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Stiff Structures for Loose Folks – A Platform for an Open Innovation Community

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Abstract

The increasing opening of the innovation process fairly neglected an important group of potential innovators so far: the employees of a company. Their integration offers promising potentials, but also requires an adequate IT support. A virtual innovation community seems to be an adequate construct to funnel the employees' creativity and knowledge into innovation management, but per se points out the need for structural support. For the implementation we used a social networking based innovation platform prototype, which aims to allow for the integration of all employees into the innovation process. Here, two options are shown to provide transparency and orientation within the innovation platform to the users as well as controlling mechanism to the innovation managers: First, the fundamental innovation structure, which allows for the flexible treatment of elements in the data model and their integrated display at the front end. Second, a semi-structured innovation process is shown, which allows for management and flexible customization.

Keywords: Innovation Network, Innovation Community, Innovation Process, Open Innovation.

1 INTRODUCTION

Over the last years, an opening of the innovation process, which was originally and predominantly restricted to the research and development (R&D) department, took place within companies. In this connection, more and more organization-spanning innovation activities are undertaken, increasingly integrating customers and external partners into a distributed and interactive value creation (Reichwald and Piller 2006). This phenomenon can be described by terms like "Open Innovation" (Chesbrough 2003) or "Democratizing Innovation" (von Hippel 2005). Here, numerous, multidisciplinary and distributed actors become involved, generating ideas to match their specific or personal demands (e.g. lead users) or helping to transfer them into commercially valuable innovations.

However, innovation communities might suffer from a lack of transparency, structure and management, if they aim for the development of disruptive innovations, which are characterized by "path independent, emergent probe and learn" conditions and "no clear rules – these emerge over time" (Phillips, Noke, Bessant and Lamming 2006). This issue is even fortified by the focus on the critical fuzzy front end of innovations (Khurana and Rosenthal 1997). So far, mostly not even the employees of a company are fully integrated into the innovation process. Although they hold significant potential on a company's innovativeness, their requirements are hardly met by current idea management systems (Bansemir and Neyer 2009). Against this background, we feel a "demand pull" for concepts and approaches to support and manage all employees of a company as innovators and contributors respectively.

On the other hand, we watch the popularity of Web 2.0 concepts and applications in general as well as social network approaches, like Facebook or XING, in particular. Based on the high acceptance and usage of social networks in the private environment, we assume promising potential for the professional usage of community based cooperation structures (Amberg, Reinhardt and Kittler 2009). For this reason, a "socio-technological push" is induced by concepts and systems, which might facilitate the harnessing of social networking for the innovation oriented collaboration of communities.

Bringing these both forces together, we aim for a social network based information technology (IT) system to support the open innovation management within companies. Using a design science approach (Hevner, March, Park and Ra 2004), the paper at hand responds to the following research question: *How can open innovation communities within companies be supported with adequate structures and processes on a social network-based platform?* To answer this question, the paper is structured as follows: The next chapter positions our research in the light of prior literature. Then we describe our methodological proceeding. Afterwards we present our results in terms of a prototypically implemented concept. Finally, we discuss our findings and indicate occasions for future work.

2 THEORETICAL BACKGROUND

2.1 Virtual Collaboration Approaches

Traditionally, innovation management was usually rooted within a specific organizational R&D department, where dedicated specialists developed innovations in a more or less closed environment (Chandler 1990). Externals mostly came from the same domain of knowledge in the form of contractual (scientific) partners, like universities, laboratories or R&D firms. In both cases, the number of actors was quite limited and manageable, why a team-based organization seemed adequate. In case of spatial separation, teams are usually implemented as virtual teams (Hinds and Mortensen 2002). Typically virtual teams are organized hierarchically, encompass a (pre-)defined number of members (usually between 4 and 8) and rely upon strong and formal ties in order to achieve a common goal (Martins, Gilsona, and Maynarda 2004, Powell, Piccoli and Blake 2004, Amberg et al. 2009). These teams share data, information, and knowledge via computational resources and

persistent databases in order to support organizational concerns (McQuay 2004). The goal alignment, task management as well as processes and IT-support for virtual teams are widely known (Martins et al. 2004).

