Peer production, its useful concepts for traditional businesses and its implementation explored for market-based business models

Jorg Soens

promotor :
Prof. Jeanne SCHREURS

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Foreword

Writing a master thesis isn't something you do from one day to another. Days, weeks and months of thinking are needed to research well, to discuss clearly and to present the final version in a good way. None of the aforementioned ingredients can be neglected if you want to deliver a work where you can be satisfied with.

This wasn't any different for this master thesis and luckily I could count on the support of a lot of people around me. Firstly I want to thank my promoter Mrs. Jeanne Schreurs who always was willing to help me and to support me with the much needed remarks and advice. I didn't bother her too often, but I know I could do so if necessary. That's why I reckon it was a great advantage for me I received the freedom and the autonomy to elaborate on my paper in my own manner and on my own rhythm.

I would also like to thank my friends who showed a lot of interest in what I was trying to work out. They were also prepared to give an answer to my questions and to fire questions where necessary.

Of course, also my parents deserve to be mentioned. Without them it wasn't possible to write this master thesis. The freedom and the opportunities they offer me to develop myself is something unbelievable. I'm very grateful for that, because I know you can't always take this for granted.

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1 Introduction

This master thesis will deal with the specific macro-economic trend which is called commons-based peer production (Benkler, 2006). Commons-based peer production is a socio-economic system of production that is emerging in the digitally networked environment. Because of the level of technical infrastructure of the Internet, the hallmark of this system is collaboration among large groups of individuals. Not as in contract- or market-based companies, it relies on social interaction and motivational elements, rather than on prices or commands so deeply recognizable in managerial or state-based firms.

Commons-based peer production is in fact a collaboration among a group of individuals on a mostly large scale. Typical of commons-based peer production, or peer production in short, is that it's organized without any hierarchy and independently of market pricing. The goal of peer production is mostly providing information, knowledge or cultural goods without any successful industrial production examples to mention to date.

1.1 Problem statement

It is without doubt that this economic evolution on a social scale draws the attention of all sorts of businesses, each with their specific business model and characteristics. Therefore, the question is whether peer production is adopted by a broad range of different companies, and how it can help companies achieving their goals.

According to the aforementioned problem statement, we can identify the following sub questions for this master thesis:

- What is commons-based peer production?
- What are the main examples of commons-based peer production?

- What are the elements of commons-based peer production now used by traditional companies?
- What elements inside a company are amenable to commons-based peer production and which departments can benefit from social production?
- For which practical elements can commons-based peer production be used inside a company?
- Are companies adopting peer production techniques in their business models?

1.2 Research methodology

Peer production in itself will first and foremost be analyzed by consulting the necessary literature sources. Examples will be given and reviewed. Thereafter, the link is made between traditional companies and peer production by checking how peer production methods are applied within the business sphere on a whole. After that analysis, and bearing in mind the effects and the limitations of peer production, we will evaluate the financial performance of companies using some peer production techniques and how those companies stand out in relation to their peers.

After the theoretic overview done with a literature study, we will check whether and how top brands and companies use peer production techniques in their corporate strategy. We will base our work on several studies and make the link between top brands in brand value and top brands in brand engagement. The research will be explorative and not focused on finding a causal link between the use of peer production and the output or revenue figures of companies. Because of the characteristics of peer production, we will try to test customer experiences ourselves with the use of the internet. From the viewpoint of user experiences, we will test the presence of peer production among the range of top international companies.

1.3 Overview of the chapters

In chapter 2 we begin with a broad analysis of peer production. A framework of peer production is given and the input, the processes and the output is explained. Here we try to answer what peer production really is, how it compares with other market forms and what the characteristics of peer production really are.

In chapter 3 the examples of peer production are discussed. A distinction is being made between full peer production examples and partly peer production examples. Wikipedia, Google, Linux and some other well known examples are linked with the peer production concepts.

Chapter 4 deals with the effects and the limitations of peer production. The problems of getting peer producers, obtaining contributions, handling sharing limitations and getting resources are explained here. This chapter focuses on the question why the peer production isn't adopted more often and more deeply in the current economic climate.

In the next chapter, chapter 5, the economic application of peer production is discussed by discussing the trends and concepts derived from peer production techniques that are getting integrated in the companies' strategies. In that chapter, user-centric production, crowdsourcing and social networks are dealt with.

Chapter 6 shows us the link between the financial performance of a company and it use of peer production techniques.

In chapter 7 we give a theoretic conclusion.

To see how, if and on what scale peer production - with it derived concepts – is integrated among companies, we will conduct an explorative research to check whether we are right in pretending that because of the higher use of the internet as a communication channel peer production indeed is becoming a trend among traditional companies. This is explained as from chapter 8.

2 Analyzing commons-based peer production

Commons-based peer production is a term launched by the Harvard Law School, more specifically by professor Yochai Benkler, when he tries to describe a model of economic production where a large group of people work together to deliver a large scale project where there are no hierarchical divisions (Benkler, 2005).

Another definition of commons-based peer production has been made by Aaron Krowne. He states: “Commons-based peer production refers to any coordinated, chiefly internet-based effort whereby volunteers contribute project components, and there exists some process to combine them to produce a unified intellectual work” (Krowne, 2005).

Commons-based peer production is relatively new in the economic sense of the word. Because of the widespread penetration of the Internet and several other digital technologies, it has made collaboration among individuals a lot easier because it has taken away communicational barriers.

In the first part of the paper, peer production is thoroughly analyzed by carrying out a literature review. Relevant theories will be used to frame peer production and it’s link with the digital revolution so clearly present in the modern world. After explaining the framework of peer production, we will take a closer look into the input, the processes and the output of peer production. Thereafter, we will make things a bit more practical by explaining some of the different examples of commons-based peer production.

In the next chapter, the effects and the limitations of peer production are explained. We will then be able to go a step further and take a closer look to the practices of traditional companies and how they are trying to use peer production. We will first outline some concepts who have their basis in peer production but are useable for everyday companies, we will then conduct an explorative research to check whether these concepts are indeed being adopted by a broad range of enterprises. To do this, we will base this research on

companies with strong brands that act as an example for other companies and are deemed to be pioneers concerning up-to-date business models.

2.1 Framework of the problem

Commons-based peer production as a trend and theory can be split into the separate word groups 'commons-based' and 'peer production'. Commons are resources without owners who can control how they can be used (Benkler, 2007); resources that are available to all who want to use them. The output of such peer projects generally becomes part of the commons, being freely available to everybody. Peer production alludes to the process of production, which in fact is a form of social production among a group of peers – people who share the same interests and ultimately the same end goals (Benkler, 2006).

