

## Communicative Incentives in Consumer Innovation Brokering

Mikko Järvillehto, *Department of Information Processing Science, University of Oulu*  
Kari Leppälä, *Provisec Ltd.*

Jouni Similä, *Department of Information Processing Science, University of Oulu*

### Abstract

*A facilitated consumer innovation model is discussed from the innovation broker's viewpoint. Consumers are involved through consequent stages of the product or service innovation process. The customer innovation process and the role of the facilitator, the innovation broker, are discussed. Explicit contracting is applied to support commitment and clarify the rights of the participants. Innovator motivation is enhanced through offering and negotiating incentives. A framework theory for evaluation and management of communicative influences is presented. The proposed customer innovation process has been applied in trial cases. Case data is evaluated and interpreted against the framework of communicative influences. The framework proved useful to continue experimenting with the brokered customer innovation process.*

### 1. Introduction

Customer acceptance is considered a key success factor in new product and service development. A contemporary industrial practice is to utilize customer feedback for improving subsequent product versions. However, this method is rigid and slow in competitive markets, and what is worse, the customers' reactions and feedback are often motivated by dissatisfaction. The established market research approach typically fails in recognizing customer preferences, and it is especially difficult to predict the potential of emerging innovations.

Our research approach is to elaborate the communicative influence concept to support analysis and development of the ascending innovation brokering activity [1] and open innovation processes.

Communication and its management is cited in numerous studies about open innovation as one of the most important topics for the successful open innovation process management [2]. Several approaches are proposed for early consumer involvement. Our starting point is an innovation process model, which aims for managing customer ideas and service suggestions in the context of

industrial innovation process [3]. We consider a process, which includes an intermediate actor, innovation broker. Consumer participation is allocated throughout the pre-defined phases of the innovation process. We will further elaborate the augmented innovation process and the role of the innovation broker. A main focus is on formal commitment instruments, and application of rhetoric strategy and incentives to enhance commitment and improve motivation of citizen innovators.

We commence resolving the research task by setting up two research questions. The first question is how Leadbeater's [4] six rules for user innovation can be applied in our cases. The second question is how beneficial is our tentative eight communicative influence determinants –model for evaluating c-integrated innovation process as it is manifested in our cases.

### 2. The advance of open innovation

The contemporary model for industrial and social innovation has become insufficient. According to this model, industrial companies plan and design products and services, and the success depends on the acceptance of customers and consumers. At the same time, technology has become more sophisticated and knowledge intensive. There is an evident imbalance between technological opportunities and actual services and applications. An emerging solution is the advancing open innovation concept. It aims for enabling networking between different actors in industry, research communities and consumer communities to empower industrial and social innovation.

Industry is in a transition phase towards open innovation, and is seeking for methods to open the product creation process for consumer innovators. Open innovation takes different forms. The industry is opening its innovation processes, through exchange and brokering of technology resources [5] and applying social innovation [6]. In the pre-industrial era, everyday innovations emerged from communities of ordinary citizens and craftsmen. Open innovation is re-vitalizing this tradition. It is understood, that consumer

communities have the best expertise and knowledge on application opportunities and new innovation ideas. Information technology and internet in particular has created a new class of services. Not only are the services distributed and accessed through networks; also a significant content and added value are created by actions of users. For example, the internet book store Amazon utilizes customer reviews as product information, and the buying behaviour of customers is used to create structured offerings.

### 3. Innovation brokering

Innovation brokering studies are yet a scarce resource. We rely on this paper mainly on topic compiling works of Chesbrough [4] and Törrö [1].

Chesbrough calls innovation brokers as *innovation intermediaries*: “A number of recently organized companies have focused their own business on helping companies implement various facets of Open innovation ... their function either helps innovators use external ideas more rapidly or helps inventors find more markets where their own ideas can be used by others to mutual benefit. The presence of these firms enables other companies to explore the market for ideas without getting in over their heads, since the intermediaries can act as guides to help those other companies along the trail.”

As Hargadon and Sutton [3] sum up, *brokers* derive value by enabling the flow of resources between otherwise unconnected subgroups within a larger network. Marsden [7] defines brokers as intermediate actors that facilitate transactions between other actors lacking access to or trust in one another.

