

“Open innovation in SMEs: a case study of a regional open innovation platform”

AUTHORS

Wolfgang Kathan
Kurt Matzler  <https://orcid.org/0000-0002-3132-4388>
Johann Füller
Julia Hautz
Katja Hutter

ARTICLE INFO

Wolfgang Kathan, Kurt Matzler, Johann Füller, Julia Hautz and Katja Hutter (2014). Open innovation in SMEs: a case study of a regional open innovation platform. *Problems and Perspectives in Management*, 12(1-1)

RELEASED ON

Tuesday, 01 April 2014

JOURNAL

"Problems and Perspectives in Management"

FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

© The author(s) 2021. This publication is an open access article.

SECTION 2. Management in firms and organizations

Wolfgang Kathan (Austria), Kurt Matzler (Austria), Johann Füller (Austria), Julia Hautz (Austria), Katja Hutter (Austria)

Open innovation in SMEs: a case study of a regional open innovation platform

Abstract

Open innovation has enjoyed widespread acceptance among large companies. SMEs, and especially micro firms, face specific challenges when adopting and implementing open innovation approaches. This paper describes a regional platform that was set up to support SMEs and micro firms to implement open innovation. The platform focuses on community-based innovation contests. The guiding idea of the project, its implementation and some lessons learnt are discussed.

Keywords: small and micro sized firms, open innovation, virtual contest community.

JEL Classification: O32.

Introduction

Micro-, small- and medium-sized enterprises are essential for the European economy. In the EU, 98 percent of all enterprises are SMEs. Between 2002 and 2010, 85 percent of all new jobs in the European Union were created by SMEs, of which 92.2 percent employed less than 10 persons (European Commission, 2012). For many of those SMEs, successful innovation is seen as one of the most critical success factors as it increases the chance of survival by 22 percent (Cefis & Marsili, 2006; Golovko & Valentini, 2011; Leimeister et al., 2009; Parida et al., 2012).

Nevertheless, there is a lack of research on factors that stimulate innovation in small and micro enterprises (Petersen et al., 2002). SMEs possess advantages regarding their innovativeness compared to large firms in terms of their R&D efficiency, rapid decision-making, fast internal communication, short decision chains, capability of expeditious learning and adaption of routines and strategies (Vossen, 1998). Existing research so far mainly focused on factors which might restrict the SMEs' ability to innovate, such as limited financial resources, a lack of multidisciplinary competence, limited resources to establish and maintain networks and collaborations, and less structured and professionalized innovation processes (Taggar, 2002; Parida et al., 2012; van de Vrande et al., 2009).

Many large organizations adopted open innovation to improve their innovativeness. Open innovation can be defined as "the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively" (Chesbrough et al., 2006, p. 2). By integrating or commercializing knowledge, SMEs can

strongly benefit from open innovation, since their resources and market reach are limited (Taggar, 2002). Research so far has focused mainly on open innovation efforts of large and multinational enterprises (Golovko & Valentini, 2011; Kirschbaum, 2005). However, open innovation is increasingly applied also by SMEs. Van de Vrande et al. (2009) for instance, analyzed the trend of open innovation adoption of SMEs in general, including motives and managerial challenges for SMEs to adopt open innovation practices. Yet, the realization and implementation of open innovation activities within SMEs is still underinvestigated (e.g., Bianchi et al., 2010; Lee et al., 2010; or van de Vrande et al., 2009). The studies also considering SMEs are mainly focusing on technology-based companies (for instance Christensen et al., 2005) and show that large and small firms manage open innovation differently. Hence, additional research might help to increase knowledge concerning the utilization of open innovation practices within SMEs (Colombo et al., 2012).

One approach which helps SMEs to open their innovation processes is the application of innovation contests (Morgan & Wang, 2010; Bodreau & Lakhani, 2013; Bullinger et al., 2010). These web-based platforms allow companies to post an innovation-related problem to a community of individuals to be solved. The best submitted solutions are selected and awarded by the host of the contest (Terwiesch & Yi Xu, 2008). The concept has already been adopted and applied successfully by multinational enterprises (MNEs) for years, e.g. Dell (Di Gangi & Wasko, 2009), SAP (Ebner et al., 2009), or Osram (Hutter et al., 2010). An Enterprise 2.0 study by McKinsey in 2008 revealed that already 60 to 70 percent of large and established enterprises exploited Web 2.0 technologies to integrate external knowledge into their innovation processes (McKinsey, 2008).

Studies also show that only 5 to 20 percent of the SMEs actively apply open innovation practices (OECD, 2008). In theory it has been suggested that the open innovation approach might also entail great benefits for SMEs (especially through the new information and communication technologies) to compensate possible size-related disadvantages towards MNEs (Petersen et al., 2002). Freel (2003) found that product innovation in small firms is positively correlated with cooperation with customers and public organizations. These findings regarding the advantages of networking and opening support the assumption that open innovation might help SMEs in improving innovation and thus growth and survival.

However, when launching an open innovation initiative, or as in our case a web-based innovation contest, SMEs face a number of challenges. SMEs usually lack the resources and skills to install such web-based platforms. Innovation contest platforms need a critical mass of participants and contributors to become a vibrant source for new ideas. While large, well-known companies attract hundreds or thousands of contributors with ease, SMEs, that are usually less known and less attractive for potential contributors, have more difficulties to reach enough interested contributors. The launch of an innovation contest requires specific know how (e.g. problem formulation, prizes, duration, community management, selecting ideas). When launching innovation contests, large companies usually hire external consultants to support the organization and/or to manage the process. SMEs usually don't have enough financial resources to hire consultants and lack specific knowledge and time to successfully manage such a project on their own. Finally, many SMEs need support not only in the idea generation phase but also in downstream phases of the innovation process, such as prototyping, market introduction etc.

