INNOVATION

THROUGH COMMUNITY CO-CREATION

- An exploratory study of how to use communities for co-creating innovations

MASTER'S THESIS BY

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Executive Summary

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Title: Innovation through Community Co-Creation: an exploratory study of how to use communities for co-creating innovations

Keywords: Community Co-Creation, User Innovation through communities, User Innovation, Co-Creation

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Background: With the spread of the Internet, consumers are getting more informed and are getting access to an almost global supply of consumer goods. This has created an interest for User Innovation in an attempt to ensure that future products will satisfy the increasingly picky customers of today. Traditional User Innovation is, however, limited by the number of users who can be involved, and the creative freedom that can be granted to the users.

Purpose: To explore how consumer goods companies can include online communities in the innovation process to actively co-create new products with users.

Method: This exploratory thesis is based on netnographic case studies of two very different consumer goods providers; Quirky and LEGO Cuusoo. The case studies are supplemented by both user and expert interviews conducted in a semi-structured manner.

Conclusions: Community Co-Creation (CCC) has been found to be significantly different from other User Innovation methods in terms of how, when, and where the users are involved in the innovation process. The main benefits of CCC are that both reach and richness can be achieved, and that the user-stimulus can be from company prompts, but also community inspiration or external, usage-situated stimuli.

The goal of Community Co-Creation and innovation at large will depend on the environment of the company and thus, any CCC strategy will have to be adjusted hereto. The thesis discusses various market and competition factors and how they can be accommodated in a CCC strategy.

Recommendations: The hypothesis developed in this thesis is that a deliberate multiphase process structure will enable companies to focus on the user input needed in each innovation phase. Through deliberate phase formatting it will be possible to get the right type of user input. In order to further assist phase formatting, this thesis presents three types of CCC that should be used as a starting point for the design of Community Co-Creation phase formats, in accordance with the aforementioned process structure.

Suggestion for further research: Being exploratory, this thesis combines analogous theories and empirical findings into hypotheses; we encourage that these hypotheses are challenged. Furthermore, both the scale and the scope of CCC should be expanded by further research.

1. Introduction

The market and businesses have undergone a transformation in the past decade. A transformation that in many ways is the result of digitalization and the Internet, which has brought enhanced connectivity, and has made it easier, and more cost efficient to communicate with customers. Customers are more informed and competent, and are increasingly aware of what they buy, and what they consume. In their search for information they are less isolated and more interconnected, and willing to share their experiences and skills with others (Borhini & Carù, 2008).

It has long been assumed that companies develop new products for consumers, while consumers are passive recipients, merely buying and consuming what producers create. Hence, the responsibility of coming up with new product ideas has lain in the hands of engineers, marketers and designers. However, in recent years more and more success stories of user innovation have come about. This has caught the interest of many researchers, and their research has shown that the traditional innovation paradigm is fundamentally flawed; consumers themselves can be a major source of product innovation (Pötz & Schreier 2009; Jeppesen & Frederiksen 2006; Hippel 2005).

Recently, scholars in strategy and marketing have focused on collaboration with customers to co-create value (Prahalad & Ramaswamy, 2004; Thomke & von Hippel, 2002). According to the notion of co-creation, if a user is involved in the production of a good or service, the end value is enhanced because the customer can shape the product that he/she desires, both individually and through networks with experts and other customers. Thanks largely to the Internet, consumers have been increasingly engaging themselves in an active and explicit dialogue with manufacturers of products and services. Consumers now initiate the dialogue *"they have moved out of the audience and on to the stage"* (Prahalad & Ramaswamy, 2000). Research shows that consumers' involvement in co-creation is significantly larger on the Internet than in real life (Have, 2008). This means that the potential of personal value-creation for both parties through interaction and dialogue is there.

Furthermore, the lower cost of using online communication between firm-to-user and user-to-user, has caused firms to increasingly adopt online initiatives for purposes such as supporting product use (Jeppesen & Frederiksen 2006), collecting feedback and ideas (Williams & Cothrel 2000) and building brands (Muniz & O'Guinn 2001). The technologies that make this interaction possible are referred to as Web 2.0 and have become an increasingly significant part of the strategy of firms.

These two aspects: 1) that the market and consumers have changed to a focus on co-creation of value, and 2) that the Internet and social media have brought enhanced connectivity and participation by users, have been the catalyst for this thesis to gain a better understanding of how these two components can act together and facilitate one another.

1.1 Problem Field

The Internet and Web 2.0 enhance the ability of firms to engage customers in collaborative innovation in several ways. They help firms transform one-way customer interaction into a persistent dialogue. Through the creation of e.g. virtual communities, firms are now allowed to tap into the social dimension of customer knowledge shared among groups of customers with common interests. This dialogue can allow firms to improve the fit between their offerings and customer needs by importing knowledge from leading-edge customers into the firm (Von Hippel, 1986). The Internet allows the firm to overcome the trade-off between richness and reach because it is interactive in nature (Evans & Wurster, 1999). In the physical world communicating rich information requires some personal interaction and actual physical proximity with customers. These constraints naturally limit the number of customers with whom the firm can have a dialogue with. When in virtual environments, these customer interactions can happen in real-time and with much higher frequency.

This means that the focus is shifting away from tangibles and toward intangibles, such as skills, information and knowledge, and towards interactivity, connectivity and on-going relationships. The orientation has shifted from the producer to the consumer. The academic focus is shifting from the *product* being exchanged to the *process* of exchange. Science has moved from a focus on mechanics towards dynamics, evolutionary development, and the emergence of complex adaptive systems (McCarthy, Tsinopoulos, Allen, & Rose-Anderssen, 2006). The appropriate unit of exchange is no longer the static tangible good. This change in focus requires new ways of acting. As concluded by Cunha and Gomes (2003), "*new* [business] *landscapes require new product innovation models"*. This thesis will explore how the new business landscape of web 2.0 can, should and will change the product innovation models by combining cutting edge theory with cases of early movers within the field of co-creation through communities.

1.2 Problem Statement

Based on the problem field outlined in section 1.1 above, the following problem statement that will guide this thesis has been outlined:

How can consumer goods companies include online communities in the innovation process to actively co-create new products with users?

To best explore our problem statement we have formulated the following sub questions:

- What characterizes co-creation through online communities?
- What are the benefits of using online communities for product innovation?
- What are the risks of using online communities for product innovation?
- How do you motivate people to participate in the communities?
- How does the company secure the best input from community members?
- How does the innovation environment affect the use of communities for product innovation?

1.3 Delimitations & Limitations

In this section we will describe the fields of study that it has been necessary to delimit our research from. Furthermore, the limitations that we have encountered during our research will be explained, and the implications hereof will be outlined.

1.3.1 Delimiting the Scope of Research

In order to gain sufficient depth in our answer of the research question it has been necessary to delimit the scope of the research to a limited part of the innovation process. Hence, this thesis will not touch upon what we term the ’operations’ part of the innovation process and how this should be handled when using co-creation communities for innovation purposes. The focus area of this thesis is the blue area of figure 1, and hence the ‘idea development’ part of the process.

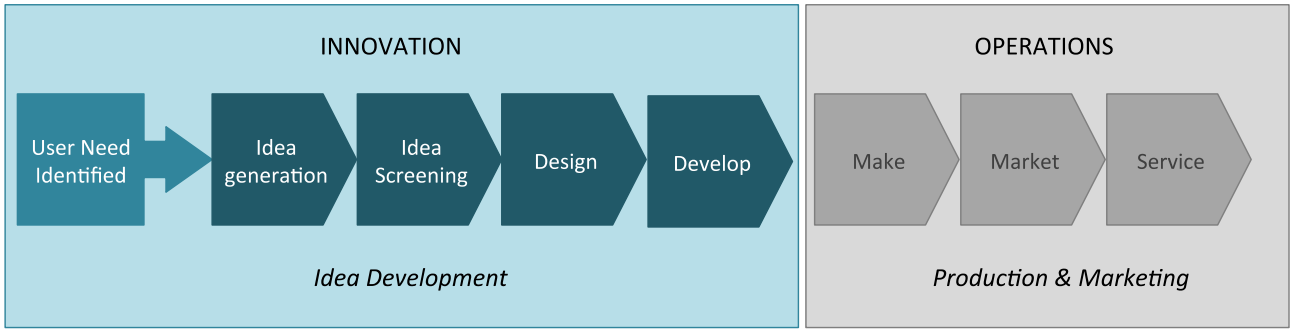

Figure 1 - Scope of Research

Furthermore, this thesis is delimited from looking into how organizations should structure themselves to best cope and succeed with co-creation in communities; hence recommendations put forward in this thesis are centred around how to work and succeed with the community as a platform for idea generation and evaluation.

1.3.2 Theoretical Limitations

The area that this thesis is exploring is very new and very little literature exists within the field of co-creation with communities, and innovation on social platforms. Hence, it has been necessary to compile, and analyse, existing theory within *related* fields and topics and apply this to our empirical findings to answer the research question. This means that some of the theory is based on another situation or environment and this needs to be taken into consideration when applying the theory. Careful consideration and evaluation have been taken into account, when looking through previous theories and material within related fields.

1.3.3 Empirical Delimitations and Limitations

This thesis will focus on one type of user innovation through communities, which we term Community Co-Creation (CCC). Hence, we delimitate our research from other types of innovation communities that practice what we define as Community Crowdsourcing.

The empirical foundation of this thesis is two cases, which are both depicted as best practice within Community Co-Creation in the scarce research on the area. It can be argued that the generalizability of the findings of this thesis would increase by including more case examples, but the scope of this thesis has not allowed for including more cases. Neither has the goal been to provide final, generalizable findings, but merely to produce input for the use, and future research, of Community Co-Creation. Furthermore, it has proved difficult to get commitment from the needed resources of the cases. This has meant that in some instances we have had to settle for other employees or users from each case, than would ideally have been our first choice.

There are some limitations to our empirical data set, since it has not been possible to get insights from the users of the LEGO Cuusoo community. Furthermore, we have been limited in collecting primary data from the users of the Quirky community, since access to their contact information is only possible if they follow our profile on Quirky.com. Hence, it has not been possible to select participants among the entire community.

Due to the internationality of our case choices it has not been possible to carry out our interviews face to face. This fact will change the nature of the interviews and hence the answers that come out of it. We have taken this shortcoming into account from the beginning and have been aware of the consequences throughout our work. To the extent possible, the interviews have been carried out via Skype, giving the closest face-to-face replacement possible. Some of the interview participants have not been willing to carry out the interviews over Skype; in these cases we have valued their input over cancelling the interview and have instead carried out the interview in textual form, either via chat or email.

1.4 Clarification of Concepts

1.4.1 Web 2.0

Web 2.0 is a term that describes web applications that facilitate *interactive* information sharing, interoperability, user-centred design and collaboration on the Internet.

1.4.2 Social Media

The term social media denotes highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content.

1.4.3 Community

The term community refers to a social unit that shares common values. This is not restricted to a physical location, but can be any kind of gathering, online and offline.

1.4.4 Consumer Products

Consumer Products are physical, tangible goods made for consumers in a B2C relation. The fact that it is Consumer *Products* also infers an innovation of product, as opposed to service-innovation, or innovation undertaken to strengthen the brand value.

1.4.5 Active Co-Creation

Active co-creation, as opposed to passive co-creation, means that the user-involvement goes beyond listening to the users' existing discussions on social media and engages the users in an intended co-creation.

1.4.6 Community Co-Creation

Community Co-Creation is a term developed in this thesis to label co-creation undertaken in the setting of a community of co-creators. The abbreviation CCC, used in this thesis, will refer to the term and not the setting.

3. Thesis Structure

Below, the structure of the thesis is presented, and how each of the sections will contribute to answering the research question.

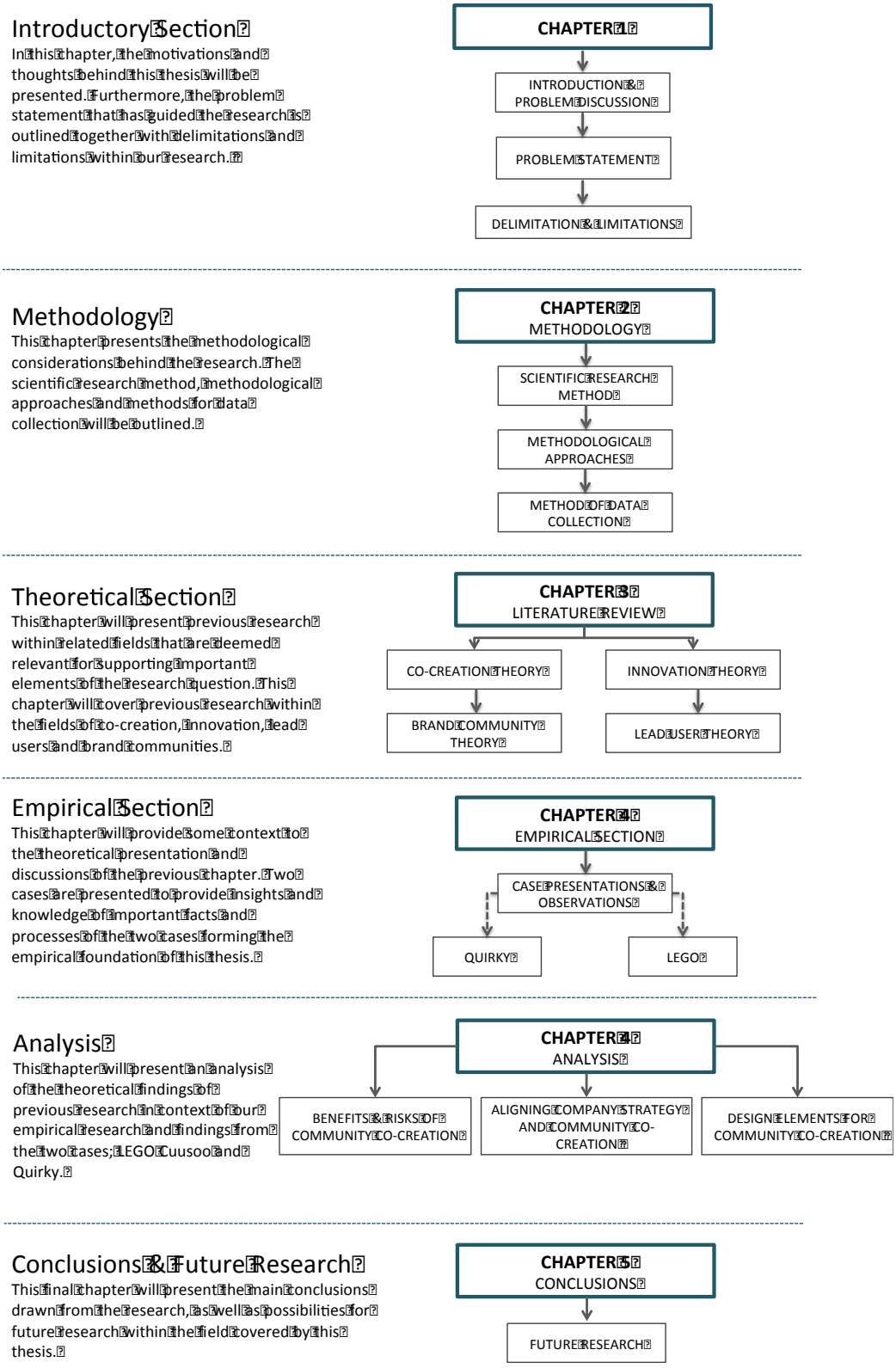

Figure 2 - Thesis Structure

4. Scientific Method

In this chapter the framework and methods used to conduct the research and analysis will be presented. Our choice of research methodology and methods of data collection and analysis will be outlined. The chapter will conclude with thoughts on reflexivity and validity.

4.1 Theoretical Approach and Choice of Theory

The theoretical approach of this study is the approach proposed by (Eriksson & Kovalainen (2008) with an emphasis on the *social nature of all scientific activity*. Rather than using an approach that emphasizes the relevance of "grand theory" with a main purpose of testing, confirming and redefining theory, the chosen approach defines theory in a more flexible way, consisting of *preliminary and changing assumptions that direct the way of doing research* (ibid.). Hence, there is no need for testing theory through hypotheses because it is constantly being challenged through the iterative nature of the research process. The theory used in this thesis is from fields that help to understand, investigate and evaluate our research. It is applied to substantiate our empirical findings and to allow for a discussion and a critical view of our findings in relation to existing theory.

4.2 Scientific Research Method

The choice of scientific research method should be made according to its relevance for answering the research question, and hence the knowledge the researcher wants to obtain (Eriksson & Kovalainen, 2008). There are two approaches from which scientific conclusions can be drawn – by induction or deduction. With an inductive approach the researcher starts by examining reality by conducting empirical research and thereby proceeds to develop theoretical results from this. By following a deductive approach the researcher does the opposite and instead uses theory as the first source of knowledge to deduct hypotheses, which are then subjected to empirical study (Eriksson & Kovalainen, 2008).

One can argue, that these two approaches rarely exist in their pure form. Therefore a third approach to research has been introduced. Abduction, as the third approach, combines induction and deduction, and thus allows the researcher to move back and forth between the two approaches through the different phases of the research (Esterberg, 2002). This project is characterized by parallel work with empirical data and theory, and thus the abductive approach suits the way this project is conducted.

4.3 Research Design

Five research designs are the most prominent; experimental and related design, cross-sectional design, longitudinal design, comparative design and case study design (Bryman & Bell, 2007)

The case study design entails an intense analysis of a single case, and is concerned with the complexity and particularity of the case in question. A case can be a single community, a single school, a single person, a single event, a single organization etc. (Bryman & Bell, 2007). In order to answer our research question in the best possible manner, we have chosen to work with multiple cases, and hence apply a multiple-case study design. This approach allows us to compare and contrast our findings derived from each of the cases to provide as wholesome a conclusion as possible. According to Knights and McCabe (1997) the case study provides a vehicle through which several qualitative methods can be combined, thereby avoiding too great a reliance on one single approach.

4.4 Methodological Approach

Research may be either qualitative or quantitative; the methodological approach of this thesis is qualitative. Qualitative research tends to be concerned with words rather than numbers (as opposed to quantitative research) and emphasizes the understanding of the social world through an examination of the interpretation of that world by its participants, thus taking on a social constructivist ontological position, indicating that social properties are results of the interactions between individuals in opposition to phenomena 'out there' and separate from those involved in its construction (Bryman 2004).

Qualitative research is particularly relevant when prior insights about a phenomenon are modest, thus implying that qualitative research tends to be exploratory and flexible because of the 'unstructured' problems (Eriksson & Kovalainen, 2008).The research question of this project would be hard to answer by using quantitative methods since there is scarce information on the use of communities for innovation purposes. The qualitative method has been chosen for this thesis, since many of the qualitative approaches are concerned with interpretation and understanding. This suits the nature of our problem statement, which is of an exploratory character. Choosing to make use of qualitative research only, is opting not to supplement with quantitative research. This choice is founded in the belief that the nature of qualitative research will serve us better in the process of answering our research question and will equip us with the best research data to base our analysis on.

4.5 Method of Data Collection

In the following, the two chosen methods of empirical data collection will be described and evaluated.

4.5.1 Netnography

Answering our research question requires a deep understanding of communities, and hence requires an immersive engagement with real communities to understand and derive answers and conclusions. To do this we have chosen to use a relatively new method of data collection that fulfils these requirements; netnography. Kozinets (1998) describes netnography as:

> *"…a participant-observational research based in online fieldwork. It uses computer mediated communications as a source of data to arrive at the ethnographic understanding and representation of a cultural or communal phenomenon."*

The data collected during a netnography, as in other types of ethnography, consists of the researcher's fieldnotes about cybercultural field experiences, combined with the artefacts of the culture or community. This data will be mainly textual and can consist of e.g. downloaded files of community postings and e-mail exchanges. There may also be some picture files and sound files (Kozinets, 1998). The data from our netnographic research can be found on the enclosed CD. One of the advantages of the netnographic data over its Ethnographic counterpart is that they emerge already transcribed, and thus will not be biased from any slips in memory when the researcher works with the data to try to recall what happened only from field notes.
According to Kozinets (1998), netnography may prove useful for three general types of studies: (1) as a methodology to study pure cybercultures and virtual communities, (2) as a methodological tool to study derived cybercultures and virtual communities, and (3) as an exploratory tool to study general topics.

We have chosen this method of data collection, since it will allow us to cover the entire social context of "life on the screen", and hence provides us with the most accurate data when studying in a purely virtual community context.

Referring to common ethnographic procedures, Kozinets (2010) recommends the following methodological stages and procedures for netnographic studies:

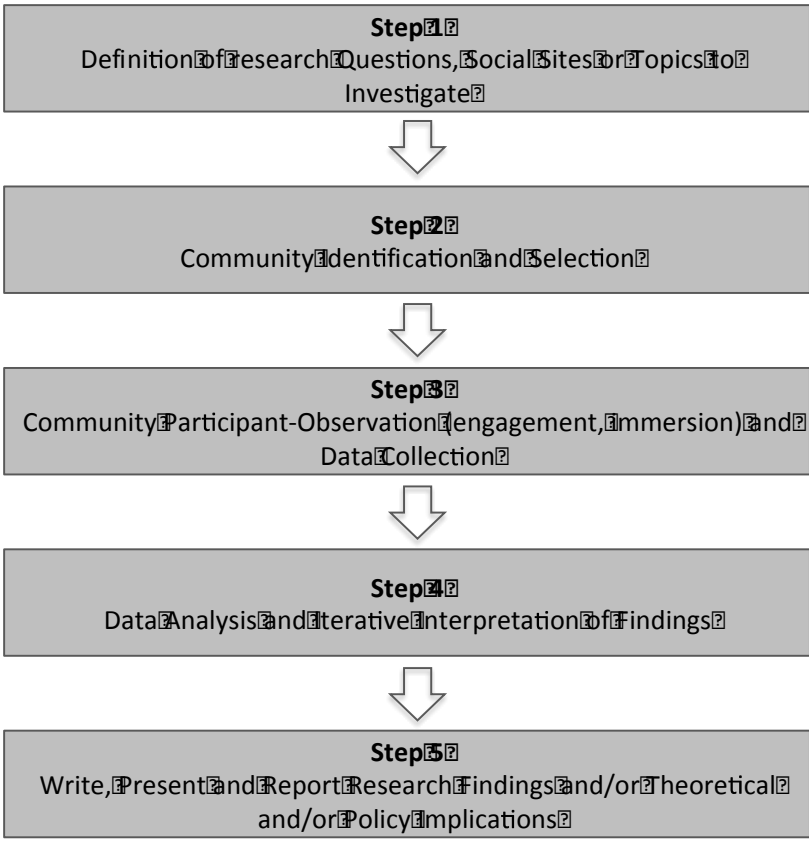

Figure 3 - Netnographic Stages

One important contrast between netnography, and the traditional etnography, is that netnography is capable of being conducted in a manner, which is entirely unobtrusive. Compared to focus groups and personal interviews, netnography is far less obtrusive, because it is conducted using observations of consumers in a context that is not fabricated by the marketing researcher.

There are some limitations to netnography that should be mentioned. One limitation is its narrow focus on online communities. Another limitation is the need for researcher interpretive skill, and the lack of informant identifiers present in the online context that leads to difficulty generalizing results to groups outside the online community sample. Marketing researchers wishing to generalize the findings of a netnography of a particular online group to other groups must therefore apply careful evaluations. One recommended way to meet this limitation is to employ multiple methods for triangulation (Kozinets, 1998).

4.5.2 Netnographic Studies

The netnographic studies were carried out on two online platforms http://www.lego.cuusoo.com and http://www.quirky.com.

4.5.2.1 Quirky

This netnography, performed to get insights into the Quirky community, was initiated the 4th of March 2012 and closed the 15th of January 2013 and entails observations of the online behaviour of members and the interaction of these in each of the phase of community engagement. Furthermore 16 projects were followed closely throughout the various phases (see the enclosed CD for more documentation).

4.5.2.2 LEGO Cuusoo

The netnographic, observational research on the LEGO Cuusoo community was initiated the 12th of October 2012 and ended the 14th of January 2013. The netnography is based on observations of the online behaviour of members across projects as well as the detailed development of 13 projects (see the enclosed CD for more documentation).

4.5.3 Interviews

Qualitative interviewing is a very broad term that describes a wide range of interviewing styles (Bryman, 2004). In qualitative interviewing there is a great interest in the interviewee's point of view, and therefore 'rambling' or going off at tangents is seen as a good thing, because it gives insights into what the interviewee sees as relevant and important. Combined with allowing the interviewer to depart from the guide set up, makes this is a flexible form of interviewing, while also providing the frame for getting rich and detailed answers (Bryman, 2004). Since most of our interviewees where from abroad and it therefore was not possible to have a personal interview, we have aimed at conducting all interviews via Skype to allow for this 'rambling' effect. Only if the interviewee insisted on making it an email interview, was this media used.

4.5.3.1 Semi-Structured Interviews

Our interviews were performed as semi-structured interviews. The semi-structured interview is one of the main types of interview in qualitative research and it entails making a list of questions or fairly specific topics to be covered in the interview, i.e. an interview guide. The interview style is very flexible and hence allows the interviewee considerable freedom in answering the questions and permits the interviewer to deviate from the order and exact wording of the questions, as well as ask additional questions beyond the interview guide (Bryman, 2004).

The flexibility of the semi-structured interview and the fact that the outcome is detailed answers motivated us to choose this type of data collection to support our Netnographic approach to data collection. The features of the semi-structured interview provide the optimal opportunities for

producing and extracting useful data from our respondents whilst still complying with our philosophical framework.

4.5.3.2 Sampling

The semi-structured interviews calls for a sampling of who to interview, and *purposive sampling* was found to be the appropriate method. Purposive sampling attempts to establish a good correspondence between research question and sampling and the researcher thus '*samples on the basis of wanting to interview people who are relevant to the research question*' (Bryman, 2004).

4.5.3.3 Interview Guides

In accordance with the (few) rules of semi-structured interviews, as well as Bryman's recommendations, we prepared four interview guides; two to be used when interviewing users from the two case communities, one to guide the Quirky community expert-interviews, and one to guide our interview with LEGO (see appendix A-D). Due to the exploratory nature of this thesis it was deemed beneficial to continuously evolve the interview-guide throughout the research phase. This limits the scale of the latest questions but broadens the scope of the combined research considerably.

The interview guides consist of an introduction, grand-tour questions, planned and floating prompts, and biographical questions. Grand-tour questions are formulated in a general and nondirective manner and are the primary questions posed in the interview. The planned prompts encourage the participant to discuss things that are not self-evident. Floating prompts is a different technique; allowing the researcher to remain unobtrusive and encourage the participant to elaborate on the subject (McCracken, 1990).

As we used both Skype and email interviews the prompts used will differ between these media. Floating prompts in the email interviews were made by inserting unused bullet points, whereas in the oral interviews it was possible to make more subtle prompts.

Firstly, we started by asking ourselves what we needed to know to answer our research question, and guided by these questions we deducted research themes. Secondly, we translated these themes into interview questions in 'normal' spoken language, eliminating academic language. We used short formulations to trigger the interviewer to formulate the questions in accordance to the context and language of the respondents. Thirdly, we sorted the questions into an order that provided a natural 'flow' and added questions to cope with probable answers as well as introductory 'face sheet' information (ibid.) or 'personal information' about the person being interviewed. Finally, we

checked the interview guide for leading questions. The same process was used for both interview guides, only differing in taking the background of the respondent into consideration when formulation the relevant questions.

4.5.3.4 Interview Descriptions

We have carried out 13 interviews with different people that were deemed capable of providing valuable input to our research. A short background description of the people we have interviewed will be provided in the following.

Claus Nørgård Hansen – Associate marketing manager at LEGO

Claus Nørgård Hansen is working with front end in LEGO. He is primarily working with innovations within, what LEGO calls, ”Playthemes”, which includes products such as Ninjago, City and Starwars. Claus has experience with innovating through use of communities for LEGO, and use communities extensively for innovation purposes. However, Claus has never been involved with the LEGO Cuusoo.

Chris Howard – Quirky Pro Member

Chris Howard is a Pro Member in the Quirky community, and has been a member since the 4th of July 2012. Chris has been a competitive cyclist, since the age of 10, and mainly submits innovations within this field as well as hardware tools. Chris has submitted 17 ideas to Quirky of which one has made it to production.

Peter A. Wachtel – Quirky Member

Peter A. Wachtel has been a member of Quirky since the 24th of October 2010. He has submitted three ideas to the community of which two has been produced, and is now on sale in the Quirky shop.

Nathaniel Padgett and Paula Rosenberg – Quirky Community Experts

Nathaniel Padgett is Community Manager and leader of the Community Support Team within Quirky. Paula Rosenberg is Invention Ambassador, and works with the inventors and ideas in the first stage of the Quirky process, and in the transition between subsequent stages. Paula has previously been part of the Community Support Team.

Rick Wielens – CEO of Ninesigma Europe

Rick Wielens is CEO of Ninesigma, a company that seeks to provide an effective means for broadcasting corporate needs to potential solution providers through their community “Ninesights”

that let organizations seek solutions (and providers) to a challenge they are facing. Through Ninesights they are sourcing the crowd to come up with solutions.

Quirky Users

Eight Quirky users with different background, seniority, and activity on Quirky. The Quirky users have between one month and one year of seniority in the community and have posted between one and 23 ideas to the community.

4.5.3.5 Transcription

We chose to transcribe all our interviews in full length since they serve as the basis of our analysis (see appendix E-J). By transcribing, the conversation is transferred from spoken into written word and this process is important in a methodological sense, since there are many ways to transcribe. When transcribing, the first interpretation of the spoken word takes place and this should be taken into account, since any transcription from one context to another involves a set of assessments and decisions influenced by the person doing the transcribing (Kvale, 1997). We have thus sought to reproduce the interviews as correctly and neutrally as possible. Transcribing hence has a constructive nature, which in turn is important to consider when evaluating the results and validity of the data. The interpretive nature of transcription should not be ignored and we as researchers have thus been a part of constructing what later is to be analysed.

4.6 Reliability and Validity in Qualitative Research

Qualitative researchers have adopted slightly different assessment criteria for qualitative studies in comparison to reliability and validity used for assessing quantitative research. We will apply four criteria for assessing whether our research is trustworthy. These four criteria are: credibility, transferability, dependability and confirmability, where the first two factors relate to validity and the latter two refer to respectively reliability and objectivity (Bryman, 2004).

4.6.1 Credibility

Credibility can be increased by means of respondent validation, which means that you affirm the definitive interpretation with the interviewees to ensure that answers have been interpreted correctly (Bryman, 2004). We have sought to accommodate this recommendation by letting our interviewees read through the transcripts of the interviews and thereby giving them the opportunity to provide feedback.

4.6.2 Transferability

A qualitative research can be more difficult to repeat as opposed to quantitative research (Bryman, 2004), and therefore, researchers can and should focus on depth rather than width. Thereby, an outsider can judge to which extent the results are transferrable to another situation. We have chosen to put our focus on getting an understanding on a deeper level by focusing on two cases within similar industries.

4.6.3 Dependability

Dependability is an investigative approach where the researcher can make use of colleagues, which then acts as scrutinizing auditors (Bryman, 2004). We have been guided by our supervisor to work out as thorough a project as possible as well as having discussed the research method and findings with many other researchers.

4.6.4 Confirmability

It is impossible to achieve complete objectivity in social research (Bryman, 2004) and as our study is of a small kind and limited in applicability this is something we have had in mind when analyzing the results of our research. To achieve the best possible and most objective result, we went into this project with open minds and were well aware of our own bias to be able to let the respondents fill our, as well as the area's knowledge gap in the best possible way.

One important bias that has to be taken into consideration is our personal interest in using communities for co-creation and possibly a minor initial bias towards the Danish co-creation community, LEGO Cuusoo over the American case; Quirky. The most important step for managing these biases is to acknowledge their existence.

5. Literature Review

Co-creation through communities is a very new method for innovation and as such no direct theory discussing the topic has been found. This section will thus have to collect relevant, analogous theories that can be combined to provide a theoretical frame for the analysis of the case studies.

5.1 A New Dominant Market Logic

There has been a shift in the market from a goods-dominant logic (G-D logic) to a service-dominant logic (S-D logic) (Vargo & Lusch, 2004). The value creation of these two logics is central and varies in significant ways. Generally, one can speak of two different ways of thinking about value; ‘value-in-exchange’ and ‘value-in-use (Vargo, Maglio, & Akaka, 2008). Value-in-exchange is the

traditional view from the goods-dominant-logic. In the G-D logic, value is created (manufactured) by the firm and distributed in the market, usually through exchange of goods and money. From this perspective the roles of 'producers' and 'consumers' are distinct, and value creation is often thought of as a series of activities performed by the firm. Furthermore, in the G-D logic, communication with customers did not take place before the end of the value chain, since value was created solely by the company. This communication was characterized by monological uttering to the customer rather than dialogical interaction (Varey & Ballantyne, 2006).

S-D logic framework for value co-creation fundamentally shifts the underlying focus of value creation away from the firm's output and 'value-in-exchange'. It focuses on 'value-in-use' and 'value-in-context', meaning that while value determined by exchange still remains an important component in the co-creation of value it should not be the main focus. To illustrate the difference the value according to the S-D logic when buying a car is derived as the customer uses it (in transportation, self-identity, etc.) and integrates it with other resources. The car itself is only an input into the value creation. If no one knew how to drive, had access to fuel and maintenance, and functioned in social networks for which particular cars had particular meanings, etc., then the car would have no value.

According to Vargo & Lusch (2004) it is possible for value-in-use to exist without value-in-exchange, but when the need to access resources from others arises, so does the need for value-in-exchange. In other words, value-in-exchange is required for value creation once the resources needed cannot be attained naturally, such as breathing fresh air versus needing an oxygen tank. One can say, that the process of co-creating value is driven by value-in-use, but mediated and monitored by value-in-exchange (Vargo et al., 2008).

5.2 Co-Creation

As an effect of this change in the market from a Goods-dominant view to a more Service-dominant view, and hence a change in value creation from value-in-exchange to value-in-use, it has become vital for organizations to understand, and work with, *co-creation* (Have, 2008; Prahalad & Ramaswamy, 2000). According to the notion of co-creation, if a user is involved in the production of a good or service, the end value is enhanced because the customer can shape the product that he/she desires, both individually and through networks with experts and other customers (Lusch, Vargo, & O'Brien, 2007). Thanks largely to the internet; consumers have been increasingly engaging themselves in an active and explicit dialogue with manufacturers of products and services. Consumers now initiate the dialogue as *"they have moved out of the audience and on to the stage"*

(Prahalad & Ramaswamy, 2000). To provide personalized experiences, companies must create opportunities for customers to experiment with, and then decide the level of involvement they want in creating a given experience. Since the level of customer engagement cannot be predetermined, it is crucial to allow for as much choice and flexibility as possible – this holds for both the channels of communication and in the design of experiences (Prahalad & Ramaswamy, 2000). The possibilities that globalization and digitalization have brought about making the customer more informed, changes their roles in the marketplace. This change means that the dialogue is a dialogue of equals, and thus research has shown that internet companies have proven best at adapting to this new dialogue, partly because the internet has done the most to increase the customer's power as an interlocutor (Prahalad & Ramaswamy, 2000). One of the most important aspects of modern product development and marketing is that the role of the customer has changed, as Prahalad and Ramaswamy (2004) states, "*It begins by recognizing that the role of the consumer in the industrial system has changed from isolated to connected, from unaware to informed, from passive to active*".

According to Prahalad and Ramaswamy this role has changed in five significant ways:

Information Access

Customers today can make more informed decisions than ever. They have unprecedented amounts of information available at their fingertips, and are able to challenge and argue with companies. For companies accustomed to restricting the flow of information to customers, this shift is radical. Millions of networked consumers are now collectively challenging the traditions of all types of industries.