Before the emergence of the internet as a communication tool, there were three ways at which production was looked at (Siefkes, 2008). Firstly we had the state-based system that was so typical in the Soviet Union. The production and the resources were property of the state. Based on centralization, the state organized the production and allocated the required resources. Secondly, we have the market-based capitalism. The production is privately owned. Companies are formed through a certain hierarchy and market prices dictate the resources. Thirdly we have the cooperative production model. Workers and other members own the collective capital and the decision-making is democratic.

In the peer production model, a variant on the cooperative production model but in essence something totally different, basically no single person is remunerated in any way, the production process is subject to the efforts and motivational levels of the peer groups. This however may not be a problem, as the creation of the peer group itself is caused by motivational elements and members can basically enter or leave the peer group at any given moment (Bazzano, 2009). The way peer groups come into existence is manifold. One way of establishing a peer group is by stimulating groups to be created. This can be done by establishing a platform where people can give rein to their already present interests. The only thing the platform does is giving them the tools necessary to add value to a project in

which they believe – being the platform itself or the possibilities the platform offers to create new projects – and to offer a tool of communication between peers. Another way to establish a peer group, or in other words, letting a peer group come into live, is being stimulated by the social behavior on the internet (Anderson, 2006). People who share the same spheres of interest can find each other on the net via social networks as an example and ultimately, they can make the decision to develop a project which they feel can be useful for themselves but also for others. It must be said that most of those projects are created in people's free time to give them an opportunity to do something they simply like. That's the main reason why in a commons-based peer production projects people aren't remunerated - they simple like what they do and will continue to do it further. People who, at a given moment, aren't motivated anymore for whatever reason, can basically step out of the project without any problem. Because the project or end product itself isn't owned by a specific person, rather than the whole group of commons, this will not cause any problems in regards to intellectual property (Anderson, 2006). Everything what's being made is mostly aimed towards information sharing with the group itself and the outside world. What's also the case when commons-based peer production is concerned, is that there aren't any – or almost any – established hierarchies in the group or between the peer group members. This contrasts hugely with other production models as firm production, where there is a centralized decision process deciding what has to be done and by whom, and market-based production, where different jobs are linked with different prices in order to attract people's interest in the job at hand. Of course, it is possible to mix the commons-based peer production model with any of the production models above, but when explaining the basic form of commons-based peer production, this comes mostly without any managerial hierarchy, let alone financial compensation for group members (Benler, Poptech 2005).

Commons-based peer production is helped enormously by the presence of the web and the possibilities associated with it. Indeed, it is difficult to imagine that peer production or social production in general can lead to complex industrial achievements or products. One of the reasons behind this is that peer production mostly is independent of a place and a time zone

whereas industrial production is not. It goes without saying that to produce a complex industrial product as for example a car, production must be coordinated in a short time span, and must be structured and comply with certain qualitative requirements. This makes it easy to see that commons-based peer production basically isn't suited for these kind of practices. As a matter of fact, it seems that peer production focuses only on the generation of information and knowledge (Fischer, et al., 2008). Of course, the value of both information and knowledge is becoming increasingly important in the current society, let alone the economic climate (Group, 2008). The shortage of broader, industrial possibilities however does imply that commons-based peer production may possible not be used to replace certain production models. Therefore we must pose the question if a society is possible in which peer production is the primary mode of production and if so, how could such a society be organized. Therefore, we will explain the effects and the limitations of peer production later in this paper. It's however also possible that peer production can be used to support other production models in the way they are dealing with their customers, develop other products, give certain services after sales. This however must be analyzed before final conclusions can be made, but examples that jump into mind are primarily marketing and services related.

The link commons-based peer production has with social networks is an increasingly important one. The way in which the internet is used now in comparison with the past differs enormously. The internet has become a tool to communicate with friends, business partners and colleagues on all different levels. It also stimulates interaction between people with whom otherwise you wouldn't communicate with, or at least on a much smaller scale. In a way, social networks can be seen as a form of peer production. Although the platform is delivered via an external party, all content on a social networking site à la Facebook, Twitter and Orkut originates from the users who utilize this platform. Personal information aside, social networking isn't only about making or maintaining relationships with friends, it also gives the possibility to join groups of people who share the same interest or who share the same outlook on life; politics, culture and sports are a few of the many examples in this respect.

2.2 The input, the processes and the output

Peer production can be divided in three processes; the input, the process itself and the output (Cross, 2009). The input side is concerned with the volunteers who contribute to the production process. Free and open material make it possible to modify and improve the product. The process side is based on low barriers for participation and freely available modular tasks rather than functional jobs. On the output side, it creates a commons, using licenses that ensure that the resulting value is available to all, again without permission. This common output in turn recreates a new layer of open and free material that can be used for a next step in the development by another peer group (Bell, et al., 2010). Incomplete variations on this model are possible**.** For example, contributors could be paid, and even work for hierarchal corporations, but still put the resulting work in the commons, where it is available for further peer improvements (Benkler, 2005). In fact, for Linux and many free and open source software projects, this is the main reality, with nearly three quarters of Linux programmers being paid by companies.

We can wonder why models of peer production succeed in their goal of delivering an end-product with certain degrees of quality. First of all, it seems that peer production works because certain technical conditions have been created for delivering this sort of immaterial production. First of all, people who contribute to peer production products mostly do this outside their official working hours. People contributing to peer production projects we can call contemporary knowledge workers (Benkler, 2006). They are called this way because, unlike factory workers, they can control their own means of production. The means of production in a peer production project is for example your computer, your own brain and access to a socialized network. That socialized network comes in the form of the internet. Since those people control their own contributions, they are of course able to voluntarily contribute them, unlike other workers in any kind. Secondly, because the content, the software and other end products of peer production projects can be digitally reproduced – and since the cost of such reproduction is marginally low once it has been produced a first time – it can be universally available through digital copying. That's the premier advantage

of information products. The consumption of it by one person doesn't exclude another from using it, unlike other products as cars, food, and many more. Therefore, end-products in the peer production cycle are mostly not scarce, so they operate outside the supply and demand curve that is globally present in the market economies. Above all, not only the cost of the product is very low to almost zero-cost levels, because of the internet it's also possible to cheaply coordinate a multitude of individuals and small groups on a global scale. All of that without the need of centralized command and control hierarchies. It is not difficult to conceive why such form of production is highly productive and cost-effective.

Some elements are amenable to peer production, others are not. Peer production theories show us which attributes processes normally must have in order to be amenable to peer production.