In this paper we describe the case of an open innovation platform that was specifically developed to support SMEs in the adoption of open innovation. We discuss the guiding ideas, the principles, and some general lessons learnt after 10 innovation contests that were conducted for SMEs.

1. Open innovation and innovation contest communities

The integration of external experts, customers, users, etc., is considered as one of the biggest external resources for innovations (Gassmann & Enkel, 2006). The present study focuses on this dimension of external knowledge acquisition. One way to access knowledge and ideas of external stakeholders are collaborative communities, competitive markets (or a

combination of both), or innovation contest communities (Boudreau & Lakhani, 2009; Hutter et al., 2011). The latter phenomenon, a hybrid of community and competition, is described as "communitition" (Hutter et al., 2011). These innovation contests are defined as "a (web-based) competition of innovators who use their skills, experience and creativity to provide a solution for a particular contest challenge defined by an organizer" (Bullinger et al., 2010, p. 291). These initiatives can be referred to as community-based innovation contests (as, for instance, used by Bullinger et al., 2010) or as innovation contest communities, as it will be used in the present study.

According to Fichter (2009, p. 395) "an important development in the past decade of innovation studies has been the recognition of the role of communities outside and across the boundaries of firms in creating, shaping and disseminating technological and social innovations." West and Lakhani (2008, p. 223) state that communities in the innovation process "offer an opportunity to extend the company-centric concept of open innovation developed by Chesbrough and his colleagues". Newly utilized communication systems provide conditions that kindle collective intelligence, knowledge sharing and collaborative innovation (Chiu et al., 2006; Gregg, 2010). Consequently, organizations start to appreciate user innovation communities as strategic assets, which have the ability to foster external innovations and expertise (Dahlander & Wallin, 2006; Di Gangi & Wasko, 2009).

Research has shown that problem solving by external innovators like customers, works best when there is competition among participants, since the setting is more likely to produce incentives for useful contributions (Morgan & Wang, 2010). Examples are innovation contest communities that combine the concept of idea competitions with tools of collaboration and the offering of incentives. Kratzer et al. (2008, p. 64) confirm this proposition with the following statement: "the core product of innovation activities is knowledge, and this knowledge can only be created through interaction between specialists with varying backgrounds of expertise; the cement of innovation activities is communication". By researching factors that positively influence the creative performance of groups, Taggar (2002) identified that providing feedback, having effective communication, and involving others are relevant processes. Further, knowledge sharing among users helps the individuals to expand their knowledge and thus to improve and extend their ideas (Perry-Smith & Shalley, 2003). The increasing number of implemented community based innovation contests is

“evidence that interaction, communication and thus cooperation are positively related to creativity and innovativeness” (Bullinger et al., 2010, p. 295).

2. Open innovation in SMEs

Van de Vrande et al. (2009) show that larger firms adopt open innovation to a larger extent than SMEs. The authors identified several managerial and organizational challenges perceived by SMEs in adopting open innovation practices that involve their customers: (1) Organizational and cultural barriers that include the balance between daily tasks and the innovation project, communication problems, the alignment with partners, and the organization of the open innovation activity itself; (2) Resources in terms of the costs and the time required by the activity; (3) Intellectual property rights that raise the question of the ownership of ideas, and developed, and commercialized innovations especially in cases where different parties are cooperating; (4) Adoption problems, e.g., the misinterpretation of customer requirements; and (5) Demand of customers that might be too specific or the innovation seems to not fit the desired market.

Compared to large enterprises, SMEs possess less external relations with innovation partners beyond their own business sector. Consequently, the potential to exchange innovation-related information and to collaborate in innovation projects is restricted (Kaufmann & Tödting, 2002). According to Kaufmann and Tödting (2002, p. 151) there are a limited number of employees “who are able to act as nodes establishing and maintaining links to innovation networks”. A solution to overcome the limited resources of SME’s regarding innovation is to use the input and services of external partners or collaborations that operate as intermediaries to

facilitate innovation (Lee et al., 2010). The following case study focuses on one specific form of an intermediated model: An open innovation intermediary between the SMEs and the innovating community. The objective is to analyze how the open innovation intermediary can help the SMEs to overcome size-related hurdles (mostly based on size and resource restrictions).

3. Case study

This study analyzes how previously identified hurdles for SMEs can be overcome by an open innovation intermediary based on the case of a regional open innovation platform for small and micro enterprises – “Open Innovation South Tyrol”. Open Innovation South Tyrol¹ is an innovation initiative for small and micro-enterprises, established in 2012 by the LVH, the South Tyrolean national association for craftsmen. The objective is to support small and micro-enterprises in their innovation efforts by providing an online open innovation platform and consultancy services for innovation implementation. The target enterprises of the initiative are small South Tyrolean companies. The OIS initiative aims to support and facilitate the innovation attempts and thus to improve the innovative capacity and the commercial success of the SMEs by: (1) developing a social software based open innovation platform and granting access to SMEs; (2) the opening of innovation processes of the SMEs to integrate external ideas, solutions, products, and technologies; and (3) the global distribution of regional products and services (LVH, 2013). The OIS initiative seeks to support the SMEs in four innovation process phases: (1) idea generation and evaluation; (2) idea selection and concept elaboration; (3) development and prototyping; and (4) production and market introduction (see Figure 1).