Global View

The knowledge of costumers and the information they can find on firms, products, technologies, performance, prices, etc. is no longer restricted to locality. Costumers are global and can access information and products easily on the other side of the globe, significantly changing the rules of business competition, and making it harder for multinational firms to vary the price or quality of products from one location to another.

Networking

Communities, in which individuals share ideas and feelings without regard for geographic or social barriers, are revolutionizing emerging markets and transforming established ones. The power of consumer communities comes from their independence from the firm. Thus, consumer networking inverts the traditional top-down pattern of marketing communications.

Experimentation

Consumers can use the Internet to experiment with products as well as develop them. As an example, it is the collective efforts of software users across the globe that has enabled the development of the Linux operating system.

Activism

Consumers are to a larger extent using the Internet to provide unsolicited feedback to companies and each other using their network to learn and make informed decisions.

All these changes means that companies can no longer act autonomously when, designing products, developing production processes, crafting marketing messages, and controlling sales channels with little or no interference from consumers. Consumers now seek to exercise their influence in every part of the business system. Armed with new tools and dissatisfied with available choices, consumers want to interact with firms and thereby co-create value.

Prahalad & Ramaswany (2004) emphasize the importance of dialogue as a crucial building block for establishing interaction with consumers. They define dialogues as interactivity, deep engagement and a mutual propensity to act. For a true dialogue to happen the issue must be of interest to both parties of the conversation (e.g. company and customer). It furthermore requires a forum in which the dialogue can occur and a set of rules of engagement to secure productive interaction (Prahalad & Ramaswamy 2004). There are many ways in which interactions can be initiated, and both the company and the customer can be the initiator. The dialogue can be between company-customer, company and a community of customers or only between customers. Thus, dialogue is not limited to listening to and being listened to by customers – shared learning of some kind must be the outcome (Varey & Ballantyne, 2006).

5.2.1 Co-creation vs. Mass Customization

Co-creation and customization appears to be two very similar concepts. However, there is an important difference between the two that lies in the involvement of the customer. In general, the customer plays a more active role in co-creation compared to customization.

Mass customization processes are built to suit the company's supply chain, and thus solves the production problem of satisfying each customer uniquely (Thomke & Hippel, 2002); i.e. how to inexpensively manufacture customized products. Due to production limitations mass customization is by definition narrowed in scope, which significantly reduces the newness and attractiveness of what is created. Thus, in customization, the customers remain an operand resource with a role that

is usually restricted to the end of the innovation phase and involves making suggestions for incremental changes to an almost complete prototype. In this case, the customer is usually cast in the reactive role of responding to questions being posed by the manufacturer.

In contrast, co-creation is more about seeing the customer as an active collaborator right from the beginning of the innovation process. The customer is an operant resource, mainly in the sense of skills and knowledge that is utilized in the co-creation process for the extraction of increased value for both the consumer and the company (Vargo & Lusch, 2004). In the process of co-creating value the customer may suggest innovative ideas for the company's forthcoming products, or share consumption experiences with the company that inspires to change the current processes or product portfolio (Kristensson, Matthing, & Johansson, 2008).

Whether in the form of value, experiences, user innovation etc., co-creation is largely an open-ended process with no predefined point of arrival, like that of customization. Co-creation is a process that seeks to provide services better suited to consumer's unique desires and preferences (Prahalad & Ramaswamy, 2004), to create stronger relations with these to increase brand value (Fournier, 1998). Customization is ultimately the solution to a supply chain issue related to servicing multiple customers simultaneously at the lowest cost. Consequently mass customization cannot be characterized as co-creation or user innovation, and it is necessary to make a distinction between these (Prahalad & Ramaswamy 2004; Thomke & von Hippel 2002).

5.2.2 Co-creation vs. Crowdsourcing

Another type of activity that could be compared to co-creation is Crowdsourcing. Crowdsourcing means literally to outsource an activity to a crowd (Sawhney and Prandelli, 2000). According to Pénin & Burger-Helmchen (2011), crowdsourcing relies on two elements: an open call and a crowd. In the case of crowdsourcing the firm does not rely on a single supplier or on a small number of suppliers, but launches an open call to an (in principle) unlimited crowd. This open dimension is central. It means that everybody can answer the call. Participation is not only limited to individuals, also firms, non-profit organizations or communities of individuals can participate if they want to and are able to organize themselves accordingly. It is the open dimension that makes it possible for the 'crowd' to participate (Pénin & Burger-Helmchen, 2011).

Although the structure of the call and of the reward varies according to the firm and the activity, crowdsourcing always follows the following main lines; (1) the organisation identifies an activity that it does not want to perform internally, (2) instead of outsourcing it to a predefined supplier, it

posts a call on an internet platform (e.g. its website), (3) it fixes the terms for the participation of the crowd (agenda, reward, etc.) (Pénin & Burger-Helmchen, 2011).

Co-creation, on the other hand, denotes an active, creative and social collaboration process between producers and consumers, facilitated by the company (F. Piller, Ihl, Vossen, & Aachen, 2011)**.**

As such, crowdsourcing can not be classified as co-creation in that it does not fulfil the richness and depth that characterizes co-creation. However, in theory, crowdsourcing could become co-creation if further interaction and collaboration is built with part of the crowd from one the initial ideas provided. One could state that there can be co-creation without crowdsourcing but there cannot be crowdsourcing without elements of co-creation.

5.3 Heterogeneity of Customer Needs

Involving customers in co-creation ultimately serves to satisfy customer needs (Thomke & Hippel, 2002). A central question when discussing co-creation and user-innovation is, why customers are interested in participating in the first place? Part of the answer to this question is to be found in the heterogeneity of customer needs (Von Hippel, 2005). Customers are rarely a homogenous group with identical needs and to be competitive companies need to realize this. According to Prahalad and Krishnan (2008) understanding that each customer is unique and in effect its own market is crucial to survive in today's market. The individual is the center of the experience. The value creation has moved from products and services to experiences, and thus what constitutes value must be unique for each individual. Digitalization of business processes and the establishment of well informed customers with almost unlimited access to information, means that it is vital for organizations to move on from mass customization, and to a larger extent involve the customers actively in co-creating a value offer that is unique to the customer (Prahalad & Krishnan, 2008). However, to satisfy all the differing needs of a company's customers perfectly, the company would be required to offer a very broad variety of products each serving a market too small to be cost-efficient (von Hippel, 2005). When users' needs are heterogeneous, the strategy of 'a few sizes fit all' will leave many users dissatisfied with the commercial products on offer. Franke and von Hippel (2003) found that users in general had a very high heterogeneity of need, and that many had a high willingness to pay to get precisely what they wanted. Nineteen percent of the users sampled even innovated to tailor the product more closely to their needs, and those who did were found to be significantly more satisfied. Not surprisingly then, studies have found that reliable and timely knowledge about customer needs and requirements is the single most important area of information necessary for product development. To obtain such data, companies have often made heavy

investments, that are often not successful, in traditional market research (Ogawa & Piller, 2006).

5.4 Reducing Risks

Companies are striving more than ever to meet these heterogeneous customer needs, by developing and producing exactly what the customers want. But because of the heterogeneity and the customers' quickly changing preferences this has become almost impossible to attain. Studies have shown, that newly launched products are suffering from notoriously high failure rates, often reaching 50% or greater, not because of technical shortcomings, but because they simply have no market (Ogawa & Piller, 2006). An alternative to traditional market research that has proven successful in meeting this challenge is to integrate the customers into the innovation process by e.g. soliciting new product concepts from them and pursuing the most popular ideas, by e.g. asking for commitments from customers to purchase the new product before actually commencing the final development and manufacturing stage. This overall process is what Piller and Ogawa (2006) calls for 'collective customer commitment' and can help to avoid costly product failure. This model of taking preorders before production starts is hardly a new way of doing business. In real estate new projects will often only start when a given number of buyers have shown their willingness to purchase a unit. According to Piller and Ogawa (2006), the use of collective customer commitment can be particularly effective for two types of situations; 1) to test really innovative products for which little customer experience exists and thus market research is fuzzy, and 2) developing products for relatively small and very heterogeneous market segments.

5.5 Open Innovation

A branch of co-creation that takes a more direct and tangible approach to collaborating with customers is *open innovation* (Chesbrough, 2003). In the past, internal R&D was how new products were created, and what competitive advantage depended upon. The model of closed innovation was seen as the self-evident 'right way' to bring new ideas to market and to protect and control IP's (Chesbrough, 2003). Towards the end of the 20th century the model of new product development (NPD) was starting to change, and become a model of open innovation, where the boundaries of the firm became more porous. The internet as a medium has enabled companies to interact with customers in a more frequent, personal and intense way with a higher richness of information, to an audience bigger in size and scope (Sahwney et al. 2005). These characteristics make the Internet an optimal tool for companies to utilize open innovation, and to interact with customers on co-creation issues, e.g. product development.

5.5.1 User innovation

User innovation is part of the concept of open innovation, and has become a source of competitive advantage, and a number of empirical studies on the sources of innovation in the fields of industrials, as well as consumer goods, have shown that users rather than manufacturers were often the initial developers of products that later gained commercial significance (Jeppesen & Frederiksen, 2006; Thomke & Hippel, 2002; von Hippel, 2005). User Innovation focuses on utilizing customers as operant resources and collaborating with them to help modify and enhance existing products or developing and designing new products (or services)(Vargo & Lusch, 2004).

Due to the market changes that have resulted in the necessity of seeing each customer as an individual market (Prahalad & Krishnan, 2008), and hence a need for companies to be able to cater for very individual consumer needs, outsourcing part of the innovation process to customers is an optimal way of assuring satisfied customers in the future (Thomke & Hippel, 2002). The obvious benefits from user innovation within a market, where each individual is a market in its own, is that the actual users of the products possess the largest knowledge base about current product benefits and deficiencies, and future ways to improve products.

Involving users as co-creators during NPD produces ideas that are more creative, more highly valued by customers, and more easily applied to the market (Kristensson et al., 2008). Furthermore, research has even shown, that especially co-creation with lead users leads to products that perform several times better than in-house generated products (Lilien, Morrison, Searls, Sonnack, & von Hippel, 2002). The contributions of users in such collaborations can be of both *need-based information* as well as *solution-based information* to the design of new products (Hippel, 1978). Empirical research has shown how the use of user contributions can increase sales potential. A study of new product development at 3M indicated that product concepts jointly developed by selected lead users, collaborating with in-house personnel, showed a sales potential which was eight times higher than traditionally developed 3M concepts (Hippel, Thomke, & Sonnack, 1999; Lilien, Morrison, Searls, Sonnack, & von Hippel, 2002).

There are different ways to integrate external problem solvers into a firm's new product development activities. One initiative is to use crowdsourcing, where parts of the innovation process are outsourced to the "crowd" (a potentially large and unknown population). Whereas other methods involve an active company-initiated search for specific types of users with the most promising ideas (e.g. lead user method), crowdsourcing is reliant on a self-selection process among users willing and able to respond to a broadcast from the company, e.g. a competition (F. T. Piller

& Walcher, 2006). In addition to fostering ideas and information on NPD, self-selection approaches can also contribute to identifying promising lead users and subsequently to the development of commercially attractive products (Hienerth, Pötz, & Hippel, 2007).

There are many aspects influencing the ability of users to come up with promising ideas. The underlying industry and/or product category will have a significant influence, since the knowledge necessary to generate new product ideas may vary. If the knowledge necessary to generate new product ideas in a given industry/product category is complex and/or costly, users might be less likely to engage or succeed in developing their own ideas. If, on the other hand, the knowledge necessary is less complex and closely linked to aspects of use experience, users might be more successful (Poetz & Schreier, 2009).

5.6 Lead User Theory

Research on sources of innovation shows, that particularly lead users are capable of coming up with truly novel product concepts, that are commercially attractive and provides great value to the market (Hippel, 1986; Franke & Shah, 2003; Hippel, 2005). According to lead user theory, the lead userness of a person is defined as (1) his/her leading position on an important market trend and (2) his/her level of expected benefit from an innovation.

Product concepts developed from lead user ideas show, on average, an over eight times higher sales potential than traditionally developed concepts and are more likely to generate breakthroughs (Lilien, Morrison, Searls, Sonnack, & Hippel, 2002). Research on lead user theory shows, that users that are ahead of an important market trend by facing needs today that the rest of the market will only experience in the future, and users that expect high benefit from the innovation that addresses their advanced needs, are likely to come up with particularly attractive innovations. Since lead users are at the leading edge of the market with respect to important market trends, many of the novel products that they develop for their own use will appeal to other users too and are hence judged to be commercially attractive (Von Hippel, 2005). The two defining characteristics of lead users and the likelihood that they will develop new or modified products have been found to be highly correlated. In figure 4, the correlation between “lead-user-ness” and attractiveness of innovations is displayed, clearly indicating, that the closer users are to being lead users, the more attractive ideas they generate.

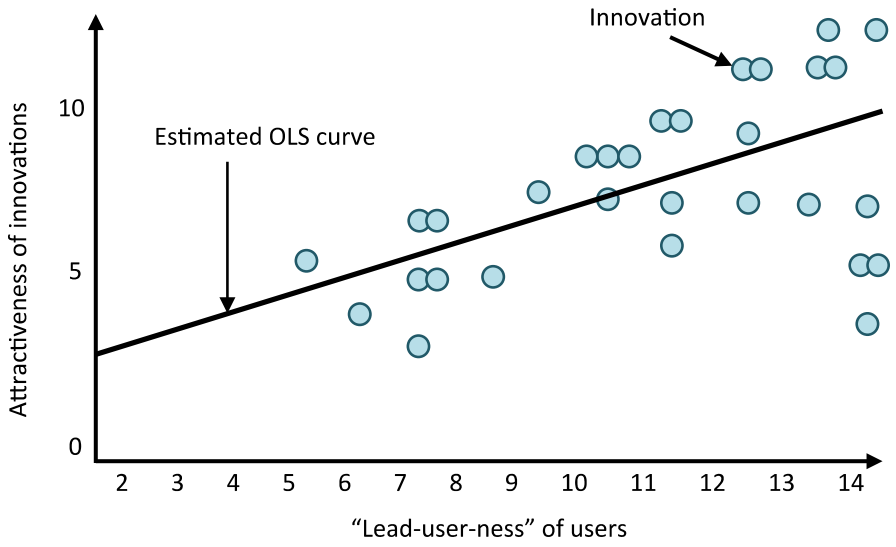

Figure 4 - Lead-User-Ness and innovation, Source: von Hippel (2005)

Also Seybold (2006) have, through 25 years of study identified, that the people who will contribute the most to customer co-creation sessions are (1) lead customers; the small percentage of current customers who are truly innovative, and (2) lead users; a group of both customers and non-customers who are passionate about getting certain things accomplished. They may not know or care about the products or services offered, but they do care about the project or need. Lead users have already explored innovative ways of getting things done, and are willing to share these approaches with others.

Lead users can be from both *target markets* and *analogous markets*. Hienerth, Pötz and von Hippel (2007) have undertaken a study of lead user workshops. Their findings showed that *market origin* has proven to have significant influence on the novelty of developed concepts. Thus giving evidence to *analogous market effects;* lead users from analogous markets contribute to concepts that are more novel than lead users from target markets. Analogous markets are linked to the target market by sharing a similar need or facing the same trend, e.g. the antilock braking system for cars was originally developed in the aircraft industry and then transferred to the automobile market. Both markets were linked together by sharing the strong need for braking quickly and safely. Because lead users from analogous markets are less likely to be blocked by existing solutions and often are able to transfer existing solutions of their market to solve the target market´s problem, it is plausible that they come up with even more innovative solutions (Hienerth et al., 2007; von Hippel, 1986). Another parameter they found of significant influence was the *source of benefit*; whether the

lead user mainly benefits from using or selling the innovation. They found that users benefitting from using an innovation contribute significantly better to the generation of novel products.

Research in these fields shows that some firms are realizing, that the sources of innovation can be modified or shifted to accommodate these changes in the market. This shift can for example be done through offering an open system, or through providing free innovation equipment, such as toolkits for user innovation, that open up the solution space to users (Franke & Piller, 2004), or through creating online channels (e.g. a community) that can serve as a mean to creating an open system and potentially be used as a method to identify lead users (Hienerth et al., 2007).

5.6.1 Lead Users and Social Media

The introduction of social media may influence the lead user phenomenon within several dimensions. First, it could enhance collaboration among autonomous lead users due to informational gains and easier feedback from others. Furthermore, social media enables lead users to easily find likeminded others who may have a piece of complementary information that is required to solve an innovation problem.

Social media can also have an effect for firms searching for lead users. Professional social networks like LinkedIn or blogs provide perfect starting points for firms searching for lead users with specific characteristics, a process that in earlier times required a lot of time and research (Churchill *et al.* 2009).

The introduction of social media could also have negative consequences. In the relationship between customers and firms, the availability of social media could increase the likelihood of customers to become entrepreneurial, since it helps them lower the market entry barriers, which are often a reason for them to give their idea to a professional firm (Harhoff *et al.* 2003). By using social media, lead users can more easily take on tasks like marketing and distribution and perhaps allowing them to skip co-creation activities with certain firms and to become entrepreneurs themselves and profiting from selling their innovation themselves. (F. Piller & Vossen, 2012)

5.7 Innovation

Innovation is a term often used and as many other buzzwords it runs the risk of losing its original meaning, thus a working definition is needed before discussing the ways to manage innovation.

The term stems from the Latin *innovare* meaning ”to make something new”. At the outset it was, thus, focused on *the process* of making something new. The *process* encompasses (but is not

restricted to) the idea generation, design, manufacturing and marketing of new (or improved) products (Tidd & Bessant, 2009).

Very broadly defined, one can say that innovation occurs due to a tension between current reality – the way things are – and a vision – what we would like to achieve. To satisfy customer needs firms must be innovative, but to be innovative organizations need to read the minds of their customers. Since it is not possible to read the minds of each and every customer in the market, innovation brings about a lot of uncertainties for the firm. To reduce these uncertainties, firms need to access and transfer different types of information In a generic framework, this information can be divided into two groups (F. Piller et al., 2011):

1. **Need information**: The firm needs information about the customer and market needs. This includes information about preferences, needs, desires, satisfaction, motives, etc. of the customers and users of a new product or new service offering. Better access to this kind of information increases the effectiveness of the innovation activities, and reduces the risk of failure.
2. **Solution information**: The firm also needs information on (technological) solution possibilities. This includes information about how best to apply a technology to transform customer needs into new products and services. Access to this kind of information primarily addresses the efficiency of the innovation process. The more complex and radical an innovation is, the larger the need to access solution information from different domains.

All innovations are characterized by both types of knowledge, but their relative proportions will vary. Furthermore, need and solution information can be located physically in different places, which are often external to the firm's innovation process. It is necessary to transfer at least a certain amount of each type of information, since successful innovation requires a combination of the two (F. Piller et al., 2011). The output product (or service, or production method etc.) does not have to be radically new in order for the process to be termed innovation, but it does have to get implemented, meaning that a complete innovation process by default has an output of some sort. This output can be more or less successful which will be discussed below.

5.7.1 Innovation Output Parameters

Traditionally the product development performance is measured on the commercial success of the innovation (Emmanuelides, 1993). The commercial success is possibly the most relevant indicator but it is a result of many factors – some inside the control-sphere of the company and some outside. When wanting to improve innovation capabilities the factors inside the control-sphere becomes the

natural staring point and thus it is useful to discuss some of the elements that can be combined to a commercial success indicator. The importance of each of the elements will vary depending on the innovation environment, which will significantly affect how the innovation process is most effectively managed.

5.7.1.1 Development Time

Development time is here defined as the total time it takes to move an idea to a marketable product. It is an extremely important factor in many cases and under certain conditions (Emmanuelides, 1993).

Fast changing technology and consumer taste will result in an obsolete product at launch date if the development time is too long. Also the development time of competitors affects the importance of this factor. If competitors are fast developers and the market favours first movers or fast second movers, then a short time from idea (or opportunity identification) to product launch is vital.

Some markets change rapidly either in consumer taste, competition, as an effect of legislation etc. Many of the same factors that make development time important also stress the importance of robustness to uncertainty, for which a fast development time can be a solution.

5.7.1.2 Design Quality

The NPD process is the basis for most of the factors later affecting the customers' perception of quality. Design quality is here defined as including the quality dimensions of aesthetics, product reliability, ease of use, and the features build into the product. The word design thus refers to the fact that the NPD process develops (designs) the quality levels which the manufacturing function then later have the responsibility of achieving a high conformance quality of. The design quality also encompasses how well the design is suited for achieving high conformance quality, which might vary significantly (Emmanuelides, 1993).

Design quality is important in all NPD environments as a driver of long term financial performance (Emmanuelides, 1993) and thus it will be an important innovation parameter in all environments, but as with anything the degree of importance will be different from e.g. a pharmaceutical company to a discount clothing company.

5.7.1.3 Development Effectiveness

Development effectiveness is the parameter describing how well a company utilizes resources in the innovation process i.e. a resources per innovation parameter. If a company achieves significantly higher development effectiveness than competitors it will enjoy some obvious cost savings

(Emmanuelides, 1993). Potentially more important are the *strategic advantages* of high development effectiveness which will increase the economic feasibility of new projects and hence in turn allow the company to innovate more both in scope and scale i.e. variety and volume.

5.7.1.4 Originality

The degree of originality in the product outcome is also an important parameter for how the product will perform in the market. Unlike the three above it is not safe to conclude that more originality is always preferable, as it depends on the innovation environment. The reasons for including originality as a parameter for the innovation output anyway is that in most cases it will be possible to determine the objective before the start of the project. Thus it should be used for optimizing the innovation process. Emmanuelides (1993) does not include originality as a performance parameter for innovation project outcomes, but it will be included here to assist the discussion of the different innovation models.

5.8 Management of Innovation

Innovation is reckoned to be a fundamental factor for the long-term success of a company, but as touched upon earlier; innovation means different things to different people, and companies will have different environments and drivers of innovation. This has led to different approaches to managing innovation. One major differencing factor is the degree of control over the innovation process exercised by the management. A spectrum from complete order to complete disorder can be made, but to enable generalizing, researchers have created a limited number of innovation approaches from sequential (order) to improvisation (disorder) (Cunha & Gomes, 2003).

These are further simplified into two schools of thought; one school that believes that it is possible to control the innovation process in steps and phases and another, younger, school that assumes that innovation is a learning process and that a set-in-stone innovation design cannot be decided upon ahead of time. The school of thought assuming control is called Traditional (Iansiti, 1995) or the Linear Perspective (Christiansen & Varnes, 2008) and the more complex is called Flexible (Iansiti, 1995) or the Network Process Perspective (Christiansen & Varnes, 2008).

These simplifications are very useful when wanting to contrast a stable environment innovation process with what is generally agreed to be the growing complexity of the present and future environment for most innovation processes. However, these simplifications do lose some important nuances regarding the management assumptions, innovation goals (Cunha & Gomes, 2003), and the micro-level innovation micro-processes (McCarthy et al., 2006). This is why the following section will discuss a range of innovation process models and the cases of applicability.

5.8.1 Linear Perspective

Some of the first literature on systematized innovation processes was published in 1957 in Harvard Business Review by Johnson and Jones. In this the authors suggested a sequential process for innovation with decision points and phases much like the, now, very popular Stage-Gate Process depicted below.

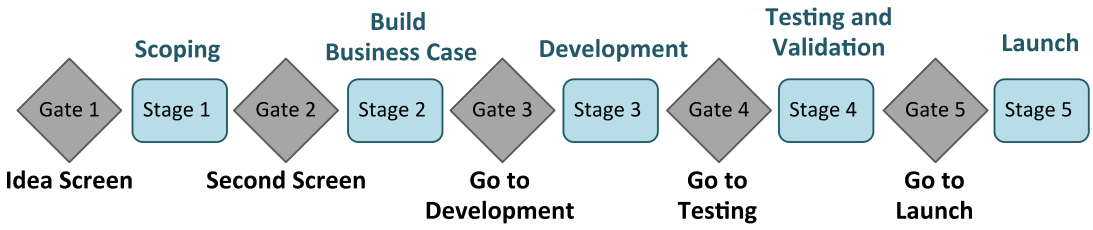

Figure 5 - the Stage-Gate Process (D. R. Cooper & Edgett, 2012)

The standardized process as well as the review points enables top-level managers to gain an overview of how the projects are progressing on important parameters such as time, direction, and costs. The Stage-Gate Process also (at least creates the perception that it) reduces risks by forcing a gradual resource allocation so that sunk costs will be manageable if a project is discontinued.

Figure 5 starts with an idea screening gate, meaning that an idea generation phase is preceding this model. The approaches within this model varies as to whether this phase is included in the linear model, or if it exists outside the model as a fundamental prelude. This essentially shows whether the idea generation "phase" is considered sequential and controllable, or if more manoeuvrability is considered to be needed hereto.

The sequential model is applicable when an incremental innovation is sought rather than a radical innovation. The approach does not encourage lateral information sharing (Emmanuelides, 1993) leading to innovation practices, which favours incremental thinking and thus incremental innovations (R. G. Cooper, Edgett, & Kleinschmidt, 1999). At the same time the model is based on an assumption that it is possible to plan the process ahead of time, and this will be more likely for an incremental innovation process (Cunha & Gomes, 2003).

One of the dangers of the sequential approach is that the rigidness of the process will enable faster competitors to get first mover advantage by simply launching their solution earlier. Another critique is that the model does not lend itself well to knowledge sharing and creation. The separate stages are function-focused and thus mainly *explicit* knowledge is transferred to the next stage. One

assumption for this model is that explicit knowledge transfer is sufficient for product innovation (Cunha & Gomes, 2003).

5.8.1.1 An Adjustable Sequential Model

The risk of losing the first-to-market race depends on the industry. First of all the likelihood will vary greatly from e.g. a new version of word processing system (Microsoft Office) to the smartphone industry. In the latter case the oligopolists struggle to move the launch date even a few days ahead so that they will be able to steal the media attention from the competitors. The example also shows that the likelihood is correlated with a second factor affecting the pressure on the innovation model; namely the impact of being first to market.

Combined with a shorter span of product lifecycles experienced in many industries this calls for an accelerated sequential model. *The Compression Model* answers this call by suggesting parallel processing of some of the processes as well as removing all unnecessary tasks. The Compression Model still operates under the assumption that the innovation process can be carefully planned beforehand, and thus, has the same assumption of "ability to plan" as the Linear Model, meaning that it is mostly applicable for incremental innovations. The rigidity of the previous model is however addressed by this model making it applicable for high-speed routine tasks (Cunha & Gomes, 2003). However, it could be argued that the Compression Model encourages even less collaboration than the Linear Model as the stages start before the other is done, thus not allowing for building upon late, explicit, learning points from the previous stage. Thus, the Compression Model is mostly applicable for well understood, familiar, incremental innovations in fast changing markets (Cunha & Gomes, 2003).

Both of the sequential models are criticized for creating internal 'walls' meaning that R&D will create a new product idea that is handed over the wall to the engineers who turns the idea into a product and hands it over the wall to marketing who pushes the product to customers. This creates multiple points for errors and misjudgements (Jassawalla & Sashittal, 2006).

5.8.2 Network Process Perspective

In recent literature the linear perspective has been criticized for being too confining for letting the innovative creativity truly unfold. Kreiner (2002) argues that more of the creativity goes into the architectural design of the process than goes into the design of the product. He concludes that the reasoning for the linear perspective is managements' attempt to explicate knowledge, which, he argues, is a subpar approach to knowledge management for innovation. What he proposes falls into line with the approach to innovation management termed 'Network Process Perspective', which is

an unfixed innovation architecture created in a learning process alongside the new product (Christiansen & Varnes, 2008). It is important to note that the concept of Network Process Perspective does not contradict, but in fact claim to complement the linear perspective according as different conditions for innovation call for different models of innovation (Cunha & Gomes, 2003).

One of the first contributions for this school of thought was made in an attempt to answer the growing turbulence of the innovation environment caused by technological changes such as computers and telecommunication, but also market changes such as rapidly changing customer needs and competitor pressure (Iansiti, 1995). This turbulence drove Iansiti to question one of the fundamental assumptions of previous innovation models i.e. the ability to make precise and relevant plans for the future innovation processes. If the management cannot foresee the essence of future turbulence then the innovation model will have to be able to adjust, iterate, and learn.

5.8.2.1 The Flexible Model

Innovating without the comfort of have a predetermined process introduces new capabilities needed for an innovation team. It is no longer enough to be efficient within the set frame. Questioning whether the set frame should be updated and reacting effectively to newly discovered information becomes vital capabilities.

The introduction of new capabilities needed do not limit the importance of speed and efficiency – rather on the contrary. The increased market turbulence means that it is even more important to innovate fast and efficiently. The flexible innovation model suggests postponing the decision point from which changes in the product features are banned. Adjusting the product will inevitably cause iterations of processes, which takes extra time (Iansiti, 1995). One of the tools for gaining time is early prototyping, enabling the company to learn about customer reactions and real product attributes early on (Cunha & Gomes, 2003). The introduction and future spread of the 3D printing technology will make the early prototyping easier, faster, and cheaper and might be used to further accelerate the learning curve of innovation processes.

As the Flexible Model addresses the rigidity-problem of the sequential models it is applicable when little is known in advance about where the innovation-journey will end. Learning-while-doing makes up for the abandoned assumption of learning-before-doing being possible. This approach makes it suitable for environments where the changes are not only fast but also deep in the sense that they significantly change the foundations of the industry. Such changes can be incorporated after the start of the innovation process. This, however, entails one of the points of critique of the

model; as most innovation environments change constantly it will be tempting to keep adjusting the innovation and thus never completing the process (Cunha & Gomes, 2003).

5.8.2.2 The Integrative Model

A central assumption of the Integrative Model is that innovative advances are created when different areas of expertise collaborate. This means a definitive step away from the sequential models, although most authors still acknowledge the (historical) relevance.

The integrative approach proposes that the New Product Development (NPD) process is organized as a learning process including all functional areas of the company i.e. including marketing, product engineering, purchasing etc. in the NPD team (see figure 6). Having the innovation process as an interdependent, learning process also means that continual redefinitions of individual tasks are necessary (Emmanuelides, 1993). Thus the NPD process will go through multiple iterations between each decision-gate where executives meet with the NPD-team to take strategic decisions. Besides these strategic decision points everything is left to the NPD team (Cunha & Gomes, 2003).

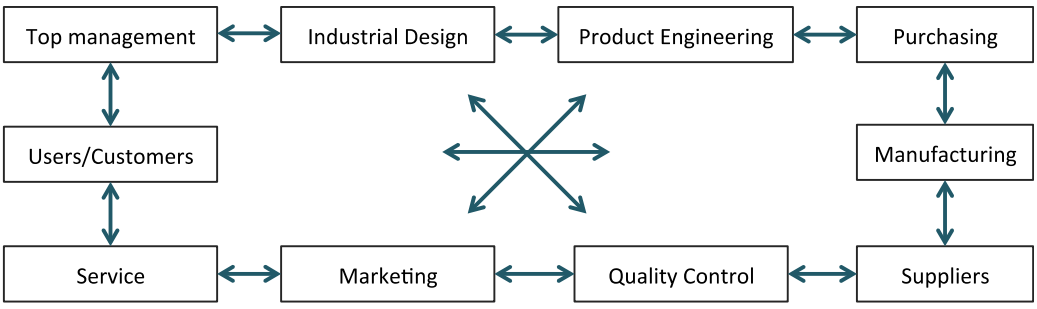

Figure 6 - The integration of functions goes well beyond linear thinking (Emmanuelides, 1993)

The resulting focus on integration of various functions into the innovation process brings with it a change in the way innovation is perceived. In the Integrative Model innovation is seen purely as a team effort and the incentive and management systems should thus be accordingly. It is relatively easy to create a team based process, but significantly harder to develop actual team work (Jassawalla & Sashittal, 2006). This increases the importance of HRM in NPD, since poor HRM will result in the team members to bring along the functional barriers (e.g. instilled by the struggle for resource allocation) to the team. The focus on the process over the functions is also a challenge for the organization as many companies are organized around functional hierarchies (Cunha & Gomes, 2003).

The integrative model is applicable in complex environments, developing rather complex products. Furthermore, studies have shown that the high differentiation in the innovation process, brought by the Integrative Model, leads to high effectiveness under uncertain conditions (Emmanuelides, 1993).

The integration of multiple functions into the innovation process will mean, that e.g. the conformance quality is likely to be significantly better, as (among others) the manufacturing department is included throughout the process. This affects the design quality positively for this model (Emmanuelides, 1993).

5.8.2.3 The Improvisational Model

"Improvisational" should not be understood as if there are no rules, or management interference at all. The improvisation unfolds within a few no-exceptions rules that guide the innovation process. This could be a one-line product mission, or a specific gap in the portfolio that needs to be filled. The rest of the planning will be undertaken continually as the innovation process unfolds.

The Improvisational model does consciously not start out trying to define the optimal product concept right away – the purpose is to gradually achieve this throughout the process. Likewise, the (ever changing) input of the various functional departments is supposed to gradually converge throughout the process. One important tool for the convergence to happen is the cross functional meetings taking place throughout the process - in the spirit of the model, as often as it is deemed beneficial. The planning will be performed in real-time along with the execution, based on the challenges that present themselves throughout the process.

The gradual approach allows for new knowledge, technologies, and ideas to be incorporated until very late in the process. This brings a constant flow of disorder into the process, which the Improvisational Model embraces, but balances it by having strict rules and clear roles.

The Improvisational Model both fosters and necessitates an ongoing balancing of order and disorder, meaning that it is applicable under uncertain conditions, but where it is still possible to make clear innovation goals (Cunha & Gomes, 2003).

5.9 Typology of Customer Co-Creation

Working with customer co-creation can be a complex task, and co-creation itself is a multifaceted phenomenon. To better understand the relationships and ties between firms and customers in the innovation process, Piller et al. (2011) has created a conceptual typology of customer co-creation. This typology is focused on strategies, which are based on a collaborative mode of participation of customers in the innovation process, facilitated and initiated by an explicit firm strategy towards open innovation.

Piller et al. (2011) propose three characteristics, that form the conceptual dimensions of a typology of possible settings for co-creation with customers:

1. *Stage in the innovation process;* this refers to the time when customer input from co-creation activities enters the new product development process; i.e. whether customer input enters early in the front end stages of the process (idea generation and concept development) or whether it enters later in the back-end (product design and testing).
2. *Degree of collaboration;* this refers to the structure of the underlying relationships in an open innovation setting; i.e. whether there is a dyadic collaboration between a firm and one customer at a time or whether there exist networks of customers who collaborate among themselves more or less independently from the firm.
3. *Degrees of freedom;* this refers to the nature of the task that has been assigned to customers; i.e. whether it is a narrow and predefined task with only a few degrees of freedom or whether it is an open and creative task for which a solution is hardly foreseeable because of many degrees of freedom.

The framework is divided into two parts, the front-end and back-end of innovation. The front-end of innovation process is concerned with two essential activities: (1) generating novel concepts and ideas, and (2) selecting specific concepts and ideas to be pursued further (figure 7).