These are basically (QMP10):

- Modularity: Peer production must be divisible into components (modules), each of which can be produced independently of the other. One of the characteristics of peer production is that several people work on the project at different times of a day/week/month. By peer production being modular, each person can work independently of the others.
- Granularity: Each of the components must be relatively small so that a large group of people can each pick a module conforming their specific knowledge and knowhow. The size of the modules can also be linked with the motivation of the different individuals. Some persons only want to contribute a small amount of work to the project.
- Low-cost integration: Integration of the different modules include quality control and the integration of all parts into a finished project.

2.3 Conclusive remarks

It was the German philosopher Karl Marx who said that the control over the means of the production should be in the hands of the producers and it seems that's where peer production comes into play. Peer production could not differ more with the earlier mentioned models of economic production that are state or market-based. Motivation in these systems is based on the expected return. When such a return isn't available, motivation is simply not present. More than that, innovation is only relatively present in those systems and based on the need to outcompete rivals. Companies won't innovate when they're suddenly confronted with a monopoly situation. It seems the aim of the market isn't to innovate or to make the best products but instead to make products sub-optimal (Bouwens, 2008). An example that springs to mind is closed source software because you are simply prohibited from improving the product.

Peer production on the other hand is about passionate individuals who group together in communities trying to strive for the greatest quality or the best products. However, peer production alone cannot survive on itself. There will always be the need for an infrastructure to be funded, new members need to be integrated, resources must be found to create products, and so on.

That commons-based peer production exists is merely a fact, but the real question is whether it can be exploited by companies as a tool to support operations, to improve efficiency, to improve relations with the customers, to support product development and so on. It's this question that we will try to answer in this paper.

3 Examples of commons-based peer production

After handling the theory about peer production and explaining what's it all about, we will now dig deeper into the real life examples of this production technique. Those examples must deliver the proof necessary that peer production can be adopted by a multitude of companies in a myriad of ways.

To complement our framework outlined in the previous couple of pages, we will differentiate between the several examples of commons-based peer production. We will therefore make a distinction between two sorts of company models that use the techniques described above. On the one hand we have full peer production companies, on the other hand we have partly peer production companies.

A full peer production company is a company relying solely on peer production to achieve its goals (Bouwens, 2008). This company will probably be a non-industrial company, or even more plausibly, a non-profit organization because of the non-commercial character of the peer production model and the lack of hierarchy that is present (Benler, Poptech 2005). The goals of such organizations are mostly not driven by turnover or profit seeking. A partly peer production on the other hand is a company that is using peer production to stimulate her objectives. This company, according to the information at this moment, can be any form of company. It can be an industrial car company that uses peer production to better interact with her customers, it can be a financial services company that is using peer production groups as a sort of think tank or some other variant.

Ultimately, we can differentiate two main focuses of peer production. In the full company model, peer production is a means to produce, to establish and to publish and distribute the product at hand. In the partly company model, peer production is a means to support already present core activities. Peer production is therefore a side activity, a "way of doing things differently". Therefore, peer production is seen as a way to solve a project or to

elaborate a project, where in a full peer production company, peer production is the general company philosophy of making the product itself.

We take a look at some of the examples of full peer production models and partly peer production models in an effort to find resemblances and finally ways to add to our main goal: to exploit the potential of peer production for traditional business and projects. First we will deal with the most important example of a full peer production model; Wikipedia. Then we discuss Google as a partly peer production company. Thereafter, we will explain some of the projects currently running in partly peer production companies.

3.1 An example of a full peer production model: Wikipedia

The free only encyclopedia Wikipedia[1], a non-profit organization, is a clear example of a full peer production company model (Broughton, 2008). Wikipedia is "*an online open-content collaborative encyclopedia, that is, a voluntary association of individuals and groups working to develop a common resource of human knowledge. The structure of the project allows anyone with an Internet connection to alter its content."* (Wikipedia Foundation, 2010). As seen in the disclaimer cited above, Wikipedia is fully based on the work of volunteers for the expansion of her product; in concreto building the largest free encyclopedia available on the net. By doing so, it wants to compete with other encyclopedia's, even up to the professional level of that of Britannica. By using the peer production model, it seems that Wikipedia is succeeding in her goals, and that because of two reasons. Firstly, there's the volume of information at hand with million pages covering any topic you can imagine. Secondly, there's the speed at which information is posted at Wikipedia. It is unmatched by any traditional encyclopedia (Broughton, 2008). One of the main strengths of Wikipedia therefore lies in the fact that it is very easy for editors to create new Wikipedia pages. The peer production platform makes it possible to add articles quickly and efficiently without any form of bureaucracy to get permission from. But the main strength of Wikipedia is at the same time also the main weakness of the project. An individual can abuse the editorial freedom and

[1] http://www.wikipedia.org/

falsify articles. Wikipedia however counteracts with several types of peer review and control by volunteers. When, in a research, the quality of Wikipedia articles was compared with those of the same topic in Encyclopaedia Britannica, the conclusion was: “Wikipedia comes close to Britannica in terms of accuracy of its science entries” (Auvinen, 2008).

By the manner communication has been established among Wikipedia users and contributors, social relationships are being created. Each article has a discussion board and each user has a talk page. Social relationships aside, reputation also plays an important role in Wikipedia. Very active users who help others are respected. Reputation is gained by cooperating with others. All of this was made possible by the underlying technological structure of Wikipedia that formed the virtual community. It enabled social interactions for people who wanted to share the same goal “making knowledge globally available” (Broughton, 2008). That technology is called a wiki, a website that allows users to collaboratively create and edit web pages using a web browser. It is not to be confused with a content management system (Mader, 2007). The primary difference between wikis and more complex types of content management systems is that wikis tend to focus on the content, at the expense of the more powerful control over layout, workflow and publishing technologies. Wiki’s also have an open-source nature and can be for personal and even enterprise use. According to a study by the University of Massachusetts wiki’s are being integrated in companies as social media tools which are important to their business strategy. Of the six technologies covered in the survey (blogging, podcasting, online video, bulletin boards, wiki, and social networking), there was greater familiarity than actual use of every technology but wiki. In other words, everyone who was familiar with the wiki was also actively using it. Considering how difficult it can be for a technology to translate attention into real use, this is an impressive indicator that the wiki has a real impact.