Along with the opening of the innovation process to the outside of the R&D domain, numerous people with different backgrounds become involved into the creation and development of innovations (von Hippel 2005; Reichwald and Piller 2006). These potential innovators and contributors may be found among external partners and customers or – in our scenario – among the collective of all employees within the company. Prior literature indicates the necessity of the integration of multidisciplinary perspectives as well as an effective collaboration between all actors as important factors, in order to make interactive innovation management work (Bansemir and Neyer 2009). Contrary to classical R&D structures, actors in the open innovation paradigm are organized more democratically across boundaries (Stevens, Schwartz and Meurer 2009). Hence, we think of an innovation community based cooperation approach to be adequate. A community can be understood as "a voluntary association of people who are not directly dependent on each other for success" (Carotenuto et al. 1999). "A virtual community consist of people who interact together socially on a technical platform to deal with a common interest, problem or task" (Leimeister, Sidiras and Krcmar 2004). Characterizing functionalities used by virtual community members are information sharing, social networking (Sumet, Kim and Zheng 2006), communication and relationship formation among participating members (Lee, Vogel and Limayem 2003). A virtual innovation community shall allow the individuals for joining or leaving the innovation process situatively, depending on their personal preferences, at any stage. Overall the usage of such an approach seems especially valuable during the early stages of the innovation process (Ebner, Bretschneider, Leimeister and Krcmar 2008). The users' acceptance of a virtual community depends mainly on factors like pleasure, sense of belongings and social identity as well as cognitive factors like perceived usefulness and ease of use (Li and Lai 2008).

2.2 Open Innovation Management System

For the above reasons, it is a main task of the underlying software system to support interactivity and collaboration within an innovation community. According to O'Reilly (2006) Web 2.0 encompasses a set of applications that harness network effects by facilitating collaborative and participative computing. "The emergence of recent web 2.0 technologies has promoted a grass roots collaboration effort that has filtered into many organizations" (Meservy, Helquist, Deokar and Kruse 2009). By shifting the focus to the user, applications like social networks, wikis, and blogs have the potential to allow for professional and personal rich peer-to-peer interactions among users, the collaborative value creation across business partners and the creation of dynamic new services and business models (Nath, Singh and Iyer 2009). The goal is to activate users to contribute to the innovation development, meeting their individual needs like indirect and direct interpersonal interaction, profiling, relationship management, documentation and categorising (Koch and Richter 2007).

Social Networking Platforms seem especially promising, as they provide the opportunity to create a profile, where the user can store personal data, like contact data, interests or a photo. Other users can view this profile and link to the other person. Furthermore, users are enabled to write personal messages to each other or share photos and documents. Often, the social networks are only the foundation for software which provides additional value. They allow for informal communication, like unstructured writing, which seems promising for the development phases. Further, individual activities and contributions can be made transparent as well as structures of user networks. In our approach we apply a social networking system, which we extend by the implementation of a semi-structured innovation process and management mechanisms, individual profile-pages for innovation concepts and a virtual white board, which supports a set of creativity techniques. This shall support the employees of a company in their innovation centred collaboration.

2.3 Innovation Ontology

An approach to bring structure into IT systems is the usage of so called ontologies. According to (Chandrasekaran, Josephson and Benjamins 1999) an "ontology is a representation vocabulary, often specialized to some domain or subject matter. More precisely, it is not the vocabulary as such that qualifies as an ontology, but the conceptualizations that the terms in the vocabulary are intended to capture." An "ontological analysis clarifies the structure of knowledge. Given a domain, its ontology forms the heart of any system of knowledge representation for that domain. [...] Second, ontologies enable knowledge sharing. [...] Shared ontologies can thus form the basis for domain-specific knowledge-representation languages. [...] This kind of sharing vastly increases the potential for knowledge reuse" (Chandrasekaran et al. 1999). To determine and connect the main concepts related with innovations in an IT system, Riedl, May, Finzen, Stathel, Leidig, Kaufman, Belecheanu and Krcmar (2009) introduce an ontological approach, which is illustrated in Figure 1. It has been derived from a study of several productively used idea portals and innovation platforms, such as Starbucks Idea Force or Dell Idea Storm. This ontology categorizes documents, ideas and comments as generic innovation resources which (optionally) have meta-attributes like their origin, a rating, a person (the creator), tags or a conceptual description.

