pyramid and identify people with a higher level of the searched attribute. This principle distinguishes pyramiding from the most similar approach, snowball sampling, within which an individual is asked for a person with the same level of the given attribute. We thus left this principle unchanged when adapting the pyramiding approach for use in an online setting.

The second principle is the application of a sequential process to identify people with the desired characteristics. Pyramiding incorporates serial experiments (Thomke, Von Hippel, & Franke,

1998), which enable the researcher to learn from one step to another (von Hippel et al., 2009). In addition, these serial experiments give the researcher the possibility to determine whether he is moving up the pyramid. As the researcher interviews every recommended person to find out whether he really possesses a higher level of the searched attribute, he is able to confirm that he is really moving up the pyramid. Previously, this has been done with the help of telephone interviews, where the researcher can carefully examine the characteristics of the identified individual. As these interviews require a considerable amount of skilled labor, we substituted them with standardized messages. For this purpose, we prepared a letter (Appendix 1) in which we asked participants to name one individual who had a higher level of the desired characteristics. To find out whether the recommended person really possessed a higher level of the searched attribute, we used a questionnaire that probes for the desired characteristics. The results of the questionnaire were then compared to the results of the previous individual. If the individual reached the desired level of the searched characteristic, the particular person would be invited to participate in the ideas competition. Given the topic of the actual ideas competition, the individuals that we wanted to identify were expected to possess three personality traits. They had to possess a high product-knowledge and –experience related to different social media applications, in order to be able to contribute ideas to the topic of the actual ideas competition. In addition to that we expected them to have a high amount of trust towards SAP in order to maximize the likelihood that the identified persons would contribute an idea.

In order to test the resulting recommendations, we used a questionnaire, which was developed by Bretschneider (2011) in order to investigate the personality traits of idea contributors in virtual ideas competitions. In this questionnaire, the personality traits "product- knowledge and –experience" as well as "trust towards the host" are operationalized by eleven items. To assess the

questionnaires comprehensibility, Bretschneider (2011) conducted a pre-test with members of an idea community as well as with survey experts. In addition to that the validity as well as the reliability of the questionnaire was evaluated and confirmed. An English version of the questionnaire can be found in Appendix 2. Each item was evaluated with the help of a five-point rating scale. To check whether the individuals possessed a higher level of the searched characteristics, we asked them for self-assessment of the characteristics. If the recommendation was correct, we asked the identified person to recommend another individual with a higher level of the three characteristics mentioned above.

As we relied completely on standardized messages, there was no possibility of checking whether the chain had been cancelled by the participants. In a telephone interview the researcher would have the possibility of asking the participant if he really wanted to break up the search chain. Unless the participant informed us explicitly, we did not have this possibility, since it would be much easier to ignore an electronic message than a telephone call by the researcher. For this reason, we installed a rule to judge whether a search chain had been cancelled. In this way, we contacted every identified person three times within a period of three weeks. If the person did not respond within this span of time, the search chain was judged to be cancelled.

The search itself was conducted in a virtual social network where the network messages could be easily sent to different individuals without any media disruptions. Furthermore, people within a social network have access to a big network of other individuals. Taken into account the fact that successful search chains in previous works were disproportionally based on business contacts (Dodds et al., 2003), we conducted our search in the social network Xing, which is a social network for business professionals. Similar to LinkedIn it allows users to find and connect to new

business contacts. We chose Xing as it is the biggest as well as most active social networking site within the German speaking countries (Figure 3).

Insert Figure 3 about here

As we had no existing network to access, we identified a set of group moderators assumed to have sufficient knowledge of the field of social media. This assumption was based on the fact that the name of the group is related to the field of social media. All of these moderators were asked to recommend one person out of their network within Xing. For this purpose, we used a standardized message in which the participants were told to give us the name of the person they believed to have the highest knowledge as well as experience in the field of social media. In addition, the recommended persons also had to have high trust in the products of SAP. To give the participants assistance in recommending another person, we provided them with several statements in which the characteristics product knowledge and –experience, as well as trust towards the host were operationalized. If the recommendation turned out to be valuable, we repeated the procedure in the described manner. Although the search process is still in progress, we present the first results in the next section.