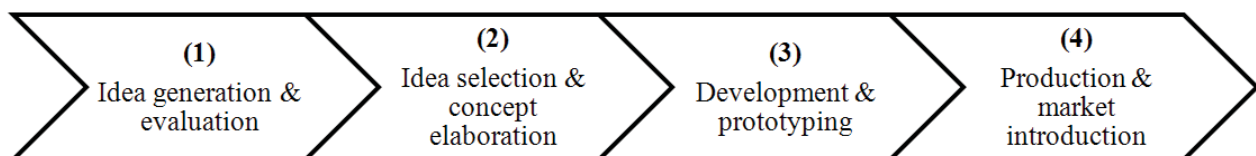


Fig. 1. Innovation process phases supported by the OIS initiative

The OIS initiative offers two services to foster the innovation activities of small and micro-enterprises. First, an online innovation contest community platform supports the first two phases of the innovation process presented in Figure 1, which is the primary focus of this case study. A second service is a brick-and-mortar laboratory, which supports the SMEs in rapid prototyping, material investigation, computer simulations, and offline workshops.

A core element of the OIS initiative is the virtual innovation contest community platform. Prior to the development of the online platform, an analysis of the innovation activities of the South Tyrolean SMEs was conducted (Hutter et al., 2013). The results provided insights on the SMEs’ requirements, needs, challenges, and barriers regarding their innovation efforts. These findings were considered in the development of the new virtual innovation platform to fit the specific conditions.

¹ <https://www.openinnovation-suedtirol.it>.

The OIS platform allows regional small and micro companies to present an innovation challenge or innovation related problem in the form of competitions to a community of external individuals. The platform facilitates several objectives at the same time for all involved parties: (1) collective development of creative ideas and innovative concepts by utilizing external parties and external knowledge; (2) ideas and discussions providing valuable insights about consumer needs; (3) new innovation projects can be initiated but also existing innovation projects can be further developed and continued; (4) company profiles on the platform enabling the emergence and maintenance of networks between the enterprises and a transfer of knowledge since companies can collaborate, exchange information, and present themselves; (5) new customers can be contacted or existing contacts deepened since

the initiative is construed to gain attention and marketing for all involved parties; (6) and the OIS project aims to initiate collaborations and the exploitation of new markets.

Each competition is set up and supervised individually by the open innovation intermediary (LVH), consisting of a team of consultants and experts in the open innovation field. Depending on the contest topic, adequate target groups are identified and addressed to participate in the innovation contest community. To provide a better understanding of the platform, the following paragraphs illustrate the OIS community in more detail. The intermediary OIS platform is based on three central components: the community, the contests, and a market place. Figure 2 shows the starting page of the OIS platform.

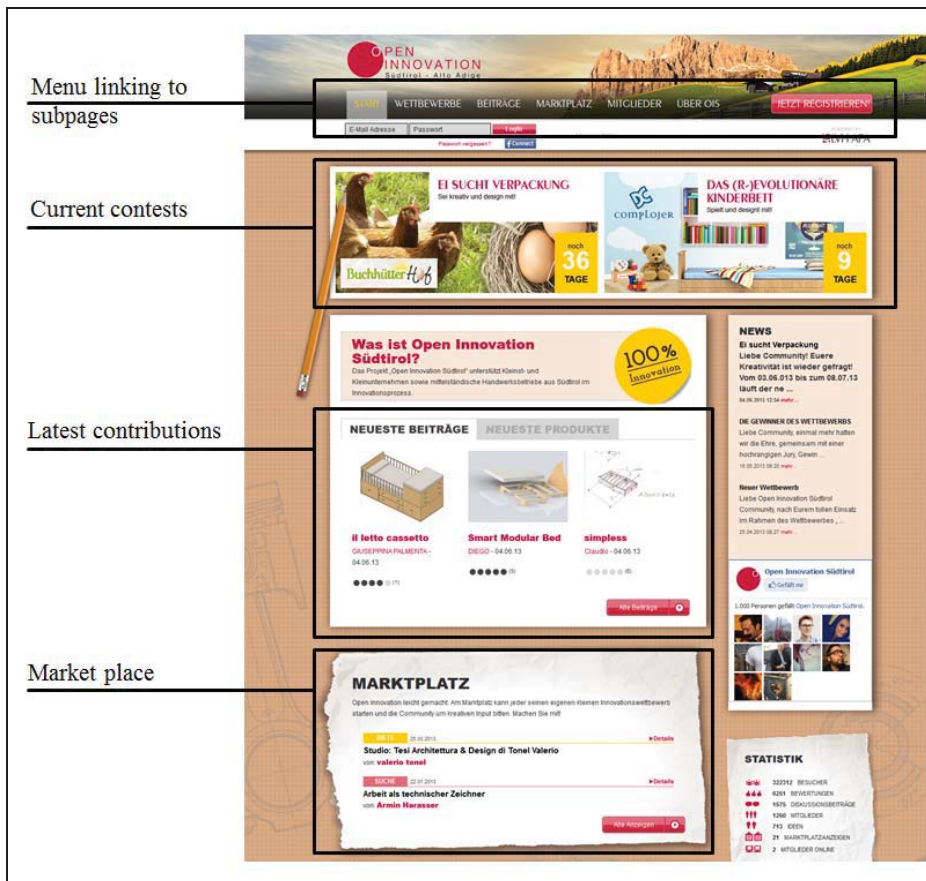


Fig. 2. The OIS innovation platform

All essential functionalities are linked on the starting page, like currently hosted contests, the latest contributions, the marketplace, the community, and functionalities such as the registration of participants, and a login function. Further, some information about the OIS project, a news feed, platform statistics and social media interfaces are available. The three main components of the platform, the community, the contest section and the marketplace will be outlined in detail in the following sections.