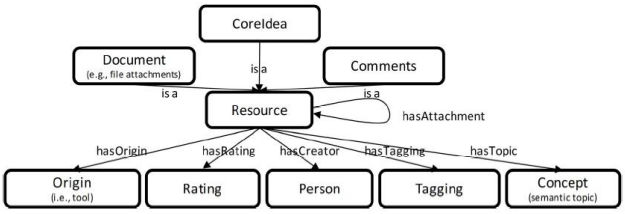

Figure 1. Innovation Ontology (Riedl et al. 2009)

However, a *CoreIdea* is defined as most central entity of each innovation and is determined by three layers of textual descriptions (see Figure 2). In addition to its attributes, it also is related to several objects, such as a *Status* (to track the progression within the idea development), an *IdeaRealisation* (to allow incremental innovation and to preserve the link to a resulting realization) and to a place for discussion and collaboration, most likely in the form of a *Community Forum.*

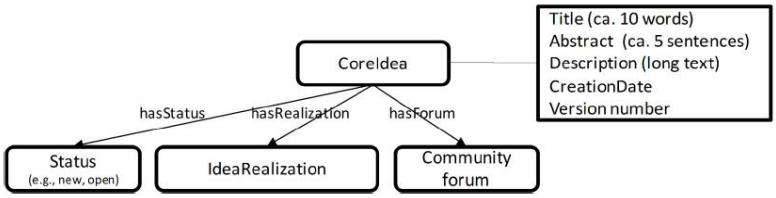

Figure 2. The CoreIdea element of the innovation ontology (Riedl et al. 2009)

The study also emphasizes the topic-oriented aggregation of the ontology elements (grouping) and highlights the main goal of using the ontology as to allow for exchanging knowledge concerning ideas and innovations across system boundaries as well as to facilitate reasoning based on the ideas collected. In particular, the study sees benefits of using this ontological approach of modelling innovations in the following areas (Riedl et al. 2009):

1. Clustering ideas by similarity or relatedness
2. Analyzing contributors and contributions
3. Integrating idea repositories for content management
4. Information integration and data exchange across tools and platforms
5. Attaching to a social network and facilitating collaborative tools

As this ontology identifies the *CoreIdea* with the innovation itself, we decided to go one step further, and to especially integrate elements of the creative process into our concept. Therefore in the wording

used in later chapters, the term *idea* will be related to idea-fragments which are associated to a *CoreIdea* (which is in our words called "innovation"). The step to emphasize the creative contributions within innovations is motivated by Amabile, Conto and Coon (1996, p. 1154-1155): "All innovation begins with creative ideas […] We define innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; the first is necessary but not sufficient condition for the second."

3 RESEARCH METHODOLOGY

Due to our primary interest to rather contribute to solving existing organizational problems through innovative IT artifacts, than to (only) explain existing phenomena (behavioural approach), we have chosen to apply a design science approach. Design science aims "to extend the boundaries of human and organizational capabilities by creating new and innovative artifacts" (Hevner et al. 2004, p.75). The goal is to match a concrete business problem with a purposeful IT artifact – in this case a productively usable prototype for the described problem domain of open innovation within companies – and "to bridge practice to theory rather than theory to practice" (Holmström and Ketokivi 2009, p.65). To thereby ensure a scientific value added, Hevner et al. (2004) proposed seven guidelines, which served us as an orientation for our work:

Most important, we were able to produce a *viable IT artifact* – an instantiation of an open innovation platform. Thereby we aim to support the alignment or even integration of all of employees with and into respectively an open innovation IT system, addressing a *relevant business problem*. Accompanying *prototype evaluations* and feedback loops with practitioners and students as well as analyzed system data (e.g. log files, database entries) indicate the utility of the developed artifact and reveal potential for further improvements. By describing (conceptually) and demonstrating (though implementation) the concept and usefulness of the prototype, this paper aims to *contribute to the research* fields of (open) innovation management and social networking services. To thereby ensure an adequate *research rigor* the construction and the evaluation rely upon transparent methods. Selected techniques and methods which were applied accompanying to the development are described below in more detail. The *search process* for an adequate design was characterized by iterative loops for the elicitation, refinement and validation of the requirements as well as the prototypical instantiation. With the *communication of our research*, we aim to address both, management- (predominantly natural language) as well as technology-oriented (more formal models; instantiation) audiences.

The developed and described IT system emerged from a university-spanning common research project, which aims at providing a holistic concept to enable and support open innovation within companies. This paper deals especially with the IT-based process support, which proved to be highly relevant to provide transparency for the management and support the innovators' workflows.

Activities and goals to construct and evaluate the prototypical instantiation within a business environment are described in Table 1. In this context, the reference "company" or "employees" refers to an IT service company with approximately 5000 employees, which is also participating in the research project and where we could work with a group of pilot users.

Activity (Number of application)	**Goals**
Literature based analysis of the problem domain	• Build an initial understanding of problem domain • Analyze state of the art of promising concepts, applications and systems
In-depth interviews with employees from different hierarchical levels (20)	• Gather, refine and validate our requirements • Understand personal expectations and motivation
Project meetings within the whole project team and with (industry-	• Refine understanding of business domain and elicit specific requirements • Iterative concretization • Present and discuss potential solutions (concepts, prototype, etc.)

spanning) company partners (4)	• Establish common understanding; central guidelines for further development; project management (milestones, further tasks, etc.)
Internal research and concept workshops within the project team (4)	• Discuss and enhance concepts and prototype (technical and business perspectives) • Match business needs with methodological concepts and their implementation
Pilot instantiation of the platform implemented to be used by the company (since May 2009)	• IT based support for approximately 30 multidisciplinary employees • See how prototype supports the development of innovative solutions for a new business field
Accompanying tool workshops (3)	• Introduce the platform and mitigate starting barriers • Train the users on the software • Collect feedback on the overall usability and on concrete functionalities
(predominantly virtual) Internal workshops and meetings	• Test and evaluate the logic and functionality of the prototype • Discover and solve technical issues • Develop new concepts and solutions
Collect and analyze workshop materials, meeting protocols, log files, database entries, etc.	• Increase the reliability of findings through additional material and data • Discover improvement potentials and analyze user behaviour

Table 1. Evaluation activities in business context

The activities describe above helped to iteratively refine and enhance the prototype.

4 OPEN INNOVATION NETWORK

4.1 Elgg Framework

After analyzing several systems and case-studies in the field of Social Networking Systems (e.g. Anderson 2005, Bryant 2006), we decided to use the PHP open source web-based social networking framework Elgg (Elgg 2009) as core system for the application's prototype. It proved to be a stable and productively usable framework, with a structure flexible enough to adapt it to our requirements.

Following our design science approach we selected, modified and enhanced components of Elgg's data model and basic functionalities. This allowed us to experiment with different settings and to quickly implement new concepts and functionalities acquired from interviews and workshops.

We found two major elements being highly relevant to bring structure to an open innovation community – first, the structure of the underlying data-model and its front-end representation as well as second, the implemented innovation process. These elements are described in the following.