4.2 Results

In a first step towards the identification of idea contributors for our ideas competition, we identified 77 moderators of groups within Xing. We chose these moderators as their groups were related to the field of social media. In addition to that we concentrated our efforts to groups that had at least 200 members in order to enhance the probability that the identified moderators had a big

network to access when searching for a suitable recommendation. All moderators were previously unknown to us. These moderators were asked to give one recommendation to another person within their network on Xing. The first result showed that we received 49 recommendations of persons that these moderators considered to be the most skilled person in the field of social media. To gain insights into the reasons for the moderators not participating in our study, we sent another questionnaire to the relevant persons in which we listed four possible reasons that may have affected the person's decision not to participate in our study. In addition, we gave them the possibility of naming different reasons in a free textbox. The questionnaire can be found in Appendix 3. As we intended to explore the reasons in full detail, we allowed multiple answers. From the persons that received this second questionnaire we received 22 returns. Out of the 25 answers that were given, 14 (56%) answers were allotted to the fact that the persons had insufficient interest of engaging in a SAP related competition. Nine answers (36%) were due to the participants feeling unable to name a person with the desired characteristics. Only one person responded with wanting to protect his existing network, that is, he was generally not answering requests of unknown persons.

As the second round is currently running, we are not able to present the final results. Nevertheless, we were able to collect five references on which we would like to report. In the second step of our search chain we first analyzed the characteristics of the referenced persons. Of the 49 persons that were contacted in the second step, five already sent back their questionnaire. The result showed that three of the identified person possessed a higher level of their product- experience and -knowledge.

Although the second round is currently running, one person gave us a recommendation that led to the third link in one search chain. Analysis of the characteristics of the identified person revealed that all three criteria increased in comparison to the previous step.

4.3 Interpretation of the results:

We are aware of the fact that, due to the early stage of our study, our results have no statistical significance, and thus we refrain from interpreting the level of the characteristics. Nevertheless, our first results reveal some interesting points that we would like to elaborate upon. First, the high number of recommendations in the first step is noteworthy, as we received 49 recommendations from the 77 moderators that we contacted in the first step. Compared to the results of Sheehan (2001), who reported a mean response rate of 36% within 31 email based studies, we can consider the various recommendations to be a first success. In addition to that, the answers of the moderators that refrained from participating in our study are encouraging. Only two moderators refused to answer requests from unknown persons. As the possibility of getting access to the personal network of the participants is one of the major requirements to the success of our search process, we consider this result to be positive. With regard to the other reasons that moderators did not participate in our study, two facts are noteworthy. First, the majority of the respondents (46%) responded with being unwilling to participate in a SAP related competition. Although this fact negates our purpose of recruiting idea contributors for a SAP related competition, the possibility remains that the persons would have participated in a study with a different purpose. Further, only 36% of the moderators were not able to name an individual with a higher level of the searched characteristics. We interpret this as a first sign that people in virtual social networks are able to give a targeted recommendation - another major prerequisite to the success of our search

process. This perception is supported by the fact that we currently have three intact search chains, within which no step back to the previous link of our search chain was necessary.

Looking at our first results, we are optimistic that it is possible to conduct a pyramiding search in an online setting. This is because there are indicators that people in a virtual social network are able, as well as motivated, to participate in our internet-based pyramiding search. We will therefore continue with this approach to our study.

4.4 Limitations and future research

Given that our search is at the very beginning, we are aware that our results have several major limitations. First, the results of our research in progress allow no statement about the quality of the particular search chains. Further, the current number of respondents is too small to elaborate on the characteristics of the identified individuals. We will therefore continue to conduct the search process to address the question of whether the pyramiding approach can be realized in a virtual social network. To do so, we will continue to search for the characteristics of the identified individuals. This will enable us not only to report on whether it is possible to lower the spreading losses that are implied in our existing marketing measures but also to judge whether successful search chains can be achieved in a virtual social network.

Further, we will compare the characteristics of the identified individuals with the characteristics of the average idea contributor on SAPiens. In doing so, we will be able to predict at which chain link the identified persons do possess a sufficient level of product-knowledge and experience, as well as enough trust towards the host of the competition. As our intention has been to lower the costs of a pyramiding search process, we will compare the search costs of our approach to the cost of an offline pyramiding search. We will therefore continue to document every effort that is

involved in the search in order to calculate not only the overall costs at the end of the process but also the costs per identified idea contributor.

