

# OPEN INNOVATION PROJECTS WITH UNIVERSITIES AS SEEN FROM THE COMPANIES

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## ABSTRACT

Projects are in the core of a present-day university. University-company -collaboration projects are an essential way of work and a part of national innovation systems. But what companies think of the collaboration projects? Why they still participate, even in the evaluations all projects do not appear successful. The aim of the research is to construct understanding about meaning of the projects from the companies' point of view. The paper highlights the importance of social interaction and active participation from the firms' point of view. The purpose of the study is to consider especially academic design projects as a part of national innovation system and an actor of collaboration projects.

## INTRODUCTION

University-company collaboration projects are a common way to organise research in the universities, especially in the area of design. At the same time, academic collaboration projects are a significant part of different national innovation systems, which aim to develop competitive advantages (Lemola 2002). The importance of the funding from outside of the universities is increasing all the time (Georghiou et al. 2002). National innovation systems emphasize cooperation between government, universities and companies (Lundvall et al. 2002). For instance in Finland popularity of the collaboration projects is based on the model of public finance (Georghiou et al. 2002, 73-90). Financier notice itself that although university-company collaboration are

part of national innovation system, their significance is still unrecognized especially outside of technology development projects (Civilization cannot be imported 2007). Regardless for the competitiveness structure of the projects should support innovation and collaboration of universities and companies.

Since from the 80' most of the literature consist of reports and *research* literature was relatively limited (Geisler & Rubenstein 1989). There is a lack of research from the point of view of collaboration firms and also in the in the context of design. Why the collaboration projects in the context of design appears ineffective? What companies think of it? Why they even bother, if the projects are as ineffective as evaluation shows?

The research considers specific university-company-collaboration projects, which are a part of Finnish national innovation system and funded by Tekes- the Finnish funding agency for technology and innovations. This paper highlights the point of view of companies' managers and foregrounds a contradiction between their conception of the fruitful collaboration project and an official structure of the innovation system. National innovation systems in different countries have similarities, and for instance transnational public programmes (Lemola 2002,1481-1483). So, even the subject of the research is strictly defined, the results of the research are exploitable widely national innovation systems in general.

The data of the study consist of interviews with the managers, who have been involved in the collaboration projects. The paper is organized as follows. First it positions the research subject conceptually within the discussions and the literature in the discourse of open innovation and research collaboration. Then the descriptions of the empirical material and analysis are given. Findings are proposed in the empirical part of the paper. In the conclusion the main findings are summed up and related to the innovation research.

## LITERATURE

Cooperation between companies and

firms are led by innovation policy and national innovation systems (Lemola 2002). The third stream of the universities, societal interaction, was elevated alongside traditional streams of universities, research and education. Societal interaction is linked with innovations and national innovation systems (Lemola et al. 2008, 21-23). Finland has been at the head of the progress, by assuming the concept of national innovation system as first in Europe (Sharif 2006, 745). National innovation system has got a wide attention and currency as a part of politic decision making and academic context as well (Sharif 2006; Lundvall et al. 2002). National innovation systems are well defined from the point of view of knowledge generalization and roles of the actors (see more Gibbons et al. 1994; Etzkowitz 2003). National innovation system is a wholeness which is composed of organizations which is engaged development and transfer of technology, products and knowledge. The prerequisite of the system is a structure created and kept up by public sector (Sharif 2006, 745). Structure of national innovation systems can vary in different countries, even countries learn each other and develop systems by imitating (Lundvall et al. 2002; Lemola 2002). The orientation of the systems is usually same, to increase national competitiveness. A purpose of the system, to create persistent innovation activity, based on the relationship of the public and private sectors (Lundvall et al. 2002, 222-227). Finnish national innovation system is consisted of producers of new knowledge (universities and research institutes) and user of knowledge (firms, government and policymakers). The ground of the systems lies in interdependency of these actors (Seppälä 2006; Lemola 2002). The central actors in the Finnish national innovation system are Academy of Finland and Tekes – the Finnish funding agency for technology and innovations (Lemola 2002, 1487; Seppälä 2006). Especially the last one is concentrated on innovations and funding also research relationships between universities and companies. In addition, European Union is also remarkable financier of the cooperation between university and firms (Löppönen et al. 2009, 15-19). Design has an own specific role in the

core of the innovation system (Löppönen et al. 2009, 141), even it is quite young discipline in Finnish universities (see more Valtonen 2007). Still design has already own and important role in the changing field of academic research, as a part of innovation system and cooperation between universities and companies (Research in art and design in Finnish universities: evaluation report 2007; Löppönen et al. 2009, 134-140).