4.2 Innovation Concept Structure

From an economic perspective, an innovation describes the successful commercialization of an initial *idea*. Therefore, innovations require an effective and efficient implementation process, which allows this *idea* to grow into an *innovation concept*, which finally gets implemented as innovation. During this process *problems* often arise, which have to be solved by appropriate *ideas*. Along the implementation process innovation concepts are enriched with ideas and problems, *content*, which is created and modified by people and the related *innovation community* respectively who are working on the concept. Further, this process requires *communication* and integrates *files and documents* from different sources.

For the implementation of a supporting tool, it was essential to map this structure onto an implementation concept. By taking the ontology introduced in chapter 2.3 into account, the concept shown in *Figure* 3 was developed. The shown elements denote the basic entities of the technical innovation concept.

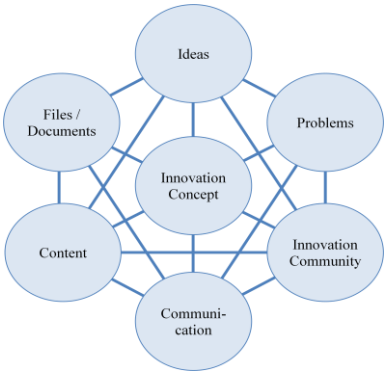

Figure 3. Innovation Concept

In the database model, an *innovation concept* forms the comprising structure and encompasses all other entities. At the user interface (front-end) of our social networking based system, an innovation concept is represented by an "innovation profile page" (see Figure 4), where all information, like ideas, problems, innovation community members, related communication, added (textual) content as well as files and documents is stored. This provides the possibility for all members of the innovation community to access and modify it (of course, different levels of security can be managed).

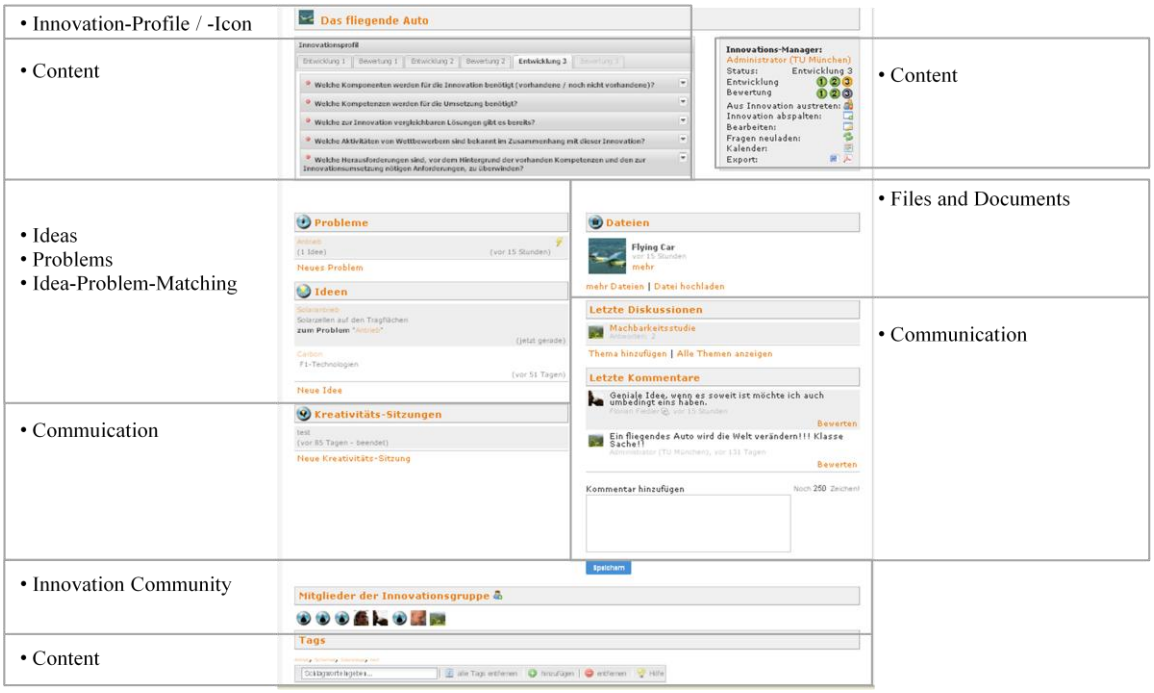

Figure 4. Innovation Concept

Problems frequently arise during the development and implementation process of innovations. Hence, they are associated within the system as sub-problems of an innovation concept. They have to be solved to meet the requirements and proceed in the implementation process. Problems can be solved e.g. via and matched with ideas within the profile page.