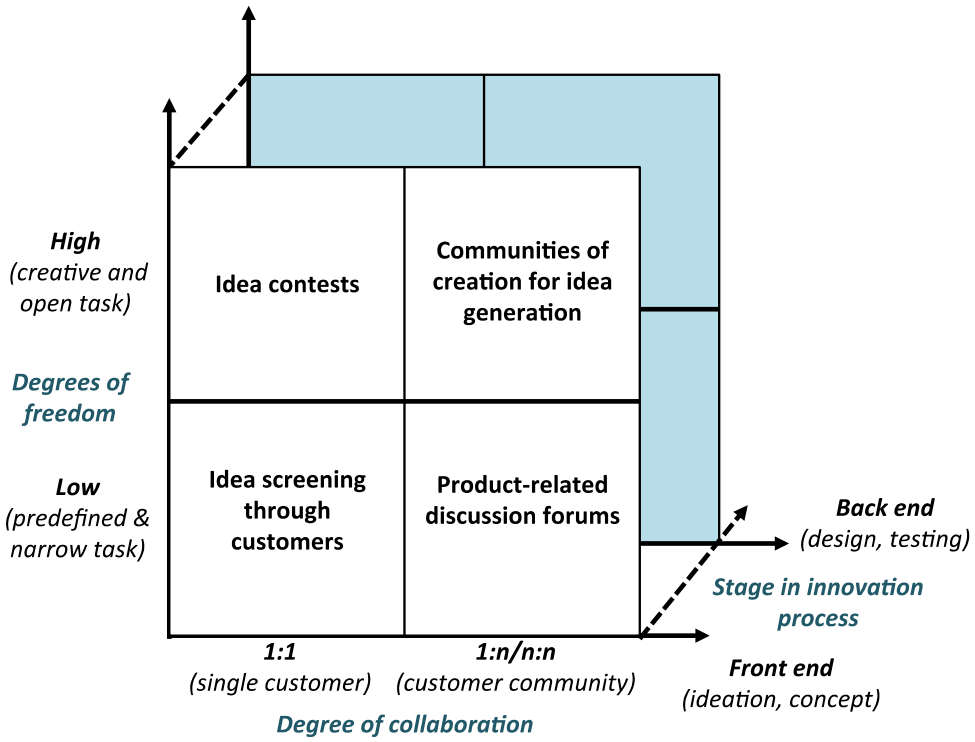

Figure 7 - Front End Co-Creation (Piller et al. 2011)

5.9.1 Dyadic Co-Creation at the Front-End

Regarding degrees of freedom the first activity mentioned, generating ideas and concepts, is a task, which is more open and creative than the second, selecting from a predefined set of ideas. Both of these tasks have been suggested to be handed over to customers by means of *idea contests;* which is a firm posting a request to a population of independent (competing) agents, e.g. customers, to submit solutions to a given task within a given timeframe (Piller and Walcher 2006) and *idea screening;* firms selecting from these ideas and identifying those with the highest potential (Toubia and Florès 2007). In both cases, the activity is carried out in a dyadic interaction between a firm and individual customers, each of them submitting and/or evaluating ideas without collaborating with other customers.

5.9.2 Community Based Co-Creation at the Front End

Customer communities have proven to be an important locus of innovation. The communities can be operating entirely independent of firms or even be dealing firms' products in an unauthorized manner. Franke and Shah (2003) found that on average one third of community members improved or even designed their own product innovations. They also found, that many of these innovations did not emerge solely from individual efforts, but were also driven to a significant extent by

collaborations with other community members. This effect also holds in customer communities that are initiated and run by firms (Jeppesen & Frederiksen, 2006).

Internet-based customer communities differ in structure and extensity of social ties and are often termed online or virtual communities, communities of interest, communities of consumption, virtual settlements or brand communities. They are mainly based upon shared interest and knowledge about specific product fields and are often virtual meeting places for users that discuss their usage experiences with certain products and ideas for new products and their improvement. Customer communities do however differ in their objective and hence their devotion to those open and creative tasks that produce novelties. Therefore, a distinction should be made between general *product-related discussion forums* on the one hand and *communities of creation* on the other hand (F. Piller et al., 2011).

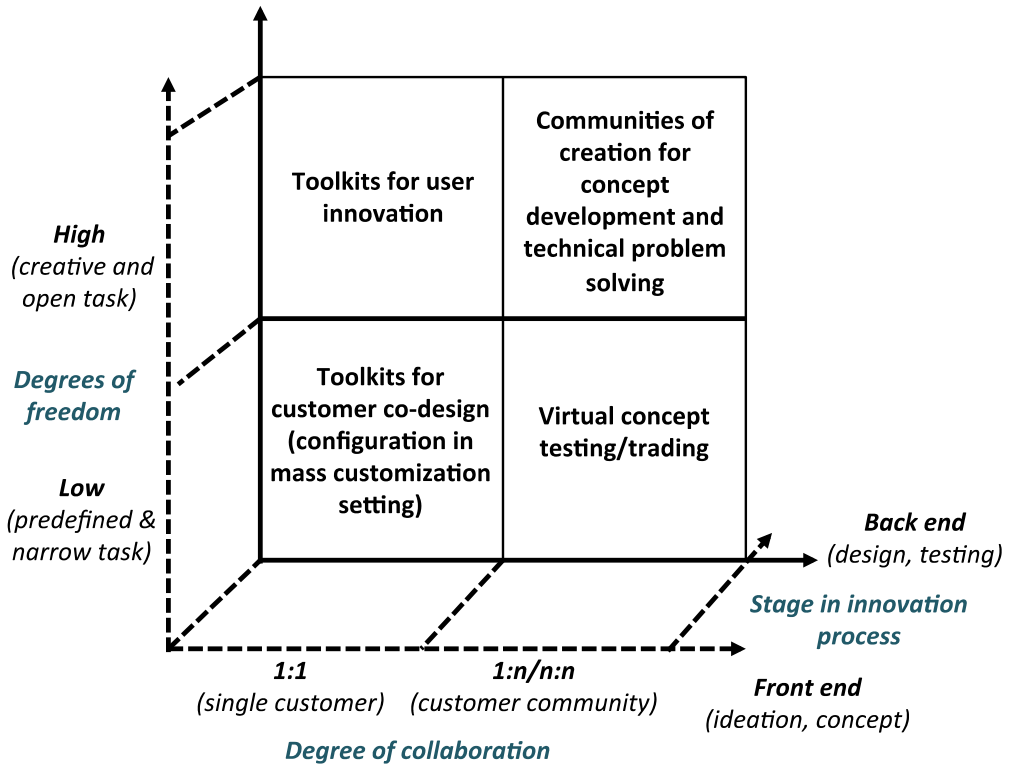

Figure 8 - Back End Co-Creation (Piller et al. 2011)

After looking at the front-end customer innovation types, the back-end innovation types can be explored (figure 8). Here, the customer inputs have to be more concrete and elaborated in order to be valuable for firms. A higher degree of elaboration often requires a more structured approach for the interaction with customers. In order to obtain an adequate solution for an innovation problem,

firms need to combine *need information* from the customer domain with their own *solution information*. Since the first solutions are not always the best, firms often repeat this process several times and evaluate possible solutions for an innovation problem in an iterative process.

5.9.3 Dyadic Co-Creation at the Back-End

The dyadic co-creation process at the back-end involves the use of toolkits. Toolkits in general are based upon the idea of handing over the trial and error process to customers (Franke & Piller, 2003, 2004). A toolkit is a development environment provided by the manufacturer that enables customers to transfer their needs into a concrete solution, often without coming into personal contact with the manufacturer.

Toolkits for user innovation are like a chemistry set, and their solution space is boundless**.** Toolkit users not only combine the manufacturer's standard modules and components to create the best possible product for themselves, but they also expend a tremendous amount of effort in experimenting through trial and error processes on new and previously unknown solutions for their needs.

On the other hand, *toolkits for customer co-design* are used for product customization and the development of variants, rather than new goods and services. Toolkits for user co-design offer users more or less a large choice of individual building blocks (modules, components, parameters), which can be configured to make a product according to the user's individual requirements.

Experience in fields where toolkits have been used shows that customers tend to prefer designing their own custom products with the aid of a toolkit instead of products that have been produced with traditional manufacturer-centric practices (F. T. Piller & Walcher, 2006).

Piller and Walcher (2006) distringuish between two types of toolkits:

1. Toolkits focused on getting access to *need information*. These toolkits facilitate the creation process by providing users with the solution capabilities of a manufacturer. They allow the users to (1) to design a novel product by trial-and-error experimentation, and (2) to receive an immediate feedback on the potential outcome of their design. These toolkits basically transfer R&D capabilities, which used to be in the hand of internal experts, to the users.

2. Toolkits focused on getting access to *solution information* and more generic innovative ideas. These toolkits do not equip users with explicit capabilities to develop a solution by

their own, but encourage them to think about a problem and to transfer an idea for a solution to the manufacturer.

5.9.4 Community Based Co-Creation at the Back-End

Collaboration among users in a community bears the potential that might allow for more complex problems to be handed over to and solved by customers. While communities of creation are often focused on the front-end activities of idea generation and concept development it often also extends to activities in the back end of the innovation process where products reach final states.

Probably the most popular movement of this kind is the development of open source software (Lakhani & Hippel, 2003) where users define problems, announce them to the community, provide solutions to problems, test and debug solutions and finally takes care of distribution and documentation. Many of today's successful computer applications, including Apache, Linux, and Firefox are open source projects that are managed by self-organizing communities of volunteer programmers (F. Piller et al., 2011).

As mentioned above, transferring and combining need and solution information is vital to solve complex innovation problems. This is, however, costly in case of information 'stickiness', which actually suggests that further division of labour among very many customers would not be a wise thing to do because of the increased costs of information transfer between actors. The stickiness of a given unit of information in a given instance is defined as "*the incremental expenditure required to transfer that unit of information to a specified locus in a form usable by a given information seeker*" (Von Hippel, 1994). When this cost is low, information stickiness is low; when it is high, stickiness is high. A number of reasons have been advanced and explored as to why information might be sticky. Some reasons have to do with the nature of the information itself, some with the amount of information that must be transferred, and some with attributes of the seekers and providers of the information (Von Hippel, 1994). Nevertheless, organizing this division of labour between networks of customers and the firm in an efficient manner is what peer production is all about. While peer production has its primary strength in the creation of products, its principles may also be applied in the test and launch stage of the innovation process (F. Piller et al., 2011).

Using the community approach to innovation in organizations for NPD should be a well thought-out part of an overall strategy that fits the organization. According to Pisano and Verganti (2008) for innovation communities to be successful a flat governance structure is required. The advantages of using this approach is that large number of solutions can be received from domains that might be

out of the realm of experience or knowledge of the organization, and usually receives a broad range of interesting ideas, but this is also the challenge of this approach since these ideas must be screened to pick out the best of a possibly large quantity of ideas (Pisano & Verganti, 2008).

5.10 Brand Communities

One type of online community that has become increasingly popular over the past decade is *'brand communities'*. The term brand community was first coined by Muñiz and O'Guinn in 1995 and has since become ever more relevant with the increase of the Internet and thus online brand communities.

Brand communities are described as "*specialized, non-geographically bound communities based on a structured set of social relationships among users of a brand*" (Muñiz & O' Guinn, 2001). The notion implies a "triadic" brand relationship between consumer and marketeer (which would be dyadic), but also between the consumer and other consumers (Heding et al., 2009).

The three markers of a community are:

- Consciousness of kind
- Shared rituals and traditions
- Communal moral responsibility

Consciousness of kind is a connection felt by members to the brand and, even more importantly, "a stronger connection toward one another" implying that "the link is more important than the thing" (Muñiz & O' Guinn, 2001). The consciousness of kind is amplified by a communal oppositional brand loyalty (Muñiz & O' Guinn, 2001).

Muñiz and O'Guinn mainly describe the sense of moral responsibility as being towards the community as a whole, and to individual members, but two factors suggest that this moral responsibility can be stretched to also include the brand and thus company. The first factor is the way the members actively recruit for the brand community, and that they, in some cases, actively develop the product behind the brand. The second factor is the triadic relationship that includes the brand and the consumer on equal terms, meaning that a sense of moral responsibility towards the community will also be likely to include the brand itself. This makes brand communities a very attractive setting for SPI. Muñiz and O'Guinn assume that brand community members are "extremely loyal and enthusiastic", but also capable of "collectively rejecting marketing actions" (Heding et al., 2009). Brand communities are thus hard to manage due to a danger of brand

hijacking by the members, who might be endowing it with a meaning not desired by marketer (Ibid).

Brand communities are already, almost per definition, being used for brand development "…*brand communities* [are] *having an active interpretive function, with brand meaning being socially negotiated rather than delivered unaltered*…." (Muñiz & O' Guinn, 2001). It is likely that some of the experiences from this type of innovation can successfully be transferred to product innovation.

In a brand community a brand manager would usually play one of two roles; observer or facilitator. In the former case, the focus is on the brand meaning, attached by consumers to the products, whereas in the latter the purpose is a facilitation of brand-related activities perceived as a valuable retention tool (Heding et al., 2009).

5.11 Motivations for Contributing

For co-creation to be successful and for collaboration and dialogue to be established it is important to consider the incentives and motivations for customers to contribute with their knowledge and resources. No universal list of motivations for customers to co-create can be put forward as every customer has specific reasons, and every type of co-creation (products, marketing communication, social experiences) as well as every type of interaction creates different values for the customer, and thus implies different underlying incentives for co-creating. However, the more motivations the company can manage to propose the more attractive and compelling the co-creation offer can be assumed to be. Keeping in mind that motivations are as versatile and unique as each individual customer, a list of some central motivations for consumers to co-create is presented. This list is by no means exhaustive as there are surely more incentives (Füller, 2006a), however we find the following to be the most relevant to discuss when building co-creation relationships with consumers.

5.11.1 Rush to Reveal

Much as scientists rush to publish in order to gain the benefits associated with being the first to have made a particular advancement, there can also be a 'rush to reveal' for innovative users (von Hippel, 2005). Furthermore, innovators often freely reveal because it is often the best or the only practical option available to them. Hiding an innovation as a trade secret is unlikely to be successful for long, since too many generally know similar things, and some holders of the "secret" information stand to lose little or nothing by freely revealing what they know.

5.11.2 Financial Incentives

Monetary rewards can serve as an incentive for people to invest their operant resources in a co-creation process (Füller, 2006b; Lerner & Tirole, 2002). This poses a change of the traditional value chain as proposed by Porter (1985), since operant resources now flow from the consumer into the organization and financial resources from inside the organization to the consumer (Humphreys & Grayson, 2008).

One could however, argue, that co-creation motivated by financial incentives is subject to the risk of a lower quality end product, since the co-creator is contributing based on a wish for financial rewards rather than an intrinsic need or motivation. If consumers participating are motivated only by financial incentives, the relationship is likely loosely tied, as any given competitor could likely acquire the consumers' operant resources simply by offering a bigger financial reward.

5.11.3 Utilitarian Need Satisfaction

The possibility of consumers having their utilitarian needs satisfied more optimally can function as motivation for consumers to co-create (Franke & Von Hippel, 2003b; Füller, 2006b). This motivation often lies in that the current offering is not fully satisfactory for the heterogeneous customer needs (Thomke & Hippel, 2002). This issue of satisfying heterogeneous customer needs has not become easier for organizations since competition has increased due a disappearance of market boundaries because of the internet, and customers therefore have more information and options than ever.

5.11.4 Peer Recognition

Another incentive for consumers to participate in co-creation processes is peer recognition (Lerner & Tirole 2002; Jeppesen & Frederiksen 2006; Füller 2006) in customers' search for recognition and opinion leadership (Mohanbir Sawhney, Verona, & Prandelli, 2005). When actively participating in co-creation, customers are satisfied by the recognition from other users. This incentive is mostly relevant when consumers co-create in communities. For peer recognition to be an actual incentive, the creation of e.g. a new product must be visible to a relevant audience (Lerner & Tirole 2002). Thus, peer recognition is especially relevant in settings where users can easily communicate innovations, e.g. online communities. In many cases, intangible incentives such as peer recognition and opinion leadership can actually fully replace and even outdo monetary rewards as incentive for co-creation (Frederiksen & Jeppesen 2006).

5.11.5 Firm Recognition

It is not only recognition from peers that can act as a motivator for consumers to co-create. Many consumers are also motivated by being recognized by the company behind the offering (Jeppesen & Frederiksen, 2006); consumers that are motivated to co-create to achieve recognition from the company, often honour or admire the brand itself and the internal developers (Fournier, 1998; Jeppesen & Frederiksen, 2006). Firm recognition can also fuel peer recognition and thereby make the motivation for co-creating even bigger. Empirical research has shown that brands that displays the value of contribution online, e.g. the exact improvements created by a consumer, will significantly increase the motivation to contribute, not only for the specific consumer being recognized, but for the community as a whole (Rashid et al., 2006).

5.11.6 Social Relations

Maslow (1999) introduced the hierarchy of needs in which social needs are among the basic needs that humans seek to fulfil. As consumption of goods and services is a bigger part of human living than ever, consumers will increasingly seek to fulfil these needs for the creation of a self through means of consumption (Belk, 1988), in this also the need for social relationships both with fellow consumers (Muniz & O'Guinn 2001) but also with brands (Fournier 1998).

Consumers engage in social relationships with brands that resemble the relations that consumer have with on another (Fournier 1998). Consumers are more likely to co-create with a brand with which they have a personal relationship and trust (Bughin et al., 2008). Accordingly, consumers are looking to fulfil social needs. The interaction of co-creation processes could be argued to fulfil these social needs to some extent. Thus, consumers can be motivated to contribute their operant resources in exchange for the social relations that are a part of forming a relationship with a brand or users in a community. The attractiveness of social relations as motivation for co-creation is also increased if the company and the consumer have a shared set of values that lays the foundation for which the consumer constructs the sense of self through the co-creation interaction (Fournier 1998).

The individual customer's relationship with the brand becomes stronger, as the support of the brand is confirmed through interaction with other consumers with shared values. The relationship that the consumer forms with fellow consumers often occurs in brand communities, in which the formation of the personal identity is a pervasive part (Schau & Muniz, 2002).

5.12 Co-creation Limitations and Risks

In the above sections many of the opportunities of "traditional" co-creation are identified, but it is just as important to identify and recognize the challenges so that they can be dealt with or at least so that decisions can be made on an enlightened basis.

5.12.1 The Risk of 'Co-destruction'

Plé & Chumpitaz (2010) has introduced the term "value co-destruction", which they define as "*an interactional process between service systems that results in a decline in at least one of the systems' well-being"*. When two service systems have corresponding expectations of the way certain resources should be used through their interactions, it should result in value co-creation. However, discrepancies can occur between the two parties expectations, which result in one part behaving in a way, which is regarded as inappropriate by the other part. Since co-creation depends on corresponding expectations, it would seem logical that discrepancies are not deliberately created. However, they may exist, which causes co-destruction. Plé & Chumpitaz (2010) characterize this situation as the result of accidental misuse of resources by at least one of the interacting parties in the co-creation process.

Plé & Chumpitaz (2010) outline that particularly in co-innovation; results can be disappointing in many situations. Due to limited knowledge about new technologies or new materials, customers cannot always forecast future usages of innovations, or the kind of innovation that may be created. Thus, customers may be unable to use their own, and the firm's, resources in the way the firm expected them to. In such a case, co-innovation becomes a co-destruction process that decreases the firm's competitive well-being, and limits its capacity to adapt to its competitive environment. Furthermore, this 'innovation failure' required the customer to bring in resources he/she could have employed for other more beneficial activities. This might provoke frustration and other psychological costs and eventually negatively affect his/her well-being.

5.12.2 Legal Risk

Co-creation can create potential legal risks for both customers and firms. This is especially true of information or software companies that rely on customers for content. Both companies and customers can unknowingly violate software copyrights or other intellectual-property covenants or libel laws through submission of content to a company in the co-creation process (Kambil, Friesen, & Sundaram, 1999). As the paradigm of innovation becomes more user oriented and collaborative, firms need to adjust their intellectual property rights management strategy to benefit from this changing paradigm. Firms need to resolve how to maintain the "closed innovation" paradigm

required to acquire intellectual property rights while introducing openness and decentralization in innovation processes. In other words, unless openness is managed, the fluid communications that are crucial in open innovation will not occur. Therefore, openness in innovation should always be either formally (through formal governance means i.e. contract, explicit firm policy) or informally (through community norms, trust and implicit corporate culture) (Lee, Nystén-Haarala, & Huhtilainen, 2010). However, according to Sawhney and Prandelli (2000) the intellectual property rights should belong to the community that creates innovation, rather than only belonging to the individuals within the community, who participate in the process.

5.12.3 Risk of Goal Divergence

Customers and producers traditionally bring opposing objectives to the marketplace; one hopes to minimize personal costs, the other to maximize profit (Kambil et al., 1999). Co-creation requires that all participants rethink their relationship by being prepared to switch to a win-win relationship. This means setting mutually defined and shared goals, as well as learning to exchange sometimes sensitive information. If this common goal is not obtained, the success of the co-creation process is at great risk.

5.12.4 Lack of Secrecy

Secrecy is another risk that firms face when involving users in new product development. By giving users access to information that needs to be kept a secret before product launch is an obvious concern that will need to be managed (Hatch & Schultz, 2010).

5.12.5 Risk of Boundarylessness

One of the less obvious risks that firms face when engaging in co-creation is the risk of boundarylessness. Not more than a few years ago, the latest trend was the boundaryless firm. But this type of firm walks a fine line between transparency and competitiveness. When opening up and sharing sensitive information with people outside the firm, transparency extends to internal decision-making processes, firms are undoubtly facing the risk of industrial espionage (Hatch & Schultz, 2010).

5.12 Literature Review Conclusion

One of the factors driving a change in innovation strategies and methods is the increased focus on the value in use of the products, as opposed to the value of the product in itself. This change means that the company will not be present when the actual value creation happens, as a consequence of which, the control over the value proposition is weakened. One solution has proven to be an

increased involvement of the users in the innovation process. User Innovation has thus evolved rapidly in the past decade, and many approaches have been developed, one of these being co-creation that stands out, by allowing the users a significant impact on the final product. Co-creation, and User Innovation in general, can be undertaken with consumers, customers, and relevant non-customers. It has been found that lead users, possibly from analogous markets, provide the most profitable innovations in User Innovation.

Co-creation can furthermore be undertaken in many settings. One potential setting could be an online Brand Community, which provides some beneficial attributes to the communication. Members of Brand Communities e.g. feel a moral obligation towards the community and its members. One potential problem for innovation in Brand Communities is that the members are not necessarily lead users and might be locked in their way of thinking about the brand and products. It must be recognized that co-creation is a multifaceted concept and that it can be implemented in multiple stages of the innovation process and in multiple ways. This allows for some options when wanting to implement co-creation in an organization.

All co-creation efforts will have to be designed according to the company innovation strategy and the innovation environment of the company. Several models of innovation have been discussed and some of the basic assumptions differ greatly, most importantly on the assumption of whether it is possible to plan and control an innovation process. The differences between the various innovation models will affect how User Innovation can be implemented in a company.

6. Case Presentations and Observations

The two cases that form the empirical foundation of this thesis will be presented in the following sections. The presentation includes background information, processes and general observations that have been made during the research period.

6.1 Quirky

Quirky was founded in 2009 by Ben Kaufman. It offers a platform for inventors to have their ideas for inventions taken from just-an-idea to an actual product. Furthermore it offers co-inventors a community in which to discuss, vote and basically affect the ideas submitted by other users. The community of inventors and co-inventors has quickly grown to over 300.000 members (Link 1). To facilitate the innovation process Quirky employs 81 regular employees and did originally outsource the production to China. Parts of the production are now being brought back to America, but the

labour-intensive production tasks will stay in China. Since 2009 Quirky has brought 269 consumer products to life, and sold them through their 188 retail partners (Link 2).

The company balances the professional take on innovation with a very friendly, cheerful, and joking attitude. The live broadcasted events are always conducted with good spirits, and as a viewer you feel included into a conversation amongst friends. In the FAQ section, Quirky has posted the question "*I'm rich! What should I do with all the money I've earned on Quirky*? " to which they answer "*Send us cakes! Then go to Disneyland"* (http://www.quirky.com/learn/faq, 06/12-2012).

Quirky co-creates consumer products with its community, and the focal industry is not predefined. At the Quirky Panel Evaluation one of the leaders of Quirky said "*we normally don't do food products, but...*" (Link 3), clearly indicating that if the idea is strong enough then Quirky is flexible enough to allow for new ventures.

6.1.1 Quirky Support

Quirky offers the members support in their personal innovation-contribution by having a page dedicated to educate the members on topics such as "the perfect pitch", "illustrating the idea", "how to network in the community" etc. The site is quite extensive in both scale and scope (Link 4). Furthermore, the Quirky blog features many insights into e.g. how the Quirky staff evaluates ideas, how they would recommend members to gain influence, and exciting new areas of innovation (Link 5).

6.1.2 The Quirky Process

In this section we will provide an overview of the Quirky process, focusing on the phases where the community members are involved, but also providing the big picture of an idea-to-product path in Quirky. As the design of the product development process can be changed quickly and without notice, it is important to note that the process design observed and described in the following are up to date as of 01/04-2013. We followed hundreds of idea submissions but as most got cut by the initial decision-gates and the Quirky Evaluation, we ended up closely following more than 10 products through the innovation process.

The process of innovation is initiated by the Quirky member. The community then has the chance to vote and/or comment on the idea submitted, which will help the idea get more attention in the first Quirky gate. The idea is, if successful, given the label "under consideration". This decision by the category expert is thus made on a mix of quantitative and qualitative considerations of the ideas pushed forward by the community in which the Quirky employees include basic considerations

about marketability and production feasibility without being an expert on either (Link 6). If the idea succeeds in getting the label “under consideration” it is then send to the pre-evaluation group of Quirky employees who sit in-house the Quirky headquarter in New York. If a pre-evaluation group sees something they like they can elect the idea to get considered in the Quirky Evaluation.

The accepted ideas from the evaluation go on to be further refined in the Quirky process. The Quirky staff evaluates what the best next steps for the idea are and sends it there. This process has been observed to take up to a month or even more depending on the complexity of the product and how well developed the idea/product is (e.g. Link 7) but most often this process is quite fast.

The first step of community refinement can be a research phase in which the Quirky product experts gather the information that is deemed important for the product development. This will typically be a basic survey regarding the use of the proposed product, the expectations for the proposed product, and the preferences for the final product. The results of this/these basic surveys are available for all Quirky users, however it is not possible to dive into the data and explore cross tables etc. It can be assumed that Quirky has these options depending on the number of respondents they use for each research.

Not all products go through a formal research stage and not all of those that do go through the research phase do so right after passing the evaluation. In many cases it is decided by the Quirky staff to go directly to the design phase. This can either be because the product usage and the need for the product is so self-evident or well tested by previous projects or it can be because the project is so far from being a tangible product-idea that research would be meaningless and imprecise without further developing the idea in a design phase first. This was for example the case for the Space Kit that was basically the idea that sending your Smartphone into space while it is recording a video should be commercialized by Quirky by making a kit letting the user send up their phone and making it land safely on earth again. In this case the idea went straight to a sub-phase of the Product Design phase called a Projects Direction Flash Phase, which explored two different directions for the product; (1) space travel for your Smartphone and (2) elevated aerial travel for your Smartphone (i.e. much lower altitude). It was decided that the product should be modular so that it can be used for both activities if the customer buys the necessary upgrades. This led to design phases for both directions as well as the unifying module.

All products go through a design phase at some point before being ready to hit retail. The same is true for the Naming phase in which members can suggest names and vote for the suggestions from other members. The Quirky staff will include the votes in the consideration when choosing a name,

but not necessarily choose the one with the highest number of votes. A Tagline phase is often run simultaneously with the Naming phase. They are similar in many ways but Quirky declares that they reserve the right to not pick a tagline if the Quirky staff should consider this the best.

At some point after a Design phase the Quirky designers, engineers, and model builders will make a series of high quality sketches of final products, which the community can vote on in the Colour, Material, Finish (CMF) phase. As with the other voting phases it is never disclosed which idea-submission gets the highest number of votes, neither as a sorting tool throughout the voting process or when closing the polls. It is thus important to distinguish between the winning idea and the most popular in the community.

Throughout the process it is possible for the Quirky project managers to go back to an otherwise completed phase to get additional insights. This was for example the case with the Jelly Bracelet Maker where it was concluded that more research was needed even though the idea had moved all the way to CMF and thus almost ready for pre-sales (see figure 9).

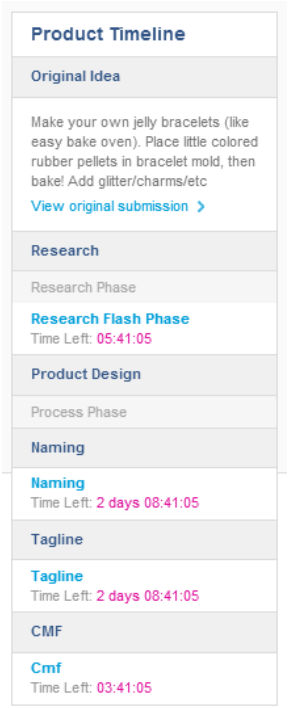

Figure 9 - Phase Timeline of the Jelly Bracelet project

Another interesting observation in the same example is that multiple phases can be running simultaneously despite the obvious interdependence. In this example a Research Flash Phase was active at the same time as the Naming Phase, the Tagline Phase and the CMF phase.

As can be read from the above; the community is highly involved in the process of product development, but never has the final say. The community acts as a source of inputs and opinion on inputs, but in the end, Quirky will make every decision in the process from idea to product. This happens very discretely, and community members might be of the perception that the submission with the most votes win. Transparency is however, a thing that Quirky values a lot, and which has made this netnography easier, but also Quirky has secrets they are not "able to give" answers to (see appendix K).

As part of the transparency-efforts Quirky has illustrated the process in an enticing figure (see figure 10 below) showing the process from idea submission to cash pay-outs. The development process has been observed to take from 16 hours (see CD; Quirky, Examples, Petal Drops) to four months (e.g CD; Quirky, Examples, Scribe) the most frequently observed time is one month.

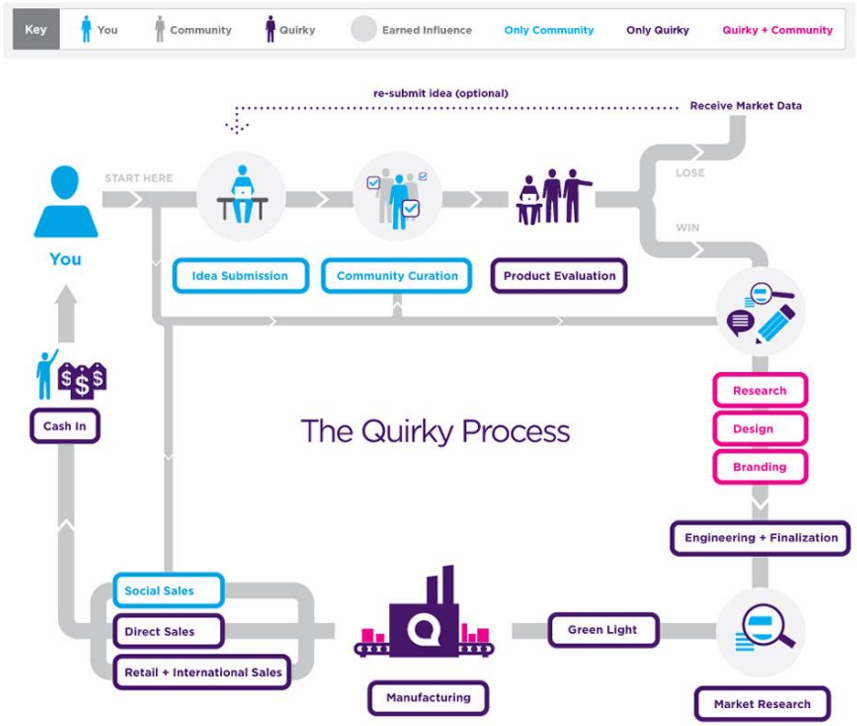

Figure 10 - The Quirky Process as depicted by Quirky

In the original innovation process, design members on Quirky could pre-order Quirky products before they were put into production. The product would only be produced when the pre-orders made sure that Quirky could sell enough units to make the production profitable. This was discontinued in October 2011, meaning that Quirky now risks the development and productions costs when finalizing a product (Link 8). In the old process, members could earn influence by making commitment to a purchase prior to production.

When the product has been produced, and is for sale in the Quirky store, then the many Quirky users who have influenced the product (with or without gaining influence points), and other Quirky members, can earn a commission by using a designated link on e.g. other social media or by sending an e-mail to friends. If any of these friends sign up for Quirky or buy a product within 30 days the Quirky member who invited gets rewarded with $5, and the same, if an invitee signs up and posts an idea within 30 days.

6.1.3 The Details of the Quirky Process

In this section we will look closer at the phases in which the community is involved, taking in the little details that Quirky has decided on, with the intent of making the best possible products, and assumingly making the most profit.

6.1.3.1 The Idea Submission

When one of the many Quirky members gets an idea that he/she finds viable, it can be submitted via the Quirky interface. Quirky requires a $10 fee for submitting an idea, which will discourage inventors who have no serious belief in his/her idea. The fee used to be $100, but was reduced because, as Joe Waisman states, "*I registered there months ago, but walked away when I saw the (then) $100 submission fee"* (Link 9). It is now also possible to become a Quirky Pro member for $99, and get free submission for a year, and the ability to automatically place one idea in "under consideration".

The idea is submitted directly on the Quirky webpage, where the submission process forces the inventor to describe, and thus also consider, some key factors for innovation success. The first step of an idea submission is to pitch the idea in only 140 characters, which will become the idea headline when presented to other Quirky members. Next, the inventor has to choose one of 10 categories in which to place the idea. Furthermore the inventor gets two textboxes allocated to describe the problem that creates the need for the proposed product, and how the product solves this problem. Finally, the inventor is asked to list key features and similar products, as well as having the option to attach sketches or mock-up pictures of the product, as envisioned by the inventor.

As in all the other voting instances, the current number of votes for each idea is not disclosed to the community, assumingly because this would affect the voting behaviour, since only votes for winning ideas are rewarded. It has been observed, that inventors (who themselves can see the number of votes for their own submissions) try to circumvent this by updating the headline with the number of votes (see CD; Quirky, Examples, Voting)

After this process, the inventor only has to pay the fee and to wait for the community to evaluate the idea.

6.1.3.2 Community Curation

After the idea has been submitted it is sent directly to a community curation phase i.e. the community of users get the chance to comment, share the idea on Facebook or Twitter, and/or vote for the ideas they like. Each user has 15 votes daily (Link 10), which can earn him/her influence on the products, if they are moved into production. The community members can vote for the idea directly from the front page of the voting platform, or when reading about the idea details. In the former case, the voter will only have the knowledge from the 140 character headline-like description, and potentially a small-scale illustration. It has no cost of any sort for the voter to vote (except time), and voting at random would eventually earn the community member a small influence in a successful product.

It is not disclosed to the community how many votes an idea already has, which is likely to avoid members trying to seek out already popular ideas, to squeeze into the profits, without regards to whether they like the idea. The decision to take an idea further is made by a team of Quirky-experts exclusively. The decision is based partly on the user inputs, but ideas are also evaluated on factors decided by Quirky employees.

Throughout the Community Curation, the community members can suggest improvements for the idea; not only in the comments, but changes can also be submitted for the original idea description. This can be a way to earn influence, if the changes suggested, presents major improvements to the idea, and if the original inventor accepts the suggestions. It is even possible to access the 3D CAD drawings and make changes to these, if the original inventor has made such an illustration.

6.1.3.3 Under Consideration (Internal)

The process of selecting which of the submitted ideas should go Under Consideration (UC) is based on the category, under which the inventor places his idea. Each category has one or more Quirky employee teams allocated to label the promising ideas as UC. The teams are formed based on personal interests, so that each team will have different skills sets, but share a passion for e.g. kitchenware. These team meetings are undertaken each Monday, starting with the idea in the category that had gotten the highest number of votes. Some ideas will be disregarded, without being opened, on the headline and illustration alone. Others will be more thoroughly discussed and investigated if a team member has his interest spurred by the submission, or if it has gotten a high

number of community votes. All new ideas in the respective categories will be considered at these meetings.

