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STEPPING OUT OF THE ZONE OF TERRITORIAL PROTECTION ENABLES OPEN INNOVATION COLLABORATION

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ABSTRACT

This paper explores the challenges organizations face in practice as they engage in open innovation projects with multiple partners. Open innovation as a way to increase competitiveness has become popular among many organizations, but its success is not guaranteed. It appears to sometimes be challenging to reap the benefits of bringing multiple, diverse partners together, as it is difficult to turn the differences into something constructive. Using empirical findings from a project in the field of vehicle- and traffic safety, this paper contributes with a proposal for a refined methodology, iKCP, to enable and facilitate open innovation collaboration. Inspiration has been sought in methods used for managing innovative design processes. The strength of the iKCP methodology is that it supports, encourages and even forces the participants to leave the zone of territorial protection and be at ease in the zone of expansive exploration.

INTRODUCTION

The challenges that organizations face today are often related to the increased complexity in the type of problems they meet as well as increased time pressure to innovate (Vanhaverbeke, 2006). The world is facing complex issues of great societal importance where it is difficult or impossible for one organization to find a solution by them-selves. Organizations are expected to provide advanced products and services at a faster pace, which demands more inter-disciplinary development work. The competition is no longer just the local market, but globalization has changed the process of creating innovations as well as the dissemination of new products and services and the flow of knowledge and competence between different organizations. The pursuit of innovative products has thus become a strong driving force for creating new collaborations in order to stay competitive.

Open innovation (Chesbrough, 2003) is argued to be a way of collaborating to increase innovation. This implies working together with known as well as unknown actors to find new ways of defining the problems but also to find new types of solutions. To keep up with the latest knowledge and competence and keep it all in-house is expensive for a company, as knowledge quickly gets old. That is why some claim that the best way to get access to the frontier is to collaborate with those that have the desired knowledge.

However, the challenges associated with open innovation practice appear to be underestimated by practitioners and not sufficiently addressed in the literature. Although open innovation collaboration has become popular among organizations (Schroll and Mild, 2011), its success is not self-evident. An abundance of research within the field of inter-organizational collaboration (Huxham and Vangen, 2005, Cropper et al., 2008, Ebers, 1997, Di Domenico et al., 2011) has concluded that collaborative arrangements are inherently difficult to manage (see e.g. Vangen and Huxham, 2003). Many collaborations slant into a state of *collaborative inertia* where the output rate seems slow and fail to meet expectations, and even the outcomes that are produced come about after much hard and painful work (Huxham and Beech, 2003). E.g. Huxham and Beech (2003) and Newell and Swan (2000) claim that it is paradoxical that the differences in perspectives, competences and resources of each partner are what provides the potential for collaborative advantage, but are at the same time also the reason for why so many collaborations fail. Hence, there is a need to have the capability to manage knowledge flows and coordinate relationships between the innovation partners. Managing open innovation collaboration means orchestrating complex social processes in which various actors create knowledge and reveal business opportunities.

For the collaboration to be perceived as successful (Ring and Van de Ven, 1994), the partner organizations must feel that they can utilize the knowledge stemming from the collaboration (Ollila and Elmquist, 2011). To make open innovation collaboration work and to exploit the advantages of such conditions, coordination and management is needed (Gassmann and von Zedtwitz, 1998, Buckley and Carter, 2002, Chesbrough and Teece, 2002). In other words shared innovation processes need to be controlled and structured (Chesbrough and Teece, 2002). Utilizing methods to structure activities and practices is in fact part of establishing an open innovation process in an inter-organizational context (Bergman, Jantunen and Saksa, 2009). The purpose of introducing methods is to spur the open flow of knowledge and fuel innovation from which all participants can benefit. This paper explores the applicability of the KCP method (Hatchuel et al., 2009, Elmquist and Segrestin, 2009, Arnoux et al., 2010), a management method for innovative design, in an open innovation context. The potential of KCP was explored, as this collaborative creative method is said to provide means to identify innovative value spaces that enable the development of innovative capabilities, the development of learning paths and the identification of external collaborations (Elmquist and Segrestin, 2009). The research questions posed in this paper are:

- How can a method for innovative design enable and support open innovation collaboration?
- What open innovation collaboration challenges and opportunities can be managed by means of a method for innovative design?

This paper presents the conceptual development and a refined methodology aimed at facilitating open innovation collaboration. This contributes to our understanding of how to mitigate some of the challenges associated with open innovation collaboration. The findings stem from interviews with individuals involved in leading open innovation collaboration as well as interviews with individuals working with the KCP method including the creators of the method. This interview study is part of an action research process, carried out together with an open innovation project, involving multiple partner organizations, and the next phase will be to test the proposed methodology.

THEORETICAL BACKGROUND

Challenges in inter-organizational collaboration for innovation.