For this reason, the entity *ideas* has been modelled to respond to an existing problem. Furthermore, ideas can represent a spontaneous, bright thought, which might for example fix a problem from a similar innovation or boost this innovation concept.

An innovation concept also contains an *innovation community*, a group of people, who generate content and promote the innovation within the organization. Through networking and collaborating, the content enhancements and the current state of the concept can be reviewed by all other innovators.

Almost all innovation-centred *communication* is stored within the innovation concept (innovation profile page) for two major reasons: First, the innovation community is supported with its situation dependent synchronous and asynchronous communication needs, allowing for the exchange of spontaneous thoughts (e.g. chat within the virtual whiteboard, comments within the innovation profile) as well as for the sound discussion of perspectives (e.g. forum, private messaging service). Second, new supervening participants are enabled to quickly step into the innovation concept and make substantiated, valuable contributions.

Content is the (textual) information of an innovation concept and the medium for communication and collaboration. It provides the opportunity to see opinions from other users, promote the own conclusions and discuss about differences. On a broad understanding, information is the medium which allows the enhancement of innovations. Hence, the innovation concept contains phase-specific (see chapter 4.3) questions, which help to break down and refine the initial idea in several steps.

To enable the integration as well as the sharing of file based information within the innovation community, *files and documents* of almost all types may be integrated. Pod- and Videocasts are handled specifically, as they can be integrated directly playable into the profile page to illustrate the innovation concept or specific ideas. All other files are stored as a list, using a type-icon-based preview or display (in case of pictures).

As described in chapter 4.1, the open source social networking-framework Elgg has been chosen as underlying system. Because of its open and standardized structure, we were able to derive and transform the defined entities and relationships in a very accurate way. We implemented representations for ideas and problems to the system, as initially there was no already existing structure which could have been used for innovation focused networking. For this reason, we built these structures by implementing plug-ins to arrange ideas and problems in the context of innovation groups. There was no need to create a separate structure for the last two elements in our innovation concept – community and information. It was rather necessary to control the behaviour of these entities. We defined constraints and rights, which control features and functions for specific roles. The way how and to whom information is published and who can edit or read information exerts a direct influence on the information flow. Most domains of information flow were treated with user rules, roles and management.

With this structure, an actively supported workflow for generating elaborated content in innovations is possible.

4.3 Innovation Process

The predefined structure of Elgg's group concept already supported displaying innovations as thematically oriented groups. Hence, we remodelled and extended existing features like the file upload and the role concept in order to achieve especially adopted innovation communities.

In this context, we distinguish three elementary roles (and related access rights) for the innovation management system: First, the *innovator*, which is the basic role connected with a system account. It allows viewing, joining and contributing to innovation concepts (and related communities). A user who sets up a new innovation concept (see below) becomes its *innovation manager*. Thereby he gets special rights to edit the community management settings (e.g. public or private visible; free access or via invitation of existing members). Finally, the *system administrator* role encompasses additionally the complete application management settings.

The innovation concept described above allows for three possible entry points into the innovation process, as shown in Figure 5. First, users can *start a creativity session* on a virtual whiteboard to create initially new ideas; second, users can *set up an innovation contest* and thereby search for suggestions and concepts from the community for a self-defined topic; third, users can *set up an innovation concept* to enhance an already existing idea which requires further collaboration and creative solution approaches.