3.1. The OIS community. The virtual community is open to everybody visiting the website. To participate and to log in, a registration process needs to be processed. Individuals can choose to register as a private person or as a company. Both profiles offer the same functionalities but can differ in the representation purpose. For instance, company profiles allow companies to present their products, services, and potential employment opportunities. Private user profiles can be used to represent the

individual participant, anonymously or authentically. Hence, skills, expertise, and the personality can be demonstrated in two ways: by composing the profile and by the performance and innovativeness of contributions in the community itself.

All private and company profiles can be searched and filtered to enable and foster the communication among the community members. Hence, community members can be identified or relocated by other participants and conversations can be started or resumed. For this communication purpose, the user profiles are endowed with bulletin and message boards and activity feeds.

To foster the collaboration among the participants, community managers from the open innovation intermediary (LVH) are active on the OIS platform. Up to three community managers supervise and actively moderate the platform with their OIS user profiles bilingually in German and Italian. The field of responsibility of the community management includes the following tasks:

- ◆ *Recruitment.* Different groups of innovators are targeted and attracted to participate in the OIS project. The objective is to establish a creative and diverse community that exhibits skills and talents according to the contest topic: for instance, designers, craftsmen, students, tourists, hobby tinkerers, etc.
- ◆ *Activation.* The community managers activate and involve the community in different ways: one-to-one communication (e.g. personal messages on the user bulletin board to welcome new participants or to reactivate inactive members) or one-to-many communication (e.g. newsletters to inform the community about new contests on the OIS platform).
- ◆ *Assistance.* Support and assistance is offered to the participants on the platform and interested potential participants, either by answering questions on the community managers' profile bulletin board or via support email account.
- ◆ *Monitoring.* The submitted user-generated content is monitored to detect potential critical content (that infringe the terms and conditions of the contest: e.g., racism terms or content harmful to minors) and to react quickly.
- ◆ *Issue management.* The most critical and sensitive task is the management of incidents, critical

content and conflicts, as for instance explored and illustrated in a study by Gebauer et al. (2013).

3.2. The OIS contests and contributions. The OIS platform hosts multiple contests. It continuously accesses the same innovating community of individuals for different contests. This central approach allows dealing with different innovation problems and challenges for varying sponsoring organizations by leveraging the innovation potential of an already existing and still growing community.

The OIS platform offers the possibility to launch three different types of innovation competitions depending on the SMEs' intention:

1. *Problem solving contests.* In this case the OIS community is confronted with a particular problem the company is facing in its daily business. The objective is to find a fast solution and to generate solutions for the problem by combining and concentrating on interdisciplinary knowledge. An example is an idea contest for souvenirs made of wood.
2. *Product development contests.* The community is used to transfer incipient ideas into real product concepts. In addition to the interdisciplinary knowledge of the community, the know-how concerning technologies, materials, the market and a comprehension of customer needs is required. An example is the architecture contest "The timber house of the future".
3. *Market and marketing contests.* These types of contests aim to support SMEs in the key market definition and marketing of new products with assistance of the community since a new or finalized product does not guarantee success in the market. Thus, challenges for the community might be to identify or define the key markets of a product, or to develop new and innovative positioning, marketing and sales strategies. An example is the identification of target markets and applications for drones.

So far, ten contests have been conducted for regional SMEs on the OIS platform. Typically, a contest runs about five to twelve weeks, depending on the complexity and the scope of the innovation challenge. The contests strongly vary in their subjects, as shown in Table 1.

Table 2. OIS contest subjects and the corresponding sponsoring SMEs

No.	Contest subject	Duration (weeks)	Prize money (in total)	Sponsoring SME (type of company)
1	Design: Souvenirs made of wood	8	€ 3,000	Hofer Heinrich KG (Carpentry)
2	Packaging and branding: Concepts for MoCem	12	€ 3,000	Moling Alberto GmbH (Painting)
3	Architecture: The timber house of the future	7	€ 3,000	Holzmar – Othmar Castlunger (Architecture)
4	Design: Wood instead of plastics	6,5	Non-monetary rewards	Tischlerei Lunger OHG (Carpentry)

Table 3 (cont.). OIS contest subjects and the corresponding sponsoring SMEs

#	Contest subject	Duration (weeks)	Prize money (in total)	Sponsoring SME (type of company)
5	Grocery: The reinvention of bacon	7	€ 1,750	Luis Moser GmbH (Butcher)
6	Interior design: The revolutionary children's bed	7	€ 3,000	Complojer Inneneinrichtung (Interior design)
7	Packaging and branding: Egg seeks new packaging	5	€ 800 + Non-monetary rewards	Buchhütterhof (Barnyard)
8	Design: Design the new Elektra outside LED luminaire	6	Non-monetary prizes, approx. worth € 1,350	Elektra GmbH (Electronics)
9	Conceptual: Identify fields of application of multi-functional drones	6	Non-monetary prizes, approx. worth € 2,500	SoLeon GmbH (Technology)
10	Packaging: Seeking for an innovative cookie packaging	5	Non-monetary prizes, approx. worth € 1,450	Bäckerei Moser KG (Bakery)

Each contest is set up on the platform website and includes a distinct sub-menu, including:

- ◆ a starting page containing an overview of all relevant information and links of contests (such as the contest timeline and statistics, the latest ideas, and members);
- ◆ a contest information page including the contest briefing, a page presenting the jury that evaluates and selects the winning contribution;
- ◆ a pool of submissions that allows exploration of all contributions submitted to the contest; and
- ◆ a pool of participants that lists the members who have already contributed any kind of input to the contest and links to their individual user profile.