5 CONCLUSION

The overall target of the described study is to identify idea contributors for a virtual ideas competition. As the study that we are reporting on is at its beginning, the main contribution of this research in progress paper lies in the adaption of the pyramiding approach for use in an online setting. In this adaption process, we described our reasons for using the pyramiding approach to search for idea contributors to our current ideas competition on SAPiens. We elaborated on the supposed benefits that an adaption of the pyramiding search within an online setting would imply. Drawing on related works, we were able to draw several design implications for conducting the pyramiding search in an online setting. In addition, we were able to present the first results of this study, which revealed promising insights into the possibility of conducting a pyramiding search in a virtual social network. Firstly, people in a virtual social network are willing to open up their personal networks in order to give a target-oriented recommendation. In addition to that we got first evidence that people within a virtual social network are able to deliver a recommendation based on predefined criteria. We will therefore continue our search in order to give a substantiated assessment of this issue. In doing so, we hope to come up with a new approach for identifying individuals with special characteristics that can be used to find participants for virtual ideas competitions.

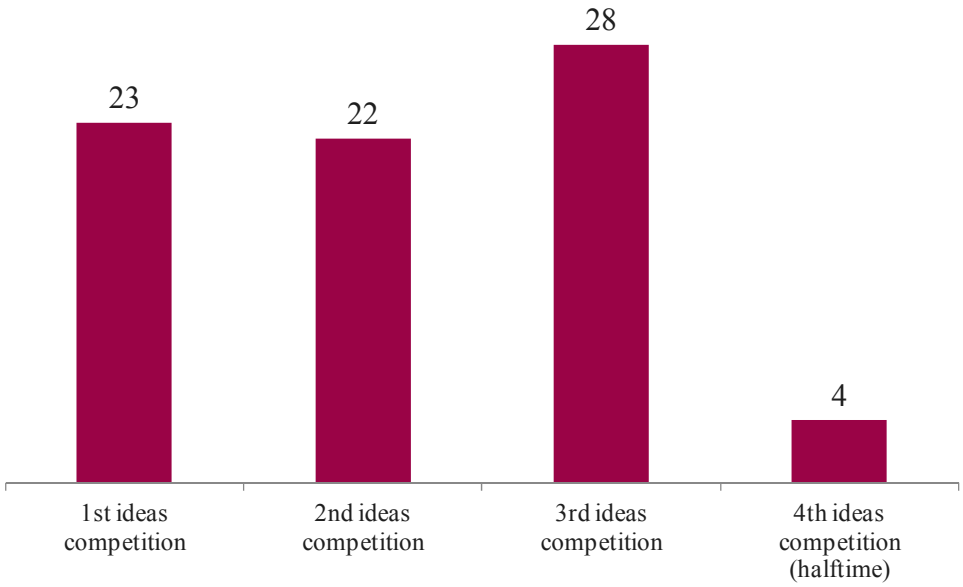

Figure 1: Number of Ideas within the Several Ideas Competitions on SAPiens

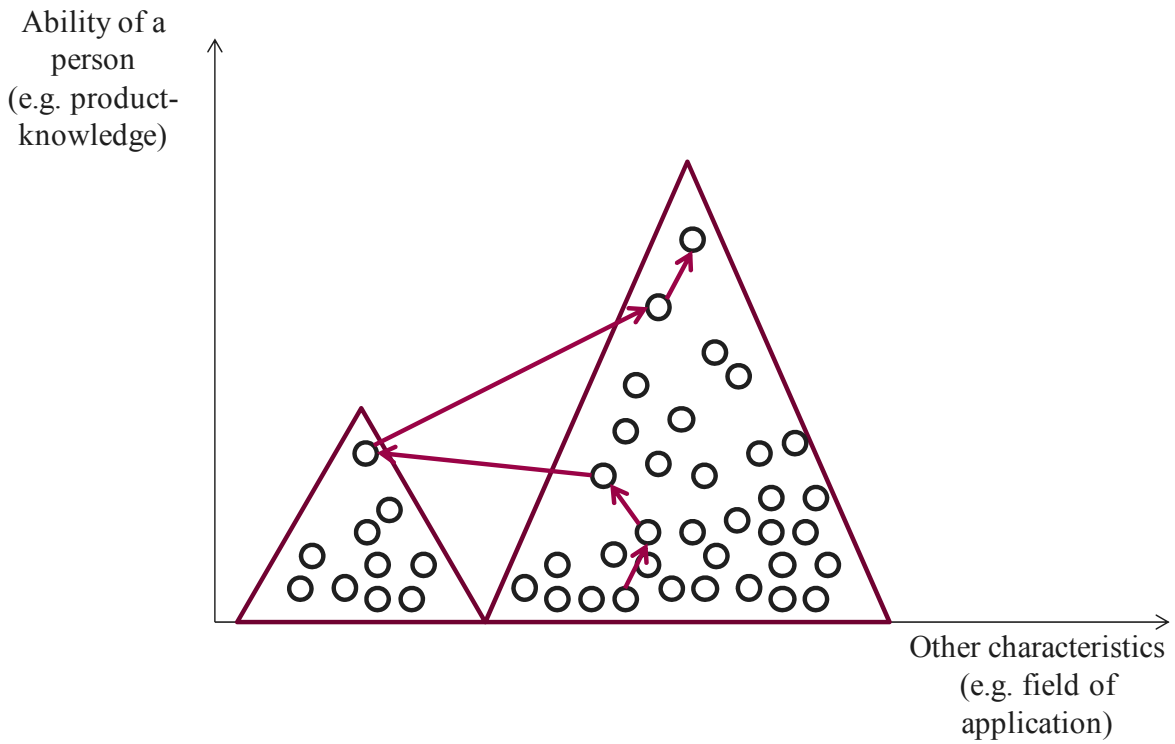

Figure 2: Illustration of the pyramiding approach (according to von Hippel et.al. 2009)

	XING	LinkedIn
Registred users within german speaking countries	5 Mio	2 Mio
Average time per page visit	9,6 min	6,3 min
Monthly search queries in google	1.500.000	165.000
Monthly page views	160 Mio	23 Mio

Figure 3: Comparison of Xing and LinkedIn in German speaking countries (Source: tobesocial, 2011)

Appendix 1: Message that has been sent to the participants

Dear [Name of the recommendation],

I am writing you on recommendation of [name of the predecessor], who has identified you as an expert in the field of social media. At the beginning I want to introduce myself. (...). Currently, we are running an idea competition with the topic "SAP Business ByDesing and Social Media".