National innovation systems and governments' actions try to support research interactions between university and industry (Caloghirou, Tsakanikas & Vonortas 2001). As it turns out, collaboration between university and firms has also many different modes. Perkmann and Walsh (2007, 262 - 264) define and present seven different modes of university-industry links. The weakest link is a use of scientific publications and networking in general level, like in the conferences. The extent of relational involvement is also quite low in the transfer of university generated intellectual property (for instance patents) to firms. Universities and companies have also links through mobility like academic entrepreneurship and transfer of human resource. The first one means commercial exploitation of technologies and inventions of academic inventors. And the second one refers for instance to graduate or post graduate training in industry.

High extent of the links and actual relationships represent contract research where the university offers research services to firms. Typical university-company relationships also include collaborative research and design (R&D) (Perkmann & Walsh 2007). This paper concerns the last one, research partnerships between university and company. In the study, research partnerships are assisted by public funds and are in their nature small-scale temporary projects in the context of national policy programmes or framework programmes in the level of European Union. Usually the projects are managed by an individual university, though consortium with several universities is possible (Perkmann & Walsh 2007, 268-270).

Geisler and Rubenstein (1989, 44-54) have reviewed of major issues in uni-

versity-company relations. According to them there are six categories of arrangement. This research is concentrated for the fourth main theme, effectiveness of university-industry arrangements and mechanism for collaboration. The most descriptive sub-theme for this research is cooperative research. According to Geisler and Rubenstein, cooperative research includes five modes and three of them describe well the subject of this research. First this research considers cooperative research projects with direct cooperation between university and industry. Second in this research is interested cooperative research programs, where university coordinates project and government (in my cases Tekes) is financier. Third possible mode of the collaboration project is research consortia, where university or universities and multiple companies collaborate.

The main interest of the Tekes is exact funding collaboration projects which have an open innovation nature. So, Projects were universities collaborate with firms. Collaboration projects are from firms and government viewpoint one mode of open innovation, where essential point is to generate knowledge and transfer it from universities to firms. In Finish innovation system, university-company collaboration projects have remarkable role in transferring knowledge (Torkkeli et al. 2008).

Briefly, open innovation as Chesborough (2006) defines it, means an activity where company utilizes innovation outside from the company. In contrast with the common, closed innovation model, where only internal "in house" research and design processes are employed, open innovation model utilizes external sources of knowledge and innovation.

Still, open innovation is not a strictly defined operation but rather a collection of different practices. The main idea is that the sources of innovation can vary a lot. Conventional assumption is that the firm should develop new products in house (Hippel 1988). According to open innovation paradigm, ideas can flow into the process and out into the market in many ways, for instance from outside the company (Chesborough 2006) In general open innovators utilize widely and deeply

external sources in their innovation activities. So, external knowledge plays an important role (Laursen & Salter 2006, 131-132).

National innovation system constitutes an official structure for open innovation for firms and universities. University research system is traditionally open: information, results and findings are shared in public and research is typically peer reviewed. Different sources of external knowledge have different influence subject to cultures, rules and norms of the collaborating organizations. These all contribute to the nature of the open innovation (Laursen & Salter 2006, 133).

Anyway, traditionally the relationships between a university and a company have been seen as a linear mode of technology transfer from university to companies (Bakhshi, Schneider & Walker 2008, 8). In spite of all, public scientific research offers not only a source of knowledge but also active collaboration networks. Collaborative networks are an effective way to utilize the knowledge of external scientists from universities (Fabrizio 2006).

In this research open innovation is a viewpoint of firms and a part of description of the research subject. It is defined as collaboration and knowledge sharing over organization boundaries. At the same time, participating companies are R&D oriented and the university is defined as the expert of design in the projects. Design research appears as a basis for the projects because of the role of the university and design programme in it. Still the operation and the nature of the project do not necessarily support conceptions of design research in practice.