Figure 3 (see Appendix) exemplarily shows the appearance of a submitted contribution to an OIS contest (in this case the winning packaging design of the second contest on the OIS platform). The screenshot of the submitted design depicts the embedded functionalities. Since the purpose of this subpage is the presentation of the submitted contribution, the main focus of the page is on the visual (a main image and attached images or other files) and the written description of the idea. Each idea is linked to the profile of the contributor, which allows exploring further information about the author and potentially further ideas by the contributor. Voting functionalities are provided to evaluate the idea. Besides a "like" button, the community is asked for its individual assessment of the ideas based on the criteria (1) functionality; (2) degree of innovativeness; (3) feasibility; and (4) its market attractiveness. Each is measured with a five-point scale.

A message board enables discussions of each idea. Hence, contest participants can advance their idea. Since ideas can be edited by the author of the idea, feedback and suggestions resulting from the discussion can be implemented. Sharing functionalities are embedded that foster the diffusion of the idea via email or different social media platforms like Facebook, Google+, LinkedIn, or Twitter, to facilitate the spread of the word about the idea to attract further potential participants or interested persons.

After each competition, the submitted ideas and designs are evaluated by a jury of experts from inside and outside the sponsoring company. The selected contributions are rewarded with monetary and/or non-monetary prizes. In this selection process of the jury, the community evaluation is taken into account and helps to handle the large amount of contributions. Further, the community evaluations provide insights on the popularity of contributions and thus might offer great market potential for the SMEs.

To better present the specific outcomes of an OIS contest, one particular contest will be subsequently described in more detail. The first contest on the platform, the "souvenirs made of wood" contest was launched in May 2012 and was open for submissions for eight weeks. The objective of the contest was to develop innovative ideas and creative designs for modern and high-quality souvenirs made of wood. The sponsor of the contest was the South Tyrolean carpentry Heinrich Hofer KG, which employs 30 people. Since the material wood was the main focus of the contest, a precondition for the submission was that the ideas include wood in any form, preferably sustainable and regional. A sales price of maximum €50 and a maximum weight of the final product that can be carried home by any person were further preconditions of the demanded product idea. The community was called to submit their ideas in the form of graphics, design, drawings, or photos.

In this first OIS contest, 298 ideas were submitted. 346 participants joined the contest and evaluated the ideas 1,672 times. The innovators seized the opportunity to discuss the ideas and contributed 691 comments. A jury consisting of five members, including the SMEs' CEO, selected three winning concepts, which were prototyped and produced and sold by the sponsoring carpentry.

3.3. The OIS marketplace. The OIS marketplace section of the platform is intended to serve as an interface for companies' and users' concerns, requests, questions, and offers regarding innovation topics. On the marketplace ideas, services, and

products can be searched and offered easily by both the private as well as by the company users. Hence, many different small innovation challenges can be set up by the community members on their own. For instance, questions regarding materials, experts, co-operation partners, or little technical problems and challenges can be posted. On the other hand, users' own skills, interests, possibilities for co-operations, or technologies can be presented. Filter, sortation, and search functionalities simplify the exploration of the offers and requests. The insertions can also be viewed and searched by visitors of the platform who are not logged in. Contributors of interesting offers or requests can be contacted. The OIS community management is responsible for the compliance of relevance concerning the insertions.

3.4. Platform numbers and statistics. In total the OIS platform was accessed by more than 750,000 visitors.¹ On average, the visitors spent more than six minutes on the website. Even though the platform is solely provided in German and Italian, visitors from 110 different nations were recorded. Nevertheless the most visitors originate from Italy, followed by Germany and Austria. Overall, Registered contributors come from 34 different nations. The more than 1,400 OIS profiles consist of mostly of private user profiles (about 90%) and company profiles (about 10%).

The OIS participants (private user profiles as well as company profiles) contributed more than 1,000 ideas and designs in the ten different innovation challenges. The OIS community contributed in total 1,900 comments on the ideas and thus facilitated an assurance and improvement of the idea quality since the idea submitters have the opportunity to adapt their ideas and to implement the received feedback. To assess the quality and innovativeness of the ideas, the community itself is asked to rate the submitted innovations. In total, the ideas received more than 7,300 votes from the community. The votes are composed of four different evaluation perspectives, each measured with a five-point scale.

Consisting of about 52% male and 48% female innovators, the community can be classified as nearly uniformly distributed. The most active participant with the highest number of ideas submitted more than 40 ideas in total. The most active member regarding the involvement in discussions on ideas (excluding the community managers) contributed more than 100 comments. Web 2.0 community functionalities that intend to facilitate the usability and to reduce the entry barriers were implemented and used. For instance, a Facebook connect button, which allows the direct

and fast registration with a Facebook account, was used by about 10% of the registered users.

4. Discussion

The deployment of a central open innovation platform by the intermediary constitutes several benefits for the SMEs and contributes to the adoption of open innovation among SMEs. Five aspects that entail the advantages of an open innovation intermediary were identified by studying the OIS case and will be presented in the following paragraphs: (1) central development of an open innovation platform, (2) recruiting and campaigning synergies, (3) skills in the management of an open innovation contest community, (4) implementation and realization of innovations, and (5) open innovation contest platform as marketing tool for SME's.