With SAPiens we want to give SAP interested people and users the possibility of forwarding requests and suggestions directly to SAP. For this purpose, our members can contribute their ideas within the community and elaborate on them with the help of other community members.

We are continuously looking for new input for SAPiens in order to provide our members with the opportunity to collaborate with experienced partners from different fields. For this purpose, we search for social media experts.

As you have been identified by [name of the predecessor] as a social media expert, we think you know a lot of Xing members who are social media experts as well. For this reason, I would like to ask you the following question:

Which of your contacts in Xing has the most knowledge and experience it the field of social media and would be interested in creating new ideas for a platform like SAPiens?

To give you some assistance in recommending a person, we have listed some characteristics that the recommended person should possess:

- Your contact has knowledge about different social media applications on the market and how this interact is above average
- Your contact has technical background knowledge regarding different social media applications
- Your contact is very familiar with social media applications and uses them regularly
- Your contact evaluates the quality and reliability of SAP products as high
- Your contact is convinced of SAP products

It does not matter in which field of social media (e.g. Twitter, Xing, Facebook, Skype) your recommended contact has experience. The points above should just be an orientation and are not mandatory for your recommendation.

I would appreciate it very much, if you would recommend some of your contacts. Further, I would be very pleased if you became a member of SAPiens and contributed your ideas to the community.

Thank you very much for your support.

Yours sincerely,

XXX,

Appendix 2: Questionnaire that was used to control the participant's characteristics

Dear [name of the recommended person],

Thank you very much for your positive feedback.

As discussed, you will find an attached questionnaire to identify social media experts.

With the help of this questionnaire we want to assess your skills and expertise in the field of social media.