If an idea is selected to the Under Consideration phase, it will get considered for two weeks unless it is moved forward before that. This will make sure that each idea chosen for UC will get the chance at two pre-evaluation meetings. If an idea is opened, but not chosen, the inventor will get some sort of feedback from the UC team as to why it was not chosen (Link 11).

6.1.3.4 Pre-Evaluation Meeting (Internal)

The participants of the pre-evaluation meeting are rotated from week to week, in order to make sure that each UC idea gets two different team opinions, before potentially being shut down. The team will consist of six Quirky employees, from different areas of the company, and the Head of Design, who leads the discussion. The first meeting of the week is held Monday, and then two more are held the two following days. The team evaluates each UC idea in terms of design, originality, marketability, and technical viability. Monday all the ideas are run through rather quickly. Some ideas are cut the first day, the rest moves on to Tuesday, and the process is repeated until they, on Wednesday, choose which eight ideas should be discussed at the Evaluation (Link 12).

6.1.3.5 Evaluation

The Quirky Evaluation is live broadcasted to the community members. At this weekly event, the elected ideas are presented by the category experts, and briefly discussed by a panel of high level Quirky experts, who give their spontaneous feedback from both a professional and personal point-of-view. The panel consists of high-level representatives from production and engineering, prototype production, commercial department, design, and one Quirky employee representing the inputs from the community. Sometimes a high profile community member is also invited into the panel.

After the panel feedback, the "audience", consisting of category experts, pre-eval teams and other Quirky employees, will get the chance to give oral comments on the idea, and finally vote by raising their hand. If the voting is close, the broadcast viewers are invited to vote yes or no to the product idea during a 20 second voting period. The viewers might also be asked how much they would pay for a certain product, or rate it on a scale, depending on what the panel is in doubt of. After this, the idea is either accepted and moves on in the system, labelled "explore" if they like it but it needs further exploration, or dismissed. If the product is dismissed, the community member has the right to resubmit an updated version, using the input from the process. The evaluation of each product takes four to seven minutes.

The idea is thus, first evaluated by people with an interest in the matter (UC evaluation). They sort the worst from the rest and the accepted ideas are then evaluated by a non-interest-selected pre-eval team sorting the worst away. The accepted ideas are then evaluated by highlevel employees who neither are selected by interest, but by functional expertise.

6.1.3.6 Research

The research phase (if one does exist) often builds the foundation for the later stages in the product development. It helps the Quirky team in their decisions, and since summaries of the research results are publicly available, it could in theory also be used by the community members in their later voting process. It is however, not required, or a default setting, that members go via the research results to the platforms for contributing original content and voting.

In the research summaries it is possible to see simple results from the research. For example, the research for the Fort Factory (see CD: Quirky, Fort Factory) investigates how many of the members of Quirky have children who would be interested in the product, and then later goes on to investigate how the children use their current fort/playhouse. It is however not possible for the Quirky members to e.g. segment the preferences for a playhouse into those, who would actually have children that would be interested in buying/using a playhouse.

It has not been possible to get a clear answer on how many respondents are needed before concluding on a Research phase, but an estimation can be made by the influence we have gained, by answering the survey for a project called Future of Healthy Snacking (Quirky; Future of Healthy Snacking). We were awarded 0,00578% influence on this project, and since a total of 5% influence is attributed for each project, and this project had two Research phases, it can be estimated that an average of 432 respondents answered each survey, assuming that respondents are rewarded equally.

All projects that are in an active refine phase (research, design etc.) are displayed in the left side of the voting platform, ensuring good visibility and community traffic.

6.1.3.7 Product Design

In the Design phase community members can contribute in two different ways: 1) submit original design solutions or 2) vote on the design submission made by other community members.

Submitting a design can be done in its simplest form by writing a headline, and a brief text based description of the design. It can also be richer in content by adding a picture, an illustration, a drawing or a video. The video can either be just a webcam recording, or a fully edited video uploaded via Quirky or linking to YouTube.

The 10 most recent design submissions are showcased at the specific design phase front page, under a slot for summarizing the designs, the user already voted for. The only description of the idea available on this page, to which the user can go directly from the voting platform, is the idea name. In order to find a more detailed description of the idea, the user must click on either a link to the original idea submission, or (if available) a link to a video of the brainstorming session, in which this idea was discussed. These brainstorming sessions are around an hour long, and there are no bookmarks as to enable skipping to the relevant time. It can thus be assumed, that a large number of voters cast their vote in the design phase, without knowing more about the idea than the idea name.

The name "Design phase" can be a bit misleading, as in this phase, both the design *and* the idea are being developed. In the first Design phase the main differentiator between the submissions can actually be said to be the solution proposition and not design *per se*. This is why it makes sense, that a "design" contribution is allowed to be made in text, by the Quirky process design (see e.g. CD; Quirky, Examples, Earbud Clip). In the Earbud Clip example, the original idea was to develop a clip around which the earphones for an iPhone could be wrapped, while not in use. The clip should be attached to "your clothes or to its iPhone case" (CD; Quirky, Examples, Earbud Clip original). The various design submissions then start adding new solutions to problems, not originally posed by the inventor, e.g. how the Earbud Clip should protect the plug going into the phone, that it should be possible to adjust volume from the clip, and that the device should boost antenna performance.

Since some community member are only contributing by voting, one can vote for up to three "design" submissions, and if a new better design comes up, or if one reconsiders, then votes can be withdrawn and redistributed throughout the Design Phase, which is usually set to last around three days. If an idea is put through a second Design phase, then each community member have three votes again for the new phase, regardless if he voted previously.

The number of votes to a given design will again help the Quirky staff to pick the winner(s), and use these as inspiration in the following internal design work. The winning design will get influence points for the product.

6.1.3.8 Naming & Tagline

In the Naming phase, the community members can also contribute in the two basic forms; creating original content i.e. a name proposal or by voting. A name suggestion is made simply in text form, and no option for an illustration is enabled. It is, however, possible to comment on your own idea to explain the benefit hereof. A community member can make multiple suggestions, but if a

suggestion is too closely related to an earlier suggestion, then the contributor is warned about this, and is informed, that if two suggestions are alike, any potential influence will go to the first suggestion.

This is one of the phases that get the most contributions, assumingly because the time consumption of reviewing one suggestion is low. The default setting is, that the ten newest contributions are showed, and then the member can flip through the contributions. The contributions can also be sorted alphabetically or at random, but not by popularity, and thus only favouring the most recent contributions, or those early in the alphabet. Many projects will get upwards of a thousand (or more) original suggestions in this phase, meaning that unless a voting member spends hours going through all, not all alternatives will be evaluated by all voters, and that the number of impressions in top positions is vital for a winning contribution.

As with most of the refine phases, each member is allowed three votes per project, and is allowed to vote for his own ideas. The Tagline phase works in exactly the same way as the Naming Phase, except for the fact that, if no tagline is deemed good enough, then the product will do without a tagline.

6.1.3.9 Colour, Material, and Finish

In the Colour, Material, Finish (CMF) phase, community members can vote on multiple versions of the final product designs, all made by the Quirky design staff, based on the inspiration from prior Design phases and other refine phases. The number of design suggestion will thus, unlike the other refine phases, have a very limited number of suggested solutions.

The CMF phase is the only voting phase on Quirky, which only allows each member one vote per CMF phase (it is very rare to have multiple CMF phases).

6.1.3.10 Pricing

The pricing phase is, for the community member, another chance for earning influence, and for Quirky, another phase to gain valuable insights. Quirky will ask the member four questions; at what price he feels that the product would be a good bargain, at what price it would be a bit pricey but still worth a second thought, at what price it would be too expensive, and finally, at what price he would consider the product to be so cheap, that he would question the quality. The four questions are posed in random order. This process is called the Pricing Game by Quirky, even though it merely consists of understanding the product offering, and answering the four questions.

Quirky will then, typically, set the price of the product to be slightly lower than the average "good bargain" price as displayed in figure 11 below.

The community member can select a specific upcoming product to price it, which can be because it is interesting to him, or maybe he sees great potential in the product, and wants to earn influence on it. When playing the Pricing Game, one will automatically be sent to the next upcoming product after answering the four questions, avoiding self-selection of the next product to be priced. If a user makes a typo, giving a completely unrealistic price indication, the question will be repeated as the last question. This happened, when we were pricing the Voyager, and we accidentally typed $355 instead of $35. The faulty answer was not recorded as the answer (see CD; Quirky, Examples, Voyager).

If a product is not appealing to the person answering, it is possible to answer "not my thing", which will be followed by the two statements, from which he has to choose: "I don't need it" or "I don't like it" followed by a box, in which the respondent gets the chance to elaborate.

It is not disclosed, whether choosing "not my thing" can earn you influence, and thus potential monetary rewards.

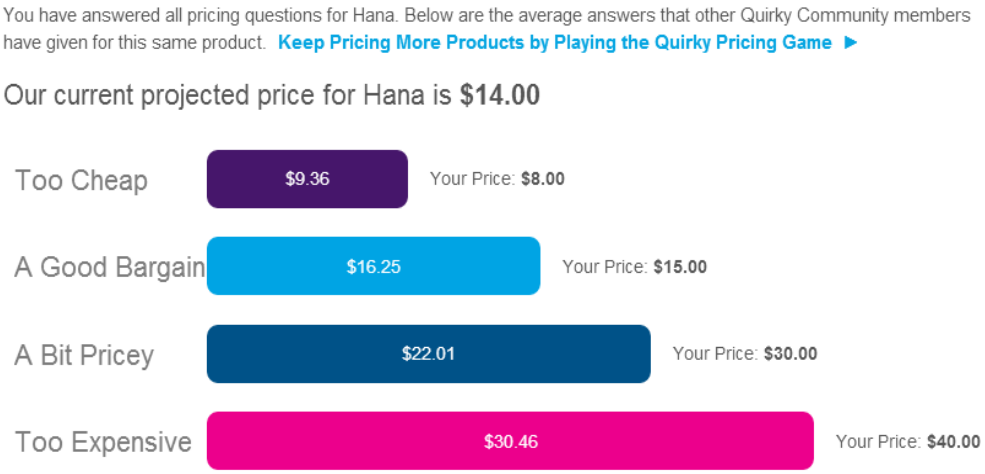

Figure 11 - The result of "the Pricing Game"

6.1.3.11 Social Sales

The Social Sales phase of the final products has recently undergone a substantial change. Prior to the 16th October 2012, community members could earn a percentage of whatever was bought

through a specific link, posted by the member on e.g. Facebook, or sent via mail. After this date, members will be rewarded by a flat fee of $5, if the new user signs up on Quirky, and submits an idea, or if the person buys something from the Quirky store (both rewards have to be effectuated within 30 days).

The Social Sales phase still works to give members incentive to spread the word of Quirky and the products, despite some negative feedback on the change (see CD; Quirky, Examples, Social Sales).

6.1.3.12 Process Design

The Quirky process is both flexible and structured. Figure 12 depicts the level of flexibility and control, that Quirky staff is allowed throughout the process. The turquoise colour, signify the control sphere of Quirky Inc., and the grey colour, signify a control sphere shared between the members, and Quirky Inc. The solid turquoise arrows show the flexibility that the Quirky staff has, when co-creating a product with the community. The Quirky staff will introduce the phases of community co-creation that are deemed beneficial to the project, and will conclude on the input of each phase as they are closed. A project can be re-entered into a phase, if further insights are deemed necessary.

The process phases marked with a black frame, shows that the phase ends with a decision gate, and possibly is ending the project.

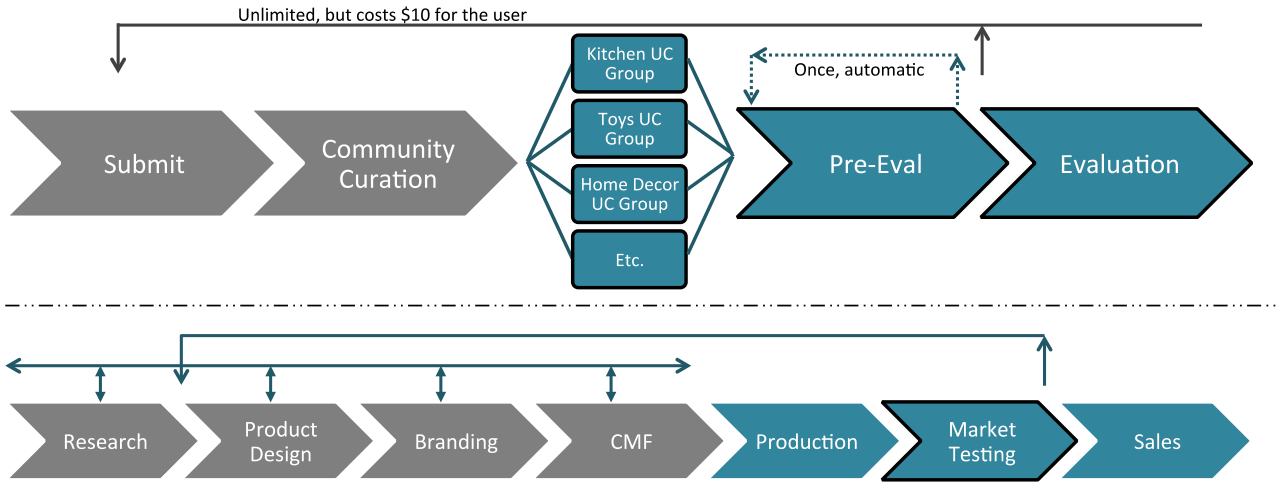

Figure 12 - Quirky Process Overview

6.1.3.13 Other Observations on Quirky

The Spare Air project offers an emergency supply of oxygen, for surfers, and others in risk of getting caught under water. In this project, as well as at least 5 others, Eric Zeng, who is sales manager at the Hong Kong based original equipment manufacturer Kenvox, contacted the original inventor with a standard message stating his interest in the project, and asking whether she would like to have a "*quality OEM Manufacturer to support…* [her] *on this project?".* Erik Zeng asked her to send drawings etc. to him, or to visit the www.kenvox.com homepage, to read more about what they could do to help her.

One of the persons Eric contacted, was Stephen Stewart, whose innovation, a cord manager for work desks, was launched through Quirky, and went on to earn him $13.577,88 through Quirky, in the 1002 days it has been in stores up until now (08/12-2012).

6.1.4 Incentive System

When a Quirky product sells, then 30% of the revenue is transferred back to the influencers, if it was generated through the Quirky online store, and 10%, if it was through retail stores. The earnings of each person, and each product, are publicly available, as well as sales numbers and influencers.

When the pre-sales influence gains were discontinued in October 2011, the excess influence points were distributed among the other phases, resulting in an influence distribution as displayed in figure 13 (Link 13).

The formal incentive system on Quirky is driven by "influence points", which are attributed to influencers by a semi-automated algorithm, rewarding the influencers on the winning ideas. At each stage it is advertised, which percentage of influence that is "up for grabs".

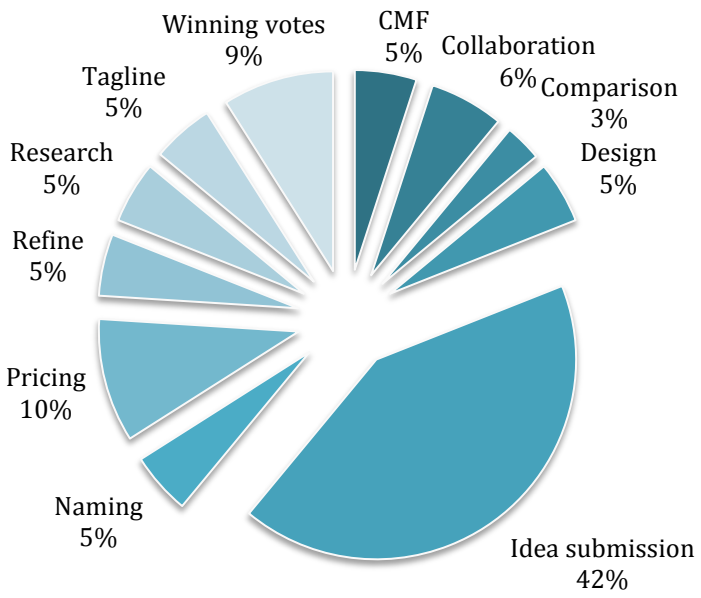

Figure 13 - distribution of influence (Link 14)

Each of these phases will potentially have multiple influencers. The Idea Submission is the only phase that can be attributed to a single community member, unless he accepted improvements from other members in the Community Curation phase, in which case, the 42% influence will be split unevenly. In the Naming, Tagline and Design phase, the contributor of the winning contribution is awarded 3,75% influence, and the voters for the winning name splits the remaining 1,25% influence (Link 15). The amount of work a contributor has put into an idea submission or a design is not a differentiating factor for the amount of influence earned, but merely affects the likelihood of getting chosen, and thus getting influence at all. It can be assumed, that idea submissions and designs with good illustrations, have better chances of being voted on than others (see appendix F).

Up until September 2012, voters for ideas that did not go through, were awarded a small influence on the ideas that did get elected in that particular week of voting. However, not as much as votes for the winning ideas. This was discontinued as based on community feedback, and because of the rapidly growing community of voters, making this more complicated by the day (Link 16).

We have in the process of this thesis, spend countless hours on quirky, voted for a vast amount of products, commented on ideas, suggested alterations, and played the pricing game dozens of times, but we have until today (1/4 2013), gained almost no influence points and zero earnings.

6.2 LEGO Cuusoo

Cuusoo is a Japanese company that bears many resemblances to Quirky. Cuusoo has, since December 1999, allowed users to upload ideas, collaborate on improving these ideas, and finally, commit to buying products, before production is started (Link 17). The site is unfortunately only available in Japanese, so only basic observations are made from the site for this thesis (). By 2007, Cuusoo had 20 products on the market, and 580 products waiting to be commercialized (Jeppesen, 2009).

The Danish toy manufacturer LEGO started cooperating with Cuusoo in 2008, to make a platform, on which the users could co-create or co-design new LEGO sets. During the first two years, the platform was only serving Japanese users, and the first ever LEGO set, that was not designed by a professional, was a LEGO remake of the Shinkai 6500, a Japanese submarine that can dive to 6,5 kilometres (Link 19). In April 2011, LEGO opened up the LEGO Cuusoo platform for the rest of the world, along with a corresponding blog, and a Facebook fanpage (Link 20). The LEGO Cuusoo is an "open beta", and has been it since the beginning, meaning that the community is open to the public, but that it still should not be considered a final product. Thus, LEGO signals that they have the right to make changes, at any point in time.

LEGO has earlier been trying to involve the customer in the design phase. The LEGO Factory, and the Design byME, were part of these efforts, but were discontinued in January 2012. In the Design byMe program, customers could use the LEGO Digital Designer software, to design customized LEGO sets (including building instructions), which could then be purchased (Link 21). It is still possible to make new designs through the software, but the actual physical production of these has ended. In the design gallery it is possible to browse through the existing uploads and vote, it is however, not possible to comment or interact in any way besides voting (Link 22).

6.2.1 The Users

In order to join the LEGO Cuusoo community, one has to be 13 years or older. Age 13 to 17 will only have the right to vote and comment on projects, whereas age 18 or older have the possibility to submit projects to be evaluated by the community (CD; Lego, Terms).

One noticeable difference between LEGO and Quirky, is the prior brand engagement. When researching the LEGO universe, it has been striking how much engagement fans, bloggers, and the like, are showing.

Like Quirky, LEGO does not apply a formal language in the community or the blog posts. However, it is still much less playful, than that of Quirky.

6.2.2 LEGO Cuusoo Process

The LEGO Cuusoo process is simpler than that of Quirky, but it still includes a combination of personal contribution and community influence. This section will provide an overview of the process from idea to product.

If a community member has an idea that he thinks should (and could) become a LEGO project, he can upload it to the platform, including a picture and/or illustration along with a project name, and a description. If the project is approved, then it will be featured on the "discover" platform, along with other LEGO Cuusoo projects. The inventor will be able to go back to the idea, and edit the submission.

Community members will, on this platform, be able to see the inventor's submission, and vote on the project. The community members can also comment on the projects, to voice opinions on good or bad, new ideas, or simply to tell the author, that they voted for the project.

When a project receives 10.000 votes, the LEGO Corporation will review the project in a quarterly review session, before deciding whether to manufacture the product. If the review is passed, the approved project will be set on stand-by, until the LEGO Corporation deems it optimal timing for market launch.

6.2.3 The Details of the LEGO Cuusoo Process

The innovation environment of LEGO is assumingly reflected in the design details of the LEGO Cuusoo innovation process. In this section we will describe some of the details observed about the process.

6.2.3.1 Idea Submission

Before being able to submit a new LEGO Cuusoo project, the "house rules", and guidelines must first be accepted. The guidelines clarify, that LEGO is a toy company, and that idea submissions must be compatible with this, i.e. no politics, swearing, religion, bullying etc. Another guideline is that LEGO Cuusoo is for new ideas, and not for requests for re-releasing old LEGO sets. Interestingly enough, it is also clearly stated, that collaboration on an idea submission is only allowed, if specific permission is given by all parties, and the project is being registered in a specific way. Finally, LEGO reserves the right to remove any content they consider in violation with the guidelines.

When having accepted the above mentioned rules, it is possible to give the project a name. The project name cannot be edited by the inventor after this point, meaning that the headline for the project is locked. The description can be edited throughout the lifetime of the project, and there are no character limits, which many of the popular projects use to post updates on votes, and/or additional ideas the inventor may have gotten for the project.

It is also mandatory to upload some form of illustration for the project, and multiple pictures/illustrations are allowed, and even encouraged.

It is not required that the inventor builds the set in (modified) LEGO bricks, but as it will help in both review processes, and the voting phase, it is strongly recommended. We did not succeed in getting an idea submission approved as part of this thesis, due to the strict quality assurance of submitted ideas.

6.2.4 Initial Review

After the project submission, LEGO will manually evaluate the submission within 72 hours. The project has to be of a certain quality, originality, and sophistication to pass this initial review.

The initial review gate demands rather high quality levels of entries. An idea should preferably be build in LEGO bricks (possibly modified LEGO bricks), and if the illustration is a photo of the real life object, then a clear explanation of how this could be turned into a LEGO model is necessary. This means, that fast entries are disapproved by this gate. It also means, that only dedicated fans are effectually able to submit projects.

6.2.5 Community Evaluation

If the project proposal passes the initial review, it will be visible to the other community members on the Discover Platform, for a simple community evaluation. The community members can, on this platform, vote for the projects they like, and comment if they have additional inputs for the project.

The first few comments are often answered by the inventor, but for the most commented projects, answering – or even reading – all comments would constitute a full time job. The LEGO Bird series now has 3.532 comments, mainly posted by its 4470 supporters (Link 23). The feedback can be used to improve the project, either by the original inventor, or by the LEGO Corporation, if the project reaches 10.000 votes, and enters further development by the company. That this happens is at least the perception on one of the many LEGO fan sites around the world: *"I can personally*

attest to the success of giving Cuusoo feedback. I have made comments, and I have seen Cuusoo implement these suggestions" (Link 24).

The default for the Discover Platform is to show the latest activities on the platform, i.e. mostly voting, and commenting by others, but also new projects by others. Above this, three "top-threes" rotate with intervals of 5,5 seconds. The first in the rotation, are the three projects closest to reaching the goal of 10.000 supporters, second are the three most recently created projects, and third are the three projects with the most comments. The three most recent projects are naturally more frequently changed, than the other two categories (Link 25).

6.2.6 Review

If a project achieves 10.000 votes it will be queued until the next quarter-yearly review, from which it will be evaluated for brand fit, strategy fit, profitability of the business case of the product, feasibility of the model design, and other criteria (Link 26).

The LEGO Corporation is not trying to hide the fact, that they are a company, and that the purpose with LEGO Cuusoo is to make a profit. This is most clearly illustrated in a blog post about the review process:

> "*Ultimately we must ensure that if we were to sell your project, we would sell enough to make it worthwhile and profitable for us*". (Link 27)

Despite this apparent transparency, LEGO is being accused of hiding this, in other blog posts as "Jon Doty" (community name) From Madison, Wisconsin wrote: "*Why don't you just be honest and say you don't want to produce this because you don't think it will sell?"* (Link 28). In this blog post, it is explained why a LEGO set, with a theme from the 2002 TV-series Firefly, is not going to be produced, because the TV-series contained scenes that are not age-appropriate for the target group of 6 to 11 year-olds. The blog posts, that clearly state that LEGO Cuusoo is there to make a profit, have no negative feedback whatsoever, or at least they have no negative feedback, that LEGO has chosen to leave for others to read. We have no indications, that LEGO actively censors the feedback – neither on blog posts nor in the community.

If an idea gets 10.000 votes but is dismissed in the review because the business case is not deemed advantageous enough to be worthwhile taking the risk with the initial costs of the production, then the LEGO Cuusoo community might be included to off-set this risk in the future. LEGO states that: "*we're exploring possibilities that will allow you to share the risk of production costs so that your favourite projects can make it into production faster*" (Link 29).

6.2.7 Product Launch

If a project achieves the 10.000 votes, and passes LEGO review, then the product will not be send straight to production. LEGO Cuusoo projects are queued for production, and hence sales. Potentially one LEGO Cuusoo project per quarter can be moved directly to production, and others will have to wait for an open production slot.

Projects might also intentionally be postponed, until it is deemed strategically advantageous for LEGO, e.g. to avoid cannibalization of similar products, or to be timed with a movie anniversary or premiere (Link 30).

6.2.8 Incentives

The inventor of a LEGO Cuusoo project, that ends up being produced, will be rewarded with 1% of net sales on that particular LEGO set. If an inventor creates a new LEGO brick as part of his project, then LEGO will, furthermore, (if the project is accepted) reward the inventor with a one-time flat fee, decided by the LEGO Corporation, for the use of this brick in future LEGO sets.

It is not possible to earn monetary rewards by being active, by voting or commenting, but despite this, there is no lack of enthusiasm on the LEGO Cuusoo community (Link 31).

6.3 Case Conclusion

The two cases described in this chapter are very different – just as the two companies are almost as different as can be. LEGO is an old family-owned company with a proud history and traditions. Quirky is a young company started with the sole mission to make invention accessible via an online community. Quirky has little added brand value when selling products, whereas LEGO has one of the strongest global brands within the toy industry. This is an obvious difference in how much the companies (risk losing) if their online co-creation community efforts launch bad products that could (damage) the brand.

The two cases are very different in the level of control they allow the community. In the Quirky process, Quirky will always have the final say in each process, but the users are kept informed and keep contributing throughout the many phases. The format of user input varies from each phase - from the strictly controlled Pricing Game, where input is merely four numbers, to the idea submission phase, where almost complete freedom is allowed.

In the LEGO Cuusoo community, a submission is scrutinized by LEGO employees before being posted in the community. There is only a single community phase, and the only input from community members, which the phase format is designed to include, is the voting option. The users

frequently comment on the projects, but it is up to the submitter to include the comments if he wishes to do so – the format is clearly not designed to utilize these inputs.

7. Analysis

The analysis is split in four parts or sub-sections that will help understand and answer our main research question. The four sub-sections are:

Part I – Benefits and Risks of Community Co-Creation

Part II - Aligning Company Strategy and Community Co-Creation

Part III – Design Elements for the Community Co-Creation process

Part IV - What it takes to become successful in co-creating via communities

7.1 Part I – Benefits and Risks of Community Co-Creation

This first part of the analysis is intended to create an overview of what co-creation via communities is. Furthermore, we wish to outline and assess the benefits and risks, that firms engaging in this type of activity should expect, and how they should adjust to this.

7.1.1 Two Types of Communities for User Innovation

Co-creation communities can be classified across three important dimensions: (1) the relationship between facilitators and contributors, (2) the possibilities for participation, and (3) the nature of collaboration.

Different types of communities that cater for user innovation exists, and we suggest that a distinction is made, and these are divided into what we term *co-creation communities* and *crowdsourcing communities*.

7.1.1.1 Crowdsourcing Community

Many user innovation platforms rely on challenges or competitions to encourage participation, resulting in community members often end up competing with each other. This type of community, where the initiator (typically a firm) poses a challenge or a problem with the aim of getting input from the masses, and in the end taking these inputs, choosing the best, and using this to solve the problem, this is what we term a *crowdsourcing community*. The dialogue on these types of platforms is rarely very rich, and the purpose of these communities is reach. An example of this

could be running short-term public or private challenges on niche crowdsourcing platforms. These types of challenges typically have phases for entry submission, community voting, and selection of winners by jury members.

Another example is brands creating their own co-creation challenge platforms to engage their community members, and crowdsource product innovations, new food and beverage flavours, new product designs, and business solutions. Some brands host the challenge on the niche crowdsourcing platforms, mentioned above, to tap into the community, but also promote them on their own branded destinations. The innovations generated on these types of platforms are rarely radical, but are typically incremental innovations to existing products in the brands product portfolio.

7.1.1.2 Co-creation Communities

The other type of community, and the type being the focal point of this thesis, is the co-creation community. In this type of community the community member initiates the projects by submitting an idea to the community platform. Most co-creation platforms enable community members to submit contributions, activate their social networks, and rate, vote and comment on contributions. Some also provide gamification features like points and levels, to encourage community members to participate more. A few platforms also enable community members to collaborate with others, and form teams. Many of these co-creation platforms incentivize community members to support others' contributions, by rewarding them with social influence, money, or by creating a culture of quid-pro-quo collaboration. In this type of community, the facilitators build and nurture their own co-creation communities, that in themselves, encourage contributions from users. This is also a popular form of co-creation for brands, and several have invested heavily in ongoing ideation platforms, to co-create the brand experience with their customers, and launch product and process innovations based on customer ideas. These communities generally rely less on challenges and rewards, and are relying more on community engagement and support, to sustain participation from community members.

7.1.2 Enhancing Value with Richness and Reach

In its traditional sense, co-creation (not CCC) is about involving the user in the production of either goods or services, to enhance the end value, because the customers can shape the product that they desire (Lusch et al., 2007). In order to do this the company will have to engage in rich and meaningful communication with the consumers to get valuable input. Fulfilling this need for a rich dialogue with the customer and ultimately providing a valuable output, means that co-creation is

very much about richness in the interaction, and therefore will need to compromise the reach. This is because the needed richness of the dialogue, would simply not be possible with too large of an audience. In the other end of the scale we find Mass Customization, which can help achieve reach but in turn compromises the richness, by providing customers with the opportunity to customize products to the their likes. Mass-customization is rarely a rich dialogue, since it is most often about selecting color, shape, etc. of a product.

The development in technology has made it possible to gain more reach without compromising the richness, and has created this entire new way of co-creating, what we term 'Community Co-Creation' (CCC). New technology and the continuously increasing popularity of social media, like communities, have opened entirely new possibilities for co-creating with customers. As such, community co-creation makes it possible to get both richness and reach (figure 14).

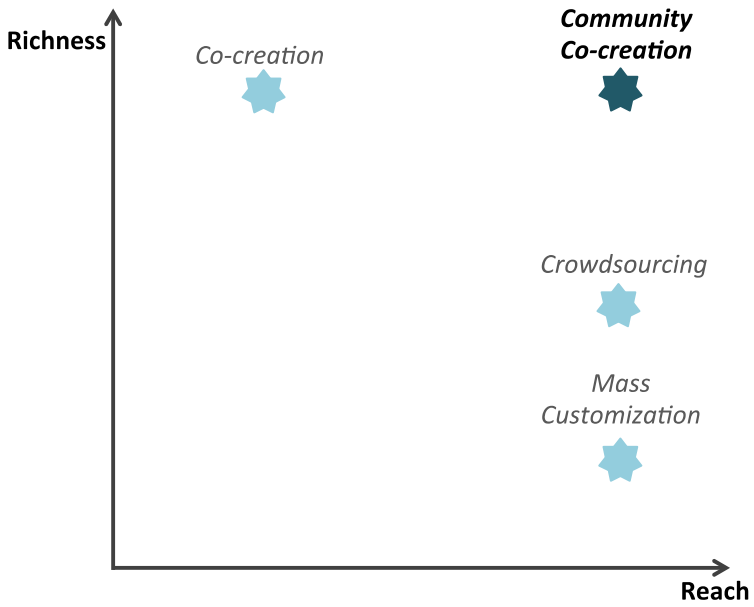

Figure 14 - Richness and Reach

Communities can practically be endless in size, and the platforms often facilitate a rich communication, in the form of text, images, sound or video. This communication can be between the user and the firm, or between the users.

In theory, co-creation communities can be operating entirely independent from the firm, but they can also be facilitated, and controlled by a firm. Common to most communities is, that they are

based upon a shared interest, and/or knowledge about a certain field. Communities provide the possibility of a much richer and personal dialogue with users, than does other virtual co-creation efforts, such as toolkits for user innovation. Toolkits are like a chemistry set, and hence the solution space is limited. As such, toolkits can be compared to the notion of Mass Customization, and as such belong in the bottom right corner of figure 14.

The communication that happens between the users, which is a huge part of what makes it a community in the first place, also adds a new dimension to the co-creation process. This collaboration among users in a community bears a potential that might allow for more complex problems to be handed over to, and solved by customers.

One could say, that online communities are reaping the benefits of many of the known models of user involvement and innovation; lead user innovation, customer co-creation, open innovation and crowdsourcing. In both of our case examples, Quirky and LEGO Cuusoo, projects start with an unfulfilled need by a lead user or lead customer. Co-creation is used to facilitate input by users and potential customers on the new product ideas, and open innovation is used to turn the idea into a prototype with the help of external experts, who participate in technical problem solving. Crowdsourcing happens in utilizing the crowd to get new inputs and insights into new products, and to enhance the existing ideas displayed by others.

Even though online communities are often a collection of users with the same interest, the diversity of users can be huge, partly because of the easy access to the online communities. This allows for reaching a larger user base than e.g. traditional focus groups, but it also allows for an untouched, and maybe sometimes unexpected, collection of users. This collection of users can be a mix of lead users, lead customers, regular customers, and regular users. This mix, and also the notion that lead users can be from both target and analogous markets, makes the online communities a very interesting tool for user innovation.

7.1.3 How Community Co-creation Deviates from Regular Co-Creation

Both of the community case examples display a unique form of “hybrid” value creation between openness and closeness. Most of the activities are performed by the community, and freely revealed on the communities. But then the firms, Quirky and LEGO respectively, take over by providing coordination and taking on the more complicated development steps, like finalizing the design and the technical development of the product.

Both case examples make use of what Piller and Ogawa (2006) refer to as the 'collective customer commitment' method, by selecting ideas, that have received a predefined amount of votes and engagement, by the other users of the community. Using this model for innovation purposes provides a better indication of whether or not there is a broad interest in the innovation, and is thereby decreasing one of the biggest uncertainties that manufacturers are facing; that their innovations will not catch on in the market, due to lack of interest.

In traditional market research, focus groups are often a tool for getting an understanding of the customer's wants and needs. In traditional focus groups, the participants are pre-selected to participate, and would be assessed as being a representative sample of the customer base. Communities for co-creation are to some extent similar to focus groups, in that they consist of a group of people, that firms can use to acquire knowledge about their future innovations. There are however some important differences that separate the two:

- Community Co-Creation engages an unlimited amount of people. There are often no limits as to how many users that can engage, there are however sometimes an age limit of e.g. 18 years old. Hence, the representative sample of the customer base is significantly larger, than the one firms could get from a regular focus group.

- Users of community co-creation are not asked a question, or asked to solve a specific task (this we would rather call community crowdsourcing as discussed in section 7.1.1.1), they are contributing on their own initiative, due to different kinds of individual motivational factors. Hence, they are not in any way prompted by the firm or brand, in their initial idea generation.

- Because of the large amount of users that community co-creation allows for, it is possible to get input from lead users, from both target and analogous markets, as well as non-consumers, lead customers, and from the end consumers.