However, effectiveness of these projects appears narrow for the financier. Evaluation has evolved to immense systems with high number of indicators and quality criteria. In general, effectiveness consist of different point of view, like research, education, societal level or organizational level, but shared basis is that effectiveness constitutes of factors in the specific criteria and framework (Parhizgari & Gilbert 2004; Lemola et al. 2008). Commonly the main point of evaluation is not only to rank the existing models but also to generate utilizable knowledge (Coryn et al. 2007). Mainstream evaluation re-

search has mostly focused on measuring various attributes, describing the object of evaluation and finally judging the outcomes. Essential point has been the realization of goals (Guba & Lincoln 1989).

In the context of academic open innovation projects the mainstream way of evaluation is typical, but problematical. From the point of view of financial benefits the evaluation concentrates without doubt on the concrete achievements, like applications or publications. Very popular way to evaluate university-company collaborating projects is consider it through input-output model (Pekkanen, Ripinen & Leminen, 2004; Georghiou et al. 2002). For instance even Walter et al (2007) concentrates on societal effects of transdisciplinary research projects, they approach phenomenon by measuring. In the context of design, a lot of unrecognized effectiveness lies outside of the measureable indicators, because for instance input-output model do not catch that (Civilisation cannot be imported 2007) In open innovation projects research can be seen as a social intervention itself. So, concentrating on the outcomes and results in evaluation gives a one-dimensional picture of the projects.

Benefits of the research between university-company collaboration have been proven in many studies and the competitive advantages of open innovation are known commonly (Fabrizio 2006). Earlier studies highlight differences in the culture, policies and expectations between universities and firms as well as financial aspects (Geisler & Rubenstein 1989). But deeper research on the research relationships (Laursen & Salter 2006, 147; Perkmann & Walsh 2007, 272) and from the company point of view is needed. The study asks what kind of meaning university-collaboration projects in the context of design has for the firms. The research considers the subject by qualitative approach through interviews with the companies' managers and highlights the discourses which is linked with meaningful of projects.

While university-company collaboration is an interesting phenomenon, it is also a mode of project work. University-company collaboration is defined by different research interests and dis-

ciplines. Project as a work model and a way of organizing resources has also an effect to the content of the collaboration as well as to the activity. At the same time projects are a part of societal change toward temporary fabric of society (Engwall, Steinhörsson & Söderholm 2003, 111-113). Projects are nowadays a constant and significant part of organizations. For instance Söderlund (2004, 186) describes research on projects as a key factor for understanding organizations.

Project as a work model has an effect in the collaboration and research. A classical mode of the project is strictly defined, well planned and narrowly executed (Söderlund 2004, 183-186) Instead of that, in this study the project is defined as a temporary organization. Temporary organization is an organizational way to consider projects. In the practitioner driven field of project management, temporary organizations represent a theoretical discussion without immediate interaction with practice (Engwall, Steinhörsson & Söderholm 2003).

According to Engwall, Steinhörsson & Söderholm (2003, 111-112, 118-128) temporary organization includes four specific qualities, which differ from mainstream discourse: 1) the social construction of project boundaries, 2) the natural uncertainty and flexibility in project missions, 3) the high degree of embeddedness and 4) the expectation and mission driven patterns.

Mainstream discourse is based on assumption that structure and mode are important in projects (Packendorff 1995, 327-328) Project is defined from the outside and established because of a specific goal. Contrary to the mainstream way of thinking, temporary organization defines the project from inside. In the temporary organization flexible goals are not a mark of a failure but a natural way to operate. In the mainstream discourse static goals and linear way to operate are a virtue. Planning and management are in essential role in the mainstream project (Engwall, Steinhörsson & Söderholm 2003, 118-120).

In the temporary organization an important point of view is the natural and contextual uncertainty of the action. Goal's flexibility gives a freedom to produce what is needed, not only what

is planned. In other words, not the plan or the goal but the needs, lead temporary organizations (Packendorff 1995, 321; Engwall, Steinhörsson & Söderholm 2003, 120-122) In addition, temporary organizations consider projects commensurate with the surroundings: people come from other organizations and get back to the parent companies (Lundin & Söderholm 1994, 449) So, there is an ontological divide between the mainstream and the temporary organization: the mainstream considers projects due to their content and emphasizes generic project management techniques, whereas temporary organization approaches projects as a result of their form and highlights the dynamics of the temporal form (Engwall, Steinhörsson & Söderholm 2003, 115-118).