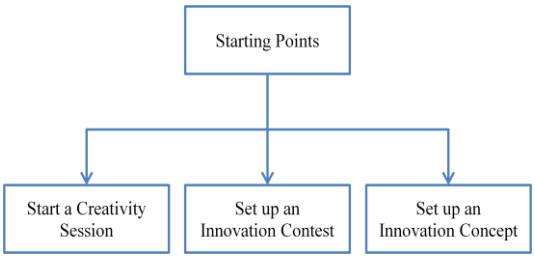

Figure 5. Starting Points

In a *creativity session*, ideas can be generated or enhanced with the synchronous help of other innovators choosing one from a set creativity techniques (Brainstorming, Assumption Reversal, Brainwriting 6-3-5, Morphological Analysis, Osborn checklist, Random Stimulus technique). Afterwards, a structured idea can be transformed into a new innovation concept on the platform.

In case of an urgent problem, to which no adequate solution is found yet or having defined a search field for new innovations (e.g. "ecological innovations for our IT"), it might be helpful to *set up an innovation contest*. Once stored in the platform, innovators are able to discuss the problem and suggest potential solutions. Within each innovation concept, (directly related/ minor) problems can be stored so that it is possible to transform an idea – problem constellation into an innovation.

The last and most concrete entry-point is to directly *set up an innovation concept***,** if the innovation idea is already shaped and ready for further development.

To support the growth of an idea into an innovation by enriching it with information and allow for transparency along the way, the *innovation process* (see Figure 6) is divided into different phases.

At the beginning of the innovation process, a *creativity phase* is located, which provides the opportunity to generate new and innovative ideas based on commonly applied creativity techniques on a shared virtual whiteboard (Forster 2010).

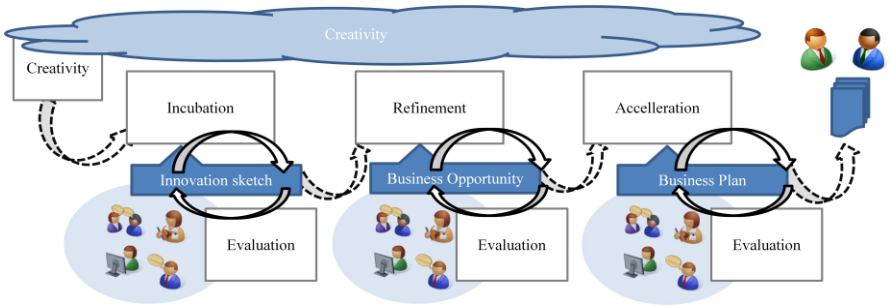

Figure 6. Innovation Process

Afterwards, the *development* picks up the results of the creativity phase and funnels them into a flexible, semi-structured innovation process. Basically, three development phases are designed (Cooper and Kleinschmidt 1990). Here, the innovation concept is accumulated with user generated content, based on questions that help to concretize the idea. Of course, all questions are open to be answered by each member of the innovation group to allow for an integration of knowledge as well as (different) perspectives. During all development phases it is also possible to split innovation concepts (e.g. if they contain valuable but too different ideas to be further processed integrated) or to merge single ideas together (e.g. if single ideas address almost the same major topic and shall be developed further in one innovation concept).

Within the first development phase, called *incubation phase*, a sketch of the innovation shall be acquired. Therefore, questions are to be answered collaboratively by the innovation group, which deal with the following topics related to the underlying innovation concept: its origin (e.g. where and how was the idea born); a short and concise description (max. three sentences); the people who would profit from the innovation and in which way; the major advantages related to the implementation.

This body forms a first draft of the innovation, brought to a predefined structure and may be enriched with further content.

The achievement of this goal is measured in a following evaluation phase. If the predefined threshold is reached, the innovation will then be transferred to the next development phase. In an iterative way, each development phase will be followed by an *evaluation*. A certain period of time can be set after which the innovation concept is pushed from a development to an evaluation phase (besides manual switching is also possible, if an innovation concept requires more or less time until its community feels confident for an evaluation). The implemented prototype traverses this iterative process three times (Figure 6). Each evaluation phase evaluates the previous generated results, using methods like collaborative scoring or prediction markets (Schwarz 2010). At the end of each evaluation phase, the innovation has to pass a threshold in order to reach the next development phase. In case of failing, the innovation will be relocated in the previous development phase to reconsider the results.