Sawhney et al. [8] composed the term *innomediaries* to describe the knowledge brokers that connect, recombine and disseminate otherwise disconnected pools of ideas, thus filling the gap between companies and their customers. They suggest that these innomediaries can span structural holes by creating virtual bridges between companies and their customers across space and time. Furthermore, they differentiate innovation marketplace operators as one type of an innomediary, referring to an actor whose purpose is to connect sellers of innovation with potential buyers. In this case, the innovations are typically intellectual property: a discovery, patent or kind of know-how. Thus the type of knowledge available for sale is the specialized expertise of professionals..

The era of web commerce has shaped the position of intermediaries in product and service distribution. With innovation processes, the situation is similar, but more complicated as the innovation process has a highly complex and dynamic nature. Web based

consumer innovation is still in its infancy, and only a few companies have created new forms of consumer innovation, for example allowing consumers participate in design, or in voting on product alternatives. Present consumer innovation intermediaries like consumer organizations and market research companies have not been replaced by the web, but are being supplemented with new consumer innovation intermediaries who address specific innovations. Innovation brokers handling knowledge and technology resources are suggested as new type of middlemen to mediate the innovation process. Especially information systems' role in brokering of ideas and suggestions is becoming more important, see e.g. Törrö [1] or Ahonen and Lietsala, [6].