In the last decade, the old, “closed” innovation paradigm has been questioned as organizations’ today face new challenges, which have made them interested in pursuing open innovation (Chesbrough, 2003) as a way to stay ahead in the competition and to reach new heights in their pursuit of innovation. The notion of open innovation is based on the premise that employees do not always have the necessary knowledge and individual skills to generate creative solutions on their own (Bissola and Imperatori, 2011). (Bissola and Imperatori, 2011). The collective needs to be acknowledged as an important part of producing creative outcomes (Hargadon and Bechky, 2006) and therefore opening up the internal organizational borders of the R&D department has become unavoidable. As the years have passed, Chesbrough (2011) now refers to openness in the innovation process as “*a way of sharing with others and inviting their participation*” (p88). Thus, open innovation is no longer presented as only a business model; it could also be considered a way of organizing collective knowledge creation. Chiaromonte (2006) has also proposed that open innovation could enable suppliers to become peers, as this form of collaboration has the potential of breaking up hierarchies and established patterns of collaborating.

But the more individuals that are interacting, the more complex the aims and expectations become (Håkansson and Snehota, 1995). Management’s attitudes, interest and support for collaborating with other organizations are essential for how the individual can act in a collaborative environment. This makes clarifying terms and expectations on the participating partners a key issue for management (Sivadas and Dwyer, 2000). If expectations are not made explicit and partners become irritated or loose motivation for participating, the collaboration can easily slant into a state of collaborative inertia, as described in previous research on inter-organizational collaboration. Some identified pitfalls in inter-organizational collaboration are perceptions of loss of control, loss of flexibility, loss of glory and unthoughtful resource spending. Complicated and slow decision-making processes can make the collaborative work tedious, and a realization that all partners are not working towards the same goal can make them loose faith in what they are doing. In such situations it is often argued that a shared vision for the collaboration is the solution to the problem. It is important to have something that holds the collaboration together, e.g. a joint cause or mission. Huxham and Vangen (Huxham and Vangen, 1996) outline a set of dilemmas in collaborative practice (see Table 1), which needs to be considered.

Table 1 Dilemmas in collaborative practice (Huxham and Vangen, 1996)

Dilemmas in collaborative practice
1. The dilemma of how much to bring all of the goals of the various organizations and individuals involved out into open discussion has to be managed – there has to be at least enough agreement about broad aims and about detailed actions to allow the joint initiative to progress.
2. Ensuring that everyone gets credit for joint action is important but some credit may have to be sacrificed in the interests of democracy.
3. Compromise of each individual organization’s priorities for the collaboration will be necessary for the sake of defining goals that are realistic for the collaboration as a whole.
4. Tasks that “ought” to be trivial or routine can take a great deal of time and compromise to sort out to the satisfaction of all concerned; time needs to be allowed for this.
5. Unthinking use of language can make collaborators angry and disempowered as well as confused.

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6. Getting started in a trusting relationship requires being prepared to take a risk.
 7. Consideration and management of internal and external stakeholders for the collaborative initiative is important.
 8. Collaborative initiatives take longer than would normally be anticipated, are demanding of time and require persistence – it is essential to “budget” for this.
 9. Individual organizations’ power bases may be stronger than is immediately perceived by their own staff – identification of the power base can put an organization in a good negotiating position.
 10. Smaller organizations may be feeling much more vulnerable than larger ones imagine – empowering the former involves paying attention to communication and to careful use of language.
-

Thus, based on Table 1, there is a range of issues that needs to be considered in order for an inter-organizational collaboration to become successful, and it is likely that this list is not exhaustive – there may be additional challenges in more complex forms of collaboration. Regarding methods that can enable and facilitate open innovation processes, it can be concluded that:

- Shared innovation processes need to be structured and facilitated to decrease risk for collaborative inertia
- Open and closed knowledge exploration, exploitation and creation needs to be included
- Well-designed process to manage knowledge flows and coordinate relationships among innovation partners is essential (Bergman et al., 2009).

KCP – a collaborative method for innovation

The KCP method has been developed by Professors Hatchuel and Weil at Mines ParisTech. KCP aims to organize innovative capabilities distributed among a large collective and has been elaborated for intra-organizational purposes in collaboration with RATP, the public transport operator for the city of Paris operating the subway. The method is based on a theoretical framework from engineering design: the design C-K theory (Hatchuel, 2002, Le Masson et al., 2010, Hatchuel and Weil, 2009). Since 2003, more than 60 KCP-processes have taken place in diverse companies and various industries in various contexts, within and outside France (Elmqvist and Segrestin, 2009, Agogue, 2013). For example, RATP has regularly used the KCP approach for subjects such as “Bus Rapid Transit”, “21st century Metro”, “Local bus services”, “Walking” and “Night bus stations”.

A KCP process typically consists of a set of workshops clustered in three phases, described as follows (Hatchuel et al., 2009, Arnoux, 2013):

(1) a phase of knowledge sharing (K-phase) aiming at expanding the common knowledge among the collective (including knowledge from outside of the field); the aim of the phase is to enable different actors to share not only existing knowledge from different expertise from inside and outside the firm (i.e. to share the state-of-the-art) but also pending questions and exploratory issues (i.e. to share the state-of-the-non-art).