4.1. Central development of an open innovation platform. Several aspects and parameters need to be considered to set up expedient innovation contests (Ebner et al., 2009, p. 346; Füller, 2010, p. 116; Leimeister et al., 2009), such as timeline and timeframe, idea evaluation criteria, incentives, problem specification (adequate degree of elaborateness and task specificity of the problem), topic formulation, tool and media richness, interaction possibilities among participants, idea review process and composition of idea reviewers committee. SMEs usually do not possess the skills and resources to develop an individual and proprietary innovation platform. SMEs lack two important factors that are indispensable to set up and establish a virtual open innovation contest platform: resources (including time), and skills. The fixed costs of an innovation contest platform that is used by several SMEs for their individual purposes can be spread among the participating companies.

4.2. Recruiting and campaigning synergies. The establishment of a lively community with enough actively participating members is innately a tough and challenging task (Tarmizi et al., 2006). SMEs usually cannot rely on global reputation and brand communities in contrast to large and multinational enterprises (MNEs). Hence a major problem SMEs are facing when establishing an online innovation platform is the recruitment of a critical mass of participants. The problem can be solved by leveraging recruiting knowledge of external providers as in the case of OIS. Specialized innovation mediators have the capabilities and experience necessary to identify the appropriate target groups, how to reach and attract them.

4.3. Know how in the management of an open innovation contest community. SMEs might not possess the resources, capabilities, and skills to

¹ Until February 2014.

manage an external innovation community. However, the active and appropriate management of the community as well as the avoidance and management of conflicts within the community are crucial for the success of the contest (Gebauer et al., 2013). It is important to encourage collaboration and moderate discussions on ideas to foster the contributions of qualified feedback that might be implemented by the idea owners and thereby might increase the quality of the submissions (Lampel et al., 2012). To successfully activate the users, the managers and hosts of a contest need to understand the motives of participation (Leimeister et al., 2009). In the OIS case, these activities are performed by an experienced team of consultants and innovation experts.

4.4. Implementation and realization of innovations.

The implementation and realization of ideas that were generated through the open innovation contest community require specific capabilities, experiences, and expertise. The OIS case shows that an intermediary provider can also support SMEs in the “development & prototyping” and “production & market introduction” phases in the innovation management process (as previously illustrated in Figure 1). Consulting services or the providing of tools and facilities for prototyping, material investigation, computer simulations, and workshops, for instance, can give assistance to the participating SMEs.

4.5. Open innovation contest platform as marketing tool for SMEs. The platform enables SMEs to benefit in the areas of branding and marketing. An innovation contest helps to positively present the company to the public as innovative and customer oriented (Belz et al., 2009). The intense engagement of the participants with the company, its products, and the brand might enhance the awareness and the strength of the brand or even help to build it. Web 2.0 and sharing functionalities such as the Facebook button enable viral marketing and word-of-mouth spread the message about the company (Belz et al., 2009).

The virtual innovation contest can be used by the SMEs as a viral marketing tool as applied by large brands like Volkswagen, Apple, or Chevrolet (Esch et al., 2009). Altogether, innovation contests are adequate, innovative brand engagement instruments (Hutter et al., 2010).

References

1. Belz, F., Silvertant, S., Füller, J. & Pobisch, J. (2009). *Ideenwettbewerbe – Konsumenten involvieren, Ideen generieren, Lead User identifizieren*, Freising: Professur für Betriebswirtschaftslehre Brau- und Lebensmittelindustrie.
2. Bianchi, M., Campo dall’Orto, S., Frattini, F. & Vercesi, P. (2010). Enabling open innovation in small- and medium-sized enterprises: how to find alternative applications for your technologies, *R&D Management*, 40 (4), pp. 414-431.
3. Boudreau, K. & Lakhani, K.R. (2009). How to Manage Outside Innovation, *MIT Sloan Management Review*, 50 (4), pp. 69-76.

An additional benefit concerns human resources and talent recruitment. Virtual platforms such as innocentive.com are built to attract and engage talents to work on specific science and engineering projects: “These forms of Web based talent brokering platforms have been especially useful for small companies who are at a disadvantage when competing for talent with larger established companies” (Lewin & Zhong, 2013, p. 9). Innovation contests can be used to identify individuals with remarkable skills and talents, which is “particularly important in areas of innovation where rapid progress often depends on identifying and supporting talent” (Lampel et al., 2012, p. 74).

Conclusion

The presented case study of the OIS platform shows how an open innovation intermediary can be successfully installed to support SMEs in their attempts to integrate external knowledge into their innovation processes. It has been shown how an intermediary can close the SMEs’ gaps of expertise and knowledge regarding the implementation and operationalization of open innovation contest communities. Time and resources are the most important constraints of SMEs in open innovation. SME can continue to focus on their core competencies and daily business whilst the specialized intermediary (including the central and virtual innovation platform) manages the open innovation initiative. The presented concept is in line with the intermediated network concept by Lee et al. (2010) who proposed involving intermediaries and networks to facilitate the open innovation capability of SMEs.

Acknowledgments

This study is part of the project “Open Innovation South Tyrol – OIS 4-1b-162” funded by the Regional Operational Programme for the Autonomous Province of Bolzano 2007-13 – Programme under the Regional Competitiveness and Employment Objective, co-funded by the European Regional Development Fund (ERDF). Additional funding was provided by the Vice Rector for Research of the University of Innsbruck.