According to Modig (2007, 809) features of the temporary organization are seen more often in the contexts of creative projects than ordinary ones. Temporary organization highlights the meaning of the people in the project, while the mainstream discourse concentrates on planning and management instead. According to Bakhshi, Schneider and Walker (2008, 1-5), quality of the innovation system is based on the relationships between the actors, and especially on the importance of the people in the project.

Anyway, to consider projects as a temporary organization gives a possibility to dissect a project itself instead of the organization around it. From firms' perspective, the effectiveness of the university-company collaboration projects can be seen to have multiple qualities instead of evaluating it just as a way to execute and attain a goal. In this paper the subject is approached from the perspective of the companies' managers, considering what they tell about the projects. Their speech is the starting point, and discourses which arise from the data, reflected with the unrecognized effectiveness.

## DATA AND METHODS

Information about the university-company collaboration projects was collected through interviews. The empirical data consists of seven semi-structured interviews with nine persons, five with individuals and two with pairs. The interviews were execut-

ed in three periods, first in December 2007, then two in October 2008 and then three in March and April 2010. The data was analyzed between the three interview rounds. So, every stage in the data collection built the interpretation and at the same time the new interviews were based on the earlier ones, as the themes for the new interviews were elicited from the analysis. The companies' managers' point of view was essential and the interviews were conducted with managers who had an extensive work experience in collaboration projects within open innovation context.

The informants are working both in midsize and large firms, which are research and development -oriented. The firms represent different lines of business, for example paper industry, printed intelligence, mobile technology and mobile services. The professional background of the informants varies; they come from different fields such as sociology, technology, design and marketing, and their tasks are mainly linked with research and development. In the interviews the informants spoke about their experience in collaboration projects in the national innovation system context. They spoke through their career experience, unattached to a specific project. The main interest in the interviews was particularly in their experiences concerning those collaboration projects, where the university had represented design expertise. University called them "design research projects", but for companies they were "experimental projects".

In the interview situation, the discussion was based on five different themes which led conversation: theme 1, describing projects; theme 2, the goals and meaning of the projects; theme 3, experiences from the projects; theme 4, after a project; and theme 5, the results and significance of the projects. In addition, the themes included questions, which helped to specify conversation when needed. Purpose of chronological structure of interview was to make sure that the interviews encompass whole process of projects when informants described their experiences. Added to this, the interviewer asked to specify some details in the description. The interview situations were informal

discussions, where purpose was to get behind the formal expressions. The interviews were approximately one hour long each; in total the data includes about seven hours of talk. The interviews were recorded and then transcribed to text. The data consists of 52 pages of text.

The interviews were analyzed applying data-driven analysis using Atlas-ti data management software. Starting point of the analysis was to categorize things which were meaningful for the firms in those projects. Data was coded according to the principle of open coding in the first round. In the next steps codes formed categories and finally main categories, code families (Strauss & Corbin 1998, 101-121). The subcategories were grouped visually and constituted new categories in the network view.

Focus of the analysis was on the ways the interviewees speak about the projects and the activity in them. So, by analysis is composed of discourses around meaningful of projects. In practice analysis does not grow just from the data, but the interpretation of the researcher has its own role in the data analysis process. So even the analysis has been data-driven, the ground for the interpretation lies on the theoretical framework of temporary organization.

Knowledge of project meaningful was constructed through the alternating analysis process and interview rounds. Considering the framework of temporary organization, the analysis has emphasized three discourses. The first discourse is societal level of the projects, which refers to projects as part of the environment and deals with the projects' position and influence on their surroundings. The second discourse is the special nature of design as one of the actors in the project. This discourse refers to characteristics of design in the collaboration. Design appears very special for the other actors and entails "practical doing"-culture in the project. Finally, active participation is the third discourse, which relates to social interaction. Meaning of the collaboration is based on active participation and is linked with the constructed knowledge.

## FINDINGS

According to the data, from the com-

panies' point of view, those projects appear a mode of open innovation. Open innovation describes the multidisciplinary, knowledge generation and wide context of collaboration. At the same time open innovation appears mostly as a motivator for the collaboration between university and firms. Talk about the open innovation contexts is typically at least partly official. The most interesting part of the interviews is behind the formal speech. Four discourses have grown from the interviews and the active participation concerning collaboration is one of those.