3.2 An example of a partly peer production model: Google

Google[2] is an example of a company using partly peer production. Google also makes use of

[2] http://www.google.com

the peer production model, but not up to the same point as Wikipedia does. Google is indeed an example of a business model with a partly integrated peer production model. In short, what Google does in her search algorithms, is analyzing the relevance of certain internet links by using the opinions of a very large group of individuals. Google in fact ranks search results according to what people on the Web think is relevant to link to. This technique contrasts heavily with the method applied by for example Yahoo. Yahoo pays experts to look at pages on the web and categorize them accordingly. At present, Yahoo has already detected their flaws in her business model and has now introduced the Open Directory; a project to make the largest directory on the web with the help of a lot of individuals. It's becoming apparent that companies are able to improve their services with the help of this kind of peer production, like Google and Yahoo are doing right now. These two examples however are purely web-related. That's not a real surprise, as the web is one of the only communication channels where millions of people can be reached with. Besides using people as a means to define certain search algorithms, Google makes use of peer production techniques in some other interesting way. When launching a new product, it launches an open call to the Google community to test the product in a beta phase and to give opinions, comments and remarks about the user experience. This was done in the past with Google's email client Gmail and currently with Google Wave. The trick for Google is that it can use a very large group of people to test the reliability and the usability of a new product at an extremely low cost. By collecting opinions about new products, it can improve and enhance the product for a later release in the final phase.

The previous two examples of Wikipedia and Google are the best known to this date, but there are of course a lot of others that we can analyze. They were however the most obvious because of the very large group of people who use Wikipedia and Google in their daily lives.

3.3 Examples of peer production projects

Linux

Linux[3] is one of most important examples of free and open source software collaboration. (Linus Boeldt, 2009) Linux is developed under the GNU General Public License (GPL) and its source code is freely available to everyone. This however doesn't mean that Linux and its assorted distributions are free -- companies and developers may charge money for it as long as the source code remains available. Linux may be used for a wide variety of purposes including networking, software development, and as an end-user platform. Linux is often considered an excellent, low-cost alternative to other more expensive operating systems. Besides, Linux alone created a economic value of more than 30 billion dollar (Linus Boeldt, 2009).

The GPL requires that anyone who distributes the Linux kernel must make the source code (and any modifications) available to the recipient under the same terms. A 2001 study of Red Hat Linux 7.1 found that this distribution contained 30 million source lines of code. Using the Constructive Cost Model, the study estimated that this distribution required about eight thousand man-years of development time.

According to the study, if all this software had been developed by conventional proprietary means, it would have cost about $1.36 billion to develop in the United States. In a later study, the same analysis was performed for Debian GNU/Linux version 4. This distribution contained close to 283 million source lines of code, and the study estimated that it would have cost $7.53 billion (2010 US dollars) to develop by conventional means. This proves that for extremely large projects, peer production can be a successful way of development and innovation.

[3] http://www.linux.org/

Slashdot

Slashdot[4] is a collective commentary project on the Internet. Users of Slashdot post links to technology stories and also comment on these stories. Other users of Slashdot join the conversation and comment on underlying stories but also on the comments itself. Comments on Slashdot are moderated by other readers with quality and relevance in mind. The makers of Slashdot pretend: : "For over ten years, the content on Slashdot has remained peer driven, straight from the source, and relatively unfiltered, giving a heightened sense of overall trust, quality and edge to Slashdot. We've redefined the standard by which similar sites are judged." (Geeknet, 2009)

Because of the enormous reputation and popularity of Slashdot among people interested in computers, free software, sciences and technology in general the "slashdoteffect" was becoming well-known on the internet (Douglas, 2010). The "slashdoteffect" happens when an external site is linked in a Slashdot article and hereby receives an enormous amount of visitor traffic. As a result, the site can't cope with the traffic and goes down. This is a good example of the power of successful peer production websites.

SETI@Home

SETI@Home[5] is a scientific experiment and stands for Search for Extra-Terrestrial Intelligence. What it effectively does is analyzing radio signals from outer space by using distributed computing (Andrews, 2000). People, volunteers, can install a program on their computer which allows SETI@Home to use free processor time in their search for extra-terrestrial intelligence. SETI@Home exists since 1999 and it's was the first project making use of peer production in the form of distributed computing. In distributed computing, a problem is divided into many tasks, each of which is solved by one computer. According to some, the project has been a success, because it provided proof of a distributed grid computing concept, it managed to build a community around it, with strong sense of bond (Andrews, 2000).

[4] http://slashdot.org/
[5] http://setiathome.berkeley.edu/

OpenStreetMap

OpenStreetMap[6] is a project with the goal of delivering freely available and editable land maps. Everyone can co-operate, add and edit geographical data. It is founded partly because of the high costs that commercial land map makers ask for their products. OpenStreetMap already has 20 million kilometers of road. Data is being collected by aerial pictures and using GPS systems.

Conclusive remarks

As we can see, full peer production models as well as partly peer production models and projects are present in the digital world and the current economic environment. Both are valuable in our quest to analyze which peer production techniques can be valuable for many of the traditional companies and projects. Therefore, in the next chapter we will dive into the several possibilities and deviated forms of peer production that indeed become a trend to integrate on a large scale.

It's becoming ever more obvious that the model of full peer production or even partly peer production is good as a starting point, as a main philosophy, to exploit other concepts deviated from peer production that are very useful for traditional companies. Therefore, we will check whether peer production outlined the main basis for some economic trends which we can see getting adopted by far more companies than mentioned in the successful examples above. First however, we will analyze the effects and the limitations of peer production. Then we will analyze the economic integration of peer production techniques and deviated concepts and give some examples for each of them.

After that, we will perform an empirical research to check whether current high-profile companies and brands have integrated some of these peer production techniques in their strategies.

[6] http://www.openstreetmap.org/

4 Effects and limitations of peer production

Peer production is an inspiring technique and new trend to let people work together at something they like and mostly know a lot about. However, this technique isn't applicable for all projects or for the economy on a whole. In this chapter, we will explain where the main problem of peer production is situated and what the bottlenecks are when you want to complete a peer production successfully.

4.1 The consumer vs. producer vs. prosumer story

In society and all productions systems, there will always be a group of consumers who consume goods and a group of producers who create them. These two groups aren't necessarily independent of each other. We may have a group of prosumers who produce and consume at the same time (Von Hippel, 2006). This however can't be the case for all types of products, but it is an interesting perspective for peer production. Peer production is, after all, production driven (Benkler, 2005). The peer group is motivated to create – in their eyes - something that has a certain value, something they want. The effect and in the same way the limitation of peer production, is that the end product of the peer group is something that is useful for the group itself, and not always for the general public to the same standard. The peer group doesn't basically try to create something that is useful for others, but for themselves. That's part of the reason why some software programs which are created by peer groups are less user-friendly than software programmes created by constumer-driven markets. Exceptions however come in the form of Linux, Firefox and OpenOffice. These software programs are also driven by market forces, and therefore useful examples for the current companies in the market-driven economic climate. It is however doubtful that peer production will ever become a dominant type of production if the peer production groups can't be put on the same level as the demand of the customers (Bazzano, 2009). After all, there are a lot of people who cannot create what they want to use. They cannot do much more than hope that somebody will pick up their needs. All of this is part of the reason why

commons-based peer production in its totality is, at the moment, not a premier type of production method that's operating along the market-based, state-based and cooperative model as mentioned in the first part of this chapter. If peer production ever will become a premier type of production is left to see for the future but such models will surely have to deal with resource and organizational barriers. Certain is however that peer production meets certain obstacles in nowaday projects that have to be overcome to make a peer production model succeed in a company or in a specific projects. We will now outline these problems and analyze them more thoroughly.