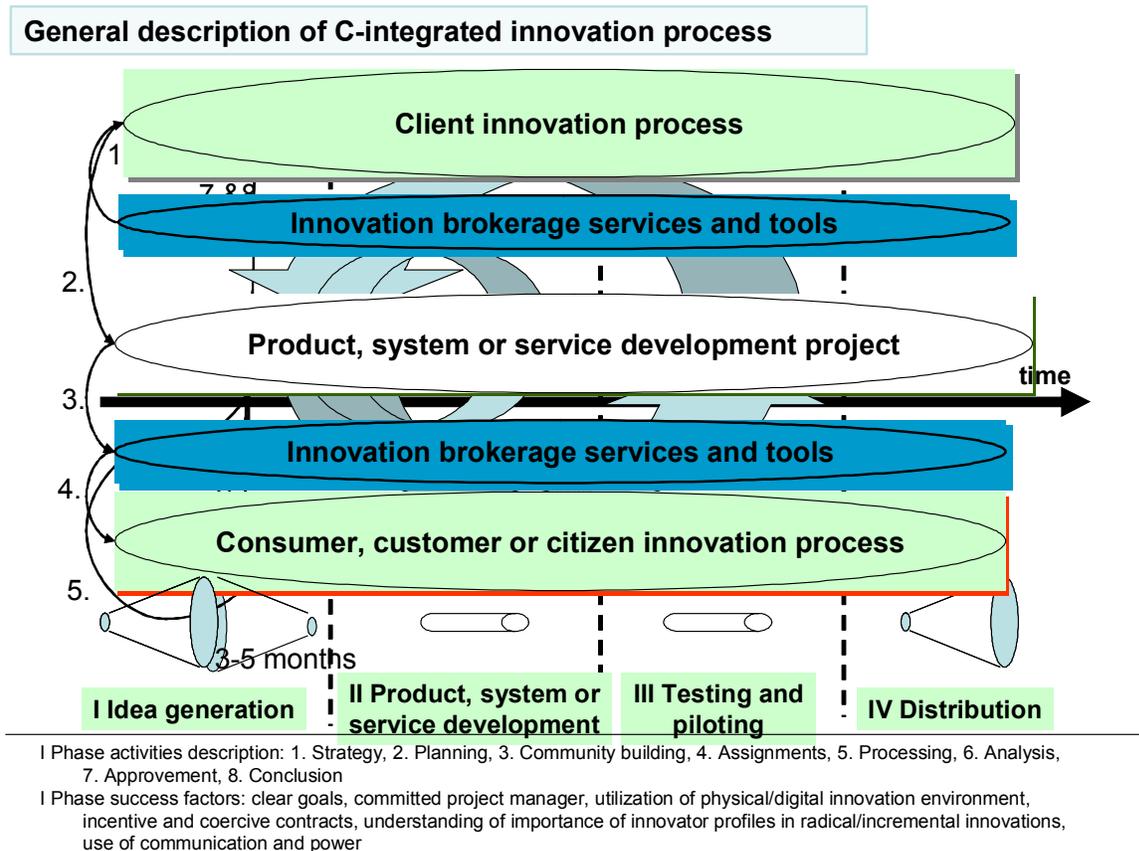
### 4. Research design

As a general action framework for our cases we apply a broker augmented innovation model. Customer, consumer, citizen, and client innovation, or what we have shortly referred to as *c-integrated innovation* bears a lot of similarities with what Leadbeater [4] and others have coined as user innovation. According to Leadbeater companies can work more effectively with user-innovators by following six rules: 1. Identify groups of lead users who are most likely to innovate and find ways to work with them, 2. Remove barriers to user-innovation, 3. Provide user-innovators with incentives to innovate, 4. Provide easy-to-use tools, information and skills to start innovating, 5. Create settings in which new ideas and prototypes can be tested, and 6. Create supporting communities in which user-innovators can share ideas. Seybold [5] has provided a list of five key innovation-enabling initiatives which has considerable resemblance: 1. Identify, study, and engage with lead customers, 2. Provide customers with tools to use to reach their outcomes, 3. Nurture customer communities, 4. Empower customers to strut their stuff, and 5. Open up your products and engage customers in peer production.

We have applied these principles in our innovation brokerage model. We consider innovation brokering a commercial service and a set of tools, targeted both for clients (organizations or companies) and for consumers, customers and citizens, and managed according to Leadbeater's six rules. The proposed framework consists of two main innovation processes feeding the product system or service development process: one managed traditionally by the client, and one where consumers, customers or citizens may participate (see figure 1). With the double cone in the left indicating the time allotted for idea generation (3-5

months) we wish to put forth the notion that the search space for ideas will first expand and then converge.

Figure 1. C-integrated innovation process.



A definition of the idea generation phases, as well as first formulation of relevant research questions is given in Table 1. Similar activities enumeration may be applied also to the other main phases: II Product system or service development, III Testing and piloting, and IV Distribution.

The matrix of Table 1 is elaborated by using teleological theory on the basis of the action cycle [9]. The teleological theory explains development as proceeding toward a goal, which guides the movement of an entity. The entity itself is purposeful and adaptive; it constructs an end state for itself, takes the actions needed to reach the end state, and monitors its progress.

This can be seen as a repetitive process that restarts again and again, as, after reaching original end state, the entity modifies the goals once again based on what it has learnt. The mode of change is constructive, meaning that there is no necessary sequence of events. However, development results from social construction among individuals within single entity and it is always something that helps the entity in reaching the end state.

### 5. Determinants of communicative influence

As another tentative framework for the cases the authors have developed the determinants of communicative influence. The framework is used to analyze the idea generation process (abbr. IG-process). We base this framework on theories about the communicative influence and sources of power. The underlying concept is influence related with power. According to MacMillan [10] power is the capacity to restructure actual situations. Influence is the capacity to control and modify the perceptions of others. We adopt the social influence theory [11, 12] and develop it bringing forth the dynamical concepts of change expectations, complexity and reciprocity. We see influence as *a use of power and as a communicative activity, which involves incentives and coercive measures aligned or misaligned with actor's goals.*

Table 1. (next page) Detailed description of idea generation process phases based on summary of the 3 cases.

<b>Action cycle phases from the Innovation Broker (IB) perspective</b>					
<b>Phases of the idea generation process</b>	<b>Participants</b>	<b>Need</b>	<b>Plan</b>	<b>Activity</b>	<b>Result</b>
<b>Strategy</b>	IB & Client	To have outsiders' development ideas aligned with company strategy	To show understanding about company strategy and to show know-how about idea generation process	(F2F-and tele)discussions and demonstrations	First draft contract
<b>Planning</b>	IB & Client	To have a working plan which fulfils the aims	Considerations about duration, costs, target groups, themes and such	Writing the plan document and the final contract, and fixing details there with the Client	Signed final contract with working plans
<b>Community building</b>	IB & Innovators	To get contact and commitment with the innovator target group preselected in plan/strategy phase	To create tempting and clear message about the case and easy-to-accept contracts	Contacting via media (newspapers and internet portal) and email, innovators signing the contracts	Adequate amount of signed innovator contracts from the right target group
<b>Assignments</b>	IB & Innovators	To create assignments which will be understandable and aligned with general themes	To make both detailed and open questions, and illustration and activity tasks	To send the tasks via email or web portal	Innovators will have received and understood the tasks
<b>Processing</b>	Innovators	No disruptions, the innovators will do their work independently and willingly	No IB plan needed	Simulating the buying and the use processes, conceptualization via cognitive textual and graphic processing	Textual and graphical Innovator answers
<b>Analysis</b>	IB	To profile innovators and summarize their structured answers and treat qualitative as unique	Make overall charts about the profiles and quantitative answers, compress qualitative answers	IB uses qualitative and quantitative data processing tools	Draft report
<b>Approval</b>	IB & Client	To show to Client good and acceptable results aligned with aims	Preparation for the demonstration and discussion of the draft report	Demonstration and discussion about the draft report	Approval of the draft report, added fixing suggestions by the client
<b>Conclusion</b>	IB & Client & Innovators	To reward innovators, to reward IB, to give good ideas for the Client, to have publicity	Checking the contracts and formulating the media release	Client rewards the IB and IB rewards the innovators, IB formulates the press release	Final report and the media release