4. Boudreau, K. & Lakhani, K.R. (2013). Using the crowd as an innovation partner, *Harvard Business Review*, 91 (4), pp. 60-99.
5. 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), pp. 290-303.
6. Cefis, E. & Marsili, O. (2006). Survivor: The role of innovation in firms' survival, *Research Policy*, 35 (5), pp. 626-641.
7. Chesbrough, H.W., Vanhaverbeke, W. & West, J. (2006). *Open innovation: Researching a new paradigm*, Oxford: Oxford University Press.
8. Chiu, C.-M., Hsu, M.-H. & Wang, E.T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories, *Decision Support Systems*, 42 (3), pp. 1872-1888.
9. Chiu, H., Hsieh, Y., Kao, Y. & Lee, M. (2007). The Determinants of Email Receivers' Disseminating Behaviors on the Internet, *Journal of Advertising Research*, 47 (4), pp. 524-534.
10. Christensen, J.F., Olesen, M.H. & Kjær, J.S. (2005). The industrial dynamics of Open Innovation – Evidence from the transformation of consumer electronics, *Research Policy*, 34 (10), pp. 1533-1549.
11. Colombo, M.G., Laursen, K., Magnusson, M. & Rossi-Lamastra, C. (2012). Introduction: Small Business and Networked Innovation: Organizational and Managerial Challenges, *Journal of Small Business Management*, 50 (2), pp. 181-190.
12. Dahlander, L. & Wallin, M.W. (2006). A man on the inside: Unlocking communities as complementary assets: Special issue commemorating the 20th Anniversary of David Teece's article, "Profiting from Innovation", in *Research Policy*, *Research Policy*, 35 (8), pp. 1243-1259.
13. Di Gangi, P.M. & Wasko, M. (2009). Steal my idea! Organizational adoption of user innovations from a user innovation community: A case study of Dell IdeaStorm, *Decision Support Systems*, 48 (1), pp. 303-312.
14. Ebner, W., Leimeister, J.M. & Krömer, H. (2009). Community engineering for innovations: the ideas competition as a method to nurture a virtual community for innovations, *R&D Management*, 39 (4), pp. 342-356.
15. Esch, F.-R., Krieger, K. & Stenger, D. (2009). Virale Markenkommunikation – Wirksame Interaktion statt "Trial and Error", *Marketing Review St. Gallen*, 26 (1), pp. 11-17.
16. European Commission (2012). *SME Performance Review*, Retrieved May 25, 2013, from http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/index_en.htm#h2-4
17. Fichter, K. (2009). Innovation communities: the role of networks of promoters in Open Innovation, *R&D Management*, 39 (4), pp. 357-371.
18. Freel, M.S. (2003). Sectoral patterns of small firm innovation, networking and proximity, *Research Policy*, 32 (5), pp. 751-770.
19. Füller, J. (2010). Refining Virtual Co-Creation from a Consumer Perspective, *California Management Review*, 52 (2), pp. 98-122.
20. Gassmann, O. & Enkel, E. (2006). Open Innovation / Die Öffnung des Innovationsprozesses erhöht das Innovationspotenzial, *Zeitschrift Führung und Organisation*, 75 (3), pp. 132-138.
21. Gebauer, J., Füller, J. & Pezzeri, R. (2013). The dark and the bright side of co-creation: Triggers of member behavior in online innovation communities, *Advancing Research Methods in Marketing*, 66 (9), pp. 1516-1527.
22. Golovko, E. & Valentini, G. (2011). Exploring the complementarity between innovation and export for SMEs' growth, *Journal of International Business Studies*, 42 (3), pp. 362-380.
23. Gregg, D. (2010). Designing for collective intelligence, *Communications of the ACM*, 53 (4), pp. 134-138.
24. Hutter, K., Hautz, J., Füller, J., Matzler, K. & Mayr, A. (2010). Ideenwettbewerbe als innovatives Markenbindungsinstrument, *Marketing Review St. Gallen*, 27 (4), pp. 26-35.
25. 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), pp. 3-21.
26. Hutter, K., Hautz, J., Repke, K. & Matzler, K. (2013). Open innovation in small and micro enterprises, *Problems and Perspectives in Management*, 11 (1), pp. 12-22.
27. Kaufmann, A. & Tödting, F. (2002). How effective is innovation support for SMEs? An analysis of the region of Upper Austria, *Technovation*, 22 (3), pp. 147-159.
28. Kirschbaum, R. (2005). Open Innovation in Practice, *Research-Technology Management*, 48 (4), pp. 24-28.
29. Kratzer, J. & Lettl, C. (2008). A Social Network Perspective of Lead Users and Creativity: An Empirical Study among Children, *Creativity and Innovation Management*, 17 (1), pp. 26-36.
30. Lampel, J., Jha, P.P. & Bhalla, A. (2012). Test-Driving the Future: How Design Competitions are Changing Innovation, *Academy of Management Perspectives*, 26 (2), pp. 71-85.
31. Lee, S., Park, G., Yoon, B. & Park, J. (2010). Open innovation in SMEs – An intermediated network model, *Research Policy*, 39 (2), pp. 290-300.
32. Leimeister, J.M., Huber, M., Bretschneider, U. & Krömer, H. (2009). Leveraging Crowdsourcing: Activation-Supporting Components for IT-Based Ideas Competition, *Journal of Management Information Systems*, 26 (1), pp. 197-224.