7.2 Limitations of CCC

Opening up the innovation process, by allowing for inputs from a community of people with an interest in the brand, product, or industry, has many benefits for organizations. However, pursuing this type of innovation process also has its risks. Some of the risks, which we have identified through our research, are outlined and discussed in this section.

7.2.1 Co-Destruction and Risk of Goal Divergence

Firms and users often bring different objectives to the marketplace, and so the motivations of the different parties in the co-creation process are often different. The motivation can differ between the participating parties, but the overall goal should be the same for the co-creation process to be successful (Kambil et al., 1999). If these goals are not aligned, and if the parties involved in the co-creation process are not working in the same direction, this may lead to what Plé & Chumpitaz (2010) refer to as co-destruction; when a co-creation process turns bad. An example of potentially misaligned goals is the voting system on Quirky. As there is no cost of voting, but a potential reward in having voted on a later successful product, voters are inclined to vote on all ideas. To work around this, Quirky instituted the maximum of 15 votes per day, which introduces an opportunity cost of voting in order to make voting behavior less haphazardly.

Quirky, furthermore, limits this on their own behalf by committing resources quite late in the process. The innovation can already be devised, and the innovator can have provided realistic ideas, as to how the product can be developed, before Quirky invests resources in it. By using a technologically open platform that people themselves can upload to, and by having other peers vote on the best ideas, it could be argued, that Quirky to some extent limits co-destruction on their own behalf, by using others' resources to filter out the best ideas. Heavy resources are only invested by Quirky when, what they and other users deem a good innovation, is selected.

The risk of co-destruction could be argued to be high for the customers in the case of both Quirky and LEGO Cuusoo, since a lot of resources can be invested from their side in getting the idea down on paper, illustrations or even prototypes before submitting the idea to the communities. These resources could be wasted if their ideas do not get enough votes or for other reasons do not make the initial cut into the consideration phase.

When co-creating and innovating through online communities like Quirky and LEGO Cuusoo, one could state that the users who submit their ideas, and have their ideas chosen, have the same end goal as Quirky or LEGO; producing a popular and successful product. Nathaniel Padgett from Quirky states: *"…what is really important is having a network of stakeholders that have some vested interest in the success of the product"*. For both Quirky and LEGO holds, that the users are only part of the idea generation and design part of the process, the development process and costs are taken on by the firm. This should minimize the risk of goal divergence since the goal of the user ultimately must be to have her product moved on to the development phase, in which the firm is not yet entailed in the product. After the product has been approved, the idea and prototype is signed

over to the firm, and in this phase the goal of the firm will be to make this idea and prototype into a high quality product, at a low production cost and a quick time to market. The ultimate goal of both the user and firm is however, as Nathaniel Padgett states, that the product will do well in the market, rendering profits for both the firm and the user.

7.2.2 Protecting and Allocating Legal Rights

Intellectual property right is one of the major issues when opening up to the outside world, sharing information, and co-creating with users. The traditional hierarchical model of managing innovation has some advantages when it comes to managing intellectual property (IP) rights, since IP rights are better protected, and a clear understanding of "who owns what" exists. What needs to be understood when working with innovation through communities is, that the intellectual property rights are not really controlled by one single entity, making firms at risk of either having a really strong governance and a closed innovation system, or a lack of governance and an open innovation system (M Sawhney & Prandelli, 2000). There is a new basis of competition in the new economy, where participation and co-creation is in the centre, where value is based more on relationships than on possession, and more on partnership that on ownership. This shift calls into question much of what is known about managing intellectual property. According to Sawhney and Prandelli (2000) the traditional intellectual property management frameworks are inadequate to manage the allocation of rents in the community-centric innovation model, but it is still unclear, exactly what mechanisms can take their place. The only certainty is the need for new approaches that recognize that the most innovative ideas, are often the output of a joint process, within which it is difficult to discern the specific contributions of single actors. Therefore, Sawhney and Prandelli (2000) believe that intellectual property rights should belong to the community that creates innovation, rather than belonging to individuals within the community, who participate in the process. Neither Quirky nor LEGO are working with this proposed model of shared intellectual property rights. Both Quirky and LEGO ask community members to sign over their intellectual property rights to them when submitting their ideas. The rights are handed over as soon as the idea is submitted. According to Quirky this way of working is chosen because "Quirky must devote significant resources and accept exposure to a multitude of legal risks" (Link 32).

In the LEGO Cuusoo community you also sign over all IP rights to LEGO. In their terms and conditions they state:

"*In exchange for use of the Platform, and to the extent that your contributions through use of the Platform give rise to any intellectual property right interest, hereunder copyright, you hereby*

assign all rights worldwide to the content generated by you to LEGO, meaning that LEGO can use your contributions in any way and for any purpose, including to reproduce, copy, adapt, modify, perform, display, publish, sell, broadcast, transmit, or otherwise communicate to the public by any means whether now known or unknown and distribute your contributions for the whole duration of protection granted to intellectual property rights by applicable laws and international conventions." (Link 33).

According to Sawhney and Prandelli (2000) this is not the ideal way of managing IP rights, when encouraging users to provide their insights and ideas to the firm. However, this does not seem to demotivate the users in neither Quirky nor LEGO, and does as such not seem to be a destroying factor in the co-creation process, maybe because it is outweighed by other more important motivational factors or because both still share profits, but not ownership. However, we would not be able to conclude on this, since it has not been possible to find a case with a loose IP rights approach, to allow for such a comparison. Some of the newer research that has been done in this field indicates, that the management of IP rights, within open innovation, does not need to be as free as Sawhney and Prandelli suggest, but that it should be either formal with contracts and firm policies or informal with community norms, trust and culture (Lee et al., 2010). It is quite clear that both Quirky and LEGO have chosen the more formal approach, since both have written terms and conditions, clearly stating the rules on IP rights. However, it could also be argued that due to the strong connection that the LEGO users (or fans) have to the brand (see appendix E) LEGO Cuusoo is to a larger extent than Quirky supported by the more informal control of community norms and trust, due to the strong common interest and culture that resides among the hardcore LEGO fans.

Having this more formal approach to IP rights protection ensures that the rights are better protected, and that the ideas are controlled by the brands, decreasing the risk of lawsuits from sharing and commercializing user ideas. Organizations should, however, be aware that the way they manage IP rights could potentially be destroying motivation for contributing if done wrong, depending on the strength of the brand and the situation of the user. LEGO has a strength in their brand that makes LEGO fans more inclined to contribute despite having a strict control of IP rights. The very committed fans would love to see their idea in an actual LEGO box (see appendix E), and hence are less concerned about whether or not they are assigned the IP rights.

The situation of the user can have a great impact on whether or not strict IP rights management will be discouraging or not. For some users, communities like Quirky can be the only option of getting an idea commercialized, as Chris Howard states:

"*A lot of companies wanted me to develop the prototype and they wanted me to find a manufacturer. They wanted me to do all the work… which can cost hundreds of thousands of dollars… and that was why I submitted it on Quirky because they pick up the bill for all the development*".

Since ideas are not protected by IP rights, there are limitations as to how Co-Creation Communities can protect their users' ideas. Drawings and images, uploaded by users, are protected by copyright law, but the idea in itself cannot be protected.

7.2.3 Boundarylessness Leads to Lack of Secrecy

Opening up to the world, and sharing information and strategies with people that are not employees in the organization, is worrying to most companies, and this also represents a significant risk in community co-creation (Hicks, 2010a). This risk is especially significant in the case of Quirky due to the type of products that are produced. LEGO Cuusoo is to a large extend protected by the legal protection of the LEGO bricks, granting LEGO the production rights of the cubes, given that the idea is signed legally over by the community member.

The boundarylessness is the business model of Quirky, and what makes them successful, but it is also one of their main risks, and has caused problems in the past with products being produced by a competitor in almost exact replica of a Quirky user idea, leading to legal actions taken by Quirky (Link 34). Quirky tries to minimize this risk, by securing a fast time to market. The process from idea to actual product is so fast, that it has proven almost impossible for competitors to take over ideas. As Nathaniel Padgett states: *"Most of our products are made in under a year, which is unthinkable in most consumer product companies, and so we are already in an advantage there, just because we are able to move so quickly, and so far that has been working to our advantage"*. This statement is supported by one of the other online community players, Rick Wielens from Ninesights: *"If I was a big company and I wanted one of Quirky's technologies I could just go in there and steal it. But because they move so fast they will get it out there before me"* (see appendix I). Exactly the risk of industrial espionage is highlighted by Hatch and Schultz (2010), as one of the most significant risks, when opening up and sharing sensitive information with people outside the firm.

7.2.4 Implications of Part I

Community Co-Creation has, in the above, been proven to be significantly different than other innovation strategies, involving persons outside of the company, allowing a company to achieve both reach and richness by using a community for co-creation (see figure 14 above). Being

significantly different, CCC naturally also introduces new risks and challenges. One fundamental risk is the lack of secrecy that leads to increased pressure on development time and IP control. Another challenge is that of managing a huge, vaguely defined work force as to avoid co-destruction of value and goal divergence.

7.3 Part II – Aligning Company Strategy and Community Co-Creation

Community Co-Creation (CCC) cannot be adopted by a company without significant implications for the entire company. This thesis is limited to discussing the implications for the innovation processes, but the implications cannot be assumed to stop there, as has been described by Hicks (2010b): "*LEGO's experience with co-design has been so positive that it has decided to blur the line between its customers and its company and has started to describe itself as transforming from a corporation into an eco-system.*"

Including the customers in this way also means that the company needs to adjust, or even redesign, the innovation process, taking the active role of the consumers into account. The active role of sources external to the company also implies a loss of control, which weakens planning abilities in all phases.

7.3.1 Loss of Control

Including consumer feedback is not by any means new in innovation processes. Traditional innovation differentiates between consumer driven innovation and technology driven innovation. In consumer driven innovation, the process is started by doing consumer research, initiated by the company. In technology driven innovation, the technology discovery starts the process, but the technology still needs to be matched to consumer needs, which are not discovered without doing consumer research. The difference between consumer feedback and CCC is displayed by the term *feedback,* as the company has initiated the contact, and will receive information *back* from the consumer. This means that the company will not only have the obligation to choose the format and the direction of the inputs, but they will also be in charge of the interpretation of these. Some consumer research methods, such as "online listening", lets researchers eavesdrop in online communities, and gain consumer insights without initiating any contact, and thus avoids imposing a frame and direction for the research. Even with this research method, the company will still have the task of interpretation.

In CCC the consumers initiate the interaction, and other consumers will have the first iteration of interpretation. This means that Community Co-Creation is not just a new form of consumer

research, and that the consumer insights are less likely to fit into predetermined strategic innovation plans.

7.3.2 Strategic Fit

The fact that the initial idea submissions via CCC innovation is not based on top-down strategic planning, and thus are not controlled, means that the company will risk strategic drift if blindly following these contributions.

The two main cases for this thesis, Quirky and LEGO Cuusoo, deal with this in two very different ways, as a result of their two very different situations. LEGO Cuusoo is tied to the LEGO brand, and the LEGO brick in particular, whereas Quirky is not per se tied to a single industry or market.

The use of LEGO bricks delimitates the risk of strategic drift on the LEGO Cuusoo community, but even within this frame LEGO moderates what is eligible to be submitted to LEGO Cuusoo. These moderations ensure that the brand connotation do not harm the LEGO brand, but the real adjustment, to the overall product launch strategy, only happens after the CCC has been completed. Only one completed LEGO Cuusoo project is launched to the market every four months, so either way the LEGO Cuusoo projects are not rushed to market. The LEGO Cuusoo projects are not only queued, but the launch is timed to fit the launch schedules of other products invented internally, or possibly via other initiatives involving users. This means, that for LEGO Cuusoo, time-to-market is deliberately sacrificed to strengthen the strategic control of portfolio management.

At Quirky time-to-market is essential, as discussed in section 7.2.3. This means that a project cannot be queued to fit long-term portfolio management strategies. At Quirky there is no such strategy. Products are released as soon as possible both in the Quirky web store, and at retail partners, but unlike LEGO, Quirky does not have a multibillion dollar brand to protect, nor does Quirky have stringent industry of product type brand profile to adhere to.

Quirky limits itself to consumer products, but as mentioned in the case description, they are not fanatically pursuing even this very broad strategic focus. This means that the scattered ideas from a "*completely open canvas for somebody to invent*" (interview with Nathaniel Padgett, Community Manager at Quirky) are likely to be workable for Quirky, for whom strategic drift is a strategy in itself.

7.3.2.1 Owner of the Co-Creation Community

An important difference between the two cases can be described as, to whether the innovation needs to fit within the frame of the brand, or if the brand is made to fit into the frame of the innovations.

Already in the submission-phase on LEGO Cuusoo, the ideas have to adhere to some basic guidelines, and fit into the frame of the LEGO brand. On Quirky it is almost the other way around; the Quirky brand can be adjusted to contain any good idea that will make an expected profit.

The two brands started their CCC within very different situations. LEGO had an extremely strong offline brand resonance before venturing into CCC. Quirky, on the other hand, had no brand equity at all, and thus started from scratch. The strong LEGO brand affects the community recruitment potential, and thus the innovation reach as discussed in Part I of this analysis. This enables a more targeted innovation, without having to sacrifice quantity or quality of creative contributions.

On the other hand, Quirky has quickly grown to a size that would allow for a more picky innovation focus, had that been a wish. Despite their 300.000 members, Quirky still encourages almost any idea for innovative consumer products. One of the reasons that this is possible is, that Quirky does not have a single core product, and that Quirky does not have a stringent brand strategy to adhere to, which is in stark contrast to the situation of LEGO. The choice between a generic CCC platform, or a brand specific CCC platform, will thus be heavily influenced by the brand equity and brand strategy of the core brand.

Brands that do have a core product and brand equity to protect, but not enough brand resonance to gain sufficient reach, risk getting trapped in the middle, unable to do CCC in one of the above mentioned forms. This does not necessarily infer that the owners of these brands are unable to do CCC, but merely that the two above discussed forms are not suitable.

7.3.3 CCC and the Innovation Models

Using a community of consumers for innovation inputs, can in its most simple form, be seen as a sophisticated form of consumer need information research, and can as such be used in all innovation strategies that utilize market insights. The community of consumers can be used for input into the structured framework of e.g. the Stage Gate model, but the users will only act as co-creators (and not a consumer panel) if granted influence and a feeling of ownership.

Fulfilling the potential of CCC does thus, as discussed below, require some loss of control and a more flexible innovation strategy. This means that the sequential innovation models will be challenged on the assumption, that innovation can be planned and controlled, whereas in the network innovation school, the integrative model will gain an extra player, and a platform on which to engage the community of consumers.

The main challenge posed by CCC on regular innovation, is the philosophy of ownership in the innovation process. In Quirky, ownership is shared with the community in a very literal way, as percentages of revenue, whereas on LEGO Cuusoo, the shared ownership is mainly a feeling of communal ownership. In both cases the internal innovation function will share not only the revenue but also the recognition. The consumers are no longer just the target group of the output, but also the source of creative input, and should thus be considered as part of the production ecosystem.

7.3.3.1 Performance on Key Output Parameters

The innovation strategy will have to fit the innovation environment faced by the company. Furthermore, it has to be compatible with the underlying assumptions of the top management. When implementing CCC into a company innovation strategy this is still true, and the same business-environment factors are going to have an impact on how CCC should be designed to fit the situation.

A crude summary of the various innovation models discussed in the section "Management of Innovation" is presented in figure 15. The factors for evaluation are the innovation output parameters, as defined by Emmanuelides (1993), plus "originality" and "robustness to change", as discussed in the respective sections earlier. These output parameteres are, furthermore, all affected by how the CCC is designed to fit the innovation framework, and the two cases provide excellent examples herof.

	Development Time	Design Quality	Development Effectiveness	Originality	Robustness to changes
Linear	Bad	Mediocre	Bad	Low	Bad
Compressed	Good	Bad	Mediocre	Low	Bad
Flexible	Potentially bad	Good	Mediocre	High	Good
Integrative	Mediocre	Excellent	Mediocre	High	Good
Improvisational	Potentially good	Good	Potentially good	High	Good

Figure 15 – Summary of the existing innovation models (5.8 Management of Innovation)

7.3.3.1.1 Development Time

The time from idea to final development is significantly different from Quirky to LEGO Cuusoo. The fastest observed community innovation time on Quirky was 16 hours from the idea was posted, to it being moved into internal development at Quirky. Without outliers, the normal CCC time on Quirky is between one and two months, which is significantly faster than LEGO Cuusoo, despite the fact that more innovation is actually undertaken on the Quirky community. Quirky utilizes elements from the compressed model in order to enable fast innovation, by allowing multiple

phases of innovation for one product to be active simultaneously. The risk of copy cats, and the fast changing markets which quirky serves, have forced them to enable fast CCC. LEGO Cuusoo seems to be in no rush when they make each project aim for the 10.000 votes, and first then will the product be evaluated at a quarter-annual meeting, and then possibly placed in a product launch queue.

If the overall innovation model, adhered to by the company, is not aligned with the innovation environments' demand for a speedy development time, then the design of CCC can be used as a tactical tool. Parallel processing of CCC phases is helpful when time is essential, but it might disrupt the continual learning throughout the innovation process. Learning points from one phase might not be integrated into the next, as the results from the former phase are not complete. Further transparency of preliminary results would help ease this problem, but would at the same time result in a loss of control by the company (as discussed in section 7.4.1.3).

7.3.3.1.2 Design Quality and Development Effectiveness

The Quirky CCC framework enables flexibility as to which phases are needed, as well as the order of these phases. Both these process-options are elements from the Network Process Perspective (Christiansen & Varnes, 2008) school of innovation, and have benefits and drawbacks. The flexibility will both allow for, and require, iterations that will prolong the CCC time. It also allows for learning throughout the CCC, and thus adjusting the process along the way, which is based on a fundamentally different assumption than for the Traditional (Iansiti, 1995) school of innovation, assuming that control of innovation is possible. This flexibility does however challenge the transparency, which has been stated to be very important in CCC, by both Quirky users, LEGO and Quirky, as it creates confusion about what is to happen next. Quirky deals with this by having a very thorough blog giving insights into the process, and the choices that have to be made by Quirky employees. The LEGO Cuusoo innovation process is more divided, i.e. a public CCC phase, followed by internal development behind closed doors.

7.3.3.1.3 Originality and Robustness to Change

One of the greatest benefits of CCC is that it allows the consumers a voice, without the bias of letting the marketing department interpret, or even instigate the input. This allows for the original, demographically diverse input, that is one of the profound characteristics of, especially, the Quirky CCC framework. It brings very different consumers, as well as Quirky employees, into the innovation process, and even facilitates as multilogue between co-creators and employees for input, interpretations, iterations, and synergy. As stated by both the Quirky user Chris Howard and the

Quirky employee Nathaniel Padgett (see appendix F and H); it can be assumed that CCC will improve the output quality. This is supported by Emmanuelides (1993), who furthermore concludes, that the high differentiation improves innovation effectiveness under uncertain circumstances. Already in the initial selection process, the internal Quirky team is a mix of functional areas, and the same is true for the community. The community composition is assumingly biased towards entrepreneurial persons, but the community is nevertheless very diverse, both in terms of expertise-area, and geographic place of living.

The entry barriers set for submitting an idea will, furthermore, affect the level of originality of future output. In LEGO Cuusoo there is an evaluation gate before the project goes into community curation, in which the project has to meet certain criteria for build and brand fit. An idea has to be rather well developed and illustrated to be accepted, which means that the innovator needs to have a firm belief in his idea. On Quirky the buy-in is not time and effort, but the $10 submission fee (if the member did not pay for "pro membership"). As a result the Quirky set up succeeds in getting the most original idea-submissions, but LEGO Cuusoo succeeds in getting the closest brand fit.

A related factor that affects the originality of the CCC output is the level of structure build into the process. In LEGO Cuusoo the structure is a simple sequential model, with one long phase of community voting and commenting, whereas Quirky splits the process up into small focused phases. The phases in Quirky are not predetermined as stated by Nathaniel Padgett (see appendix H), which gives way to some of the benefits of the Network Process Perspective, most predominantly in this case, is the ability to keep learning while doing, and if need be; to iterate. In LEGO Cuusoo the process is very much left open to the community members to define, which could mean room for a wider span of creativity and freedom. This freedom has however been observed to result in some form of mild anarchy, drowning creative input in social comments.

The above mentioned structure of LEGO Cuusoo, also means that if the innovation environment changes during the community voting phase of a project; e.g. a competitor launching a similar product, then it will only be possible to react to this at the final decision gate. By allowing multiple stages as well as iterations of already completed phases Quirky gains the robustness to change that have been mentioned as one of the strengths of the Network Process Perspective (Iansiti, 1995).

The two cases are very different in the way they deal with innovation and CCC in particular. Quirky allows the consumer a more direct influence, but is still ultimately the only real decision maker in the Quirky innovation process. The flexible, improvisational, integrative, cross-functional, and cross-phased nature of the innovation process, shows that Quirky is most closely linked to some of

the modern innovation models discussed. Some elements of Quirky e.g. the parallel processing of phases, does however, show a pragmatic reaction to the importance of development time, and thus also an inspiration from Sequential Innovation Models. Having a decision gate before idea development, focusing on the business case viability of the idea, could also appear to be inspired by the Sequential Models.

LEGO Cuusoo on the other hand has a very simple linear innovation process design. The simplicity allows LEGO to not interfere when a project is running, and let the community members themselves drive the project. This means that the investment in each project is very low from LEGO's end, and that the number of projects on LEGO Cuusoo is thus only limited by the community engagement. The seemingly purposely slow idea development process is a result of an innovation environment not stressing the development time significantly. Having the business case evaluation at the end of a completed voting phase, means that some projects will be allowed to gain community support, which will later have to be turned down for business considerations. Some sequential models place the business case consideration early in the innovation process, but besides this, LEGO Cuusoo is heavily inspired by a traditional innovation mindset applied to CCC. One reason for this, might be that LEGO has been accustomed to regular offline innovation, and that they, furthermore, have to coordinate the online innovations with the ongoing offline innovations, that are being brought to market. Having a dual innovation process is in fact one of the factors LEGO uses to explain the need to queue approved LEGO Cuusoo projects (Link 35).

7.3.3.2 Implications of Part II: A Balancing Act

In this section several significant differences between the two cases, and the underlying strategic realities, have highlighted some factors that affect how CCC must be designed in order to align with the brand strategy. These implications are all dependent on the innovation environment, and how it affects e.g. the level of control that can be given up, and the relative importance of the key output parameters. Throughout this section it has been a balancing act of several factors having negative effects on each other, and thus no universal optimum can be found. In the following section, some general ways a CCC can be designed to optimize some elements are analyzed and discussed.

7.4 Part III – Design Elements for the Community Co-Creation Process

7.4.1 Controlling the Loss of Control

The two cases show that there are multiple ways to design CCC, so that some control is re-gained. LEGO applies most of its influence before and after the single phase of community-influence, whereas Quirky has split the (much deeper) community influence into several phases, with a very well defined purpose. Compared to the LEGO Cuusoo process, the Quirky process design is very sophisticated allowing for both flexibility and structure as depicted in figure 12.

The company engaging in CCC can control the inherent loss of control in a multitude of ways, but the main trade-off is the effect on user engagement, and obviously the opportunity cost of not nurturing the potential creative input from community members. The steps the company can take to regain some control can be summarized to be within the following areas (not an exhaustive list):

- Playing Field (area of influence)
- Playing Rules (design of process)
- Phase Formats
- Triality of Co-Creation (engaging actively in the phases as a company)
- Exposed Black Box Phase
- Guide (next step authority)
- Launch Authority

Each of these will be analysed and discussed below.

7.4.1.1 Playing Field

The first step a company can take in order to control the loss of control, is obviously to limit the areas of influence, that are shared with the community, i.e. the "playing field". The balancing act is in this case between which areas (or phases) the community is presumed to be able to contribute more than the trouble that CCC undoubtedly is (See Part I of this analysis). Another related consideration is how CCC at the specific stage affects IP protection (See section 7.2.2). At LEGO Cuusoo the CCC-area-of-influence only entails the initial model concept design, whereas at Quirky the CCC-influence spans from idea submission to choosing the final colour, material and finish (CMF) (see figure 10)

7.4.1.2 Playing Rules

If the area of influence is the playing field, then the process design is the "playing rules". The process design can legitimize rejecting an idea, or unilaterally changing even some fundamental characteristics, if desired by the company. The latter can be done by instituting a number of decision gates, in which the company is allowed to kill a project, or by instilling a "black box" phase, in which the company can summarize the community input, i.e. choose the ones they like without the need to justify the specific choice. Instituting one or many decision gate(s) can be necessary to weave out the many projects that will inevitably be of low quality.

Quirky allows all idea submissions to enter the Product Evaluation platform, but have weekly decisions gates leading to another, and yet another, decision gate, before the real CCC is begun. This means, that the community will be exposed to a multitude of ideas with a huge variety in quality in the first voting phase, but also, that they will only be working with quality submissions in the later community development phases.

LEGO weaves out project submissions even before they are submitted to the community. The only other way bad projects are weaved out at LEGO Cuusoo, is that they drown in the sheer amount of product submissions. Only trending or new projects are highlighted, and the rest are left to die at the bottom of the pool of submissions. This laissez faire method demands, that a large number of community members are committed enough to trawl through a large number of submissions, or that the inventors have a way to promote the idea elsewhere. A laissez faire method like this carries the risk of letting good product ideas drown among bad ones.

At LEGO Cuusoo there is furthermore a big risk that suggestions for improvement from other co-creators are drowned in other comments, that mostly just center on a social element. This risk is enhanced due to the long, single process from project submission to LEGO evaluation, meaning that the pool of irrelevant comments for the constructive co-creation improvement-suggestion to drown in, will be deep, and that no CCC phase is dedicated to follow up on the improvement ideas.

7.4.1.3 Phase Formats

The way a phase is formatted can have a significant effect on the outcome of CCC as stated by the Quirky Invention Ambassadeur Paula Rosenberg "*the format is different in the different phases… it is a very different type of involvement*" (see appendix H). The example Paula was talking about is the Pricing Game at Quirky, in which the members are asked to answer four basic questions about the price-level perception for a specific product that is approaching production. In this case, the

input format is very strictly defined to be a dollar amount, and if the given answer varies too much from the expected number the question is iterated.

Quirky allows its users more freedom when submitting ideas, but still gives some gentle guidance. This is done by headlining the boxes, in which the idea is to be described, with a strong focus on the viewpoint that the idea needs to solve a specific consumer problem. This forces the contributor to consider the market relevance of the idea before submitting, but still allows for the freedom of not answering that particular question. When submitting an idea in the LEGO Cuusoo community the only guidance provided by the headline is where to write, and not what to write, as the headline reads "Main Section". This section is also the only box in which the contributor can provide a written description of the project besides the "tags" section, where keywords for the theme can be mentioned for indexing purposes.

In the Quirky innovation interface a "count-down timer" not only highlights the projects that are undergoing active community development phases, but also urges the members to submit their comment, vote, or other contribution before the phase ends. This urgency might encourage some users to contribute ideas, that they themselves could have developed further if they were given more time, but instead they are submitted to the community, to take the ideas further. In LEGO Cuusoo all community processes are running throughout the lifetime of a project, and therefore, there is no need to highlight urgency. As discussed in "Playing Rules" the popular projects are highlighted instead.

It becomes clear, that some of the above mentioned formats are better suited for quantitative research than qualitative creativity generation. The main distinction between need information and solution information, discussed in the Innovation section of the literature review, gives a good framework for these differences. Both types of information can be needed for innovation, but the complexity varies greatly between the two.

The well-defined phase formats obviously cater best for the situations, in which need information is the primary interest for the co-creating company. On the contrary, a more loosely defined format is better suited for solution information, in which the solution is either sourced directly from one community member, or co-created within the community. The phase format should thus, deliberately be shaped to fit the input type needed for the innovation to be improved. As showed in the examples above, and in the case descriptions, there is a multitude of ways to format each CCC-phase, and the simplified framework, of only two kinds of information for innovation, do not do the full range of solutions justice. Asking for a numeric answer to a well-defined question, with control

mechanisms for outlier answers, is certainly in the one end of the spectrum of format solutions. Providing a blank field, with the headline "main section", is at the other extreme.

The phase format however, also affects the outcome in other ways than being suited for the type of co-creation wanted. Having a countdown timer is an act of transparency (Quirky interview), and instills a feeling of immediacy, but it is also a tool, and a method, for highlighting (as discussed in section 7.4.1.2). Another formatting of the CCC phase, which highly affects the outcome, is how the users can interact, not only with each other, but also with the suggested ideas. In the initial community curation phase in Quirky, it is not only possible to suggest improvements for projects, but also to incorporate the suggestion into a revised version of a complete project description – provided the original inventor accepts the changes. It is even possible to improve the illustrations – even 3D CAD drawings if these are submitted. This makes sure that suggestions from other users are not drowned or neglected – provided that the inventor is willing to give up influence points. This is not a method that has been observed used in the Quirky study, but the option is present. Making the inventor a project manager in this way is one possible solution to prevent ideas (both original submissions and suggestions for improvement) from drowning, as was one cause of concern for LEGO Cuusoo, mentioned in section 7.4.1.2.

7.4.1.4 Triality of Co-Creation

In the Quirky example, the inventor can only be considered the project manager at the initial phase until Quirky takes over. Who the project manager and de facto project owner is, will inevitably affect the co-creation dynamics. Letting the original idea submitter have decision power, brings the benefit, that the person has a vested interest in the success of the product, understands the idea well, and is likely to be willing to spend time monitoring and nurturing the project. Furthermore, it does not require resources from the company, and thus more projects could be developed further. The downside is that the inventor might not have any education or experience in entrepreneurship, or market understanding, and so, ideas with potential might be steered in the wrong direction. Another downside is the lack of control the company would face, if allowing inventors from the community to become project managers. Thus, the partial model employed by Quirky might combine most of the benefits, but it will be important to consider where to make the cut, and transfer the project management rights internally to the company. This consideration can in part be guided by the framework developed by Piller et al. (2011) and the Front end/Back end Co-Creation described in section 5.9. One significant difference is that what Piller et al. are theorizing over is traditional, dyadic co-creation, whereas CCC deals with the triality of co-creation in communities.

Regardless of who the project manager is, the type of co-creation relation used will also affect how the collaboration between members, and the company will take place. At Quirky, employees submit ideas on equal terms as the community members in the design phase, under the username "Quirky Invention Ambassadors". These submissions compete with the other ideas for votes, but as previously mentioned, it is eventually Quirky employees who will choose a winning idea. The active role of Quirky in the design phase means that the company, and the community members, can actually react on the feedback from each other. Quirky will also in some instances talk with inventors via Skype, which enables a rich-in-content dialogue with a single community member. The public idea submission allows for a trialogue (or even multilogue) with multiple members, as well as making the parties communicate on equal terms.

The trialogue allows Quirky to react on the community inputs, and get new inputs for the reaction. The same effect can be achieved when terminating a phase, choosing a few winners, and starting a new phase with these. But in this case the choices are much more set in stone, and thus this is not suitable for testing ideas. Participating on equal terms with the other community members can thus be a easy way to test ideas for Quirky employees e.g. community managers or community support staff. Transparency is however, as always, important when dealing with CCC. Quirky solves this by having clear labels on the profiles of Quirky employees, and by posting the ideas with the username "Quirky Invention Ambassadors". In this way the Quirky employees act both as members and decision makers.

7.4.1.5 Managing Complexity of Multilogues

The active idea posting from Quirky however, also adds a significant increase of complexity to the innovation process. In the community curation phase, in which the inventor acts as project manager, the high level of complexity is caused by multiple rich "conversations" from multiple members. In this phase the complexity is dealt with by having a de facto project manager closely monitoring, and reacting to the very limited scale of multilogues. In later development phases, the inventor is no longer the project manager for the reasons discussed above, and the scale of member input is increased. This has led Quirky to lower the complexity by lowering the richness of the multilogue. This is done by formatting the phases to cater for quantified input, which in this case is simple voting, but it could just as well have been a Likert scale or any other easily comparable inputs. This need to quantify will inevitably lead to a loss of feedback detail, but will give the ability to quantify, and thus extrapolate the findings. Phase design is thus a choice between 1) scope i.e. the richness of input and 2) scale i.e. the ability to quantify and to extrapolate. One way to deal with this is to repeatedly shift between the two extremes, as the idea moves through the development phases. The

Quirky process design has some elements benefitting from this solution, whereas the LEGO Cuusoo process does not allow for this, due to its single-phase format.

7.4.1.6 Guide and Launch Authority

The single phase process design at LEGO Cuusoo also means, that if any changes are to be made throughout the community input phase, it is up to the submitter of the idea to carry out these changes, i.e. collect input, and create a solution to match the unstructured input in the form of comments. At Quirky, the multiphase design allows Quirky to structure input, and to have the authority to guide the idea development process, as well as to pick the winners. Due to the undisclosed voting results at Quirky, this is a powerful way to ensure control.

7.4.2 Implications of Part III: Types of consumer Co-Creation

In order to provide an overview of the types of CCC that have been analysed in the research phase for this thesis; three simplified models can be made. One in which the main streams of communication are between the single community member and the company, one in which the main communication stream is between the members themselves, and one in which all parties are active contributors of the multilogue. The models can be the foundation for a whole CCC platform, or a specific model can be applied to only a specific phase, and thus all models can be represented in a single CCC innovation process.

7.4.2.1 Input CCC

In the Input CCC model, the company uses the community as a platform for consumer research in a way that bears resemblance with the Community Crowdsourcing presented earlier. Input CCC is however not necessarily a competition and all input can potentially be utilized, but little to no cooperation between the community members exists. In Input CCC the community members are asked to provide feedback on typically very specific questions and thus the communication is going to be a multitude of monologues on a very determined topic in either quantitative or qualitative form as depicted in figure 16.

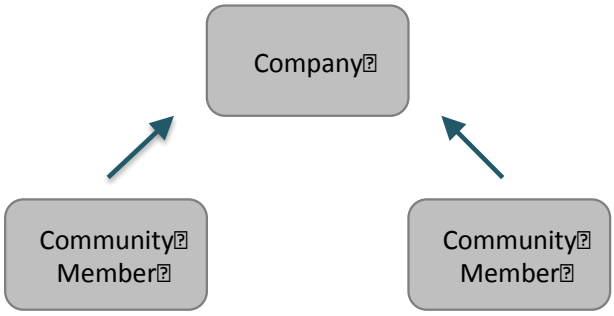

Figure 16 - Input CCC

The best example is the Pricing Game in Quirky that acts as a fast and cheap, quantitative survey method. In this model the community members are not included for their creative resources, but for their (assumed) ability to represent a population of buyers. The knowledge created in Input CCC models is based on Need Information and will not require any loss of control, but neither will it provide any insights that regular consumer research could not have provided.

7.4.2.2 Hijack CCC

The other extreme is that the company provides the platform for communication, and leaves the rest to the community (figure 17).

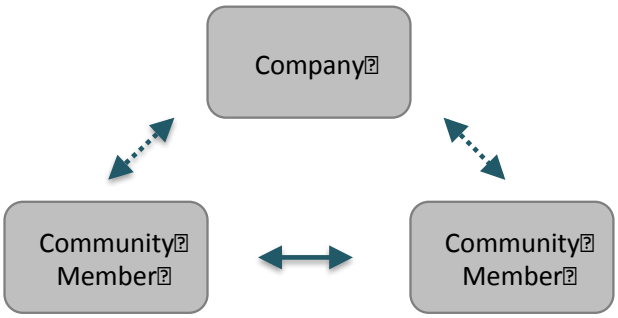

Figure 17 - Hijack CCC

This is to a large extent true for LEGO Cuusoo, where the single-phase structure encourages the members to discuss anything about the idea they feel is relevant. The conversation can, in this case, easily abandon the topic of innovation and become a social chatter or completely unrelated topics.