Determinants follow the French & Raven's [13] and McQuail's [11] theories and the Swiss [14] framework for assessing incentives. Sources of power or influence are: 1. reward, 2. coercive measures, 3. legitimate, 4. referent, 5. expert. We create eight

categorical determinants, replacing the reward-coercion determinant with the value proposition determinant.

**1. The relationship scope.** Describes the communicational setting, in which the participants act. Who are the actors of the communicative situation and how many are there? The scale is put from one alone,

one to one, one to many and many to many. Several results to the further important aspects follow from the setting of the participatory amount: e.g. Bornstein [15] shows that the level of trust differs between communicational setting of individuals and communicational setting consisting of groups. Trust is necessary because it allows exchange of knowledge, favors, goods, and services between persons.

**2. Change expectations.** Describes the frequency of change (and thus the continuity) of the expected incentives and coercive measures. The scale is from no surprise elements to many surprise elements. Constant salary payment for lifetime would be a representation of a rigid incentive system, while in the other extreme management gives the worker every day the new objectives with specific incentives. Here in the IG-process change expectations are seen as what could be considered as the surprise elements for each actor. Our analysis dealt with the surprise elements for the IB, as may be seen in Table 2. Swiss [12] refers to change expectations as being the *Ability to Reward and Punish for Results Consistently, Unaffected by Politics*. According to Swiss [14], the best incentive system consistently delivers the rewards and sanctions that are expected.

**3. Positioning in time.** Describes the delay between action and effect. For IG-process, this means whether there is any delay of incentives or coercive measures concerning each phase. The scale is from fast and instant result in the same phase to delayed result after long time and over many phases. Swiss [14] uses the concept of *Time Frame* to clarify cause-and-effect chain, which diagrams how processes are expected to lead first to early outcomes and, finally, to late outcomes.

**4. Value proposition.** Describes how the certain incentive will affect the values and needs of the target or object. Is it fulfilling or devastating the value fulfilment? E.g. the manager may threaten the worker with the notion of getting fired or the manager may give the worker autonomy and interesting work assignments. The value scale is parallel to scale of incentives to coercive measures. In the IG-process, it will describe the incentives and coercive measures in each phase for the actors. What we mean by value proposition is in effect the list or use of incentives/rewards and coercive measures/sanctions in various settings.

**5. Transparency.** Transparency describes the democracy and the clarity aspects of the system. It thus means that logic, influence and all the other aspects of usage of power are made visible. The means to achieve the incentives are made clear, but they are also under constructive and critical debate. The scale is from secrecy to openness. For IB, this means how openly

he/she discloses the goals and influence methods he/she uses in each phase.

**6. Domain.** Incentives (and coercions) might appear in different forms, as money, time, services, products, commitments, connections, speeches, etc. The scale of domains may vary from concrete material to lingual. For the IG-process, this describes the essential nature of influence in each phase. The domain adds more detailed information about the value proposition in any given situation.

**7. Boundary objects.** The forms of making boundary objects, such as agreements, contracts, plans etc. will influence the communicational setting, dynamics and relations.

Koskinen [16] highlights the role of boundary objects to support both social interaction and create shared understanding among various stakeholders, i.e. contextualize knowledge to the task at hand. Creating shared understanding (i.e. a boundary object or contract) requires a culture in which the stakeholders see themselves as reflective practitioners rather than all-knowing experts. Boundary objects may also constitute a centre of intense conflict as easily as one of co-operative effort. Creating and reshaping boundary objects is an exercise of power that can be either collaborative or unilateral. Nonetheless, in the absence of boundary objects, the possibility to arrive at common understanding is limited. Boundary objects can be artefacts, documents and even vocabulary that can help people from different organizations to build a shared understanding.