Collaboration between university and company is constructed in the interviews as an exhilarating and informal environment, which is a good setting for enabling innovation. Still the operational environment of the collaboration projects is often unusual, or difficult to conform to at least for the most participants or stakeholders in the projects. That is because a project creates an independent organization and the operations in the project organization can vary a lot compared to participating organizations around it. The projects of research are positioned inside the third stream. Despite that actual research is carried on in the second stream. Third stream concentrates on the "commercial activities of the university" (Laursen & Salter 2004), the societal interaction. Same way the descriptions of the projects found in the third stream sound more like traditional research. Mainly informants refer in the interviews to projects, which were located inside the university. Even so, informants refer to the actors of the university naming them with the term "designer". The term "researcher" refers to the actors outside of the universities' design programme, such as researchers in other universities or a research centre. In the speech of the companies' managers, the projects collaborating with the design programme of the university, does not appear as design research, like Cross (2006) defines it. According to Cross (2006, 98-103) design research falls into three categories depending on the research subject. The goal of the design research is to create knowledge about the designerly ways of knowing, practices and processes of design and the form and configuration

of design.

According to the data those projects concentrates on either technological or user-oriented perspectives. Basically projects lie in the university. Procurator from every collaborative company and financier attend in the meetings of steering group. Some times interaction between universities and companies is restricted to steering group. But companies want more interaction between partners in cooperation. One interviewee for instance describes how participation in workshops during project is important for them. Their company does not want only to receive information in steering groups but also to get empirical experiences.

The concrete outcomes are commonly seen as one of the main results of the collaboration projects. In the data university research is associated with quality among firms and thus constitutes a good ground for the innovation, even if all the concrete outcomes would not be considered significant. In one interview, informants speaks how difficult is to transfer outcomes, like knowledge from project to firm.

"Informant 1: Että se on tosi raadollista, mitä ihmiset on hirveän kiireisiä, organisaatiot on ajettu tosi uhuiksi, niin se viesti pitää aina muokata täsmämuotoon. Vaikka mä saisin hirveen hyvän PP:n, niin kuin oikein unelma PP:n, niin mä todennäköisesti joudun pistämään...*It's really wretched, people are deathly busy, organizations has become real thin, so the message has to sweeten for niche mode. Even I'll get very good power point presentation (from university/project), like a dream presentation, there is a strong possibility that I'll have to still...*

Informant 2: Sitä joutuu editoimaan. *You'll have to edit it...*

Informant 1: ...viiteen eri tulkintaan, että mä saan sen niille kaikille oleellisille, niin kuin tahoille syötettyä kurkusta alas. ...*edit it for five different version, that I could feed information for essential people.*

Informant 2: Se on tunkemista välillä. *It's like stuffing some times.*"

Informants think that knowledge transfer is difficult and require lot of extra job for succeed. Informants describe that the project reports are like in "wrong language" when they come from the university. Reports are diffi-

cult to utilize in the real world and they are almost value of nothing. So, contrary to the general assumptions, the companies do not consider concrete outcomes as the most in the collaboration projects.

"Mä näen hyvin suurena sen merkityksen, että ne kasvattaa mun ihmisten kompetenssia ja yleissivistystä ja tietoutta siltä alueelta. *It's very important and meaningful, that project should enhance competence and all-round education of my team.*

Niin se on, että tehtäis, istuttais yhdessä alas ja tehtäis jotain. Niin se, se on ainakin, mihin itse olen kyllä pyrkinyt. *So, that we would do together, would sit at the table together and do something. That used to be my aim (in the collaboration).*"

One solution for the knowledge transfer seems to be active participating. Knowledge is not just information, but also new works of action and cultures. According to the data one meaningful aspect in a project is the constructed knowledge. The aims and results of the projects seem to be too general level to produce tangible benefits for collaborating companies. Results are not utilizable straight for the firms need. So companies seek significance from the process of projects. Constructed knowledge culminates to the active and lively interaction and participation during the project.