The company is in this case without control of the conversation, and can only prompt the members' conversation to stay relevant. Leaving the confining frames from the Input Model does however,

also create room for radical innovation to take place as was mentioned by Quirky member Chris Howard (see appendix F).

In the Hijack CCC model information is not gathered. It is generated at the tempo decided by the community, and in the direction decided by the community, and will thus be an uncontrolled mixture of Need Information and Solution Information.

7.4.2.3 Controlled Hijack CCC

If conversations are set free within very structured frames, then some of the benefits from the two former models can be combined into a single model. The Controlled Hijack CCC model uses well-defined phases in the innovation process to control the topic of the conversation, but allows for creative sharing of opinions. (figure 18)

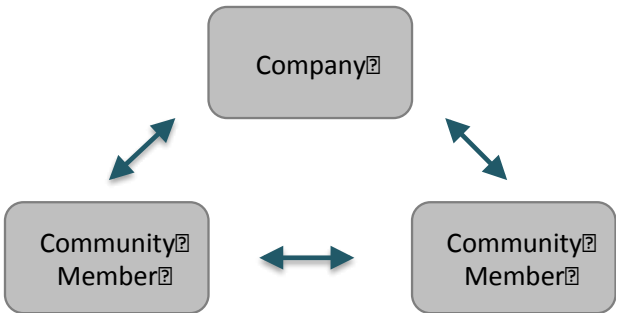

Figure 18 - Controlled Hijack CCC

The richness of communication between community members varies a lot within this model. In most instances the communication is merely voting-based, but in others, members are allowed to comment and discuss critique. The level of richness in the conversation is to a large degree formed by the phase formatting, as discussed in section 7.4.1.3. The level of richness allowed can significantly pull this model towards one of the former models.

Due to the controlled nature of the conversation, the potential for radical innovation will not be as high for this model, as for the Hijack CCC model. However, the co-creation will be more relevant, and significantly faster at its goal line.

7.5 IV –What it Takes to Become Successful in Co-Creating via Communities

The last part of the analysis will seek to outline the most important factors that should be present, to secure that firms are successful in co-creating with customers and users, through online communities.

7.5.1 Securing Participation

One of the main prerequisites for co-creation to happen is to secure participation from users. If users are not motivated to contribute, then no interaction and dialogue will take place, and it will be impossible to meet the requirements of co-creation. Several motivational factors for co-creation have been outlined in the literature review (section 5). The outlined factors are a representation of what has been found to be the main motivational factors in previous studies of co-creation in general, hence they are not limited to CCC. However, what we have found in our study is, that many of these factors can also be applied to CCC, as will be outlined below.

7.5.2 Financial Incentives

Financial incentives are an important component in the Quirky community, and a factor many of the users mention as a direct motivation, or as a secondary factor, as Chris Howard states: *"*[My motivation is] *mainly financial, but recognition is also nice, but not the main factor*" (see appendix F). For some users the monetary reward is the only motivation for contributing to the community, as Jim McKee says: *"Motivation to submit was completely monetary"* (see appendix J). Also the two community experts from Quirky, Nathaniel Padgett and Paula Rosenberg see this as a strong motivational factor: *"Of cause* [users are also motivated by the financial incentives]*"* (see appendix H).

The users in the LEGO Cuusoo community do however, not appear to be equally as motivated by the financial rewards as the users of the Quirky community. According to Claus Nørgård Hansen, the LEGO users are often hardcore fans, and advanced users of the LEGO product. They have a love for the brand, and a commitment and loyalty, which is much stronger than the users of Quirky.

7.5.3 Utilitarian Need Satisfaction and Firm Recognition

The motivation of getting utilitarian needs satisfied is a bigger motivation on a community like Quirky, than it is on a community like LEGO Cuusoo. The types of innovations, and the broad spectrum in which innovations can happen, everything from household products, to sports equipment and electronic goods, means that the co-creation process is often spurred from heterogeneous customer needs not being satisfied. In the LEGO Cuusoo community, the co-creation

is more likely spurred from other intrinsic factors, such as peer recognition, and an urge to for a creative outlet. The fact that the LEGO Cuusoo community consists of very committed LEGO fans, makes it more likely, that users are also motivated to receive peer and firm recognition from their creative ideas and creations. Claus Nørgård Hansen highlights, that for LEGO fans there is no larger reward, than the recognition from the LEGO brand: *"Fans do it for the recognition and the experience… for a fan, this is worth more than money, I think"* (see appendix E).

Firm recognition is not a big motivational factor in the Quirky community, here the users do not choose the community because of the brand, but because of what it can do for them: *"I found it hard to get companies interested in my product. A lot of companies wanted me to develop the prototype and they wanted me to find a manufacturer. They wanted me to do all the work, which can cost hundreds of thousands of dollars, and that was why I submitted it on Quirky, because they pick up the bill for all the development."* (see appendix F).

7.5.4 Social Relations and Peer Recognition

As previously mentioned, the interaction between the users in a community is one of the main factors that make Community Co-Creation unique. The social relations among the users in the communities are part of what maintains, and fuels a community. The sense of belonging, and being able to share, and gain from the shared knowledge and interest in a given field. The social relations vary in the two we have studied. Mainly because the users in one of the communities are all experts and fascinated by the same type of product, and in the other, the common denominator among the users is that they are interested in innovation, and developing new things, but not necessarily within the same niche. Hence, the users of the LEGO Cuusoo community have a stronger common denominator, and are all much more narrow in their mindset and focus. These users are fans of the brand and products, and have likely participated and interacted with the brand (and perhaps with each other) in other settings than the community, e.g. LEGO World event in Copenhagen. The social bond and the conversations among the users in the comment fields are more personal than on Quirky (see example figure 19).

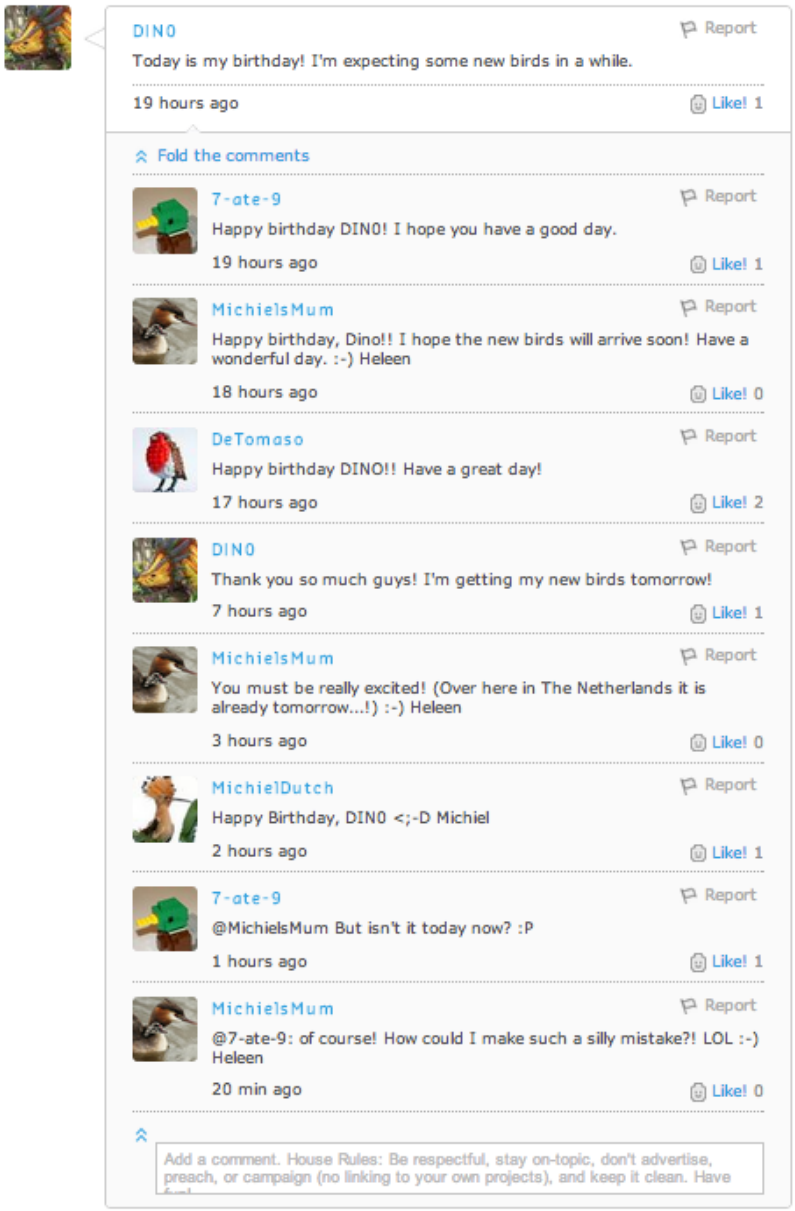

Figure 19 - Social Motives on Lego Cuusoo

The social relation on the LEGO community is characterized by a vast amount of complimentary comments to idea submissions. The majority of comments to each product has a complimentary tone (see example in figure 19).

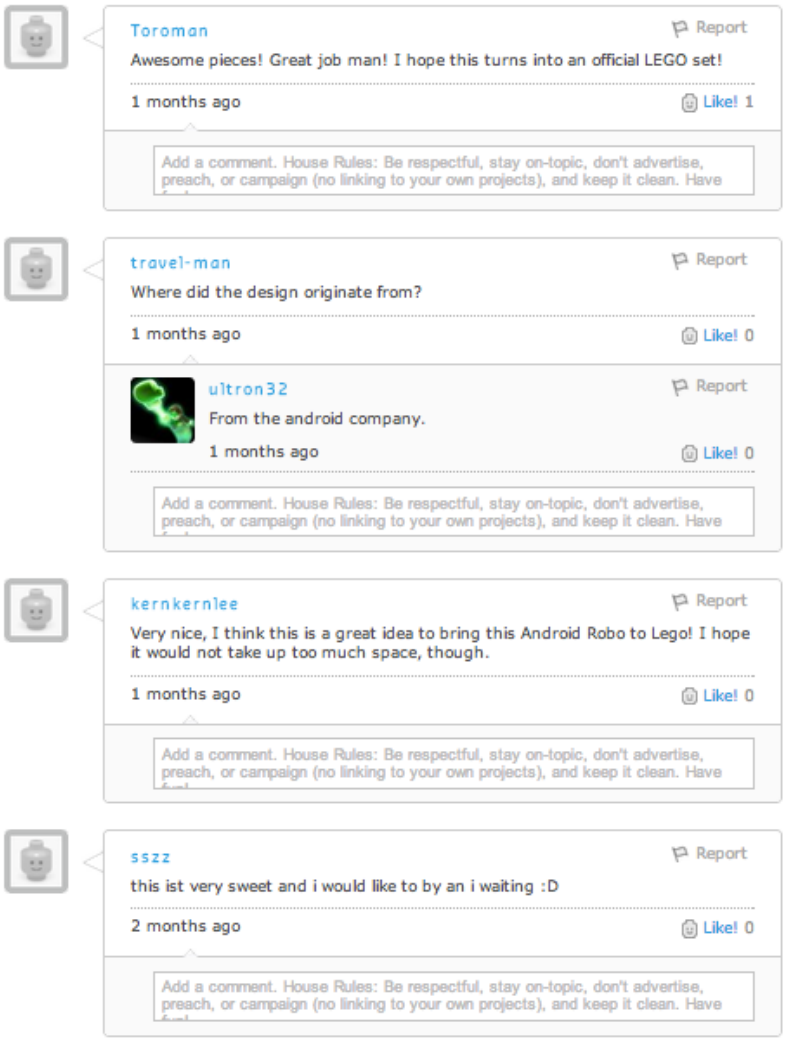

Figure 20 - The tone of communication

The dialogue among the users in the LEGO Cuusoo community is characterized by a strong sense of commitment to the individual idea submissions. Once a user has started following, and supporting a project, he becomes very committed to getting the project through to the review stage, which takes 10,000 supporters. On all the products we followed, there was a clear trend that other users, than the one who actually submitted the idea, would count down towards the 10,000 votes, and once the 10,000 supporters was reached, they would react as if they were a very integrated part of the idea, with comments such as “we won!” or “we made it!” (see example in figure 21).

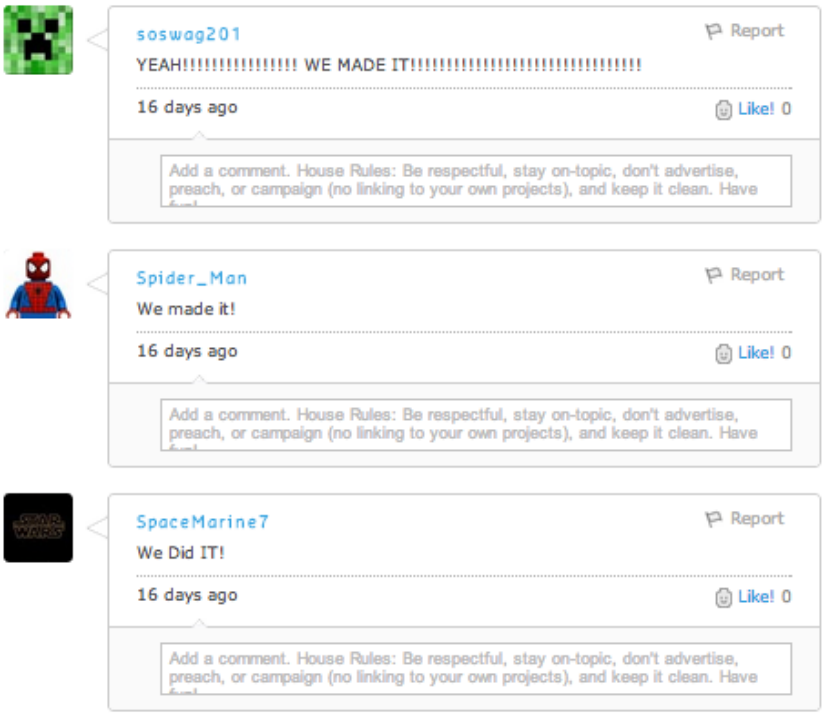

Figure 21 - Community feeling

That the dialogue among users is not as personal in the Quirky community, as it is in the LEGO Cuusoo community does however, not make the social relations and interactions less valuable. As Chris Howard, pro member of Quirky, states: *"The social community on Quirky of other inventors is quite important. When I submit an idea I instantly start to get a lot of feedback from others […] That's also very useful because sometimes it can spark more ideas or improvements for the products, which you hadn't thought of yourself".* Even though Chris Howard mentions that the social community is important, and it is important that they get feedback from others in the community, the engagement level, in terms of amount of comments, is significantly lower on Quirky than on LEGO Cuusoo. Almost all submissions on LEGO Cuusoo have hundreds of comments, whereas many of the submissions on Quirky have zero comments. This trend seems to have a lot to do with the social relations among the users. As previously mentioned many of the comments on LEGO Cuusoo have a 'friend-like' tone, whereas the Quirky comments are mainly 'professional', adding ideas to the submissions (see example in figure 22).

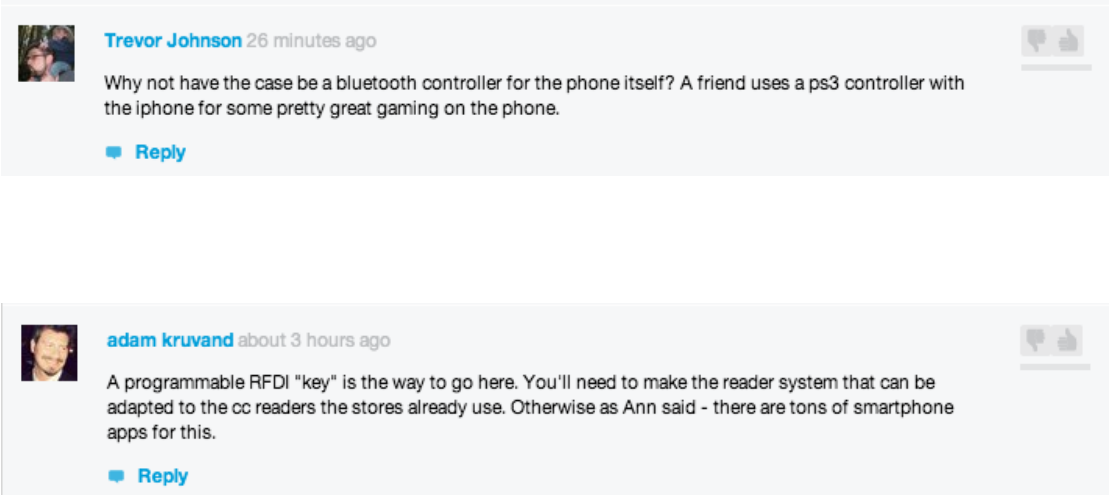

Figure 22 - Difference in the tone of conversation

7.5.5 Getting the Right Input

The ultimate goal for all firms is to produce the next big thing that all consumers want. This is part of the argument why CCC can be so great, in the first place. Previous research within user innovation states that the best, most innovative input, comes from lead users or lead customers.

The contributors to the Quirky community can be lead users/customers within their own field, but the whole Quirky community are not experts within the same field. Herein lies the potential of getting input from lead users from analogous markets, and evaluation from regular customers (non-experts). Hienerth, Pötz and Hippel (2007) proved in their study on lead user workshops, that this exact constellation, where lead users from analogous markets were able to contribute, proved to have a significant effect of the novelty of the developed products. This might very well be a shortcoming of the LEGO Cuusoo community that the users here are all from the target market, and are as such all experts, and highly involved users of the product, and fans of the brand.

In the LEGO Cuusoo community, the products are typically developed for 5-12 year old boys, but developed by 20-55 year old men. As Claus Nørgård Hansen from LEGO states:

"No [it is not the target group that are innovators]. *They are typically men at the age of 20-55 years old. The normal picture is that they are grown-ups with a close relationship to LEGO, and they are skilled builders".*

Also, to be able to submit ideas to the LEGO Cuusoo community you must be over 18 years old, naturally limiting a big part of LEGO's target group from providing input. This means that the end consumers are not part of the co-creation and evaluation of the LEGO Cuusoo products.

Hienerth et al. (2007) found in their study, that users benefiting from using the innovation came up with better ideas, than users only benefitting from selling the innovation. This is a strong advantage in both communities, since almost all of the users will be users of the products themselves. In the case of Quirky, most of the ideas come from a shortcoming, that the given user has detected in a current product, or specific situation. There will however also be more professional inventors that invent several ideas every year, these may not necessarily be frequent users of the products that they invent, but might instead be good at detecting opportunities in their everyday life and environment. In the case of LEGO Cuusoo, all users could to a large extent be argued to be benefitting from the use of the product. Even though the users do not benefit continually from a LEGO model, their regular use of the LEGO bricks will give them the same understanding of the need in a product, that would the 'use benefit' that Hienerth et al. (2007) outline.

A vast majority of idea submissions on Quirky do not make it beyond the first decision gate. This means that members are advised to do research, and develop the idea before sharing it with the community. This has the implication that most of the creativity still resides outside the realm of the community. In the LEGO Cuusoo community, all approved projects have a fighting chance to be community co-developed into an appealing product, although the LEGO Cuusoo process design (or lack hereof) does not actively encourage radical changes to the submission.

7.5.6 Lead Customers and Lead Users

Seybold (2006) distinguishes between lead customers and lead users. She defines lead customers as being a small percentage of current customers who are truly innovative, and lead users as a group, of both customers and non-customers, who are passionate about getting certain things accomplished. Lead users may not know or care about the products or services offered, but they do care about the project or need, and they have already explored innovative ways of getting things done, and are willing to share these approaches with others. This is an interesting distinction, that when applied to our two cases, almost makes it possible to divide the users of each community into a group each. The users of LEGO Cuusoo community are very similar to what Seybold describes as lead customers. From what we have observed in the community it can be established, that the majority of the users in the community are customers, and regularly invests in LEGO products. The users submitting ideas would be part of, what Seybold refers to as, the small percentage of the customers who are truly innovative. In the Quirky community, the users cannot be classified as customers of the product ideas they suggest, but rather, they resemble what Seybold refers to as lead users. They are people who need to have a creative outlet, who have seen a shortcoming within a

certain field, and have come up with a way to fill this shortcoming, and more importantly, they are willing to share their ideas.

Seybold does not mention any particular difference in the ability to come up with innovative ideas among the two defined groups, neither has she concluded any difference in the quality of the outputs of the two. However, Hienerth et al. (2007) concluded in their study on lead users, that lead users from analogous markets contribute to concepts that are more novel than lead users from target markets. From this knowledge, it could hence be assumed, that the chance of getting inputs from lead users from analogous markets is bigger in the Quirky community than in the LEGO Cuusoo community, because of the high diversity in market origin of the users. Since the users of the LEGO community are all fans to some extent, and skilled builders, which require practice and time, they can never be from what Hienerth et al. define as analogous markets. Their love for the brand and therefore, knowledge and experience with the products makes this impossible.

This distribution of, primarily, lead users in the Quirky community, and lead customers in the LEGO Cuusoo community, will likely have an effect on the 'collective customer commitment' that Piller and Ogawa (2006) suggests as a great way of reducing the risks of developing, and introducing a new product to the market. Excluding the actual target customers of the review phase, which is not necessarily done deliberately, but as an effect of e.g. community minimum age rules, or the fact that they may not have the shared interest, and thereby never join the community, will have a significant effect on the value of the collective customer commitment method. The ideal solution would be to have a whole community of potential buyers to review the products. However, one should not diminish the value of having a community of experts evaluate innovations and ideas. In the LEGO Cuusoo community the target customers are boys at the age of 5-12. This age group is not allowed to sign up to the community, naturally limiting the value of the evaluation phase. Here the product ideas are evaluated by other lead customers and LEGO fans. At the Quirky community, the chance of having an actual target customer evaluate the product is larger, due to the diversity in the community members and product ideas. It does however seem like, that the only users that are part of the community have lead user characteristics, and are part of the community because they are interested in innovation and NPD. Hence, the potential is there, but not exploited as the community is today. However, the collective customer commitment method gets more nuanced on the Quirky community, due to the fact that users here are lead users from both target and analogous markets.

Despite the fact that the collective customer commitment method in the LEGO Cuusoo community is weakened by the fact that the end consumers are not present on the community, it is strengthened

by the very active users. Each submitted idea have hundreds of comments, providing the LEGO corporation with great indications of whether or not the submitted idea is deemed worth their investments. Due to the smaller amount of comments on Quirky, the collective customer commitment method naturally loses value compared to LEGO Cuusoo's very active user feedback.

7.5.7 Implications of Part IV: User mix in Community Co-Creation

Different factors that can be used to motivate community members; one of the most prominent is not surprisingly financial motivation, but the community dynamics should not be overlooked, and thus more social motives can be used. The feeling of kinship has been observed to be a very strong retention and motivational factor, especially in the LEGO Cuusoo community.

It has also been observed that the users are a somewhat heterogeneous group with regards to their level of expertise, and their relation to the brand-category, but many members can be classified as "lead users" more than "target customers". Lead users have been concluded to provide innovative input, but lack the representativeness of the target group of customers. Combining this knowledge with the different types of CCC that are suitably with different innovation objectives, discussed in Part III, allow for a framework for designing a CCC process. Part IV of the analysis allows us to build yet another layer into the framework; who should be participating in the specific phases. In the next section it will be elaborated what this layer looks like.

8. CCC Process Hypotheses

The following section presents a hypothesis derived from our research and analysis and is thus also a proposal for further research as the framework presented is not tested, but based on an analysis of theory and case-based research. The case-based research is based on Lego Cuusoo and Quirky; two very different producers of consumer products and thus the framework is primarily targeted consumer products. We highly welcome that the framework is challenged, developed or rejected by further research.

8.1 Designing the CCC process

In Part I, Community Co-Creation is described as achieving a more dense mix of reach and richness, but it is also discussed how the two factors are working against each other. Even within Community Co-Creation it is thus necessary to achieve the right balance between the two. This balance is touched upon multiple times and from multiple angles in section 7, which will here be combined in a framework for designing the CCC process. To illustrate this, figure 23 from section

7.1.2 could be modified to display that CCC also entails an act of balance between richness and reach (figure 23).

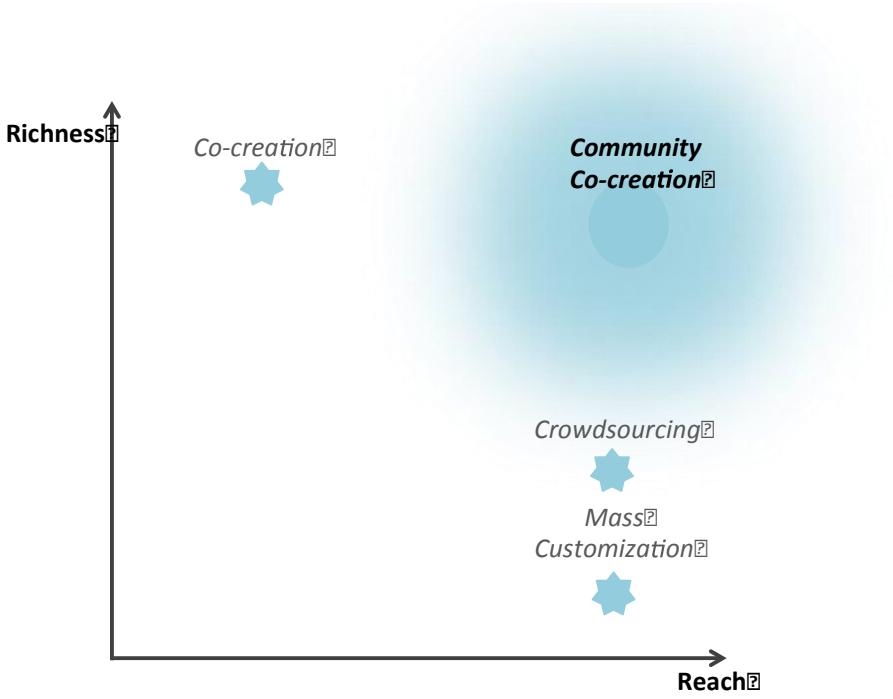

Figure 23 – Balancing Richness and Reach in CCC

In Part II the challenge of aligning Community Co-Creation with the company's innovation strategy, and the innovation environment, was analysed. Several goals for CCC were found to differ, depending on the innovation environment; some of these challenges were loss of control, output fit to brand, and the importance of short development time. Heterogeneous challenges naturally leads to various solutions for the optimal CCC design. In Part III it was established, that each phase of CCC requires specific kinds of input in the form of scope (the ability to get creative input of high quality and rich communication), scale (the ability to get a quantity of input from a many members), and that the phase format can be designed to cater for either one. In figure 24 the changing needs are displayed, and a pattern clearly shows. The phase structure is built on an innovate-evaluate-innovate framework, and is inspired by the positive findings about the multi-phased structure of Quirky.

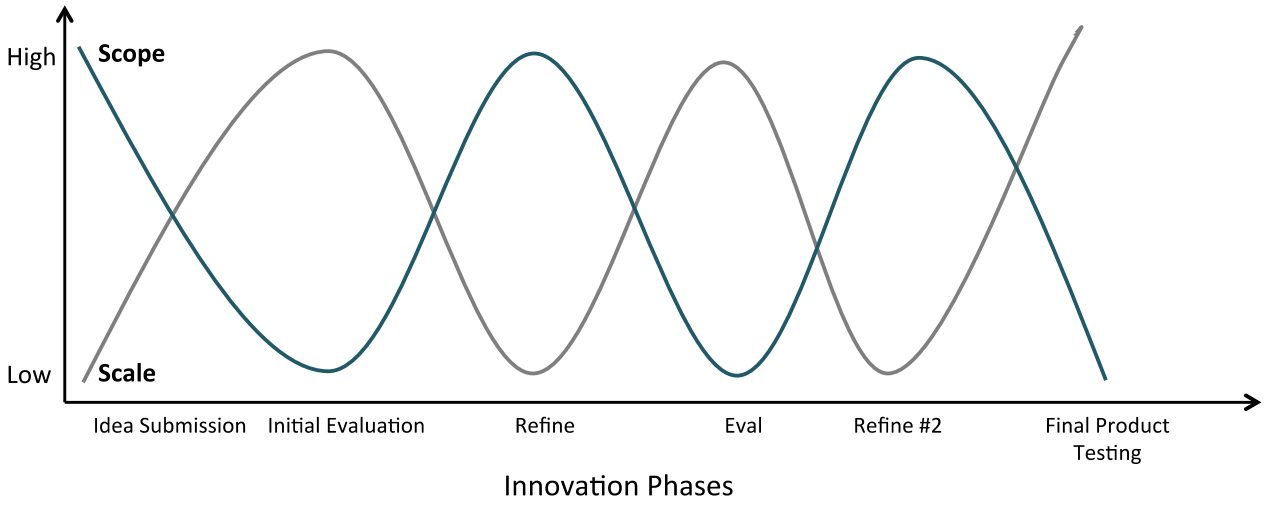

Figure 24- Scope and Scale needed in each phase

Three different types of CCC was found and discussed in Part III; being Input CC (I CCC), Hijack CCC (H CCC), and Controlled Hijack CCC (CH CCC). All of these types have different strengths and weaknesses, but had been observed to work harmoniously within the same CCC process, meaning that the strengths could strategically be utilized in the design of new CCC frameworks. In this way, it is possible to make a framework for which type of CCC that should be used in which phase. Using Controlled Hijack CCC in a strategically important phase can for example minimize the risks of losing control. This means that by deliberately designing the format of the phases accordingly, the company can minimize risks and maximize effect of CCC. The proposed framework is displayed in figure 25.

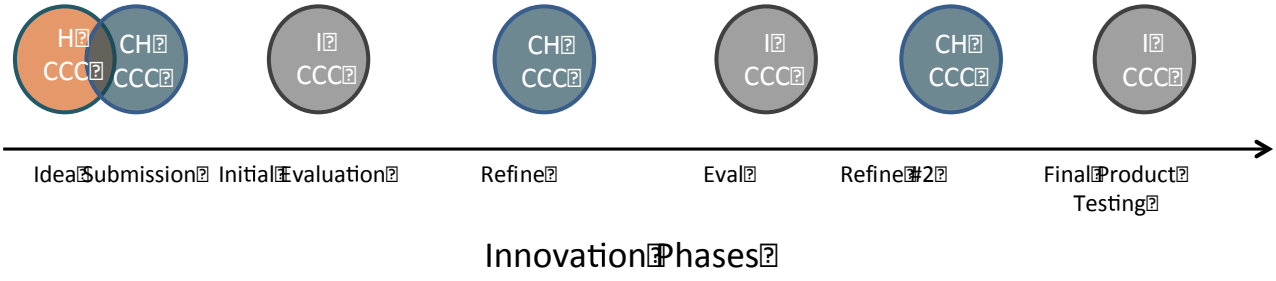

Figure 25 – Types of CCC throughout the innovation process

In Part IV it was found, that in order to get the right input, it is necessary to target different users in different co-creation situations. Typical customers are great when wanting to predict market needs,

but if wanting to innovate, then lead-users from analogous markets were found to provide better input. These inputs are typically wanted in situations where the co-creation task is rather complex and abstract, wheres the target consumers should be asked to evaluate concrete, and well explained solutions. This is illustrated in figure 26 below where the ideal types of CCC are used to show in which realm the co-creation phase should be located.

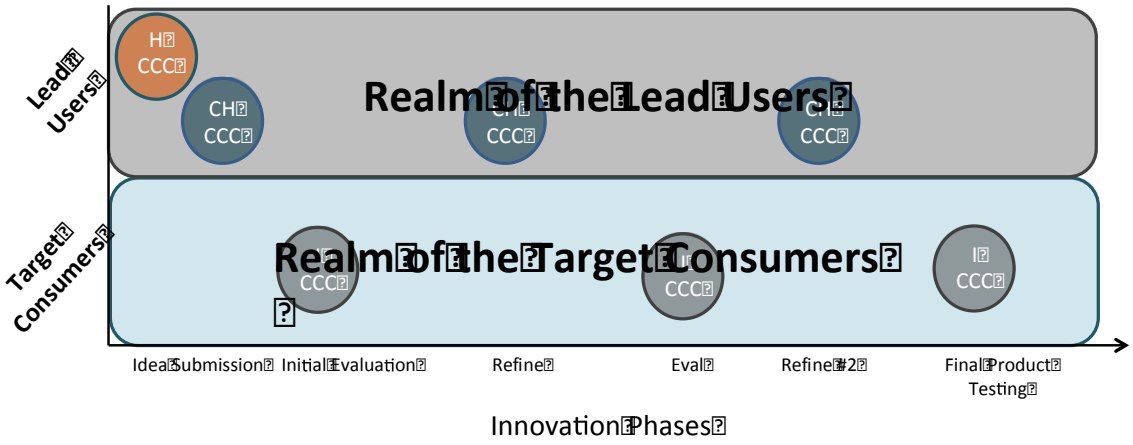

Figure 26 – Getting the right phase-specific input

In Part IV, it was also considered, whether the abstract tasks in the Realm of the Lead Users should be eased by assisting the co-creators in the task of e.g. illustrating the idea, which have proven vital for the success of the idea. Supporting illustrations, when sourcing *solution information* in the Realm of the Lead Users, would significantly help ideas when they enter the Realm of the Target Consumers, where the company sources *need information* from the target consumers. Being aware of the difference in the types of information needed when designing the phase format will also help the company get straight to the point in CCC.

9. Conclusion

This exploratory thesis takes a look at how consumer goods companies can benefit from involving a community of co-creators. The process of exploring this new innovation method has resulted in a distinction between various methods for user innovation and in this process a new term is developed; Community Co-Creation (CCC).

Community Co-Creation is further typified into three ways of undertaking CCC. These distinctions have been combined with analogous theories, two very different case-studies and a series of interviews to form a basic framework – not only for consumer goods companies wanting to implement CCC, but also to support future research within this very new innovation method.

9.1 A New Concept: Community Co-Creation

In this thesis, we have classified two types of communities for user innovation; crowd-sourcing communities and co-creation communities. The main differentiator between the two is the level of cooperation between members, where members in crowd-sourcing communities compete amongst themselves; they cooperate in co-creation communities. Furthermore, a distinct difference between the two is that in crowd-sourcing communities, the firm or facilitator initiates the dialogue by posing a problem or a challenge to be solved. In co-creation communities, it is the users who contribute with their ideas, unprompted by the firm.

Community Co-Creation (CCC) is a term developed to describe this new innovation method which combines Social Media and various innovation tools in co-creation communities. In CCC, users sign up to an online social media platform focusing on innovation and can basically contribute in three different ways: 1) submit ideas, 2) develop ideas and/or 3) evaluate ideas.

The CCC facilitator will then take care of the offline product development and testing, but the community members will have a significant influence on taking the product from an idea in a single member's mind to a well-developed product.

The ideas created are owned by the company, although the success is often shared with the inventors. Some examples show that financial motivation is not the only motivational factor and that the community, and its members, can be a factor in itself. But still, profit-sharing is often a positive factor for goal alignment.

Furthermore, three fundamentally different types of Community Co-Creation have been identified. These three types have been labeled; Input CCC, Hijack CCC and Controlled Hijack CCC. The

three forms of CCC differ in the way the communication is formatted and companies can, by deliberately formatting the phases of CCC accordingly; 1) achieve control where possible, 2) let unconstrained creativity roam where feasible and/or 3) achieve a healthy, and deliberate, balance between the two former points.