One important category of boundary objects is contracts. They are e.g. the tools for memorization of the acts and create a continuum for solving possible disputes over the matters. The scale for contracts is from spoken and informal to written and formal. For the IG-process this describes the nature of contracts in each phase. Incentive contracts are in the very heart of the principal-agent theory. According to Sappington [17], the incentive theory focuses on tasks that are too complicated or too costly to do by oneself. Thus, the "principal" is obliged to hire an "agent" with specialized skills or knowledge to perform the task in question. The central concern is how the principal can best motivate the agent to perform as the principal would prefer, taking into account the difficulties in monitoring the agent's activities. The logic of incentives, sanctions, measurements and such are put in the contract.

**8. Complexity.** Complexity describes the complexity and understandability of the logic behind the incentives or coercions. The scale goes from simple to complex. The complexity category is close to the category of change expectation. The more complex the logic behind the action and the end result is, the more

surprising events may happen. But that does not necessarily imply that the more complex activity is the more difficult it is to master. The complexity may appear to other actors as difficult and to others it is just an internalized operation, or a way to make a ploy. For the IG-process this unravels the nature of perceived complexity in each phase. Swiss [14] describes complexity as *Clarity of the Cause-and-Effect Chain/Program Technology*. The less clear the Program Technology, the more difficult it is to reward or punish primarily on the basis of results because such incentives will correctly be perceived as unfair.

We apply these eight determinants to explain the innovation broker's, innovators' and clients' communication acts and the principles behind those acts and acts of involvement and the meanings the customers will give. Using this framework may prove an efficient tool for both understanding and developing the C-integrated innovation process via experimentation with variations of action in each category. The following chapters will open up the usage of this framework through case studies.

## 6. Case description

The cases cover the idea generation process (IG) phases of the C-integrated (CI) innovation process. The three cases are small business start-ups located in Northern Finland. The user innovation processes were conducted during the years 2005-2007. The research material was collected in the form of reports, agreements and plans.

One of the authors was in the role of innovation broker, who planned the outlines of the whole process and negotiated with the companies (clients) and the user innovators. The case description is based on two data sources: notes and minutes of the researcher, and written phase documents: agreements and working plans. The innovation broker/researcher worked also as a manager at that time in a regional development and business incubator organization, which had a central role in supporting regional business development activities. The background organization gave added credibility and trust to the relations between innovation broker, user innovators and companies. User innovators were recruited using regional newspaper advertisements. Altogether 50 of 74 applicants were selected as "Members of the BrainNet", who made work and concealment contracts.

The first case (abbr. C1) is a consumer product oriented games and entertainment company. It has an own production facility, and sales are direct internet sales and through vendors. A mass customization concept is applied: the main design of products is generated by the consumers themselves.

Innovation brokering was initiated by creating a personal contact to the client CEO, when IB presented the concept of citizen innovation process. As being a pilot project, the costs to client were set to minimal level. IB outlined a draft plan, which was used in a more detailed client contract. The plan included client needs, background information about whole assignment, proceeding of assignment and specific questions to innovators. The client contract, which was finalized after two weeks of the initial plan included description of service, time schedule, funding plan and before mentioned assignment plan.

The assignments were e-mailed to the innovators. All the innovators didn't understand assignments correctly, so IB had to give advices via phone and email. Innovators had 2 weeks time to buy the product, give their insights about it and the web pages of the client. After 4 weeks from the start, almost everybody had the product, which was to be tested and all assignment questions to be answered. Innovators had to give a 2 pages report after 5 weeks from having the emailed assignment. Innovators had all their expenses covered, all had a small reward from the report, and the best innovator received a 500 € bonus.

IB collected and made synthesis of all innovator reports to the client. The client had concrete ideas focused quite straight on the needs, which were stated in collaboration with IB. The problem was that there were too many good ideas, and the client was asking IB to give support for the next phase of implementation and follow-up. The support for follow-up was not possible for the IB, so the case was closed to the synthesis report of IB.

The second case (C2) is a consumer oriented jewellery artisan firm, which also has its own production capability. It uses www for selling products directly to customers, but the main source of revenue comes of repairs for jewellery vendors. The consumer products are unique items.