(2) a phase of team work around conceptual propositions (C-phase) aiming at providing a large number of creative ideas and building on the knowledge exchange from the first phase; this second phase is a set of creative workshops where usual creativity techniques are used to help participants to discuss estranged propositions, crazy concepts. These initial original concepts are chosen to be quite generative so

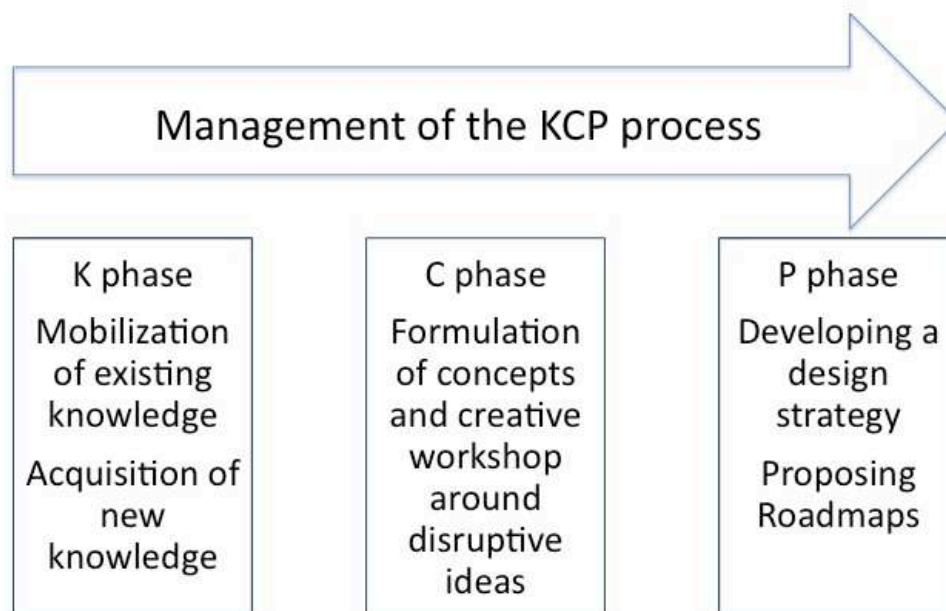
that team work helps to explore them in different ways, leading to the emergence of a variety of refined and elaborated ideas.

(3) a phase of preparation of the innovative design roadmap (P-phase) aiming at associating the conceptual propositions from the previous phase with strategies of knowledge acquisition. This last phase is usually the one that requires the longest preparation, as it builds on the outcomes of the first two phases. Building on discovered new knowledge and explored new ideas, the aim of the P phase is to elaborate proposals, projects, perspectives to implement and nurture novel propositions within the firm. It is usually associated with discussions regarding internal organizational issues but also regularly leads to rediscussing the nature of the relationship of the firm with the rest of its ecosystem.

In some cases, there has also been a D-phase prior to the K-phase (DKCP), with the purpose of defining the scope and aim of the workshops within the firm.

A management team consisting of project managers from the firm and external KCP-consultants or researchers organize the set-up of the KCP process and guides the emergence of new knowledge and new ideas.

Figure 1 Outline of the KCP process



The method has received a lot of praise as it appears to be a methodology to combine dual expansion of both social and cognitive perspectives (Hatchuel et al., 2009), to support organizational aspects that play an important role in fostering creativity and sustaining breakthrough concepts in the firm (Arnoux et al., 2013). It addresses contemporary innovation challenges when trying to include internal as well as external knowledge. This approach thus suggests new ways to design learning strategies and explore innovation fields in a collective and flexible way (Elmquist and Segrestin, 2009).

However, the method is developed for use in an intra-organizational setting, and it is not self-evident that it is easily translated to e.g. an open innovation setting. For instance, the matter of time and resources appears to be crucial: in an open innovation context, how could it be possible to mobilize a large collective over the extended period of time that the typical KCP process demands? Moreover, not much is known

about if this methodology could help overcome some of the innovation challenges that participants experience in open inter-organizational contexts. Thus, this paper aims to explore how the KCP method could be further developed to better suit the open innovation collaboration setting.

METHODOLOGY

Research design

This paper is based on an action research design involving an open innovation project. Action research according to its originator Kurt Lewin (Adelman, 1993) always strives to add to both practical knowing but also theory building. Action research must include the active participation by those who have to carry out the work in the exploration of problems that they identify and anticipate. An action research model includes the following five steps: 1) Analysis, facts finding and reconceptualization 2) Planning 3) Acting (Execution) 4) Observing (More fact finding) 5) Reflecting and acting again (Dickens and Watkins, 1999). Accordingly, a distinguishing feature of action research, separating it from other forms of organizational research, is the tight link between research and action and the deliberate involvement of the researcher in changes to the situation being researched (Huxham and Vangen, 2003). This was considered to be a suitable design to try the chosen methodology in a new context. This paper is based on the data from the initial two phases of the action research process, in which empirical data is collected and used to identify the problem and conceptualize a methodology (phase 1) and three meetings with the project managers of the studied project to plan (phase 2) the activities included in the research project.