Even if the whole point of the project is multidisciplinary collaboration between different cultures, in practice there are contradictions in attitudes. Some expressions approve the multidisciplinary character of the projects and highlight active collaboration. Regardless of that, some opinions demand ready and concrete results from the projects, and are not ready to take up active participation. And so, in the perceptions of the informants both prohibitive and supportive factors of active participation can be noted.

#### PROHIBITIVE FACTORS OF ACTIVE PARTICIPATION

Traditionally the utilization of the results in companies' business is the main point of the whole project. Some informants in the data underline the importance of an upswing of the revenue as the main factor of effectiveness from the concrete outcomes. Apart from that the upswing of the revenue has no

role in the effectiveness of the project. However, mostly the ability to see the effectiveness of the project beyond the measurable impacts is connected with the participants' wide experience of the projects and openness of the company. According to some managers, complete results produced by the university as well as readily applicable results, are almost the only criteria for a successful project. These kinds of expressions come from the organizations, where openness appears to be in the minority role. Those companies seem to confine the official line or method of collaboration and interaction in university-company –collaboration projects to steering group meetings. In their view, projects are described in a mainstream way, where the planning and goals have an essential role, and the concrete and ready results are important too. Thus the mainstream way to interpret the projects becomes an essential prohibitive factor of active participation. These companies base the projects on a vision about classical project and contract research. They are waiting for results that are ready to be exploitable. According to the data for instance, a manager describes that the process is unessential: firms do not want to visit to “tune in” or “watch” when researchers or designers do their job. So, if the participants' expectations are formed along the mainstream interpretation of projects, the openness is confined and the interaction across the organizational boundaries does not come true. Furthermore, the official framework of collaboration appears in the data as a prohibitive factor. The official framework and structure of the projects leads projects and links them with a conventional way to execute project as planned. There is no room for the lively and wide openness across organizations' boundaries in that structure. In the managers' speech bureaucracy constricts collaboration by creating an artificial structure. Bureaucracy constricts collaboration through organization boundaries and prohibits free interaction in general. Factors which are identified with bureaucracy are disappointing for managers.

Dougherty (2006) affirms this by indicating that the free innovation environment and innovation-minded organization are meaningful for the

results. Organizing the projects using the bureaucratic model does not enable motivation enough to get good results. The data points out this also. Still, the structure of the projects is based on the innovation system and policy. Managers' interviews point out, that the source of the project is meaningful for the organization and the mode of the project. Collaboration and interaction appears to remain narrow, when the project is led from outside the firm.

#### SUPPORTIVE FACTORS OF ACTIVE PARTICIPATION

Supportive factors of active participation are linked with three different discourses in the data. The first supportive discourse pertains to openness of the organizations. Firms, which are widely open and experienced in using university projects, concentrate to construct collaboration in the interactive participation. The generality of managers consider project as a mode of open innovation and the attitude is approving for the open innovation in general. The base for the open innovation appears to be lively cooperation with other participants, especially with university. Projects are then expected to be “experimental” and “wild” and directed towards the future.

The second supportive factor in the data is the flexibility of the project. Here the attitude of the managers comes closer to the discourse about temporary organization and the uncertainty of project missions is seen natural. In this perspective the project plans constitute a framework for the activity. The projects are seen mission driven, but an element of uncertainty is welcome and worthwhile.

Managers link design actors (in this study the design actors are university participants) with the uncertainty of the projects. Designers, as the managers call them, “confuse” activity in the projects. Designers have their own way of work, which appears different and unfamiliar for the managers. Not a single manager that carries this view has a design background but their speech illustrates the practical nature of design and gives a meaning for the flexibility of the project.

The flexible and innovation-minded environment described by Dougherty (2006) is a natural way to organize temporary organisations. The main

point is a balance between freedom, responsibility, creative problem solving and control from the top. The open innovation project combines innovative actors and encourages participants' interaction and knowledge construction. Besides flexibility, designers seem to bring a “practical doing”-culture to the projects. So, the third supportive factor is the meaning of the process. In the data, managers emphasize the process even more than the outcomes. The generality of the managers highlights the meaning of the learning through the process. They tell, for instance, that new experiences and the influence of the multidisciplinary context give a good place for learning and refining.

The main results of the projects mentioned in the data are usually identified as knowledge, which can be applied elsewhere, sometimes also products, service concepts or other applications. Accordingly the biggest challenge in the projects is getting the knowledge from the project to the organization. As the projects are usually located outside the mother organizations, the knowledge flow is often challenging.