4.2 The problem of getting peer producers

Finding people who are willing to cooperate in a peer production group can be done twofold. Firstly you can find people by common interest. It is the most logical way to find contributors for a peer production project. If we look to Wikipedia, Linux, OpenStreetmap and many more, it's obvious that people contribute to the project because they like it and it interests them. People can also be found on location, for example you can cooperate with people in your neighborhood (Anderson, 2006). This kind of contributions are mostly for smaller scale projects and dates back to prehistoric levels of peer production. Both alternatives however can be used to form a peer production group. The scope of location based peer production can be small or large. People living in a specific neighborhood can have very detailed common needs or interests. There may be things that concern all the people living in a specific area, such as the providing and maintenance of infrastructure, so we may assume that everybody can be a possible member of a local community or some other kind of local association organizing these issues. And people with specific interests would continue to search others with similar interests and cooperate with them in the context of peer projects, just as they do now. That way, we can connect both alternatives of 'by common interests' search and 'by location' search to a certain degree.

It's however true that finding volunteers is not the only problem. Finding the necessary skilled volunteers is another. Peer producers must earn money themselves, so they are not fully available for a peer production project. Finding more volunteers will always be the goal of a peer production project; more labor force means more products and more diversity of knowledge and creativity among the range of products.

4.3 The problem of obtaining contributions

The problem of finding contributors aside, receiving contributions itself is another pertinent bottleneck (Benkler, et al., 2006). Because peer production relies on volunteers, these people can't be forced to do certain tasks. The volunteers choose the tasks they want to do and everybody chooses how much time they want to invest in the project. When information is concerned, this isn't really a problem, because it involves near zero costs, but when applied to the production of material goods, it's unclear how a peer group can be successful. Certain necessary tasks are regarded as boring, dangerous or dirty. A peer project trying to successfully complete a car is doomed to fail because of another reason; it will simply lack the resources to design and build one. Therefore, contributions must be asked – which is not as obvious as it may look like. While certain projects based entirely on voluntarism might be possible, it is hard to see that these projects can be stable on the long term. The organization of a project is very complex and involves a lot of tasks, not all of which are nice to do. Peer projects will therefore have to decide whether or not they require contributions from those who want to benefit from the cooperation (Cross, 2009). A simple way to do this would be to ask all participants to contribute a certain amount of hours to the project, letting contributors choose which tasks they want to handle. However, ultimately, if a project wants to be successful, it needs to find a way to cope with the tasks seemingly nobody wants to do.

This can be done threefold (Cross, 2009); automate unpleasant tasks, make unpleasant tasks more fun and make unpleasant tasks shorter. Automation already proved a lot of beneficial

results, for example through the greater usage of computer systems. Although in a market-based production systems, automation must be cost-efficient to be integrated, the same doesn't apply for peer production. If members of a peer project want to avoid a specific task, they might spend effort to get rid of it. If we want to combine peer production with traditional businesses, the businesses can give impulses to handle with the unpleasant tasks themselves, leaving the more creative and fun assignments to the peer production group at a whole. It can prove a good combination to let peer production groups work together with companies. The stimuli of the companies can take away unpleasant barriers for the peer groups. Making unpleasant tasks more fun is another way to cope with tasks seemingly nobody wants to do. It's in the best interest of the peer production group to do this, because they have both the incentive and the means to make their work more agreeable. Making unpleasant tasks shorter is another solution. People's preferences vary not just in regard to the tasks they like to do, but also in regard to the time they are willing to spend for a project. An unpleasant task gets more pleasant if it takes a shorter amount of somebody's time, giving them more time to pursue other interesting projects. The tasks must be weighed according to a time span. Setting up a task auctioning along the participants of the peer group can be possible to let them choose the tasks they prefer doing among the total tasks available (Fischer, et al., 2008). When it's obvious that some tasks aren't picked enough, those tasks are weighted higher. Tasks which are more popular than necessary are weighted lower, people doing them will have to spend more overall time to the project. This is the idea of weighted labor. During a certain time span, all members of a project are expected to contribute the same amount of weighted hours, who in turn will correspond with an amount of actual worked hours that are higher for popular tasks and lower for unpopular tasks. It is a way to ensure all tasks are handled with and it doesn't take away anything of the fact that everybody is free to choose what activities they want to do. This is also an incentive for tasks who require more specialized people or skills. If the demand for such tasks is bigger, they will be weighed higher, which in turn increases the motivation for people with the required background to contribute.

We must however remark that not all contributions a person wants to do, will be accepted by the peer group. This is also the case in peer production examples stated above. If someone contributes and article to Wikipedia, others may be critical of some levels of fact-stating and subjective remarks.

4.4 The problem of sharing limitations

In essence, what is produced by peer projects or peer production groups, is free to use by the peers and mostly by all people outside (Benkler, 2006). However, sometimes, there are limitations to that sharing philosophy – mostly to prevent it being transferred to more restrictive parties who will try to develop outside the peer production sphere (Newman, et al., 2008). One restriction that is commonplace in current peer production is to require that modified versions of the product also stay in the commons. People could decide to modify a work and distribute their modified version only in a form that's unsuitable for further modification. A copyleft clause is the clear solution for this problem. Another possible restriction tries to prevent others from using the shared information for commercial purposes. This is what we call a non-commercial clause.

The aforementioned clauses are all great when the end product of the peer production group is information-based. Information, basically, can be shared at zero cost. When a peer production group creates something that cannot be easily shared, it will mostly only share among themselves. Image a peer production group that tries to create a car. You may think that seems farfetched, but it is close to reality. The goal of The Oscar Project[7] is exactly this; 'develop a car according to Open Source principles' (Markus, 2009).