The case: the ABC project

The ABC project, hosted by the open innovation arena SAFER, was used as a pilot case. The project currently involves 6 partners including AB Volvo, Autoliv, Scania, Volvo Cars as well as the open innovation arena. SAFER is constituted by 26 partner organizations from academia, industry and society. It hosts collaborative projects, and is in this case responsible for the project management of the ABC project. The open innovation arena transcends the traditional role of an innovation intermediary, as the arena and its management is highly involved in not just acting as a broker between partners and facilitating knowledge transfer, but also encouraging and trying to find ways of stimulating joint knowledge creation in order to innovate (Agogué et al., 2013).

The ABC project had been formed as a result of a shared interest in the development of a specific area of crucial importance for the partners involved and the future of the industry. The project had early on experienced difficulties in defining a joint platform and a joint purpose, and were eager to test a methodology that could increase their possibility of creating sustainable and utilizable results.

Data collection and analysis

The initial phases of the action research project began with problem identification through a focus group interview with the project management team, to more specifically understand the challenges the project appeared to face. Furthermore, interviews had also been conducted on KCP as a methodology in order to understand elements of the process, but also explore the limitations and possibilities for further developments. The interviewees were researchers, consultants and others who had

worked with KCP development and been part of the management team of several KCP processes.

Furthermore, to explore how the KCP methodology could be adapted to inter-organizational or open innovation settings, interviews have been conducted with researchers who have performed KCP processes in those types of settings. The interviews aimed at gaining an understanding of what specific challenges they faced and how they dealt with them.

Table 2 Themes and methods of data collection

Theme	What	When
KCP as a methodology	9 semi-structured interviews with users and developers of KCP	2011
Open innovation challenges	Focus group interview with project management	2013
Adapting KCP to open innovation	Semi-structured interviews with CK-theory/KCP experts	2013
Initial workshop presentation at Traffic System Competence Group	Field notes	2013

The analysis of the data from the interviews laid the foundation for developing a refined KCP process, which is better adapted to the open innovation context. In the continuation of the project, the proposed methodology will be tested in a series of three workshops with the ABC project, sometimes also including external partners. To complete the action research methodology, interviews will also be conducted to follow-up on the workshops in order to discuss and evaluate the findings.

FINDINGS

Management methods to spur innovation: benefits and limits of the KCP method

The findings indicate that one way to spur innovation is to infuse collective creativity into the organization. However, this means that you need to bring social principles that are in line with creative thinking. Introducing a method inviting people to other social orders is one way to go about as pointed out by one respondent:

“You cannot introduce creative things as such. You need to have a social organisational principle that goes with it. In the end, the success of brainstorming was due to the fact that nobody knew what brainstorming was. But it was a simple thing. We meet in a room and we consider that we are free, and so there is an action principle. You remember we discussed if you could structure creativity. No, in fact, we don't structure. We make it actionable.”

Professor at MinesParisTech and co-founder of KCP

The KCP methodology can be further described as:

“It's like being able to manage collective innovative design in the company and implement the first impulse for collective innovative design in a company... It's more like the first step to learn about acquiring the capacity for radical innovation. I would depressurize the method by saying

that it's just a way to learn about managing innovation, radical innovation. It's not something that will create new innovative projects or new knowledge for the company. That depends on the chances you have during the project."

Researcher at MinesParisTech and Industrial PhD student

The main challenge for collaborating around product development is the technical expertise, experience and knowledge people bring to the collaboration, since this *á priori* knowledge can become a barrier for exploration. One strength of KCP is that the method invites people to step out of their zone of protection as described in the quote below:

"So we began to think, okay, if we want to bring people to increase their capacity of innovation, we have first to change their view of the work. We don't have to ask them to be creative. That would only make them stay in their own area so the K-phase became simple, first share, because there is knowledge in the company that one has, but that's not enough. We have to break the knowledge base of these experts and to bring external experts, to bring radically different, to bring experience, to bring a lot of knowledge which is not certain that it will be relevant."

Professor at MinesParisTech and co-founder of KCP

As a complement to the zone of protection, KCP offers a zone of expansive exploration where people can think of their knowledge and the knowledge of others in a different way and get guidance and support to deal with the unknown:

"When is a company interested in KCP? The situation that we analyse is the following. It's very difficult for a company to express goals that are unknown, that are unrealistic. And the day a boss says, this is a goal, and everyone should now put their energy towards this. So the difficulty is... there are windows of opportunity for the moment. Usually you need to have a boss or somebody who has power in the company that recognize that there are areas where we need to go but he doesn't know how. He cannot say it's a goal, because if he sets a goal, people will say: Okay, you have set the goal, now you give the budget, you give the people, you give the... So he's in a kind of strange situation. He wants to say: Okay, you know there is a very nice desert there. We should go to explore it. Yes, but don't come to me and say to me "now how, boss, are we going to explore that"? Or "what do you expect, boss, in the desert"? I don't know. So it is a situation, which we call unknown. How do you manage the unknown?"