If you should assess yourself, how far do you agree with the following statements:

1. Compared with acquaintances and friends, I know much about the use of individual social media applications.
   totally disagree ☐☐☐☐☐ totally agree

2. The quality of SAP software solutions and applications can in general be rated as high.
   totally disagree ☐☐☐☐☐ totally agree

3. I have an overview of particular social media applications on the market.
   totally disagree ☐☐☐☐☐ totally agree

4. SAP is a reliable provider of ERP systems.
   totally disagree ☐☐☐☐☐ totally agree

5. I have knowledge about the context and impact of different social media applications and solutions.
   totally disagree ☐☐☐☐☐ totally agree

6. I have much experience with the use of different social media applications.
   totally disagree ☐☐☐☐☐ totally agree

7. I am very familiar with the use of different social media applications.

totally disagree ☐ ☐ ☐ ☐ ☐ totally agree

8. The SAP software solutions and applications meet my expectations.
   totally disagree ☐ ☐ ☐ ☐ ☐ totally agree

9. I have technical background knowledge regarding different social media applications.
   totally disagree ☐ ☐ ☐ ☐ ☐ totally agree

10. I can always rely on the quality of SAP solutions.
    totally disagree ☐ ☐ ☐ ☐ ☐ totally agree

11. I regularly use different social media applications.
    totally disagree ☐ ☐ ☐ ☐ ☐ totally agree

Thank you very much for your support in the study!

Best regards,

XXX

Appendix 3: Questionnaire to assess the reasons for not participating within the study

Dear [name of the moderator],

First, I want to apologize for contacting you again.

You certainly had good reasons for not answering my last cover letter from the XX.XX.XXXX, within which I asked for your support to identify experts according to the field of social media.

Within the scope of my study, I also would like to evaluate the motivation of users within social networks. To achieve this purpose, I need to "bother" you again.

I would be very pleased if you could give me some information as to why you did not answer my last inquiry. Because:

1. … you didn´t know anybody, who met the requirements?
2. ... you didn´t want to engage in a SAP based platform?
3. …you wanted to protect your private contacts?
4. …you never answer any inquiries of unknown persons?

It would be great, if you could also give me feedback, if none of the above-mentioned points meets your reasons.

I am looking forward to hearing from you.

Many thanks for your support.

Yours sincerely,

XXX

References:

Adamczyk, S., Haller, J., Bullinger, A. C., & Moeslein, K. 2011. ***Knowing is Silver, Listening is Gold: On the Importance and Impact of Feedback in IT-based Innovation Contests***. Paper presented at the Wirtschaftsinformatik Proceedings 2011, Zurich, Switzerland.

Atkinson, R., & Flint, J. 2001. Accessing Hidden and Hard-to-reach Populations: Snowball Research Strategies. ***Social Research Update***, 33(1): 1-4.

Bayus, B. 2010. Crowdsourcing and Individual Creativity Over Time: The Detrimental Effects of Past Success: University of North Carolina.

Bjelland, O. M., & Wood, R. C. 2008. An Inside View of IBMs Innovation Jam. ***MIT Sloan Management Review***, 50(1): 31-40.

Bretschneider, U. 2011. ***Die Ideen Community zur Integration von Kunden in die frühen Phasen des Innovationsprozesses - Empirische Analysen und Implikationen für Forschung und Praxis***. Technischen Universität München, München.

Bullinger, A. C., Neyer, A. K., Rass, M., & Moeslein, K. M. 2010. Community-based Innovation Contests: Where Competition Meets Cooperation. ***Creativity and Innovation Management***, 19(3): 290–303.

Chen, Y., Pavlov, D., & Canny, J. F. 2009. ***Large-scale Behavioral Targeting***. Paper presented at the Proceedings of the 15th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining,.

Dodds, P. S., Muhamad, R., & Watts, D. J. 2003. An experimental study of search in global social networks. ***Science***, 301(5634): 827-829.

Ebner, W. 2008. ***Community Building for Innovations - Der Ideenwettbewerb als Methode für die Entwicklung und Einführung einer virtuellen Innovations-Gemeinschaft***. Technische Universität München, München.

Ebner, W., Leimeister, J. M., Bretschneider, U., & Krcmar, H. 2008. Leveraging the Wisdom of Crowds: Designing an IT-supported Ideas Competition for an ERP Software Company, ***41st Hawai'i International Conference on System Sciences (HICSS 41)***. Big Island, Hawai'i.

Ebner, W., Leimeister, J. M., & Krcmar, H. 2009. Community Engineering for Innovations: the Ideas Competition as a Method to Nurture a Virtual Community for Innovations. ***R&D Management***, 39(4): 342-356.

Frank, O., & Snijders, T. 1994. Estimating the Size of Hidden Populations Using Snowball Sampling. ***JOURNAL OF OFFICIAL STATISTICS***, 10(1): 53-67.