[7] http://www.theoscarproject.org/

4.5 The problem of resources

The problem of resources is a very important one. Without resources, production simply isn't possible. It is however a fact that most peer production groups who exist today, aren't in need of much resources. The information goods they produce can be made with the help of their personal resources; a computer, an internet connection, and so on. The rule of thumb is that for any immaterial project, as long as there is a general infrastructure for the collaboration, and input can be created, the peer producers can work together on a common project. But when it comes to more complex products or physical production of goods, the problem of a lack of resources is a very obvious one (Bell, et al., 2010). There are costs of getting the needed capital together and there has to be a plan of cost recovery, otherwise the project is doomed to fail. One solution is to let the state sponsor or subsidize certain machinery, as it happens in science projects and the Open Acces project. Another way is to cooperate with companies who are willing to sponsor expensive machinery. In a way, these companies are able to produce peer production designs on order. There is the ongoing trend of "asking the users" of a product in order to develop it more and more. According to Eric v. Hippel, this we might call the user-centered innovation process. It is a trend towards democratization of innovation that not only applies to information products such as software but also to physical products. Traditionally, the consumers of a product only had to have needs which companies try to identify and fulfill with self designed products. But now, the contribution of users is growing steadily larger as a result of development in computer and communications capabilities like social networks and instant messaging.

As a conclusive remark, we can say that peer production indeed has a problem of resources when it comes to finding ways to physically produce a product. That's why peer production will mostly focus towards the immaterial process of designing and not the material process of producing a good. We can see some deviations of the peer production technique among present companies in the form of the trends and concepts outlined in the next chapter.

5 Economic application of peer production in traditional companies

As peer production can be seen as an economic system of production, distribution and consumption of goods and services of an economy, it's clear that peer production in its totality isn't widely adopted by organizations; companies, governments, and many more because of the reasons mentioned in the previous chapters. On the other hand, what's becoming more obvious is that peer production has an influence on doing business in a different way. Certain elements of peer production are adopted and lead to some derived trends and other concepts that are useful for a lot of traditional companies.

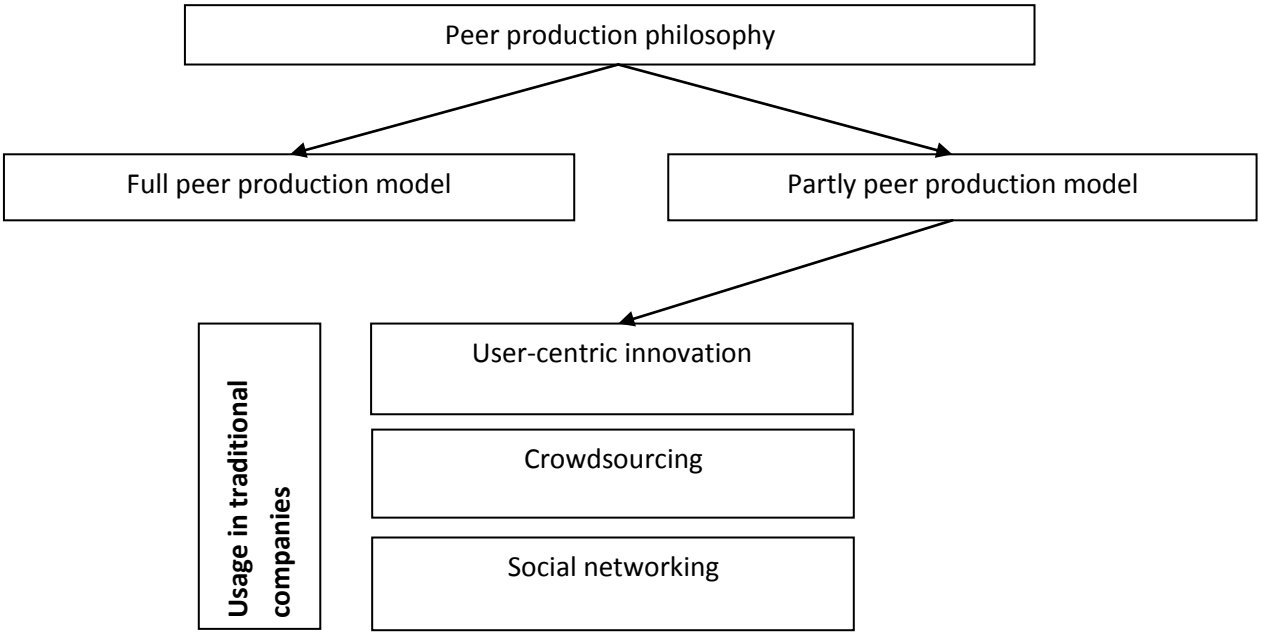

Figure 5.1 (own figure): Peer production and derived trends and concepts

As seen in the figure above, after research among different companies and in combination with the literature (Anderson, 2006) (Benkler, 2005) (Brottlund, 2009) (Hickman, 2009), we can differentiate three trends which have a strong connection with peer production characteristics and which are getting increasingly used by a broad sort of companies. These

trends and concepts are mostly unrelated to the sector where a company is operating in, as can be seen in the explanations of each of those trends and concepts in the next couple of pages. User-centric innovation is the first concept and describes the trend of companies seeking product improvement by consulting their customers or potential customers. It is based on the democratization of innovation, outlined by Erik von Hippel in his book 'The Democratization of Innovation' (Von Hippel, 2006). The second concept is that of crowdsourcing, the act of outsourcing tasks, traditionally performed by an employee or contractor to a large group of people or community through an open call (Newman, et al., 2008). Finally, the third concept is the usage of social networking by companies in an effort of brand promotion and customer relationship management.

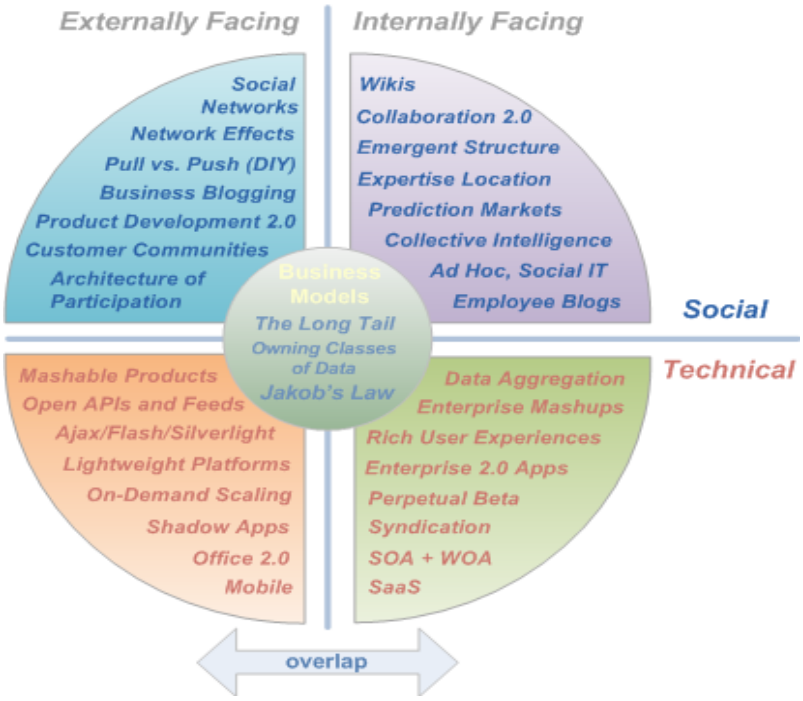

Figure 5.2: Peer production as externally faced corporate strategy (Hinchcliffe, 2007)

The figure above shows, according to Zdnet, Web 2.0 applications for enterprises. We can differentiate social networks, business blogging, product development, pull vs. push strategies, product development 2.0, customer communities and architecture of participation. All these concepts have definite links with peer production techniques and ways of thinking.