Professor at MinesParisTech and co-founder of KCP

But although KCP appears to offer several benefits, it can sometimes be difficult to keep expectations of what can be achieved at the right level:

"If you sell a KCP by saying like "this is the way to learn about radical innovation management", it's different than we will do radical innovation. [...] When KCP is sold as a method to do radical innovation, people are

just waiting for that kind of stuff, so the consultants who are managing the process feel a big pressure to come up with this kind of ideas. They know that they can't come up with these ideas but the guy in the company is waiting for that, and the top management of the company is waiting for that kind of stuff."

Researcher at MinesParisTech and Industrial PhD student

Thus, the guidance the KCP provides as a method is limited, it relies heavily on the expertise and experience of the management team. Regarding further developments of the method, one interviewee said:

"Now, if I had to do a KCP by myself in a company, I would develop some tools and stuff like that to be sure to explore everything. I am just talking to you based on what I've seen in [French company], but I want you to be aware of the things that could be better. I think the only problem is like... in some situations, it feels like you are proceeding in the dark, and if your method or so is like a [whistling sound], it's really difficult. [...] We need to have a database of tools and methods, micro-methods inside to fit every company's needs."

Researcher at MinesParisTech and Industrial PhD student

Challenges for innovation in open innovation collaboration

From the interviews it becomes evident that there are a multitude of challenges associated with open innovation collaboration that inhibits innovation. When setting up the ABC-project, the project management team faced the fact that the partners did not even like to collaborate:

"They [the industrial partners] don't like to collaborate, they don't have the habit of collaborating, they don't have that tradition, even when it comes to this area. I still think in their own minds they think that they can do this by themselves. It will be interesting to see what areas they can agree upon where they need to collaborate. The easy way out is to say we will do it our selves. I don't know [Name of industrial partner] very well, but I know [another large industrial partner] and they have their own systems for dealing with this and that, and say that they don't really need to collaborate."

Project Manager, ABC-project

Another challenge appears to be how to go from just talking about collaborating to actually doing it. According to the project manager, one important part of this is how to frame the project, what goals to set up in order to get everyone motivated to participate:

"In a sense, the difficulty is going from the politics and shaking hands in those big conventions to actually hands-on project. And that is where I think this is going to hurt, when we say can you collaborate on this, and they will say, oh, but that's secret, or we are not interested in that area, we have another area that we are interested in, and so on. So I think the

challenge here is to extract the concrete examples of where we can collaborate, where we all agree. And also the goals, I think the goals of a project, of what we can deliver... As project manager I have to set up targets on delivery, and what can we actually as a project deliver to those partners in the end. So it's not just the paper work, it has to be something concrete in my mind, where we can say that this is what we have achieved. I think it will not be easy in the beginning, because I think there will be some scepticism, coming into this area because they are forced to go into this. And hopefully we will motivate them."

Project Manager, ABC-project

This project also involves partners who have previously not been very active in the collaborative work, although they have experience of supporting similar projects. Changing their role to a more active one changes the dynamic of the entire collaboration:

"And then we have this new partner [Swedish authority] which has previously been more passive and just distributed research funding, and now they are important for us to have as an active partner. I'm not sure that they are accustomed to this new role."

Project management team member, ABC-project

Still, there is a concern that some partners are only interested in furthering their own agenda, and not really being concerned with the greater good that can come out of the collaborative project:

"I think the funding in this project is based on a national perspective, how to strengthen Sweden in this area. But the industrial partners would say that "we don't care about the Swedish perspective, we care about our profits, so we are not going to give away anything that can reduce our chances of profiting"."

Project Manager, ABC-project

Adapting KCP to the open innovation context

A minor experiment has recently been conducted in France as a way of trying out the KCP in another context than the traditional intra-firm setting. In this project, a variety of different actors needed to be brought together to find a solution to a joint problem. The researcher in charge of the project describes the initial challenges:

"The departure point [of the KCP workshops] was to show the stakeholders that the objective of the project was a "concept": it was hard to define and to identify assessment criteria; they did not know if they could achieve it, or how. A second point was that it was necessary to involve a range of actors in the workshop: not only the cooperative board and the few researchers who were involved in the launching of the project, but also farmers, local authorities, extension services (technical advisers) etc. As it was hard to bring together all these people for a long time, we decided to organize the workshop on one day: K-phase in the

morning, C-phase in the afternoon; I worked on the P-phase during the following weeks and made two presentations of the results: one first for the organizers of the workshop, then one for all participants. The K-phase and C-phase were short, but the P-phase quite thorough. I was in charge of organising everything: as the duration of the workshop was short, I did not have another person from the partner organizations to support me, except to book a place for the workshop. As a consequence I don't think that the participant organisations seized upon this methodology.”