Cohen & Levinthal (1990) examine companies' absorptive capacity for the knowledge sharing with a cognitive approach. From their point of view the ability to exploit external knowledge, like results of the projects, is a factor of innovative capability. They suggest that the organization's absorptive capacity depends on the absorptive capacities of the individual members and grow cumulatively. In addition absorptive capacity and innovation performance depend on the history and experience of members of the organization.

In contrast to the general assumptions of knowledge as mainly individual capacity, here knowledge is seen as something that people create together (Gherardi & Nicolini 2000, 330-331). Knowledge and sharing of it, is not seen as a capacity, which is a general way to cover it. In the data knowledge sharing is essential from the point of view of project success, but without the active interaction between participants, knowledge distribution and individual learning is not enough.

In managers' interviews, the companies concentrate on the knowledge produced in the multidisciplinary projects and emphasize participation.

Active participation is a practical way to improve the utilization of the outcomes. As the temporary organizations approach assumes, knowledge is situated in the context, and in particular, it is dynamic and provisional as Gherardi & Yanow (2000) describe. Similarly to the temporary organisation, also the knowledge, which is constructed in it, has a dynamic nature. Thus the main point in the university-company collaboration projects is to recognize informal, socially constructed knowledge and find ways to share knowledge in the process from inside the project community to the mother organisations. Wenger (2000, 237-238) describes projects a natural environment for the innovation and learning. Similarly to the open innovation, Wenger describes that knowledge sharing with the competitors is a ground for the success. Learning and knowledge are diffused from a project with the members of home community to a new project and further. The direct and active participation is the basis for social learning. By Wenger, in a community of practice, much like the projects described in this study, knowledge production, exchange and transformation are as important as the core processes of the project (Wenger 2000).

The three central factors prohibiting or supporting the participation are interpreted to be subject to the ontology and nature of the project (see Table 1). First, the level of openness interacts with active participation; thereby more open organization is more active across the organization boundaries. Second, flexible nature rather than abstinence in the official structure support active participation. Third, the importance of the concrete outcomes restrains the active participation in the process.

## DISCUSSION

University-company collaboration

PROHIBITIVE	SUPPORTIVE
Closed	Open
Official structure	Flexible
Results centred	Process centred
Mainstream	Temporary organization

Table 1: Prohibitive and supportive factors of active participation in the university-company collaboration projects.

projects culminate in the strength of the relationship (Perkmann & Walsh 2007). In spite of all, in practice there are different levels of strength in the relationships. The study shows that even learning motivates the participants more than the outcomes (Perkmann & Walsh 2007). The analysis of the data presents both prohibitive and supportive factors of collaboration.

In the research starting point of the analysis is the unrecognized effectiveness, which is approached by analysing interviews with managers of the collaborating firms. Three discourses about meaningfulness from the firms' point of view are elicited including active participation as one of those. The purpose of this paper is to propose one of the discourses, active participation and defines prohibitive and supportive factors of it. In addition, the paper highlights the special role of the design partner in the collaboration projects in the context of open innovation. Designers appear to bring a practical doing –culture and natural uncertainty to the project. In the beginning managers are embarrassed by the way that designers work in the research relationship, but during the project managers accept the flexible mission and consider it a good way to organize collaboration.

The interview data, seven interviews and total nine informants, will be the first part of overall data. Data from two cases will be collected in the spring 2010. Case data will give a change to find deeper discourses under the main discourses and probably also new ones. Also then is a possibility for a comparative setting and increase validity of the study.

The paper pays attention to potential ways to intensify collaboration and points out the contradiction between ideal innovative environment and the official structure of the projects as well as the meaning of the process in the university-company collaboration. The study implicates that there is a need to take notice of the flexibility of the projects and the special role of the design partner or design research in the projects.

Official structure of project in the Finnish national innovation system is based on the mainstream way to understand project work nature. According to data, especially in the design

expertise context, official structure support not active participating or interaction in projects. Regardless, data shows that interaction is important for companies. Together constructed knowledge is more effective from the companies viewpoint than reports or knowledge transfer. The research debates with the structure of the national innovation systems nowadays and the development of the new and more effective way to construct collaboration projects in the future.

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