33. Lewin, A.Y. & Zhong, X. (2013). The Evolving Diaspora of Talent: A Perspective on Trends and Implications for Sourcing Science and Engineering Work, *Diaspora Investment and Entrepreneurship: The Role of People, their Movements, and Capital in the International Economy*, 19 (1), pp. 6-13.
34. LVH (2013). *Der Open- Innovation Leitfaden für Klein- und Mittelbetriebe in South Tyrol – Ein Praxishandbuch*, Bozen.
35. McKinsey (2008). Building the Web 2.0 Enterprise, *The McKinsey Quarterly Online Journal*, July.
36. Morgan, J. & Wang, R. (2010). Tournaments for Ideas, *California Management Review*, 52 (2), pp. 77-97.
37. OECD (2008). *Open Innovation in Global Networks*, Organization for Economic Co-operation and Development.
38. Parida, V., Westerberg, M. & Frishammar, J. (2012). Inbound Open Innovation Activities in High-Tech SMEs: The Impact on Innovation Performance, *Journal of Small Business Management*, 50 (2), pp. 283-309.
39. Perry-Smith, J.E. & Shalley, C.E. (2003). The social side of creativity: a static and dynamic social network perspective, *Academy of Management Review*, 28 (1), pp. 89-106.
40. Petersen, B., Welch, L.S. & Liesch, P.W. (2002). The Internet and foreign market expansion by firms, *MIR: Management International Review*, 42 (2), pp. 207-221.
41. Taggar, S. (2002). Individual creativity and group ability to utilize individual creative resources: a multilevel model, *Academy of Management Journal*, 45 (2), pp. 315-330.
42. Tarmizi, H., Vreede, G. de & Zigurs, I. (2006). Identifying Challenges for Facilitation in Communities of Practice, In *System Sciences, 2006. HICSS '06. Proceedings of the 39th Annual Hawaii International Conference on: System Sciences*, pp. 26-36.
43. Terwiesch, C. & Yi Xu (2008). Innovation Contests, Open Innovation, and Multiagent Problem Solving, *Management Science*, 54 (9), pp. 1529-1543.
44. van de Vrande, V., Jong, J.P.J. de, Vanhaverbeke, W. & Rochemont, M. de (2009). Open innovation in SMEs: Trends, motives and management challenges, *Technovation*, 29 (6-7), pp. 423-437.
45. Vossen, R.W. (1998). Relative Strengths and Weaknesses of Small Firms in Innovation, *International Small Business Journal*, 16 (3), pp. 88-94.
46. West, J. & Lakhani, K.R. (2008). Getting Clear About Communities in Open Innovation, *Industry & Innovation*, 15 (2), pp. 223-231.

Appendix

OPEN INNOVATION
Sudtiroi - Alto Adige

START **WETTBEWERBE** BEITRÄGE MARKTPLATZ MITGLIEDER ÜBER OIS **JETZT MITMACHEN!**

Wolfgang | Mein Profil | Ausloggen | Versione Italiana

POWERED BY **LVH-APA**

HOME > WETTBEWERBE > MOCEM'S NEUES DESIGN > C > MOCEM PACKAGING

MoCem's neues Design

START ÜBER DEN WETTBEWERB JURY GEWINNER **BEITRÄGE** TEILNEHMER

MoCem Packaging

Alles in einer Box

Erster Platz beim Wettbewerb: **MOCEM'S NEUES DESIGN**

EINE IDEE VON
C
1 andere Ideen

MEHR BILDER

Das Produkt Mocem von der Marke Moling befindet sich in einer 20 x 20 x 40 cm großen Kartonbox. Die Größe ist so gewählt, dass die Boxen auf einer Europalette ideal Platz finden und so optimal versendet werden können. Eine Box beinhaltet genug Material für 3 Quadratmeter und überschreitet die 25 Kg Grenze nicht. Im Inneren befinden sich weitere Boxen, die die einzelnen Substanzen beinhalten. Je nach Menge sind sie verschieden groß.

Design:
Die Grundfläche der Box bildet die Struktur und Farbe eines Mocem Produktes ab. Die CI-Farben werden in einem "Band" aufgegriffen, das sich um die Box legt. Dieses setzt auch den Produktnamen in Szene. Das Logo ist wie ein Siegel an den Kanten angebracht. An der Seite wird die Anwendungsanleitung mit Piktogrammen gezeigt.

Arbeitsprozess:
Der Arbeitsprozess wird an der Seite der Box in 4 Schritten erklärt. Jeder Schritt ist nummeriert, zeigt was zu tun ist und welche Substanzen verwendet werden müssen. Auf den einzelnen Boxen im inneren finden sich die Nummerierungen wieder. So weiß man sofort welche Substanzen in welchem Arbeitsschritt benötigt werden.

Gefällt mir:
11 Mitgliedern gefällt dies

BEWERTUNG

Kreativität: ●●●●● Durchschnitt: ●●●●● (9)

Funktionalität: ●●●●●

Innovationsgrad: ●●●●●

Umsetzbarkeit: ●●●●●

DISKUSSIONSBEITRÄGE

etwas schreiben **Senden**

Karina Repke
Auch von meiner Seite in großes Kompliment! Ein sehr schlichtes und absolut tolles Design :)
Date: 04.10.2012 23:54

Daniele Zandonella
Great design, I really like!
Date: 02.10.2012 09:55

Nicolò De Santi
I don't understand what's written, but from what I see from the images I really love this solution, a really well thought package!
Date: 30.09.2012 20:27

Fig. 3. Exemplary OIS contribution: winning packaging design MoCem-Contest