Innovation brokering was started by a personal contact with the client CEO, who was attending the business incubation program. From the business incubation program was discovered the need for a citizen innovation process. The costs to the client were included in incubation program costs. The IB outlined a draft plan, which was used in a more detailed client contract. The plan included client needs for developing marketing of jewellery and services, and proceeding of assignment. The client contract, which was finalized in two weeks from the initial plan included description of the service, a time schedule, funding plan and detailed assignment plan.

	<b>Phases of the idea generation (IG) process</b>			
<b>Determinants of communicative influence</b>	<b>Strategy</b>	<b>Planning</b>	<b>Community building</b>	<b>Assignments</b>
<b>Relationship scope</b>	1-1, IB and Client	1-1, IB, Client	1-n., IB, Innovators	1-n., IB and Innovators
<b>Change expectations</b>	IB wasn't sure what to expect to rise from the strategy as themes	The work plan was developed by IB, so it was unclear at first	Amount of committed innovators was always a surprise	Not all innovators understood the assignments correctly
<b>Positioning in time</b>	Delayed reward in the whole process perspective	Delayed reward of expectation of phase transition	Delayed reward of amount of innovators	No reward for IB
<b>Value proposition</b>	IB will bring new ideas aligned with strategy, profit for all	IB has got a clear and efficient plan to get the ideas	Monetary and thematic reward. Coercive measures via NDA's.	Intrinsic reward through interest.
<b>Transparency</b>	The aims of IB were openly discussed.	The work plan was open for critique.	The idea generation process was partly only disclosed	The assignments were dictated to innovators
<b>Domain</b>	Lingual, related to profit	Lingual	Lingual	Lingual
<b>Boundary objects</b>	Semibinding, spoken, textual and formal	Binding, formal, textual	Semibinding, formal, textual	Semibinding, formal, textual
<b>Complexity</b>	Complexity was in transforming the vague needs of company to concrete development themes via creating mutually accepted conceptions	Revenue comes via successful IG-process, complexity within the process	Complexity of reward (intrinsic, monetary, product) and coercion (NDA) optimization	Complexity of making universally understandable tasks and questions
	<b>Phases of the idea generation (IG) process</b>			
<b>Determinants of the communicative influence</b>	<b>Processing</b>	<b>Analysis</b>	<b>Approval</b>	<b>Conclusion</b>
<b>Relationship scope</b>	1, Innovators	1, IB	1-1, IB and Client	1-1-n., IB, Client, Innovators
<b>Change expectations</b>	The format for the answers was not followed by all	The format of the report was developed by IB, analysis was unclear at first	One case wasn't approved at first, which was surprise	Conclusions were what was expected
<b>Positioning in time</b>	No reward for IB	Instant intrinsic reward through interest of analysis.	Approval was direct reward	Profit was direct reward, invention was direct intrinsic
<b>Value proposition</b>	Intrinsic reward through interest.	Intrinsic reward through interest.	Emphasize the utility aspect of ideas to company	Ritual of reward giving and fame via media publicity
<b>Transparency</b>	Hidden process	Hidden analysis	Report was open to critique	Dictated, not open for innovators
<b>Domain</b>	Lingual and material	Lingual	Lingual	Material and lingual: money, fame and products
<b>Boundary objects</b>	No contracts	No contracts	Spoken, contract revision	Spoken, contract revision
<b>Complexity</b>	No dialogue	Complexity of compression of the qualitative text	Complexity of getting mutual understanding about the benefits of the idea results.	Complexity of the selection of the material for presentations to the media

**Table 2. (previous page) Summary of idea generation process cases from the innovation broker perspective in the analysis frame of communicative influence determinants**

The assignments were e-mailed to the innovators. They were given two weeks to answer to the assignment/questions. All received a small reward from the report, and the best innovator received 300 € worth of jewellery.

The IB created a synthesis of the innovator reports to the client. The client was unsatisfied with the idea of new jewellery and the IB proposed to make a second round for more innovative models of jewellery.

The innovators had one week time to make new ideas and after that IB presented results from the second round. The client was then satisfied enough to close the case and make the payment for the IB and innovators. The support for follow-up implementation to practise was possible through the incubation program.

The third case company (C3) provides visibility for various client brands via internet-games. It sells directly to business clients, based on direct contacts. It procures the internet-technology from suppliers. Consumers are game players, and the brand visibility product is congruent for all the clients.

With the third case, the IB/researcher was no more with the regional development organisation, but at the university. The user innovators were recruited through selected university sororities, by email, presentation occasions, face-to-face meetings, posters and leaflets. Around 50 student innovators were on the mailing list.