5.1 User-centric innovation

User-centric innovations centers around the democratization of innovation. It means that users of products and services, both firms and individual users, are increasingly able to develop what they need for themselves. User-innovation means that lead users develop innovations that they need, then make it freely available (Von Hippel, 2006). Lead users are a group of users within the customer group that differentiates because of its heterogeneous needs. Here we may notice an important possible link between peer production and traditional businesses whereby a company may rely on their customers to improve their products. It can also be part of the product development strategy.

To explain this, we must distinguish two concepts. On the one side, we have the users. Users are firms or individual consumers that expect to benefit from using a product or a service. On the other hand, we have manufacturers, who try to benefit from selling a product. A firm can both be a user and a manufacturer at the same time, logically because it uses resources and it creates added value in order to sell her products. When we again apply this to the example of producing a car, we will see that Volvo is a manufacturer of cars, but a user of tools to create them. If we analyze the innovations that Volvo develops for their cars, then Volvo is a manufacturer-innovator (Von Hippel, 2006). At the same time, it is a user-innovator because it develops new ways to produce cars more efficiently. It's important to understand these two concepts very clearly. If Volvo chooses to user-innovate, it will benefit directly from their innovations because it can make cars cheaper, faster, more automated, less labor-intensive and so on. Manufacturer-innovators can't benefit directly from the

innovations they make because the innovations are related to the very product they sell. In order to benefit from innovations, they must license them or sell more of the improved products than the older versions of it.

Innovating users we can call “lead users”, a group that is ahead of the majority of the users and that has the intention of finding a solution where they can gain benefits from. It is likely that many users can’t find what they want on the market. Users may innovate if they want something that is not available on the market and are able and willing to pay for its development. Because most manufacturers follow a strategy aimed at developing and making a product for the masses in order to gain sufficient profit from it, obviously some users aren’t wholly satisfied because the needs of a customer can be very heterogeneous for certain segments. This is where peer production comes into play. One could ask why these lead users often innovate products for themselves rather than to pay for their development and hire a professional manufacturer. Both in the case of user firms and in the case of individual users, agency costs play a major role. In the case of individual users, enjoyment of the innovation process can also be important, something where peer production is aimed at. Considering agency costs, a user or a peer group will act in its own best interests, whereby a manufacturer is hired and works as an agent for the group. The interests of both aren’t exactly the same, so there will be costs that have to be made to align those interests at the maximum possible level.

User-centric innovation in traditional companies can come in two ways. On the one hand, we have lead users who really try to improve the product themselves in a professional manner. This is the case when the original producer of the product isn’t inclined to adapt its product to certain heterogeneous groups within its customer base. These group of lead users can be both companies or private customers. When private customers are concerned, they mostly establish a group of talented people with the same goals of obtaining an improved product. In the next phase, they cooperate to make the new, improved product, come into existence. Along the several production phases of the new product, from design to assembly, they can

work together with companies to provide a mix of peer production techniques and market-based techniques.

The second type of user-centric innovation is based on companies who launch the initiative to improve their products via user feedback. The company hereby launches a call, mostly on the internet, to its customers to send in remarks and ideas about their current products and the way products must be developed in the future. This technique is similar to some customer survey's, where the opinion of the customer is gathered around certain fixed and within a certain scope of questions. User-centric innovation goes further. Idea's of customers aren't limited to specific topics, but can be very broad and very detailed at the same time. Companies use these idea's to put forward to their management groups, who mostly decide on which idea to elaborate on further.

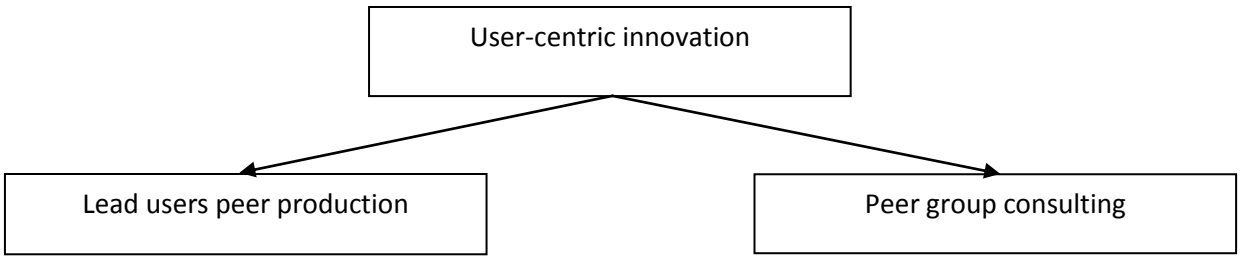

Figure 5.3 (own figure): User-centric production application

Examples of user innovation: Study by Franke and Shah

The first example deals with the lead user group of a certain product who are inclined to improve it themselves.

Franke and Shah (2003) studied user innovation in four communities of sports enthusiasts. The communities, all located in Germany, were focused on four very different sports. One community was devoted to canyoning, a new sport popular in the Alps. The second community studied was devoted to sailplaning. Boardercross was the focus of the third

community. The fourth community studied was a group of semi-professional cyclists with various significant handicaps, such as an amputated limb. A total of 197 respondents (a response rate of 37.8 percent) answered a questionnaire about innovation activities in their communities. Thirty-two percent reported that they had developed or modified equipment they used for their sport. With respect to commercial potential, Franke and Shah found that 23 percent of the user-developed innovations reported were or soon would be produced for sale by a manufacturer.

Lüthje (2003) on the other hand explored innovations developed by surgeons working at university clinics in Germany. Ten such clinics were chosen randomly, and 262 surgeons responded to Lüthje's questionnaire. Of the university surgeons responding, 22 percent reported developing or improving some items of medical equipment for use in their own practices. Using a logit model to determine the influence of user characteristics on innovation activity, Lüthje found that innovating surgeons tended to be lead users. With respect to the commercial value of the innovations the lead user surgeons had developed, Lüthje reported that 48 percent of the innovations developed by his lead user respondents were or soon would be marketed by manufacturers of medical equipment.