Frey, B. S., & Jegen, R. 2001. Motivation Crowding Theory. ***Journal of Economic Surveys***, 15(5): 589-611.

Griffiths, P., Gossop, M., Powis, B., & Strang, J. 1993. Reaching Hidden Populations of Drug Users by Privileged Access Interviewers: Methodological and Practical Issues. ***Addiction***, 88(12): 1617-1626.

Habermeier, K. F. 1990. Product Use and Product Improvement. ***Research Policy***, 19(3): 271-283.

Haller, J. B. A., Bullinger, A. C., & Moeslein, K. M. 2011. Innovation Contests: An IT-Based Tool for Innovation Management. ***Business & Information Systems Engineering***, 2: 103-106.

Hass, B. H., & Willbrandt, K. W. 2011. Targeting von Online-Werbung: Grundlagen, Formen und Herausforderungen. ***MedienWirtschaft: Zeitschrift für Medienmanagement und Kommunikationsökonomie***, 08(1): 12-21.

Herstatt, C., & Von Hippel, E. 1992. From experience: Developing new product concepts via the lead user method: A case study in a. ***Journal of Product Innovation Management***, 9(3): 213-221.

Hutter, K., Hautz, J., Füller, J., Mueller, J., & Matzler, K. 2011. Communitition: The Tension between Competition and Collaboration in Community-Based Design Contests. ***Creativity and Innovation Management***, 20(1): 3-21.

Leimeister, J. M., Huber, M., Bretschneider, U., & Krcmar, H. 2009. Leveraging Crowdsourcing: Activation-Supporting Components for IT-Based Ideas Competition. ***Journal of Management Information Systems***, 26(1): 197-224.

Lüthje, C. 2004. Characteristics of Innovating Users in a Consumer Goods Field: An Empirical Study of Sport-related Product Consumers. ***Technovation***, 24(9): 683-695.

Newman, M. E. J. 2003. The Structure and Function of Complex Networks. ***SIAM Review***, 45(2): 167-256.

Newman, M. E. J., Strogatz, S. H., & Watts, D. J. 2001. Random Graphs with Arbitrary Degree Distributions and their Applications. ***Physical Review E***, 64(026118): 1-17.

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.

Sheehan, K. B. 2001. E-mail Survey Response Rates: A Review, ***Journal of Computer-Mediated Communication***, Vol. 6: No pagination specified: Blackwell Publishing Ltd.

Shrivastava, V., Boghey, R., & Verma, B. 2011. A Framework for Improving Target Marketing Using Collaborative Data Mining Approach. ***International Journal of Information***, 1(2): 69-72.

Soll, J. H. 2006. ***Ideengenerierung mit Konsumenten im Internet***. Wiesbaden: Deutscher Universitäts Verlag.

Spreen, M. 1992. Rare Populations, Hidden Populations, and Link-Tracing Designs: What and Why? ***Bulletin de Methodologie Sociologique***, 36(1): 34-58.

Strogatz, S. H. 2001. Exploring Complex Networks. ***Nature***, 410(6825): 268-276.

Sudman, S. 1985. Efficient Screening Methods for the Sampling of Geographically Clustered Special Populations. ***Journal of Marketing Research (JMR)***, 22(1): 20-29.

Thomke, S., Von Hippel, E., & Franke, R. 1998. Modes of Experimentation: an Innovation Process--and Competitive--Variable. ***Research Policy***, 27(3): 315-332.

tobesocial, A. 2011. Xing vs LinkedIn – Eine Analyse der größten Business Netzwerke in Deutschland. http://tobesocial.de/blog/xing-linkedin-analyse-mitglieder-deutschland-business-netzwerke.

Ulrich, K. T., & Eppinger, S. D. 2011. ***Product Design and Development*** (5th Edition ed.). New York: McGraw-Hill International Edition.

Vogt, W. P., & Johnson, R. B. 2011. ***Dictionary of Statistics & Methodology: a Nontechnical Guide for the Social Sciences***. Los Angeles, London, New Deli, Singapore, Washington DC: Sage Publications, Inc.

von Hippel, E., Franke, N., & Prügl, R. 2009. Pyramiding: Efficient Search for Rare Subjects. ***Research Policy***, 38(9): 1397-1406.