During the meeting with the client CEO and IB needs of the client were discussed and put to a draft plan, including a time schedule. The client contract and the IPR-contract between innovators and the client were finalized in four weeks from the initial plan. It included a description of the service, a time schedule, a waive clause, rewards to innovators, IB and client cost calculation, a funding plan, and a detailed assignment plan.

An e-mail about the assignment was sent to the innovators. A web based tailored discussion forum was used as the database for assignment and answers. Innovators had 2 weeks to answer to assignment/questions. Three best innovators were encouraged to share a 300 € reward.

From the 50 innovators just 4 replied. 3 innovators actually sent their development ideas, which were collaboratively contemplated by IB and the client. The client was not satisfied with the result, wishing for more practical and refined ideas. A second round of questions was issued, but no new ideas were produced.

The case remains open. The failure of the ideation process might have to do with the small amount of innovators, insufficient rewards, or minor interest towards the assignment substance.

**7. Using communicative influence model to analyze the C-integrated innovation process**

We base our analysis on the data collected from the innovation broker. Data from the three cases were summarized in four action cycle categories (in Table 1). The summary description helped the innovation broker to keep in mind what happened in each phase and case. He was able to answer questions, based on communicative influence categories presented in the chapter 4, such as: considering each phase, which actors were present; what were the surprise elements; were there any instant or delayed rewards; were there any formal contracts considering each phase etc.

The summary of cases includes only the idea generation process phase of the C-integrated innovation process. Based on this summary of each sub-phase of the IG-process, the IB reflected his views according to categories of communicative influence (Table 2).

**8. Discussion**

As mentioned in chapter 3, according to Leadbeater [4], companies can work more effectively with user-innovators by following six rules: 1. Identify groups of lead users who are most likely to innovate and find ways to work with them, 2. Remove barriers to user-innovation, 3. Provide user-innovators with incentives to innovate, 4. Provide easy-to-use tools, information and skills to start innovating, 5. Create settings in which new ideas and prototypes can be tested, and 6. Create supporting communities in which user-innovators can share ideas. We will now compare how Leadbeater's rules came true in our cases.

The first rule could not be followed. The possibility to seek out the lead users in the start-up company case, when there are few or none users yet at all, is almost impossible. Finding the potential lead users might be possible by comparing with similar product or service providers and their users. The phase of community building should take in to account the seeking and catching the lead or power users and simultaneously use other means for other user profiling and segmentation. The rich variety of marketing methodology may prove useful in community building.

Leadbeater's second rule aims for easy user contributions, transparency and openness. In our cases, the access was restricted and defined beforehand. The

transparency of the whole process was not very good, and the work done by individuals was not shared. The development of these elements may prove to make a difference. The openness depends on the attitude of the client. If the client hesitates to open the processes, it means the mediator either have to get client convinced towards using more open approach or/and make compromises with assignment plan. So Leadbeater's second rule is related to each phase of the IG-process and is similar to transparency-category in our framework. One may say that this rule could not be followed very well.

But the third rule was applied in our cases. Different incentives were used, but maybe the most important ones, the intrinsic incentives, which may grow from true user interest and openness were not applied as well as they might have been. The value proposition category in our framework describes the types of incentives and coercive measures used. The experimentation with different incentives in each process phase may prove more efficient and give better results to the whole process. The role of coercive measures may prove harmful to the innovation process, because in our cases some innovators were afraid to join in because of coercive measures in the NDA-contract. Certain incentives may prove a subvention to some coercive measures.

The fourth rule concerns the facilitation of the individual innovator or innovator teams by tools and training to creativity. This rule did not apply fully, and it holds a great potential. The cognitive processing tools, designing tools, experimentation tools, web-based collaboration tools and the training to their usage may prove most efficient at the process of innovation. Nevertheless, the power of an individual's undisturbed imagination and idea generation capability is considerable. So in the light of our cases, it is possible to acquire great ideas, giving simple tasks for innovators who are not connected to each other and who are not trained for the case.

What comes to the fifth rule, in our cases, we left the role of testing of ideas and prototypes to the companies involved. This is related to the tools and environments of design, mentioned in the former paragraph.