9.1.1 Benefits

One of the main benefits, and characteristics, of co-creation communities compared to other forms of user innovation (and even crowd-sourcing communities) is that you get the possibility of getting both reach and richness – both being some of the most significant components when wanting to innovate. The reach of online communities allows for a basically infinite number of co-creators and thus, a large pool of user resources, knowledge and creativity. The improved reach means that organizations can reach lead users (from both target and analogous markets), lead customers, non-consumers and end consumers within one community. This provides unique possibilities for designing and testing almost continuously.

The richness that is gained with CCC is based on the rich communication which is possible with the co-creators. Because of the reach, it is not possible, or even desirable, to communicate with users one to one, but richness can be gained through phase format design and by letting co-creators communicate together themselves.

The community in itself can motivate co-creators to stay and to keep contributing, as opposed to the finite time frame of regular co-creation. Furthermore, it has proved possible to get member commitment to purchases even before production, which naturally minimizes the risks the organizations face when committing to produce an innovative new product.

9.1.2 Risks

An important factor for CCC is the process of opening up the innovation process to the community. As the community is open to all, this includes a very real risk of industry espionage. We observed obvious attempts to persuade the inventors of promising ideas to pursue these ideas outside of Quirky, but it would be just as easy for competitors simply to copy the ideas without permission and try to circumvent the IP protection. This is why a fast time to market is often essential in CCC, unless other factors act as protection, as e.g. the trademark protection LEGO has for the bricks.

In order to achieve the benefits of CCC, the company must allow the community some freedom. This infers some level of loss of strategic control of the innovation. Some of the control can be regained through process design, but never completely. The company can ultimately just choose not

to launch any of the products developed through CCC, if the strategic fit is wrong, but besides alienating the co-creators, this will also entail having wasted resources.

9.1.3 Limitations

Community Co-Creation cannot completely replace internal innovation efforts in all cases. The loss of strategic control also means that CCC is not supposed to solve specific challenges faced by the company, but rather to explore new possibilities. If the company does not embrace the strategic drift, this may have the consequence that more traditional company-controlled innovation is needed.

9.2 The Innovation Environment

The innovation environment impacts the choice of overall innovation strategy in a company as well as the CCC strategy. Furthermore, the overall innovation strategy itself affects the CCC strategy. It was concluded that CCC can be designed to support all innovation models, but with significantly restricted scope in the linear models.

Community Co-Creation requires the act of handing over some level of control to the co-creators, which challenges the underlying assumptions of the linear perspective in innovation models. Some elements from the different models have been observed to have been mixed with success in CCC, e.g. the parallel processing of phases from the Compression Model is implemented in the Quirky process design, which also has elements from the Flexible Model and the Integrative Model.

The market and consumer dynamics were also concluded to affect how the CCC should be adjusted to fit the overall innovation strategy. Many of the environment dynamics were e.g. found to put pressure on the time to market of CCC.

9.3 The Innovation Process

Similar to what the theory for traditional co-creation states, it was found that the stage in the innovation process will significantly change what the CCC needs to contribute with. Thus, in order to determine how to get the best input, it was necessary to identify the best input in each stage. It was concluded that CCC can contribute in all of the idea development processes by continuously shifting from generating original content to evaluating these submissions. Two types of CCC were found suitable for generating original content; the Hijack CCC and the Controlled Hijack CCC, whereas the Input CCC would give the best results for evaluating ideas.

This also infers that a multi-phase structure is recommended, if CCC is not merely used in a single phase of the innovation process. A multi-phase structure will allow the phase format and design to be adjusted to fit the purpose of the specific phase.

Despite the finding that CCC can combine relatively high reach with relatively high richness, some compromises still need to be made between the two. Using a multi-phase CCC process design will allow the company to actively balance reach and richness as needed in each phase. This resulted in a suggested process flow for CCC, as presented in section 8. By applying the suggested structure, the company will remain in relative control throughout the CCC process, but still achieve the creative benefits of Community Co-Creation.

10. Future Research

This thesis explores a very innovative way of carrying out innovation. The newness of the topic itself has had significant influence on the direction of this thesis. The theoretical framework of innovation through communities is virtually non-existing, which was the main reason for making this thesis exploratory. Being exploratory, the thesis seeks to shed light on Community Co-Creation as a new concept, and to develop a basic framework for the use of companies and researchers. None of the findings in this thesis claim to be universal tools, but are intended merely as a framework for thinking about CCC, and the design hereof.

As with any research, and especially exploratory research, any findings should furthermore be seen as hypotheses, which future research should challenge. We strongly encourage future research within this field of innovation, which initially should be based on qualitative research. In turn, it might be necessary to confirm future findings with quantitative research, in order to convince skeptical innovation managers of the situational benefits of CCC.

Just as the findings and frameworks of this thesis need to be challenged and developed, so should the scale of it be expanded. In this thesis the focus is on consumer goods, but it would be interesting to see how CCC would be applicable in other industries, where the complexity of products, consumer knowledge, etc., will be different.

We also encourage future research to expand the scale of CCC in the complete innovation process. In this thesis we focus on the process from idea to prototype, but delimit ourselves from e.g. the production and product launch phases in which CCC might also have a potential role.

This thesis is, thus, only to be seen as one of the first steps in a very interesting new way of doing innovation. Future research will need to challenge the findings, and expand both the scale and the scope. Meanwhile companies will certainly experiment with new ways to include users in innovation – also through communities.

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Link 2: www.quirky.com/about, (visited 01/12-2012)

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Link 4: http://www.quirky.com/learn (visited 14/12-2012)

Link 5: http://www.quirky.com/blog (visited 14/12-2012)

Link 6: www.quirky.com/learn/faq (visited 28-11-2012)

Link 7: http://www.quirky.com/products/523-Ski-Snowboard-Carrier (visited 29/12-2012)

Link 8: http://www.quirky.com/blog/post/2012/11/the-end-of-sales-influence-and-a-new-beginning/ (visited 12/12-2012)

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Link 19: legocuusoo.posterous.com/?page=5 (visited 20/12-2012)

Link 20: legocuusoo.posterous.com/?page=5 & www.facebook.com/LEGO.CUUSOO (visited 20/12-2012)

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Appendix A: Interview Guide, Quirky Community Experts

Starters

- What's the most important factor for co-creation to succeed?
- What are the main benefits of involving users?
- Do the members behave differently in the different phases of contribution?
- Value creation? Between customers?

Process

- How flexible is the Quirky innovation process?
    - Can it happen that a product gets send back to a previous phase because of new insights? (e.g. go from naming" to "product design" or "research" due to newly discovered insights)
- Who decides whether the product-idea goes to which phase (and how)
    - This is one of the few things regarding the process we could not find anything about in the otherwise great blog posts you have
- On most Quirky products for sale a "Development Duration" is displayed – what does this include?
- Who do you consider your community to consist of?
    - How does this composition impact the innovation?

Community Management

- What are the main benefits of involving the users in the innovation?
- How has the community engagement in charity projects such as "Hana" been?
    - Are people willing to contribute without the prospect of monetary rewards?
- Does your community composition match your target customers?
    - Does it match the customers who make up the volume of purchases?
- Does the inventor-group (i.e. those earning influence on a specific product) match the target customers?
    - If not - would this, in your opinion, be an issue for the product?

Other

- Eric Zeng is a person from Kenvox in Hong Kong who contacts the inventors of promising ideas via the Quirky comments and asks if they should help developing the product outside of Quirky – what is Quirky's stance towards this?
    - Do you do anything active to prevent this?
    - That's the visible stuff - Do you have people employed to pursue copyright infringements?
        - If yes, how big a priority is this for you?

Appendix B: Interview Guide, Quirky Community Members

I would prefer talking with you over Skype, but if that is not possible a written reply will also be highly valued (the questions are below). Any kind of response would be great but obviously as detailed as possible would be best.

Let me know how I can repay your kindness.

How many idea submissions have you made?

Have any of the contributions made it to the consideration phase?

Have any of you contributions been produced?

What was your motivation to contribute your product idea?

Have you ever commented on another users idea?

- if so, what was your motivation to comment?

Who do you feel influences a Quirky product the most?

- the person submitting the idea, the community, or Quirky? (please write a few words to elaborate)

Appendix C: Interview Guide, Quirky Community Members #2

Demographics

- Age
- Job
    - Expertise-level in the area in which you contribute on Quirky?
- Gender

What is your personal experiences on the community/What do you think about the community?

- What is your motivation to submit an idea on Quirky?
    - Is anything else than the above mentioned (e.g. financial) motivation relevant for you in this regard?
        - Financial
        - Utilitarian
        - Peer recognition
        - Firm recognition
        - Social relations
    - Would you feel proud if you initiated a product that went to production even if there were no financial motivation?
        - Would it affect your level of engagement?
- Did you throughout the process of any of your idea-submissions change the opinion of your original idea?
    - If so; how?
    - If not; why not?
- What do you think about the quality of ideas posted on the community?
- How much do you feel that the final product is made by the users?
    - What is the role of the company?

What is your personal experience of the community

- What do you think of the community (Lego, Quirky or NineSights)?
- What do you feel about the other members of the community?
    - Any kind of connectedness?
    -
    -
- What is your relation to the platform provider (Lego, Quirky or NineSights)?
    - How was it before you joined the community?
- How did you learn about the community in the first place?

Appendix D: Interview Guide, LEGO

Hvad ser du som de væsentligste styrker og svagheder ved jeres communities?

Hvad er målsætningen med Lego Cuusoo og andre projekter der involverer brugere i innovation?

Hvad mener du er vigtigt når man bruger communities til produkt innovation?

Ser du at der er forskel på en-til-en co-creation og gruppe co-creation? Hvordan?

Har i præferencer i forhold til hvilke personer I gerne vil innovere med?

Hvem er det I rent faktisk innoverer sammen med? (f.eks. demografi, forbruger status, brand-tilhørsforhold)?

Er de brugere I innoverer sammen med også jeres kerne-målgruppe?

- Hvis nej; Hvordan håndterer I dette?
- Hvis nej; Er der sammenfald mellem deres og målgruppens behov?

Hvad tror du får brugerne til at ville innovere med Lego?

- I Cuusoo?
- Andre brugerdrevne innovationsprojekter?

Ser du en sammenhæng mellem hvilken motivation, der driver brugeren og hvilket engagement denne bringer og kvaliteten af brugerens idé?

Hvilke typer produkter har I lanceret som følge af bruger-innovation?

- Gruppe co-creation
- En-til-en co-creation

I Lego Cuusoo lader I brugeren komme med produktforslag og andre brugere stemme på disse – har I overvejet at lade dem bidrage i senere faser af produktudviklingen?

- Hvorfor/hvorfor ikke?
- Er der forskel på Cuusoo og andre af Legos brugerdrevne produktudviklingsprojekter i denne henseende?
    - Hvorfor?

Appendix E: Interview – Claus Nørgård Hansen

Skype interview

Date: 10.01.2013

Duration: 35:08

Participants: Claus Nørgård Hansen, Associate Marketing Manager

J&C: *Kan du kort fortælle lidt om hvad du laver for LEGO?*

Claus: Jeg arbejder med front end hvor vi laver innovation på det vi kalder playthemes, f.eks. Ninjago, City og Starwars, altså nogle af LEGOs kerneprodukter. Så jeg har ikke noget med Cuusoo som sådan at gøre, men vi bruger communities meget I vores innovation og det er noget som vi er begyndt at skalerer op indenfor det sidste år til halvandet. Jeg kan dog svare på en del spørgsmål om LEGO Cuusoo også.

J&C: *Hvordan er det præcis at i involverer brugerne?*

Claus: Hvis vi tager udgangspunkt i Ninjago, så går vi ofte ind og skaber en hel historie omkring universet, ligesom Ninjago har sin egen TV serie, og så har vi skabt det univers. Så i forbindelse med at skulle lancere den næste produktlancering, der har vi lagt det ud til fans f.eks. "kom med ideer til den næste historie ala Ninjago", sådan at de er med til at skabe universet. Så man kan sige, at lige i dette tilfælde er det ikke så meget på produktet, men mere på konceptet.

J&C: *Hvordan har i fundet dem?*

Claus: Det har vi gjort sammen med noget der hedder LEGO community, som har kontakten til vores fans, og det er især fans vi har brugt til det her. Det har vi fordi der er rigtig mange dygtige fans derude, som bruger al deres fritid på at bygge med LEGO klodser, så de vil kunne hjælpe os med gode idéer, både til modeller og til hvordan verdenen skal se ud. Så ved vi allerede at de har

simpelthen så mange meninger om det her, fordi de bruger så meget tid i forvejen på LEGO at de er så dybt integreret i det, at de ikke er fremmede for LEGO. Det er deres interesse.

J&C: *Er LEGO community en intern afdeling hos jer?*

Claus: Det er en intern afdeling ja, som skriver ud til fans og varetager kontakten til LEGO fans, og som f.eks. også er med når vi sætter LEGO World op ovre i København. De er både inde over online og offline events, og deres arbejde kan ofte være på vegne af en anden afdeling i LEGO.

J&C: *Hvad er målsætningen med jeres communities?*

Claus: LEGO Cuusoo er at bruge hele verden som innovationsflade. At nå ud til rigtig mange brugere og få deres input og idéer, og føle nogle trends i forhold til, hvad kunne være interessant at udvikle, hvad snakker de om derude, og finde det som virkelig er populært lige nu. Et eksempel kan være, at en fan lægger en model op som han har bygget og som han virkelig synes er sej. Og så går andre ind og stemmer på den model, og på den måde kan vi se, at her er potentiale for noget der er rigtig spændende. Cuusoo gør så det, at de går skridtet videre, og rent faktisk sælger den model som bliver rigtig populær, hvis man vurderer at der er forretningspotentile her. Det vi så gør i den afdeling jeg sidder i, front end, er at have to initiativer i gang, hvor målsætningen simpelthen er at forbedre vores koncepter og modeller som vi skal have ud i butikkerne på et tidspunkt. Så går vi ud og ser, altid med involvering af brugere, om vi kan skabe et lignende koncept, og så gør de så det. En anden måde at bruge de her fans på kunne være at sige; via vores LEGO community har vi opdaget 10 fans som er rigtig dygtige som vi gerne vil i kontakt med, for så vil vi sætte en workshop op med dem ,hvor de kommer her og får en opgave af os, og så skal de simpelthen hjem og bygge, eller de bruger måske to dage sammen med os hvor de bygger. På den måde så produktudvikler de faktisk for os ved at komme med idéer til fysiske LEGO modeller.

J&C: *Når de er hos jer og bygger, er det så som en gruppe eller individuelt?*

Claus: Det er lidt forskelligt, nogle gange sætter vi dem sammen, f.eks. tre og tre. Andre gange for de lov til at sidde alene og bygge og så mødes man senere og giver input til hinandens modeller. Så slut resultatet vil altid være en gruppe-bearbejdning, fordi der kommer input fra alle. Så gøre vi ofte det, at de udvalgt fans får tilknyttet en designer, som så løbende vil holde kontakten med dem. De

får en mail eller skype adresse, og så kan de kommunikere med den designer, så han kan komme med input, så man løbende produktudvikler deres idéer. Og hovedformålet med at gøre det her er, at simpelthen kunne få nye idéer til hvordan modellerne skal se ud til kommende koncepter der skal lanceres et til to år frem i tiden.

J&C: *Du siger at det er fans i bruger, så det må forstås som det er lead users i bruger når i hiver de her 10 personer ind?*

Claus: Du skal nok forstå fans i denne her sammenhæng som voksne mennesker, fordi børnene, som rent faktisk skal ende med at lege med det her LEGO produkt, de ville nok næppe have været en del af de fans som sidder og bygger. Det er ofte lidt ældre engagerede personer som har evnerne til at bygge kreativt også. Det vil børn i målgruppen 5-12 år ikke have udviklet på nuværende tidspunkt, og så er det heller ikke lige helt så nemt at komme til at arbejde med børn.

J&C: *Hvad er alderen på dem typisk?*

Claus: Det er meget forskelligt, men mellem 20-55 år. Kendetegnet er at det er voksne mennesker, der har et nært tilknyttet forhold til LEGO og som er dygtige byggere.

J&C: *Kommer de fra hele verden?*

Claus: De kan komme fra hele verden, men der er selvfølgelig nogle problemer i at de skal rejse helt til Billund for at arbejde sammen med os. Så i mange tilfælde har man valgt at sige, at vi holder os indenfor skandinavien og måske England, sådan at rejsetiden og omkostningerne er overskuelige. Men når det er sådan at vi bygger koncepter, så sender vi en template ud til omkring 50 udvalgte fans. Tanken bag dette var så, at de ville sende templaten videre til andre fans, og da det hele det sluttede så havde vi i stedet for de 50 vi sendte ud til, over 200 forslag fra forskellige fans, simpelthen fordi det havde spredt sig via blogs osv. Så vi havde over 200 idéer på hvordan det næste koncept kunne se ud. Forskellen på dette approach og Cuusoo det er, at på Cuusoo der har du ligesom ikke noget filter ligesom vi bruger fans som vi ved er meget engagerede, hvor Cuusoo jo i princippet kunne være hvem som helst der kan lave en profil.

J&C: *Hvordan har i udvalgt de 50 fans?*

Claus: Det har vi gjort sammen med LEGO community, og bedt dem om at finde 50 som de ved er meget engagerede i LEGO, og som de kunne forestille sig ville have gode idéer til hvordan sådan et koncept kunne udvikles. Så vi har egentlig lade dem stå for kriterierne, og bare sagt, at vi vil have dygtige folk, som interesserer sig meget for LEGO og som har vist en hvis kreativ evne. Og det er så ud fra deres erfaring og hvem de kender og har snakket med på en messe, og så simpelthen bare lade dem køre dialogen derfra.

J&C: *Hvad bestod templaten i sendte ud af?*

Claus: Den bestod af en beskrivelse af hvad vi gerne ville, have et koncept lidt ala Ninjago, hvor vi har nogle gode og nogle onde, vi har en verden og en mission. Vi bruger en poster hvor vi har delt den verden op i de gode og de onde, og så gik de ud fra det billede, og så skulle de skabe noget lignende. Vi gav dem også nogle nøgleord omkring hvad verdenen skulle bestå af, der skulle være konflikt osv. og så fik de ellers bare lov til at udfylde den template med billeder, f.eks. egne tegninger eller noget de havde hentet på Google. Så var der flere steder hvor de kunne skrive hvad historien handlede om, hvilke modeller skulle der være, hvilke helte figurer, hvilke onde figurer, hvor er der konflikt, osv. Simpelthen lade dem gribe en historie og visualiserer det i denne her template.

J&C: *Hvordan svarer de tilbage?*

Claus: De sender templaten tilbage både med tekst og billeder. I kan garanterer finde templaten hvis i Googler den. Vi opfordrede dem ikke til at dele den som sådan, men vores holdning til open innovation er, at vi helst ikke vil begrænse det på nogen måde. Det er selvfølgelig sådan med rettigheder og sådan, at de 200 der sendte en idé, skal skrive under på det man kalder en NDA (non disclosure agreement), hvor de siger, at mine idéer giver jeg videre til LEGO. Og det er jo prisen de betaler for at give os de ting, men det gør de frivilligt fordi de er fans. Så får de ”bracking rights” fordi de har været med til at skabe det næste store LEGO koncept.

J&C: *Har i overvejet at i kunne have ladet dem kommunikere med hinanden, og hvordan det ville påvirke slutproduktet?*

Claus: Det havde vi faktisk ikke, meningen var egentlig at det skulle være deres egne idéer de kom med og ikke hinandens fordi så kunne man igen få problemer med at de kunne påstå at deres idé var blevet stjålet af en anden. Men der var faktisk nogen der var gået sammen to-og-to, selvom vi ikke havde lagt op til det. Gevinsten ved det her var, at vinderne af det bedste koncept ville få chancen for at interagerer med LEGO designere og kommer herover og arbejde videre med deres idé i en 2-3 dage. Vi har ikke offentliggjort det endnu, men det bliver det her indenfor det næste stykke tid.

J&C: *Og det betyder meget for en LEGO fan?*

Claus: For en fan er det næsten mere værd end penge tror jeg. Men på Cuusoo der er jo en økonomisk gevinst i det (1% af salget) og det følte vi at vi ikke ville gøre her. For det første fordi at de koncepter vi udvikler er nogle der sælger for flere milliarder om året, så det bliver et stort beløb at give til en fan. Og vi vidste også, at de ville være mere end tilfredse med at bidrage til et nyt LEGO koncept, og chancen for at interagerer med os ville være rigtig stort for dem.

J&C: *Så dem der innoverer for jer, er ikke de samme som dem i gerne vil sælge produktet til?*

Claus: Nej det er det ikke. For at sikre at der er overensstemmelse mellem det der udvikles og målgruppen, så tester vi løbende koncepterne med børn. Der bliver ikke sendt noget ud på gaden som ikke er gennemtestet. Først produktudvikler du dit koncept, og så tester du det efterfølgende med børnene. Så kan du gå tilbage og produktudvikle igen, og så tester du igen, hvis du hele tiden får nye input fra børnene i testen. Det kan godt være at det ikke er børnene der innoverer selv, men der ville aldrig komme noget på gaden som ikke alle børnene ville kunne lide.

J&C: *Er der forskel på hvorfor folk deltager?*

Claus: Det tror jeg ikke. Man kan sige at professionelle gør det nok mere for pengenes skyld. Vi har før talt om at inviterer nogle professionelle ind, men så får de jo løn for at være her. Fans gør det for anerkendelsen og oplevelsens skyld. Så umiddelbart kan jeg ikke se andre formål end deres begrundelse for at gøre det.

J&C: *Har i oplevet at det er professionelle der går ind på Cuusoo for at tjene penge?*

Claus: Det ved jeg ikke, man kunne selvfølgelig godt forestille sig det, men det er jo ikke voldsomt meget de kan tjene derinde. Men man kan selvfølgelig godt skabe sig et navn for sig selv, hvis man er professionel.

J&C: *Har i set en sammenhæng mellem hvilken type motivation i bruger, og niveauet af brugerens engagement?*

Claus: Jeg synes ikke der er den store forskel, men det er nok fordi vi mest arbejder med fans, og ikke på noget tidspunkt rigtig har sat en økonomisk gevinst som gulerod. Men det kan godt være, at professionelle har ekspertisen til at kunne udarbejde det bedre end fans, som gør det her på hobbybasis. Så man kunne godt forestille sig at vi med en økonomisk gevinst kunne får bedre og mere kvalificerede input fra de her mennesker. Jo jeg kunne godt forestille mig, at folk der ikke er fans ville bidrage mere hvis der var en økonomisk gevinst.

J&C: *De typer produkter i har lanceret, vil du sige at det har været meget nyskabende produkter for LEGO eller har det været en ny serie der minder om tidligere LEGO produkter?*

Claus: Der er væsentlige elementer af Ninjago f.eks. som er helt nyt for LEGO, f.eks. Spinners, som er et socialt legetøj mere end en isoleret byggeoplevelse for dig selv.

J&C: *Var det en bruger der kom med den idé?*

Claus: Nej den mener jeg var skabt af os selv.

J&C: *I Cuusoo er brugeren kun med i selve idéudviklingsfasen, hvordan kan det være?*

Claus: I Cuusoo har brugeren jo egentlig næsten udviklet en færdig model, og så skal vi bare lave den i LEGO klodser, så den ligner så tæt på det koncept som de har designet som overhovedet muligt. Så jeg tænker ikke at man har behov for at inddrage dem yderligere der, fordi det simpelthen er en model der er færdig og som bare skal gøres klar til at komme på markedet. Hvorimod, i front end, der hvor jeg sidder, kunne man inddrage dem oftere, også senere i forløbet fordi der har man længere tid til at udvikle det, hvorimod på Cuusoo, der siger vi nu har den fået de

stemmer den skal have, nu har vi afgjort at denne skal på markedet, og så skal vi bare have skabt modellen rent praktisk så det ligner, og der har man ikke behov for at få brugeren indover mere.

Vi arbejder oftest med mere en én-til-én bruger innovation for at få flere input, men der er enkelte gange hvor en enkelt bruger er kommet med en god idé, og så kan man godt arbejde videre bare med den enkelte bruger.

J&C: *Hvad ser du som fordelen ved en-til-en bruger innovation og flere-til-flere bruger innovation?*

Claus: Jeg vil sige at fordelen ved gruppen er at du får flere synsvinkler på idéen, fordelen ved en til en er at du har en person som nok højst sandsynligt er så meget inde i idéen eller konceptet, at personen ved alt om det. Men igen, det ville også blive lidt snæversynet, og gevinsten ville nok også i sidste ende være større når man kommer ud til grupper. Og det er derfor vi oftest vælger at tage gruppevejen, for i sidste ende er det oftest os selv der vælger at færdiggøre idéen med vores designere og kreative folk. Ovenpå det kommer der test med børnene. Så grupperne kan man bedst bruge tidligt i fasen til at komme med rigtig mange idéer til produktet.

J&C: *Er det altid face-to-face i laver?*

Claus: Nej ikke altid. Nogle gange er det via skype, email, eller lignende. Det varierer meget.

J&C: *Har i erfaring med at lade dem mødes i grupper over internettet?*

Claus: Det ved jeg faktisk ikke, men jeg tror faktisk at de gør det af sig selv via blogs. Men det er ikke noget som vi som sådan har sat op. Men jeg ved at der er et projekt i gang, hvor man vil lave et netværk som skal lanceres på nettet, hvor man kan lave en profil og komme med idéer. Lidt ala Cuusoo men bare ud til en breddere gruppe hvor det ikke kun handler om LEGO modeller men om alle mulige idéer (f.eks. koncepter, tegninger, trends, mm.) og så kan man gå ind og skrive kommentarer osv. Så der er noget på tegnebrættet indenfor det. Det er rullet ud internt og det er hensigten at det skal ud til den breddere befolkning indenfor det næste års tid. Og der er rigtig mange muligheder for os der, vi kan oprette diskussioner, stille spørgsmål, bede om forslag, spørge

hvordan synes i vores sortiment ser ud, er det for dyrt osv. Det ville være et værktøj til virkelig at kunne bruge fans og communities til at forbedre hele oplevelsen LEGO har omkring sine produkter.

J&C: *Får fansene der hjælper jer med at innovere at vide hvilken målgruppe de skal prøve at ramme?*

Claus: Det er et godt spørgsmål. Jeg vil tro at de godt selv ved hvad målgruppen er når de sætter sig ned med en model eller et koncept. Så har de en god idé om det, fordi de kender LEGO og Ninjago så godt. Men jeg kunne godt forestille mig, at de i briefingen fik at vide hvad målgruppen var. Det ville man nok oftest oplyse.

J&C: *Hvor lang tid taget det typisk at udvikle et produkt/koncept?*

Claus: Ovre ved os der går vi typisk i gang med konceptet i f.eks. november-december det ene år, og så er vi færdige med ideen og modellerne i september året efter, så vi har et helt år til at produktudvikle og arbejde på konceptet. Så går der er år mere hvor produktet kommer ud til markedsudviklingen. Så før du ser noget på gaden så kan der nemt gå to år. Men selve produkt- og konceptudviklingen den tager ca. et år. På Cuusoo er det anderledes, der er det et spørgmål om hvornår en idé har fået stemmer nok og så er der nogen der går ind og kigger på det hver kvartal, og kigger på de ideer med flest stemmer, om der er nogen af dem der kunne være forretningspotentiale i. Og så udvælger de idéen og sætter den i produktion. Så der varer det typisk kortere tid end hos os.

J&C: *Er det din fornemmelse, at produktudviklingen går hurtigere eller langsommere med denne form for brugerinvolvering?*

Claus: Det vil aldrig gå langsommere fordi vi har en fast struktur der hedder at man har et år til det, så det skal bare nås indenfor det år. Og meget af det bliver allerede låst tidligt i fasen, så man kan sige at produktudviklingen kan måske på et givent projekt vare 4 måneder. Så indenfor de 4 måneder, der skal komme input fra fans. Vi har deadlines løbende i løbet af det år hvor visse ting skal være færdigt så det er meget forskelligt hvor lang tids input vindue man har til de forskellige idéer.

J&C: *Kan man i jeres innovations process godt gå tilbage til tidligere faser, hvis man føler der er et eller andet der mangler?*

Claus: Principielt nej, for så kan vi ikke nå at lancere året efter. Så idéen skal være rigtig rigtig god, hvis man vælger at gøre det. Du kan altid tweake dit koncept, og du kan også altid ændre lidt på modellerne, og det er sådan set også derfor at vi har et år efter til at gøre det markedsklar, men konceptet piller man ikke meget ved i løbet af det år, men modellerne ændrer man ofte lidt på.

J&C: *Sidder der folk med fra salg i jeres konceptudvikling?*

Claus: Ja det gør der, og vi skal løbende have businesscases klar på de forskellige koncepter der vurderer hvad der er af potentiale i de forskellige markeder. Vi har forskellige vinduer vi får input og vurderinger fra så man hele tiden holde ren fornuftig forventningsafstemning på hvad koncepterne kan levere i kroner og ører.

J&C: *Sidder der også en med fra produktion?*

Ja, en projekt manager som har indsigt i værdikæden, og som ved hvor lang tid det vil tage at færdiggøre et givent produkt. De har de samme deadlines i forhold til konceptudvikling osv. Det er også derfor det gør det svært at gå bagud i processen fordi vi skal kunne nå deadlines.

J&C: *Hvad ser du som vigtigt for at co-creation kan lykkes?*

Claus: Det er essentielt at skabe en fælles vision for virksomheden og dens brugere. Brugerne skal ønske at ville forbedre/bidrage til produktet enten fordi de er følelsesmæssigt knyttet til produktet, eller fordi der er en præmie/økonomisk gevinst forbundet. Dernæst skal man oprette det rette miljø for at skabe og dele ideer – jeg ved ikke hvilken form der er bedst, men vi har haft gode resultater ved at anvende workshops blandet med mail/Skype interaktion med LEGO designer.

J&C: *Hvad ser du som fordele og ulemper ved at involvere brugerne?*

Claus: Fordelen er, at virksomheden kan få input i form af vidt forskellige ideer fra forskellige brugere med forskellige baggrunde. Det er en måde at få nye ideer, tilmed skæve ideer og tanker,

der måske ikke ville dukke op via den konventionelle ideskabelsesproces. I den tidlige fase (blue sky) kan det være belønnende at involvere alle brugere, men man skal være forberedt på de mange input kræver tid og ressourcer

En klar ulempe er, at brugerinvolvering kræver tid og ressourcer. En hver bruger, der kommer med forslag til et co-creation initiativ, skal have svar på sin henvendelse og gerne feedback på ideen. Når man vælger at lægge et co-creation initiativ (fx find på det næste LEGO concept) ud til brugerne, så spreder budskabet sig hurtigt. Det fører til mange input fra brugerne, og det tager lang tid at læse igennem, og for at være helt ærlig, så kan der være langt imellem de gode ideer. Vælger man i stedet at begrænse sine brugere til et udvalgt felt, fx en faggruppe af art directors, er der større sandsynlighed for kvalificeret ideer inden for det ønsket felt.

J&C: *Hvad ser du som essentielt for at få brugerne til at involvere sig i første omgang - Hvad virker for jer?*

Claus: Jeg har observeret at to ting virker:
1) en økonomisk gevinst eller anden præmie (Cuusoo modellen).

2) Anerkendelse: At man har et brand med stor fanværdi. LEGO har rigtig mange fans fordelt i hele verden, som bygger med LEGO i deres fritid. For dem har anerkendelse og interaktion med LEGO gruppen stor værdi. De bliver anerkendt af LEGO og de andre fans i community.

Hvorfor har man valgt at sætte tidsbegrænsning på processen?

Ofte er det fordi man skal bruge ideer til et givent produkt som skal lanceres til en fastsat dato. Men i princippet kunne man holde processen kørende og anvende løbende ideer til fremtidige projekter, men igen, det ville være tidskrævende. (men som nævnt i interviewet forleden, så er LEGO gruppen ved at udvikle et online netværk til at lette brugerinteraktionen og skabe overblik over ideerne. Så koncernen har indset værdien i bruger involvering)

J&C: *I hvilken grad ser du brugernes involvering i hhv idéfasen og "løsnings-fasen" (altså hvordan en given idé bliver løst rent praktisk/teknisk)?*

Claus: I idefasen åbnes der op får en bred involvering, hvor det handler om at få mange ideer. Ligesom da vi sendte ud til 50 fans, men fik svar fra 175-200 brugere. En løsningsfasen vil man ofte

gå efter kvalificeret input fra faggrupper, freelancere eller konsulenter, så det kan man egentlig ikke kalde brugerinvolvering, men ansættelse. En anden vigtig del af bruger involvering er tests, hvor slutbrugerne (børnene) bringes i spil. Her er der selvfølgelig tale om iscenesat brugerinvolvering og ikke brugerdreven innovation.

J&C: *Hvad tror du det betyder for innovationen at jeres community er så specifikt og i meget specifikt involverer LEGO fans i stedet for at gå bredere ud? Hvorfor har i valgt at fokuserer så specifikt?*

Claus: Det er et bevidst valg fordi mange fans er dygtige LEGO-byggere, og kender LEGO koncepterne yderst godt og har en mening om de produkter vi udvikler. På samme måde giver vi noget tilbage til community ved at lade dem involvere sig.

Appendix F: Interview - Chris Howard

Skype interview

Date: 22.11.2012

Duration: 28:35

Participants: Chris Howard - Pro member on Quirky (http://www.quirky.com/users/245853)

General observations: casually dressed grow-up man with two pro road-bikes in the background and a poster from the Paris-Nice classic. It is obvious that Chris is a bicycle enthusiast.

J&C: *How old are you?*

Chris: I'm 41 years old

J&C: Gender?

Chris: Male

J&C: Location?

Chris: Melbourne, Australia

J&C: *Which job do you currently hold and what is your educational background?*

Chris: I am originally an art director and I worked with graphic design and advertising for about 15 years but do a little bit of inventing on the side.

J&C: *Which kind of innovation?*

Chris: Mainly a product called Tite Tie but also a product called mud guard – it's also on Quirky, but I had been working on that for some years before actually submitting it to Quirky. But what I found was that I found that very difficult to get that up and running. I found it difficult to get companies interested in it. A lot of companies wanted me to develop the prototype and they wanted me to find a manufacturer. They wanted me to do all the work… which can cost hundreds of thousands of dollars… and that was why I submitted it on Quirky because they pick up the bill for all the development.

J&C: *How often do you use Quirky?*

Chris: I use it quite a lot – I've only been a member since July this year… and I started using it because – well I invent products anyway with my company called Tite Tie. That was my first product that I invented and I found that quite difficult to get that into the world wide market because Australias population is so small – we don't have much of a market her to get new product out there so you need to find a new market and that's when I thought… well Quirky is a good way to do that.

J&C: *What is your motivation to submit an idea on Quirky?*

Chris: Mainly financial but recognition is also nice… but not the main factor. When I have an idea I just need to get it out there. I like that creative process.

J&C: *Are there any other reasons to submit ideas on Quirky?*

Yeah [fast reply]… the social community on Quirky of other inventors is quite important as well. When I submit an idea I instantly start to get a lot of feedback from others which you can't do if go the traditional route. That's also very useful because sometimes it can spark more ideas or improvements for the products that you hadn't thought of.

J&C: *Did you ever find the inspiration for a modification or a new product on the community?*

Chris: Yeah yeah [quite enthusiastic]… the shock absorber stem that I invented – that came from an idea… that was sparked by someone else… one guy said something like "it's a pitty that suspension forks only go for mountain-bikes" and that's what made me think of the suspension stem. I really like getting input like that.

Another of the ideas I posted was not my own. I was contacted by a guy who had the idea that it would be useful to have collapsible steers for bikes, so he contacted me via Quirky and said "wouldn't it be cool if we could make this collapsible steers?".

J&C: *So did you then brainstorm on the idea together?*

Chris: No it was actually a complete idea he just couldn't come up with an idea to do it practically and to illustrate the idea. It needed to be possible to retrofit to bikes. So he had seen that I had done some stuff with bikes and he figured that I might be able to help. So I did and we posted the idea together.