Researcher at MinesParisTech

Furthermore, she described the initial stages of setting up the workshops as crucial to the potential success:

“The preparation of the workshop was very intensive: we had to define who to invite, what presentations were necessary in the K-phase, what was the initial concept and the concepts projectors, how to organize the exploration of the concepts projectors... These concepts had to be very targeted. I sent invitations to the participants that explained the principles of the workshop to everyone, and sent a brief to each speaker for his/her presentation. I took time for a detailed introduction at the beginning of the workshop. This workshop helped the advancement of the project a lot, but I think that one day is really short to make people really understand the principles and objectives of the workshop. Maybe it would have been better to organize it on two days at least.”

Researcher at MinesParisTech

PROPOSING A REFINED METHODOLOGY – THE iKCP

Stemming from the findings previously presented, this paper proposes an extension of the KCP methodology to address the specific challenges of open innovation collaboration. The outline of the iKCP process is presented in Figure 2.

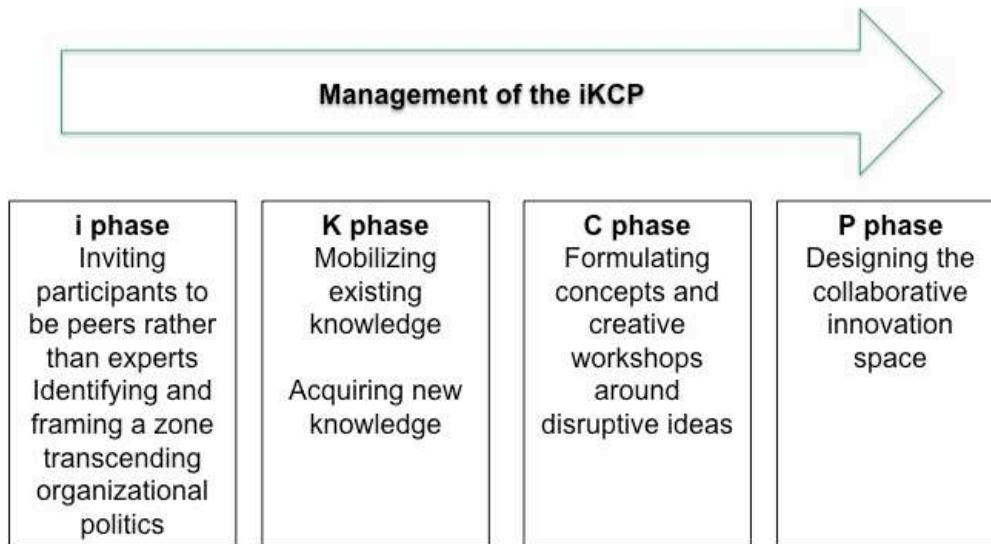
Adding an i-phase

Adding an i-phase implies that in this inter-organizational context, a specific focus needs to be put on initiating the KCP. This phase, involving the management team of the iKCP, includes *inviting participants to be peers rather than experts* as well as *identifying and framing a zone transcending organizational politics*. This means that the participants in the iKCP process are selected carefully; balancing the number of participants from each participating organization, including people who are genuinely interested in the area that will be explored, and avoiding to include sub-groupings with known fixations in contradictory positions. This also means that any past conflicts as well as previous successful collaborations between the participants are thoroughly discussed. The actual invitation to participate in the workshops is also worked on in order to find a phrasing that catches the interest without old battles resurfacing based on conflicting positions. Furthermore, as organizations as well as individuals are being positioned as peers instead enables collaboration even between competitors. The framing of the invitation including presenting the area in focus is crucial for setting a scene mitigating the strong political forces often involved in inter-organizational collaboration.

Re-thinking the P-phase

Additionally, this paper suggests that the P-phase of the iKCP methodology entails different activities and a different purpose than those included in the traditional KCP. Instead of proposing specific road maps and strategies, the iKCP is developed for open innovation collaborations and *the purpose of the P-phase is rather to design the collaborative innovation space*. This implies an identification of areas of collaboration as well as confirmation of the joint commitment for this work.

Figure 2 The iKCP-process



DISCUSSION

This paper aimed at exploring how a method for innovative design can enable and support open innovation collaboration and what open innovation collaboration challenges and opportunities can be managed by means of a method for innovative design. The aim of the proposed methodology is to enable participants to step out of their zone of territorial protection and into a zone of expansive exploration.

The proposed methodology offers the possibility of setting the scene and discussing expectations and potential inhibitors beforehand. This does not necessarily mean that the outcome of such a discussing is a watered-down compromise, but it cannot be neglected that if the participants cannot agree on what to collaborate on and how to do it, it is very unlikely that any collaboration will take place at all.

Starting in the i-phase, participants are being positioned as peers rather than experts. Positioning is done by means of how the participants are addressed and related to throughout the process. With the different positions come different rights and duties guiding people in how they can act. The peer position allows people to not know, to inquire, to co-create and have opinions. This is different from the position that most of the participants usually have, as the expert position entails to provide solutions, give answers and make claims without being questioned. A peer position is necessary to step out the protective zone and step into the zone of expansive exploration.