The sixth rule is related to the third and first rule, where the openness and community creation are present. In our last and ongoing case, we tried to develop an innovator community. The conditions set by the client restricted the process to a small target group. They were given access to a web-based collaboration environment, where open discussion was possible, but we did not encourage them especially to share ideas. What we did in fact, was that we encouraged them by setting incentives to idea competition. So the

contradiction between sharing and competition may prove harmful in certain cases.

Implications to further studies are numerous. We will continue by conducting a longitudinal process study using a multiple case study research strategy. We will interview stakeholders, such as managers, brokers and consumers during 2007-2009. The cases will vary from Finnish start-ups to large international companies.

We would also like to develop our framework of analysis, determinants of communicative influence to a more simplified form. It would make the process more understandable and easier to develop via experimentation of variation of the elements. The material from the client and innovator perspective would give more understanding about the IG-process. The experimentations with further cases would give more insight about the nature of the whole C-integrated innovation process. Case material and analysis of the other main phases (product, system or service development, testing and piloting and distribution) is also in our aim. The C-Integrated innovation process model should also be developed to a more systemic form by adding the technological infrastructure development trajectories, as from our perspective innovations could be best understood grounding on dynamics between systemic value networks, technology trajectories, and consumers as collaboration partners.

## 9. References

- [1] Törrö, M. Global Intellectual Capital Brokering: Facilitating the Emergence of Innovations through Network Mediation, VTT Publications 631: Espoo, FIN, 2007.
- [2] R. Adams, J. Bessant, and R. Phelps, "Innovation management measurement: A review", *International Journal of Management Review*, Vol. 8, 2006.
- [3] A. Hargadon, and R. Sutton, "Technology Brokering and Innovation in a Product Development Firm", *Administrative Science Quarterly*, Vol. 42, 1997.
- [4] Chesbrough H., W. Vanhaverbeke, and J. West, (Eds.) *Open Innovation: Researching a New Paradigm*, Oxford University Press: Oxford, UK, 2006.
- [3] Von Hippel E., *Democratizing Innovation*, Mass: MIT Press. Cambridge, 2005.
- [4] Leadbeater C., *The User Innovation Revolution*, The National Consumer Council, London, 2006.
- [5] Seybold P., *A Coordinated Game Plan for Business and IT Execs to Spur Outside Innovation. Five Initiatives to Support Customer Innovation*, Patricia Seybold Group, Boston, 2007.

- [6] M. Ahonen, and K. Lietsala, Managing Service Ideas and Suggestions – Information Systems in Innovation Brokering, Proceedings in Tekes Haas Conference of Service Innovation, Berkeley, 2007 (to be published) [www.tekes.fi/berkeleyinnovation/program.htm](http://www.tekes.fi/berkeleyinnovation/program.htm).
- [7] Marsden, P.V. Brokerage behavior in restricted exchange networks. In: Marsden, P.V. & Lin, N. (Eds.). Social Structure and Network Analysis. Sage, Beverly Hills, CA.1982.
- [8] M. Sawhney, E. Prandelli and G. Verona, “The power of innomediation”, MIT Sloan Management Review, Vol. 44, 2003.
- [9] A.H. Van de Ven and M. S. Poole, “Explaining Development and Change in Organizations”, Academy of Management Review, Vol. 20, 1995.
- [10] MacMillan, I., Strategy Formulation: Political Concepts. West Publishing Co., 1980.
- [11] McQuail, D., McQuail’s Mass Communication Theory. Sage Publications Ltd., 2005.
- [12] Cartwright D. and A. Zander (Eds.). Group dynamics, Harper and Row, New York, 1960.
- [13] French, J. P. R. Jr. and Raven, B, The bases of social power. In: D. Cartwright and A. Zander (eds.), Group dynamics. New York: Harper and Row: 607-623, 1960.
- [14] J.E. Swiss, “A Framework for Assessing Incentives in Results-Based Management”, Public Administration Review, Vol. 65, 2005.
- [15] G. Bornstein, “Trust between individuals and groups: groups are less trusting than individuals but just as trustworthy.”, Papers on strategic interaction, Jena, Max Planck Inst. for Research into Economic Systems, Strategic Interaction Group, 2005.
- [16] K.U. Koskinen, “Metaphoric boundary objects as coordinating mechanisms in the knowledge sharing of innovation processes”, European Journal of Innovation Management, Vol. 8, 2005.
- [17] D.E.M. Sappington, “Incentives in Principal-Agent Relationships”, The Journal of Economic Perspectives, Vol. 5, 1991.