J&C: *What did you do?*

Chris: I did some illustrations and suggested an idea for how to retro fit it to existing bikes. I don't know if you have those people in Denmark, but here in Melbourne we have a lot of people who retrofit their bikes with all sorts of things. New coloured wheels and so on. I think they are actually ruining their bikes. They start out with a beautiful old racing bike and they end up with something completely different!

J&C: *Was it difficult to get a joint idea posted on Quirky?*

Chris: No, you just tick off a box and write the name of the guy you cooperated with.

J&C: *Your idea submissions get a lot of comments – is that something you actively pursue?*

Chris: I think it has a lot to do with the illustrations I supply with my ideas. I want people to understand the idea from the picture in a few seconds.

J&C: *Is that because of your background or did Quirky help you get better at illustrating your ideas?*

Chris: No, I know that Quirky did something on the matter in their blog post – they have a blog post in which they keep their users updated. They had a post on how to illustrate your ideas.

J&C: *Did you read it?*

Chris: No I didn't [laughing]

J&C: *What do you think about the quality of ideas posted on the community?*

Chris: [silence]

J&C: *Do you look at the other ideas posted on Quirky?*

Chris: Yeah, I spend around an hour a day just looking at other people's ideas

J&C: *What do you think about the quality of these?*

Chris: I think maybe 10% are good. 50% are crazy ideas that have not been thought trough – they're just ideas. But I like reading them anyway. It makes you think out of the box… 40% a just far out ideas that really haven't been thought through (laughing).

J&C: Did you see my idea submission with the adjustable picture frame hangers?

Chris: Yes

Well, I kept asking my friend who worked in a supply store what his customers were asking him for at work and finally he said that he was often asked about nails for hanging pictures – like many many times a' day. So I knew the demand was there and then I researched what was on the marked and it turned out that

J&C: *What do you think of the community (Lego, Quirky or NineSights)?*

Chris: Some people don't like Quirky saying that they have had products in production for over a year and that you'll never get your money. And that they are only good for a certain kind of products.

J&C: *Which kind of products would that be?*

Chris: Stuff that's cheap to produced and that sells reasonably cheap as well. Stuff for iPod and stuff like that. Simple electronics for example. And that you'll never see a Quirky product priced above $150.

J&C: *Do you agree with those people?*

Chris: Yeah – if you look at the products that Quirky have made it's never something expensive.

J&C: *What do you feel about the other members of the community?*

Chris: [silence]

J&C: *Do you feel any kind of connectedness?*

Chris: Well I guess there is some kind of connection – I talked with another guy from Melbourne who contacted me and said that he was into bicycling as well so we ought to go for a ride (laughing) and catch up – never happened though but he seemed like a nice guy.

J&C: *But is the connectedness geographically bound?*

Chris: No I guess it isn't but some guys have Quirky products for sale in Australia and it just makes it a lot more tangible that you can see and touch their products.

I talk with a couple of guys 2 or 3 times a week, but that's with the private communication via Quirky. I feel like I'm in contact with experts from all over the world with Quirky

J&C: *Where did you meet these guys?*

Chris: I met them through Quirky. Some of them I contacted because I had seen their good contributions and others contacted me with ideas or comments.

J&C: *How was your relation to Quirky before you joined the community?*

Chris: I didn't know Quirky before I signed up.

J&C: *How did you learn about the community?*

Chris: I actually just made a Google search for "invention help"

Appendix G: Interview - Peter A. Wachtel

Email interview
Date: 06.06.2012
Participants: Peter A. Wachtel

Background: Peter has invented two products on Quirky: the Mercado (a bag for grocery shopping) and the Stake (an all-in-on tool for barbequing). This interview takes its point of departure in the Stake-invention.

J&C: *What is your age?*

Peter: I'm 44 years old

J&C: *What is your current profession?*

Peter: I'm a Toy & Product Designer at my company KID Toyology. Before that I was a teacher, a writer & Inventor. You can ead more about my background on http://www.coroflot.com/kidtoyology.

J&C: *What is your total household income?*

Peter: Medium

J&C: *Where do you live?*

Peter: Camarillo, California - originally from Buffalo, NY

J&C: *What is your highest level of education?*

Peter: It's a Master in Industrial Design from Pratt Institute Brooklyn, NY

J&C: *How did you get the idea for Stake?*

Peter: I am a big BBQ fan, I recently was BBQing in the backyard, and was amazed that I needed so many tools to cook. I had my spatula, tongs a fork, a knife, and even a bottle opener. There was a different tool for only one function. I thought, wouldn't it be great if there was a way to combine all if these needed tools into one multifunction tool, that I could easily take with me where ever I go- camping, picnics, BBQs, tailgating, the beach, even the kitchen!

I started by taking the most used tools that I used when BBQing, and chopped, cut and broke them apart, and started to make a rough prototype to see if I could get the right combination as well as the best look and ergonomic feel. After a lot of trial an error, I came up with a success! I tried it out and it worked great! I could flip burgers, steak (which is the pun I used to name it STAKE), chicken, veggies, poke the meat, cut potatoes, pick up corn, and even open my beer! I now use STAKE year round, and even indoors in my kitchen when cooking! "ALL IN ONE" BBQ Tool which

transforms from spatula to fork to tongs. Now you can flip burgers, grip chicken legs, and spike hot dogs without breaking a sweat…

Check out my Ultimate BBQ Tool Invention video here: youtube/r9ROjUnQGIM and you can buy it here: qrky.co/ktw8K8 for $29.99, and my other invention – the Mercado Farmer's Market Bag qrky.co/oGTJqq

J&C: *Do you think you are encountering the problem, which your product solves, more often than other people?*

Peter: No, I think most people have this problem when carrying BBQ tools to picnics, tailgating, etc.

J&C: *Do you think you would use the product more often than the average person if it already existed?*

Peter: Yes, I do BBQ a lot.

J&C: *If so: is that propelled by your interests, job, life situation or other factors? Please explain why and how.*

Peter: Yes, I have the "Invention Bug"- for which there is no cure… I am inventing each week to try out new things, and ways to make life more fun, as well as solving problems.

J&C: *What motivated you to upload the idea?*

Peter: I wanted to see if my ideas had merit as well and solve a problem.

J&C: *Would you have contributed without the prospect of making money on the product/idea?*

Peter: No

J&C: *Did you consider pursuing your idea outside Quirky*

Peter: Yes

J&C: *What factors would make you create the product without Quirky?*

Peter: Cost & Distribution, percentage as well as contacts.

J&C: *Would you go to a competitor or create it yourself?*

Peter: I would search out the best company for the product and try to license it to them for a royalty.

J&C: *Would it affect it if the idea was extremely good with the potential of making a sizeable profit?*

Peter: Yes

J&C: *How often do you think about your Quirky-contributions?*

Peter: I think about them multiple times a week

J&C: *Would you be willing to contribute on other sites?(e.g. GM, Apple, or your local [computer] store)*

Peter: Yes and I do including Edison Nation

J&C: *What is important for you in the decision of choosing to contribute on a site such as Quirky?*

Peter: Cost, Distribution, Idea development as well as promotion of the final products produced on the platform.

Appendix H: Interview - Quirky community experts

Google+ Hangouts interview

Date: 22.01.2013

Duration: 37:29

Participants:

Nathaniel Padgett (N); Community Manager and leader of the Community Support Team within Quirky

Paula Rosenberg (P); Invention Ambassador, works with the inventors and ideas in the first stage and the transition from to subsequent stages. Has previously been part of the Community Support team.

J&C: *What do you see as the most important factor for co-creation to succeed?*

N: Communication is by far the most important component. Especially when you are working in a distributed [separated], collaborative environment communication is gonna be of the utmost [importance] because you are not gonna have someone whose desk you can just walk over to and ask for something or check progress on so you need to make sure that you are either constantly following up or providing updates on a given project and that is something we try to do on our side when we open new phases. Each phase has a countdown timer associated with it which tells you how long you have until the round expires. There is a set limit that is advertised on the actual project page for how many contributions an individual can make and how many votes they can use for contribution and these vary from a naming submission to a design submission to a tagline submission.

P: Also ethics in general are important. Living up to what you say you are going to do. Follow through.

J&C: *Does it matter what type of communication it is?*

N: Communication as a broad term is the most important. In some instances only one form of communication is going to be possible. You might not have a phone number for someone. You can ask them for their phone number, but maybe they don't want to give it to you. So sometimes your only method of communication is going to be email. When it comes to completion of projects that communication is purely happening through the project page, through the information that we are communicating in a one-to-many sense with the users. So through that information stage we are also providing a transparency as to the process as well as some predictability so that users know what to expect through their part of participation.

N: So it boils down to that there is really not one form of communication that is better than the other. The important thing is just to make sure that you are communicating what needs to be done, what is happening, and what has been accomplished.

J&C: *What do you see as the main benefit of involving users?*

P: Everybody has the need to be creative as some form of self-expression, but most people don't have the time to fully fulfill this need as they have their own career to worry about and they don't have the financial resources to make a prototype or have an idea to get their idea into the hands of the right marketers. I think there are a lot of barriers to do innovation outside Quirky.

N: that touches on the benefits for the users, but with regards to how the brand- or even the brand's partners - might benefit from involving the users it is an important benefit that the active engaging your users – the active cultivating a community around a given product, or a given process builds in a network of stakeholders, who all have either contributed in some way to the product or have some vested interest in that product's success and creates a customer base and that customer base then also benefit that brands' partners who maybe are acting as distributors of the given product and then

it might be driving sales for that given partner or the product themselves. So it's a dual benefit in engaging users: you create opportunities for those users and you create opportunities for those brands by doing so.

N: There is also the component of gaining creativity from the users. And that is absolutely an important component, but if we are speaking in a purely abstract sense in terms of what is benefitting both the brand that is engaging the users and perhaps it's partnership-circles at the end of the day what is really important is having a network of stakeholders that have some vested interest in the success of that product. Obviously if you have users who have contributed to the development of that product and contributed to the creative process then you conceivably would have better products, but you will also have a network of people who would really want to see it do well – and that is really important.

N: The creative process is very important, but it is only going to be as important as you allow for collaboration – and collaboration is ideally going to be between the user and in our sense you are going to have the team that is internal to the company and that is actually able to execute on some of the ideas that are provided by the users. So absolutely, the creative process benefits from the interaction with the users, but in terms of general success – you know having that stakeholder network is really ideal.

J&C: *Does the creativity generation mainly happen as a result of collaboration between a user and an internal Quirky team or would it be between users themselves?*

N: I would say that it happens both places. The original idea for a given invention is something that we are sourcing from the users. That's not saying that our team of designers etc. wouldn't be able to develop that on their own – where the consumer is providing benefit is that they are providing consumer insights that we don't necessarily have. We may be trained in how to technically develop products or to develop a good design – what we don't have is an understanding of what the consumer actually wants and what they will actually find useful. So in that respect in terms of providing direction and direct inspiration for execution – the users involvement is obviously very

important to the process, but again that does all lead into the importance of having a network of people who are really interested in the success of this product because they have some stake in it. One of the really cool things about Quirky is that we are providing an opportunity – through having an open creative process – for everyone involved, customer, influencer, employee, partner… to have a stake of the success of that product and that everyone to be collaborating to ensure that it does well.

J&C: *Do the users behave differently according to which phase of innovation they participate in?*

P: The format is different in the different phases. The way pricing game works is that they are either going to check off that they are not interested in that type of product or if they are interested they are going to answer four very general questions regarding price of a product – it is a very different type of involvement than submitting your own idea or submitting suggestions to someone's idea or coming up with an idea for a tagline or a name or for design refinements, which is just another level of engagement based on the type of format that it is. I think people tend to participate in things that they themselves would be interested in – if it is a product for moms, then people who are moms tend to be more interested and more vested in that project than people who are not moms. I think it varies project to project who is involved.

N: the different formats are going to elicit a different kind of engagement and a different kind of involvement and participation, when you are tasking them to creating that core idea and when they are building off someone's idea. So when we are saying "submit your invention ideas to us" you are providing this completely open canvas for somebody to invent and to create and so they are more likely to have some personal vested ownership – or feeling of ownership - in that idea opposed to a product that we have already chosen and now we are looking for some end designs or a final name for it; it is a different form of engagement. We still have some who are engaged in that process, but they are doing it less for themselves as they are for that final project that was conceived by someone else. So yes, there are definitely different levels of engagement and we have seen different incentives as well. We provide a much higher return in terms of influence, for submitting an invention idea than for submitting let's say a design for somebody else's invention idea. And as a

result we see the majority of people participating in that invention conception side and less involvement – though still very robust involvement - in the subsequent development process.

So the users are also motivated by the financial incentives?

N: Of cause…

J&C: *Who decides to which phase a product-idea goes after getting approved at the Quirky Eval?*

P: Once a product is moved into development, it can actually be a very long process. Sometimes things happen really quickly. As with the Plugg, a product that we just came out with – a product that separates the egg yolk from the egg white. That was a really really fast turnaround on that product, because it was pretty much a done prototype – really simple for us to figure out what the design of that was going to be, really simple because we knew we had a market for it. Really easy to manufacture and launch that. Other products take a bit longer. We are opening those different community rounds that Nathaniel mentioned, refining, design, CMF or coming up with a name or a tagline. Our designers are brainstorming about the idea depending on how complex of an idea it is – if it involves any kind of technological engineering then we have engineers on staff who will then also get involved. So we are looking at the feasibility of the product; what is it going to take to actually make this. We are also looking at the market for the product – is there a market out there for this and that is partially where the pricing game comes into play once we do a soft launch of our product so once our product team has done some initial brainstorming and have figured out that there is some feasibility to the product – we'll do a soft launch on our website where you'll see a mock up or a prototype and images of it on our website it then goes into our portfolio. We take our portfolio of products to our different retailers to see what the interest is. If there seems to be an interest there, that's when we turn on the pricing game to see what people are willing to pay for this – are we able to manufacture this, it will then go into tooling and molding if it's feasible and if we are able to manufacture it at the price we are able to sell it at. When we know that there is going to

be a market out there – that when we'll go ahead and give a green light and move it into manufacturing and move it "out there" both on our website and retail stores.

J&C: *When it is approved at the Eval it then goes into some sort of community refinement phase – how is it decided which phase it enters?*

N: Well, it is based on project management. How much additional work, research, and input are we looking for in this project to go from its infant stage to be completed. So you have a situation where you have the Plugg and it's essentially ready to go so you don't really need to… well, you can do some research to determine the viability as a commercial item, but in terms of how you are going to design it – how it's going to actually work it's pretty cut and dry. Another product that this is a good example of is the Stem – it's a citrus-spritzer. The inventor of Stem had built a prototype and the final product ended up being really close to that final prototype. So really all we should do was to choose a name, a tagline and a price point so that limited the number of phases we actually needed to open because there just wasn't any additional work that needed to go into it. At least not much. But if we find ourselves in the course of developing needing more information and we want to see if the community can contribute to that – maybe because there are parts of the community that might have more expertise in this particular product. For example the vehicle cleaning tool which we have recently been working on designs for a particular problem we didn't know too much about…

P: yeah, it was the snow-problem. We are internally limited to people who live in New York city

N: …and while it snows in NY-city it's city-snow and the city takes care of a lot of that problem for you. It's not really that big a deal. You park your car in a garage, but we had community members who live in Alaska and it's a real issue for them cleaning snow off their car. So they had some real valuable insights in terms of what would be nice to include with this product, what lacks with the products that are currently on the market and how we can fill that gap. So that was really useful and that was an instance where we couldn't answer those questions, but the community could. So it really depends on what we need and what they can provide.

J&C: *If these insights were radically new – would your innovation process then allow for you to go back to previously completed stages and redo these?*

P: Well, when we are opening those community rounds we haven't gone into tooling or molding yet so it's really easy to make changes if we need to. One of the other things that we do – one of the other ways we include our community is that we once we have gone through tooling and molding our product, but before we have massive amounts of products produced we will have samples made and we'll send them out to community members for product testing and if through product testing we realize that the product doesn't work quite as well as it could, or if there's something wrong with how it functions, then we can go back to molding and have them adjusting so that it fixes the problem that the community members have identified for us.

J&C: *Could you throw it back into a community e.g. design phase?*

P: I don't know if we have done that in the past…

N: well, Treck-Support, which we are now calling Power Pack is actually a good example. It took a while for us to come to a final concept. So we selected this product which is a backpack that enables you to charge your electrical devices on the go. We selected this back in early 2010 and it is still not available for purchase yet and that is just because we really had to refine and revise this product idea over and over again. So we initially launched some initial concepts for it back in early 2011, late 2010 and then we found out that those weren't quite as workable as we thought they would be and it didn't quite hit the brand as we would want it to so we went on and launched another refine phase for it. So that's what we would call it if we have another refine phase and we have chosen what is going to be the design for the product but we need to modify that, then we'll launch a refine phase where we say "here's what we already have – where else can you take this?" and while this is all happening our designers are working on concepts as well and submitting those. Not all the time but in some cases our designers will be submitting what they are coming up with as well and then the community can just build off of that and then it a snowball effect that eventually leads to a whole smattering of great ideas that our team then goes through, lumps together and then moves on with.

N: It's an iterative process. Innovation doesn't come out of stagnation – you have to constantly reinvent in order to find something truly innovative

J&C: *Does your community composition match your end customers in terms of demographics and purchasing patterns etc.?*

N: I would say that a lot of times the members submit problems that solves problems that they themselves have experienced or that they have friends or family who have experienced them and that's how the seed for that idea was actually planted in their mind – so yes definitely. Whether 100% of the people who are actually involved in developing the product are within the target demographic… not really, no – I would say it's closer to 25% to 50% that are actually within the target demographics. But again, the beauty of the stakeholder model, means that people even if they are not the target demographics, contributing and sort of buying into the success of this product, inevitably leads to some interest in seeing it do well in retail – whether that manifests into them themselves purchasing the product or they are promoting it through their friends – either way it ends up flying off the store shelfs. Making everybody who have contributed a little extra cash.

J&C: *What is your stance towards people who copy ideas from Quirky to produce outside of Quirky? We have observed a member called Eric Zeng who does this openly..?*

Actually we banned him a couple of months ago – so that's our stance; we ban those people [laughing]. Because they are soliciting. The platform is not for solicitation, but for testing your ideas – seeing where they can go and then engaging in a collaborative, creative process and people like Eric who come to our site and pitch their services external to Quirky as a panacea for these people who are looking for a way to make their idea – a lot of the time they are just predators they are not actually looking to help these people. They are looking to take their ideas for themselves – and we don't need that on the site because that creates an unsafe environment for creative people.

J&C: *So do you have people hired for policing the not-so-obvious infringements?*

N: we have only two lawyers – so no [laughing] one is a patent lawyer and one is copyright lawyer, but they both tackle the legal sides of Quirky. Do we go about the policing the web for instances of submissions to the site appearing elsewhere – not even worrying about products that we have actually designed or made and are out there, because copy cats do happen there and we do pursue the products that we have produced and we actually have some kind of ownership over – but when it comes to submissions to the site; the only thing we can protect is the content of these submissions. So the images that are used, the written descriptions that are provided and those things are all covered under our copyright, because the copyright covers any copy and content – it doesn't cover the idea itself and that is much harder to protect on an open platform. We only way to protect that idea would either be to get a patent or have a private submission process. We believe that private submission create a closed environment that doesn't lead to true innovation – that doesn't facilitate collaboration as we see as the key ingredient to building truly innovative products. Now one interesting thing to consider is that even if someone was to get a patent then that's not really going to be protecting their core idea. If you apply for a patent anywhere in the world then it enters your patent into a publicly available database and that database is definitely going to be on the web, which means that anyone in the world can look at your patent and be inspired by your patent. US patent law doesn't apply in a way that is actually protecting your idea from being picked up in some other country, but is also doesn't protect your idea from being designed around. So a patent is only going to protect what it covers. If someone sees your patent and thinks "that's a really good idea, but I think there is a better way to approach it" then that can be patented as its own thing.

J&C: *Do you think that it is a problem to Quirky that everything you do is so transparent?*

N: It hasn't endangered us, no, and the reason that it hasn't is because when it comes to business and when it comes to consumer products; one of the most important principles is the first to act principle. If you are the first company to come out with a product and to establish a customer base and to establish a brand around that product you are already in a better position than someone who wanna copy you and who comes in later in the game. Now, if they do it better than you then that's your fault for not doing it as well as you could. But the reason I'm talking about first-to-act

principle that is something that we are trying to acquit because we have this collaborative community we are able to be very nimble when it comes to making new products and we can act very quickly. Most of our products are made in under a year, which is unthinkable in most consumer product companies and so we are already in an advantage there just because we are able to move so quickly and so far that's been working to our advantage. There have been a few instances where a product gets knocked off in let's say China, but these are products that we have already made – they were going to get knocked off anyway – china knocks off everything.

J&C: *What does the development duration displayed on each product mean?*

N: It is from the moment we choose the idea to the moment it is launched on the "upcoming" page. Everything that happens post-upcomming; engineering, tooling, manufacturing – that's not included in the development period. It is purely based on what the community was involved with. At the most you are going to see up to two months of development duration, but on average it probably takes about 6 months to actually produce a product.

Appendix I: Interview – Rick Wielens, CEO at NineSigma Europe

Skype interview

Date: 02.11.2012

Duration 20:44 minutes

Participants: Rick Wielens, Eindhoven Area, Netherlands

***J&C**: "Thank you so much for taking the time. We doing research on community co-creation and both you and Quirky seems like perfect cases for exploring more about this…"*

Rick: Ahh yes Ben Kaufman is the founder there. He was at one of our conferences last month. He's a cool guy. He started the company to let others innovate without having a company – but still make money on it! The problem is that when you have an idea you're still so far away from the innovation and he faced that problem himself – so he started Quirky that can deal with that problem for other would-be innovators.

What they do is that they are really good at getting close to the user. He'll ask the users how they want it and then in the end he'll use their preorders to see if they want it. That's how he stays so close to the customers and gains his speed.

Actually the speed of that is his main…and only source of protection. If I was a big company and I wanted one of his technologies I could just go in there and steal it. But because he moves so fast he'll get it out there before me. But if I had a better distribution system I could steal it if I wanted to because it's SO open. You can't use patent in that sort of setting.

***J&C**: "So how do you protect the ideas – what is the difference on NineSights?"*

Rick: When we have connected the person to the company that's when we step out. Then they have to agree on partnership terms and then the innovation can be protected.

The things that are shared on our platform are not that specific. When the company picks up on the technology or idea posted then you make a confidentiality form – at that point we step out of the process.

***J&C**: Why should big companies use NineSights?*

Rick: Big companies have the challenge that they used to have all the experts, they used to own all the research. Now there is this enormous amount of science out there far away from the company. The company needs to test this research somehow. The problem is that the research is not happening inside the companies anymore – they moved away from that.

Companies are now focusing more on development or innovation than on research. For example Apple invented the iPod but they didn't do the research. Tony Fadell had that technology from Phillips – he used to be the VP there you know. So they just gathered the technologies but made the invention and are making a lot of money on it because they were very good at it.

Innovation is only an innovation when it makes sense to the user

***J&C**: How would you describe what NineSights does?*

Rick: NineSights provides big companies with access to experiments and technology experts that they otherwise wouldn't have a chance finding.

We connect companies to enable them to reach a big community of innovators. We do that by providing a platform for companies who are looking for innovation solutions.

Another thing we do – which is just the other way of looking at it – is that we make all the innovators out there visible for the big companies.

The guy might have invented e.g. a new technology for nano technology which would make the display of smartphones better. Maybe it gets rid of the sticky fingerprints or it just makes it last longer. Then he wouldn't upload the specific technology or the specific features, but he would just list the benefits and then let the company pick up on the technology when they enter into a partnership.

***J&C**: So would you say that your users are more specialized than those on e.g. Quirky?*

Rick: Much more specialized!– you are halfway expected to be an expert in a relevant area to be on NineSights.

***J&C**: Is the partnership then with individuals or some sort of community within the community?*

Rick: Most frequently it is with individuals but sometimes a small community of users move on to partner with the company. When the partnership is established with a company it is important to get sorted out what happens to the profits and who gets paid and how. What happens if the project is dropped or if it is dropped and later picked up by the company? Who takes that risk? It is important to get these things sorted out.

Challenges for companies before doing open innovation

"Do you then consult companies on how they need to adjust in order to succeed with open innovation?"

Rick: This is actually where we make our money; on consulting companies on getting ready for open innovation.

"What is the biggest problem for companies when they consider trying out open innovation?"

Rick: The biggest problem for open innovation is the "not invented here" tag that an external idea/project/product gets. This leads to low or no internal support, but we're trying to teach companies that it shouldn't be a disqualifier.

For this to happen the "not invented here" problem should be dealt with through a culture change.

This happens in a two step process:

- Establish a need portfolio
- You need to make a list of your company needs. What are the needs of your customers? What technologies does your company need?
- Then you need to make an explicit scouting process.
- First you should look outside your company and see what is already out there.
- Then you should identify which of these things you can use to accelerate the things on your "need portfolio".

Appendix J: Interview – Eight Quirky Users

Received 16.03.2013

User: Decosistems

Dear Mr. Jakob Jensen, will be happy to help you with your dissertation. For the first of your questions, I answer that I uploaded just three ideas to Quirky and of which two of the ideas have been UC, but they have not been produced. The motivation that led me to raise ideas, is that I am a very creative person, and I have some patents and utility models, I need to commercialize ideas, since it is no good being creative and having ideas if you can not take them out. With most of my ideas I can help many people, as for example a few panels I've patented, that I can reduce the cost of housing, 30% or 40% and can do much more affordable access to housing, and all without sacrificing aesthetics and promoting the quality of life in homes. I love helping others, is in my nature. With regard to the comment on the ideas of others, I am know perfectly recognize a winning idea, but when any people, ask for me an opinion on an idea in particular, and the idea it has no future, who am I, to take away the dreams and hopes someone? To succeed in Quirky, you have to make design simple product with low cost of manufacture and a large segment of the target audience, I believe that they are the keys and certainly are correct, this is so. I hope you have been helpful with his thesis, a big hug.

Received 15.03.2013

User: Robert Cobin

13 ideas the only one that went UC I got through buying a yr. of quirky no My gun lock idea and saving lives i comment all the time on users stuff, I like to support the ideators. They are here instead of wasting their brains Quirky has the first and final say. I can be frustrating if you really believe in your idea.

Received 15.03.2013

User: Gwansik Yi

Hi Jakob I have an friend from Copenhagen and that makes you feel more familiar to me. I don't know you much right now, but I think it's ok to answer this question. About repaying my kindness, if you can connect me to some organization or firm, people, it would be helpful. Gwansik Yi ----- How many idea submissions have you made? - I submitted only 1 idea. Have any of the contributions made it to the consideration phase? - I submitted an idea, but that doesn't come up to any result. Have any of you contributions been produced? - No. What was your motivation to contribute your product idea? - In my situation, I need money now. So I want to commercialize my invention with quirky. And also I want to get an network to work with. But I don't think it works well. There are tons of poor ideas and popularity contest is remained as I see. Have you ever commented on another users idea? - if so, what was your motivation to comment? - I haven't commented, because it isn't useful to me. I inspired many ideas can improve other ideas, but I didn't motivated to do that. Only poor reward is seen to me for that. Who do you feel influences a Quirky product the most? - the person submitting the idea, the community, or Quirky? (please write a few words to elaborate) - I don't know about this. Every participant influence. But great idea can be created as great products or service by genius and by the boss, I think.

Received 14.03.2013

User: Jim McKee

Sure, i'm not on Skype but i'm willing to answer the questions thru a response here... 1. I've submitted 17 ideas 2. I only had 1 idea make it to UC but that's because i used my annual exemption as a pro member 3. No 4. Motivation to submit was completely monetary 5. I used to comment on other's ideas and contribute suggestions ut i just tired of members who either don't accept suggestions or even acknowledge that i did, or even take the time to tell you why they didnt accept. Going thru that with one member right now.. I just vote for all the most active ideas and get good influence points every week due to it. Not as good as influence for impacting an idea's concept, but i just don't have the time render my idea's and get deep into that phase of involvement. 6. As for

influencing a product the most, i think what community members have to say matters little to Q, they are in the retail game, as was i, and it doesn't take more than a glance to know if a product can be made to meet your price range, margin, cost structure and turnaround time... Personally, i'm not impressed with Q, particularly due to the products they choose to produce and what appears, to me anyway, a lack of readiness to take products to market that they've already produced. So, Q claims to take 2 products to market a week in one of their webpages...with a turnaround time of 4 months. I've influenced 195 items, been a member for 10 months, which equates to 2.5 cycles based on a 4 month prod cycle. So how is it that only 9 of my influenced are on the market..? One member here, robertwww, has a bluetooth jumprope that has been produced, yet quirky is still in the process, last time i spoke with robert, of hiring an app developer..!? Crates is the best example to date of either their inefficiencies or their ineptitude, i don't know which, but this is a 4 yr old company and these issues should be well in the past by now. Another issue are ideas that are immediately moved into UC with zero comments or community involvement. It gives an immediate look of non-transparency and that there are 'members' and then there's 'Quirky's friends'. Don't like it one bit, and in that regard, i think Q has definite maturity issues as a company... Hope this helped, Jakob, and good luck to you with whatever career endeavor you choose to pursue.. Jim

Received 14.03.2013

User: Tom Trombley

Hi Jakob, I'm glad to help. As for how to repay, it would not be out of kindness if payment was required. If you are interested in helping my idea, you already know how to do that, but it is not expected or required as some kind of payment. How many ideas? I have just submitted the one, so far. Has it made it to UC? Not yet, but I have high hopes! Have any been produced? No, but I've just submitted the one and it hasn't gone UC so far. My motivation to contribute? I would use my idea, and I believe others would as well, but I do not have the time or resources to get it done, myself, nor do I desire to run the sales and distribution on the other side of production. Quirky can solve all of this. Commented on others? Yes. Motivation? To improve their product, provide encouragement, and let them know I voted so that they may become interested in viewing my submission. The last is secondary, as I would comment for their edification anyways, and did even before I had a product submitted. Who influences? For those that got a free UC with some kind of subscription, probably the Quirky staff only. For everyone else, it appears to be a combination of

the community and Quirky staff. The community, because it appears that they won't touch something unless it gets a really strong community reaction (i.e. the marketing was better than the other products), but once they touch it, they really do their best to refine and position the product to fill market needs. The community because, without them building the statistics information needed to be considered for UC, Quirky will never touch it. The suggestion process seems to be equal parts abused by some trying to snag easy influence for "major changes" that aren't, but others that genuinely care about the product improving. I hope this all helped! Good luck with your research! - Tom

Received: 02.02.2013

User: WenD

Hi, sorry for the late reply. I'm busy with work and family...

You can see the # of submissions on my profile

None of the contributions I've made made it to the CP

None of the contribuitons I've made have been produced

The thrill of being selected and see one of my ideas come to life

Yes, I have commented on other member's ideas. I don't contribute as much these days as it is very time consuming. But I do like to maybe give my opinion on an idea if I think it's a good idea but it need to be polished. Most people have a clear picture of what they want their idea to do or look like so I don't make that many comments...

I feel Q chooses for the most part ideas that are already well thought of. So, definitely the person submitting the idea

Hope that helps. Happy inventing!!!

Received: 01.02.2013

User: Jason Hennessy

How many idea submissions have you made? 137 submissions

Have any of the contributions made it to the consideration phase? 8 to Under Consideration. 5 to Evaluation.

Have any of you contributions been produced? No

What was your motivation to contribute your product idea? I wish to help Quirky and its community to become an established company with original, profitable products.

Have you ever commented on another users idea? Yes

- if so, what was your motivation to comment? I always try to leave a constructive comment that can help the ideator build the idea. With the overwhelming number of submissions, I have almost entirely stopped this contribution.

Who do you feel influences a Quirky product the most? - the person submitting the idea, the community, or Quirky? (please write a few words to elaborate)

In the Quirky decides what they want to make and how. But if ideators submit a game changing idea then they end up being the biggest influential factor. The uniqueness of Quirky however is that influence can come from any party in varying degrees for every different product.

Cheers and good luck with your thesis!

Received 20.03.2013

User: Devin Harris

I have made about 10 submissions. I have not had an idea make it to the consideration phase. I have not had anything produced yet. I only put ideas on that I am not passionate about. I have commented on lots of peoples products I see thinks in this world as a possibility instead of a

problem. I like the people and companies that take the ambition to serve these needs. I think the biggest influence comes from the Quirky staff but they wouldn’t be able to see the products we would support without us voting on them.

Appendix K – Email correspondence with Paula Rosenberg

From: **Paula Rosenberg** <paula@quirkyinc.com>
Date: 2013/1/18
Subject: Re: Quirky members
To: Jakob Helnæs <jakobhelnaes@gmail.com>

Hi Jakob:

Thank you. Nathaniel Padgett and myself would be happy to Skype with you for 30 Minutes if that works for you. I know there is a time difference between us. NYC is on Eastern Standard Time. Would sometime between 2-5PM EST on Monday work for you? If not can you please email me some days and times that work for you next week and we'll try to find a time that works for you.

Thanks,

Paula

On Fri, Jan 18, 2013 at 11:22 AM, Jakob Helnæs <jakobhelnaes@gmail.com> wrote:

Hey Paula

I just completed the form but I would also like to send you a bit of additional information.

I have attached my own CV. The other researcher is a Digital Marketing Strategy Specialist in LBi Denmark (http://www.linkedin.com/company/lbi-denmark).

As I mentioned in the form; what we would want is a brief interview with a senior person from the Community and/or Leadership department.

I have also attached the exact interview guide we would use.

Best regards,

Jakob

2012/11/28 Paula Rosenberg <paula@quirkyinc.com>

Hey Jakob:

Jessica was kind enough to forward me your email. I'm so glad that you are interested in Quirky. We love working with students whenever possible. It all depends on if it information we are able to give, how much time our staff would have to devote and if we have enough lead time to work with you.

I have a form, that I need you to fill out online. Here is the link to it: https://docs.google.com/a/quirkyinc.com/spreadsheet/viewform?pli=1&formkey=dERFYnhJUWNxNG0yQnl1d0Y0LTdWZ1E6MQ#gid=0

Please fill this out and shoot me an email once you have. I'll review your request and let you know if we'll be able to work with you.

Thanks again so much for the kind words and interest in Quirky. Please feel free to contact me if you have any questions.

Cheers,

Paula

On Wed, Nov 28, 2012 at 9:30 AM, Jessica Gray <jgray@quirkyinc.com> wrote:

Hi Jakob,

Thank you for the email and your kind words! I love hearing about MBA students who include Quirky's social business model in their research. In my mind, the new economy begs business to incorporate more collaborative community bottom lines into its traditional for-profit model, as a foundation for sustainability and social impact.

I've forwarded your email to my colleague, Paula, who handles university research inquiries. I'm confident she can help you with any questions you may have.

Thanks again for your interest in Quirky and enjoy doing your masters in Copenhagen! It's an fantastically beautiful city in a wonderful country.

Warmest regards,

Jessica

---------- Forwarded message ----------

From: **Jakob Helnæs** <jakobhelnaes@gmail.com>

Date: 2012/11/28

Subject: Quirky members

To: jngrecu@gmail.com

Hi Jessica

I'm sorry about contacting you on your private mail with a Quirky-related question - that's the only one I could find.

I am doing research for my master thesis from Copenhagen Business School, Denmark and we are including Quirky as a case for community co-creation.

Therefore I would love to know a little more about your users. Do you have any informations/statistics available about the demographics of the Quirky users?

Btw your online identity gives a very good first hand impression (hoping that (very sincere) flattery will buy me a reply ;-))

Best regards,

Jakob Helnæs Jensen