In the i-phase, issues such as time, resources and trust can be brought up to the table. It is about discussing priorities, how to handle the different stakeholders, how to deal with perceived power bases and how to communicate and the use of joint language. However, in order to deal with such a discussion, the role of the management team

and in this case the hosting arena cannot be ignored. The management team as well as the arena must be perceived as legitimate and unbiased in order to gain the trust and respect of the partners, otherwise there is a great risk that the participants retreat to the zone of territorial protection.

The i-phase differs from the previously described D-phase in that the D-phase is solely oriented towards helping the organization performing the KCP to identify a suitable scope for the topic of interest. It does not at all account for the dealing with the relational and political aspect between those involved and how that might affect the coming process.

In the case of the ABC-project, the content of the D-phase could actually be considered to be part of the P-phase, as one of the outcomes in the iKCP process is to define potential areas for collaboration. In the conventional KCP process, the P-phase is about outlining roadmaps, trends or suggestions for strategic projects to implement. In open innovation collaboration, such a “concrete” outcome can be difficult to reach. Instead, in an iKCP, the P-phase is about designing the collaborative innovation space. This could be viewed as a kind of psychological contracting, where the participants seal the commitment for continuing collaboration. As this is the final phase, participants start to consider the implications of the iKCP for their organization. The risk of falling back to the zone of territorial protection resurfaces, as the everyday organizational life with demands and deliverables start to come to mind, and therefore means must be found to keep participants in the collaborative state of mind.

As stated previously, it appears that there are a range of challenges that can be associated with collaborative practice, and especially open innovation collaboration. This paper argues that the refined iKCP methodology addresses some of these challenges and strives to overcome at least some of these dilemmas identified by Huxham and Vangen (1996). A crucial step towards achieving a fruitful collaboration, appears to be that all partners reach a collaborative state-of-mind, i.e. that in order to participate in the collaboration, they must feel that they have something to gain by participating and this is also a prerequisite for being willing to share some of their own knowledge. It is evident that obstructions can easily occur, especially when competitors are trying to collaborate, and positioning and politics can make it difficult to get ahead. The strength of the iKCP methodology is that it supports, encourages and even forces the participants to leave the zone of territorial protection and be at ease in the zone of expansive exploration.

To conclude, a comparison of the challenges, processes and outcomes of a conventional KCP-process and the proposed refined iKCP-process can be found in Table 3.

Table 3 Summary of challenges, processes and outputs in intra- versus inter-organizational processes

Theme	Intra-organizational innovation process	Inter-organizational innovation process
Challenges	Identify space of value Exploit existing competencies Explore new possibilities	Identify space for open innovation collaboration Mitigate organizational politics Align diverse interests
Process	A 3-phase-process: K phase: sharing and integrating new knowledge C phase: discussion around concepts P phase: building a design strategy	A 4-phase-process: i phase : inviting to be peers and framing zone free of politics K phase: sharing and integrating new knowledge C phase: discussion around concepts

		P phase: designing space for open innovation collaboration
Outcomes	A design strategy around the renewal of the identity of an object	Joint commitment for future collaboration in specific areas

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

By acknowledging the challenges of enabling of open innovation collaboration, it is possible to develop better ways for collaborations to deal with these challenges. The findings of this paper is one step towards building a methodology specifically addressing the challenges of open innovation collaboration, and could also be of relevance for individuals and organizations engaged in other forms of inter-organizational collaboration with multiple stakeholders. It can serve as an inspiration for further development of such methods in collaborative settings, and increase managements' knowledge of how such methods can be used to stimulate and direct innovation capabilities.

The proposed method can be seen as complementary to other methods that can be used to support and enable management of open innovation processes in an inter-organizational context (see e.g. Bergman et al., 2009). However, more research is needed, and in this case the action research project needs to be completed before more decisive observations can be made about the implications and value of this proposed methodology.

REFERENCES

- Adelman, C. 1993. Kurt Lewin and the origins of action research. *Educational Action Research*, 1 (1), 7-24.
- Agogu , M., Kazakci, A. 2013. 10 years of C-K theory: a survey on the academic and industrial impacts of a design theory. In: Blessing, L. & Chakrabarti, A. (eds.) *Ouvrage collectif sur les th ories et m ethodes de la conception innovante*.
- Agogu , M., Ystr m, A. & Le Masson, P. 2013. Rethinking the role of intermediaries as an architect of collective exploration and creation of knowledge in open innovation. *International Journal of Innovation Management*, 17 (2).
- Arnoux, F. 2013. *Mod liser et organiser la conception innovante : Le cas de l'innovation radicale dans les syst mes d' nergie a ronautiques*. PhD dissertation, Mines ParisTech.
- Arnoux, F., B jean, M. & Hatchuel, A. 2010. *Strategies for Building Radical Innovation Potential : Exploring the Role of Collaborative Creative Design Methods*. International Product Development Management Conference. June, Murcia, Spain.
- Arnoux, F., B jean, M. & Hooge, S. 2013. *Building radical innovation strategies: exploring the role of collaborative creative design methods*. Submitted to *Creativity and Innovation Management*.
- Bergman, J., Jantunen, A. & Saksala, J. M. 2009. Enabling open innovation process through interactive methods: Scenarios and group decision support system. *International Journal of Innovation Management*, 13 (1), 139-156.