The next development phase, the *refinement***,** shall specify the information and refine the content. Business opportunities are to be detected and discussed. The results of this phase shall be well argued business opportunities, examined for risks and feasibilities. Hence, during this phase the development aims to gather information regarding the following areas: necessary components and competences for a successful realisation (existent and not yet existing ones); comparable solutions on the market; activities of and how to stand out from competitors. Similar to the evaluation, which took place after the first development phase, after the refinement phase another evaluation is necessary.

Finally, the *acceleration* aims to complete the conceptual work, addressing the following aspects: Major risks and challenges with regard to the realization of the innovation; estimations for cost-benefit-relations; affected stakeholders; expected resources and responsibilities during the implementation. The requested result of this step is the generation of a mini business plan. We experienced during the pilot usage of the tool that the conceptual output of the innovation process shall be presented in a standardised format and layout, to serve for example as a decision memo for the top management. Here, we implemented an export routine, which generates Word and PDF format documents and encompasses all key data of the innovation concept (e.g. integrated content of all contributors to the question based development; list of all participants including contact information).

During the different stages, only the required, process-supporting tools are provided by the system. Furthermore, the data shown to the users is adjusted by the current phase status. Key features, which are necessary at any time in the innovation process, like the innovation profile, starting page widgets or innovation data, are available within every phase. Hence, for example content creation is only available in development phases (read only access for this content during the evaluation to ensure a consistent evaluation basis) and the evaluation features are only provided in evaluation phases. This seemed necessary to guide the innovators through the process. Other features like the innovation profile, which contains all innovation-specific content or tools for communication and collaboration between users, are provided during the whole process.

5 DISCUSSION AND IMPLICATIONS

This approach shows how open innovation management within companies and non-profit organizations (e.g. universities) can profit from supporting the primary entities of innovations and the underlying innovation process, using customized Web 2.0 social networking. Building on prior literature as well as concrete requirements from practice, we employed a design science approach to develop a prototype of an open innovation network platform. Addressing this prior gap in research, our research leads to theoretical and practical implications when opening and supporting the company wide innovation management with social network based applications:

Innovation management on a social networking platform requires additional structural elements and control mechanisms. Here, onthologies seem especially useful for the conceptualization of the fundamental database scheme.

The implementation of an innovation process allows for the realization of management mechanisms, which shall support the alignment and goal orientation of the innovators. In this context, for example

time limits were realized to automatically push innovation concepts towards a group-evaluation after a certain development period. Innovation contests can be set up, to focus the search process on concrete and recent issues.

The above implications for practice must be viewed in light of some limitations of the paper. First, the paper bases on one in depth study, with a company from the IT service sector. Seeking to generalize our findings, the developed software platform should be instantiated into further company environments. Creating concrete use cases and putting it to the test in another industry shall help to clarify, if the implemented process is flexible enough, to work in different company contexts.

Next, it will be interesting to see, how intuitively the suggested process structures can be adopted by huger numbers of users, which additionally do not share a concrete context. So far, we were able to gain experiences in different scenarios with a limited number of users (mostly 30-40), who share one connecting factor in the sense of a common context (e.g. employees from the same company; students within the university). Here, we assume that, although the users did not know each other before, they were more likely to adopt common structures than those who do not share such a connecting factor.

Respecting these limitations, our prototypically validated concept for the social network based innovation process support contributes to the company internal creation and development of open innovations. It shapes an IT supported collaborative environment, in which ideas of multidisciplinary and geographically distributed actors can incubate and grow into innovation concepts. Simultaneously, it fosters transparency with regard to the innovation-centred integration of people and information flows. Thus our work addresses both companies and researchers, as it enables an interactive and open innovation management, offering an integrative and flexible web-based platform.

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