- Bissola, R. & Imperatori, B. 2011. Organizing Individual and Collective Creativity: Flying in the Face of Creativity Clichés. *Creativity and Innovation Management*, 20 (2), 77-89.
- Buckley, P. & Carter, M. 2002. Process and structure in knowledge management practices of British and US multinational enterprises. *Journal of International Management*, 28 (29-48).
- Chesbrough, H. 2011. Bringing Open innovation to services. *MIT Sloan Management Review*, 52 (2), 84-90.
- Chesbrough, H. & Teece, D. J. 2002. Organizing for innovation: When is virtual virtuous? *Harvard Business Review*, 80 (8), 127-135.
- Chesbrough, H. W. 2003. The Era of Open Innovation. *MIT Sloan Management Review*, 35-41.
- Chiaromonte, F. 2006. Open innovation through alliances and partnership: theory and practice. *International Journal of Technology Management*, 33 (2-3), 111-114.
- Cropper, S., Ebers, M., Huxham, C. & Ring, P. S. (eds.) 2008. *The Oxford Handbook of Inter-organizational relations*, Oxford: Oxford University Press.
- Di Domenico, M., Vangen, S., Winchester, N., Boojihawon, D. K. & Mordaunt, J. (eds.) 2011. *Organizational Collaboration: Themes and issues*, Oxon, U.K.: Routledge.
- Dickens, L. & Watkins, K. 1999. Action Research: Rethinking Lewin. *Management Learning*, 30 (2), 127-.
- Ebers, M. (ed.) 1997. *The formation of inter-organizational networks*, Oxford: Oxford University Press.
- Elmquist, M. & Segrestin, B. 2009. Sustainable development through innovative design: lessons from the KCP method experimented with an automotive firm. *International Journal of Automotive Technology and Management*, 9 (2), 229-244.
- Gassmann, O. & von Zedtwitz, M. 1998. New concepts and trends in international R&D organization. *Research Policy*, 28, 231-250.
- Hargadon, A. B. & Bechky, B. A. 2006. When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science*, 17 (4), 484-500.
- Hatchuel, A. 2002. Towards design theory and expandable rationality: the unfinished program of Herbert Simon. *Journal of Management and Governance*, 5 (3-4), 260-273.
- Hatchuel, A., Le Masson, P. & Weil, B. 2009. Design Theory and Collective Creativity: a Theoretical Framework to Evaluate KCP Process. *International Conference on Engineering Design, ICED'09*. 24-27 August 2009, Stanford CA.
- Hatchuel, A. & Weil, B. 2009. C-K design theory: an advanced formulation. *Research in Engineering Design*, 19 (May-June), 181-192.
- Huxham, C. & Beech, N. 2003. Contrary Prescriptions: Recognizing Good Practice Tensions in Management. *Organization Studies*, 24 (1), 69-93.
- Huxham, C. & Vangen, S. 1996. Working together: Key themes in the management of relationships between public and non-profit organizations. *International Journal of Public Sector Management*, 9 (7), 5-17.
- Huxham, C. & Vangen, S. 2003. Researching Organizational Practice Through Action Research: Cases studies and Design Choices. *Organizational Research Methods*, 6 (3), 383-403.
- Huxham, C. & Vangen, S. 2005. *Managing to Collaborate: The theory and practice of collaborative advantage*, Oxon, U.K., Routledge.

- Håkansson, H. & Snehota, I. 1995. *Developing relationships in business networks*, London, Routledge.
- Le Masson, P., Weil, B. & Hatchuel, A. 2010. *Strategic Management of Innovation and Design*, Cambridge, Cambridge University Press.
- Newell, S. & Swan, J. 2000. Trust and inter-organizational networking. *Human Relations*, 53, 1287-.
- Ollila, S. & Elmquist, M. 2011. Managing Open Innovation: Exploring Challenges at the Interfaces of an Open Innovation Arena. *Creativity and Innovation Management*, 20 (4), 273-283.
- Ring, P. S. & Van de Ven, A. H. 1994. Developmental processes of cooperative interorganizational relationships. *Academy of Management review*, 19, 90-118.
- Schroll, A. & Mild, A. 2011. Open innovation modes and the role of internal R&D: An empirical study on open innovation adoption in Europe. *European Journal of Innovation Management*, 14 (4), 475-495.
- Sivadas, E. & Dwyer, F. R. 2000. An examination of organizational factors influencing new product success in internal and alliance-based processes. *Journal of Marketing*, 64, 31-49.
- Vangen, S. & Huxham, C. 2003. Nurturing collaborative relations: Building trust in interorganizational collaboration. *The Journal of Applied Behavioral Science*, 39 (1), 5-31.
- Vanhaverbeke, W. 2006. The interorganizational context of open innovation. In: Chesbrough, H., Vanhaverbeke, W. & West, J. (eds.) *Open innovation: Researching a new paradigm*, Oxford: Oxford University Press.