Both studies found that innovations created by users mostly are commercially attractive to exploit. It can be useful for companies to have such lead user groups because product development can be done outside the company sphere but commercial exploitation afterwards can at the same time be made possible within certain boundaries in regards to remuneration of the people who contributed to the product improvement.

Examples of user innovation: Dell's IdeaStorm

The second example deals with the second type of user-centric innovation that is based on companies who launch the initiative to improve their products via user feedback.

Dell's IdeaStorm[8] we can best describe as an example of peer production using user-centric innovation idea's. IdeaStorm, launched in February 2007, was created to give a direct voice to Dell's customers and potential customers and an avenue to have online "brainstorm" sessions to allow the customers to share ideas and collaborate with one another and Dell itself. Dell's goal through IdeaStorm is to hear what new products or services the customers like to see Dell develop. Ideastorm seems to deliver the necessary response and input from the customer base. In total, from February 2007 until March 2010, the Dell community contributed more than 12.000 ideas, 718.000 times the ideas were promoted from other users and 89.000 comments have been posted in that time span. Dell itself has implemented over 400 ideas.

If people want to contribute to Ideastorm, they first have to register to become part of the community. To post an idea, the community can first use the search function to check if the idea, or something close to it, is already posted on Ideastorm. If that's not the case, the idea can be drafted and posted. After posting the idea, the community in a whole can give comments and individuals can promote the idea via a scoring system. Every time an idea is promoted, the scoring goes up by several points. An idea can also be demoted, in which case it loses points. The more an idea is promoted, the more popular it becomes and the higher the ranking of the idea will be. Of course, the Dell community only will be inclined to contribute if they notice their ideas are actually listened in by Dell itself. Dell tries to do that by putting the idea in a life cycle of several statuses:

- Acknowledged: Every idea is read by the IdeaStorm team within 48 hours to ensure that each submission is truly an idea and it passes the Terms of Use.
- Under review: The idea has been reviewed by the appropriate business team for further investigation.
- Already Offered: The idea is already part of a product or service that is already offered by Dell. Ideas that receive this status will also receive a conclusion by the

[8] http://www.ideastorm.com/

IdeaStorm team with a reference to where the customer can see where the idea is already offered.

- Partially implemented: Some ideas are implemented in stages. Items given the status partially implemented are still available for future consideration.
- Implemented: Dell has taken action and the idea has been put into production.
- Not planned: There are times where an idea, although interesting, is not in line with the business plans and will not be implemented.
- Archived: All ideas that have no commenting activity after one year will be archived. These ideas will no longer be viewable on the site, however are still viewable by the Dell teams.

Employees of Dell can also join the conversations. Dell executives and managers also monitor IdeaStorm to gauge which ideas are most important and most relevant to the customer base. Via a blogging system, Dell shows from time to time which ideas of Ideastorm are implemented, how Ideastorm is functioning and which updates are being pushed through.

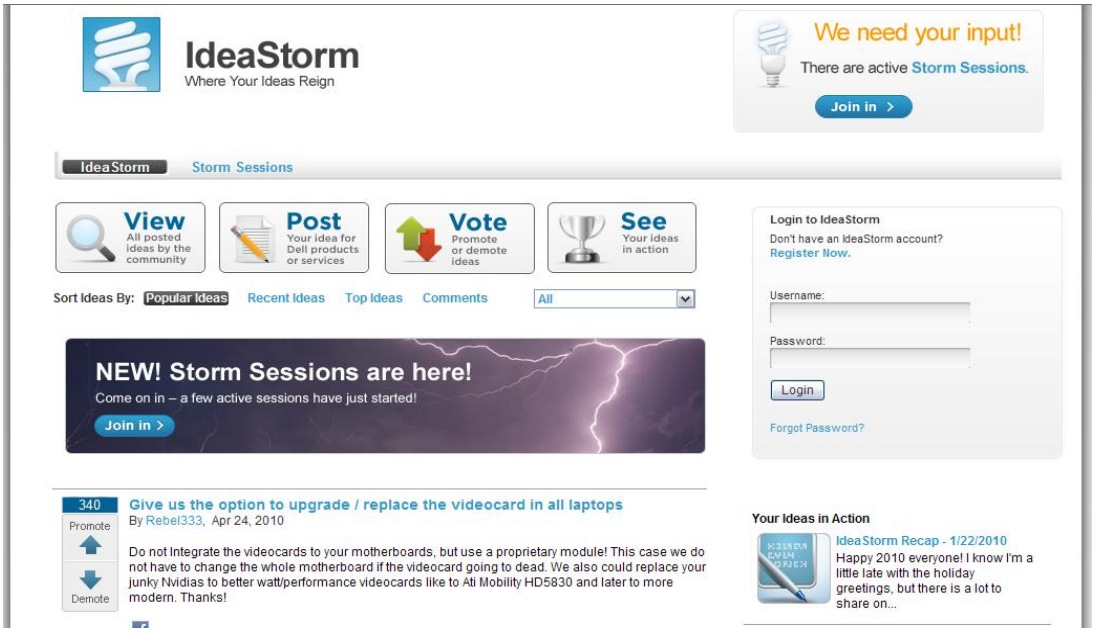

Figure 5.4: Dell's Ideastorm website

5.2 Crowdsourcing

Crowdsourcing is an English neologistic term combining the word crowd and outsourcing, used to illustrate the recent development where organizations (government, companies and institutes) make use of a large group of people for tasks of consultancy, innovation, policy making and research. In essence, crowdsourcing is the outsourcing of tasks that are traditionally performed by employees or contractors (Group, 2008).

How it works is described as followed; organizations launch an open call to a group (the crowd), who in turn submits solutions for the problem at hand. When compared to peer production, we can see that crowdsourcing groups sometimes are rewarded for their solutions while peer production groups are not. Also noticeable different to peer production, the organization who launches the call will also be the owner of the end-solution that is created by the community. In peer production, the result of what the peer group creates stays in 'the commons'. Crowdsourcing is possible for amateurs working in their spare time, but also for experts.

The crowdsourcing model
1. **A company has a problem**
2. **The company broadcasts the problem online**
3. **The online crowd is asked to give solutions**
4. **The crowd submits solutions**
5. **The crowd vets solutions**
6. **Company rewards winning solvers**
7. **Company owns winning solutions**
8. **Company profits from solutions**

Figure 5.5: The crowdsourcing model (Brabham, 2008)

Crowdsourcing can be advantageous for organizations of any kind because problems can be solved at a seemingly lower cost and by people with talents that aren't present in the current organization (Bazzano, 2009). Furthermore, the cost is often linked with the end-result and sometimes, the crowd isn't even rewarded for their solutions. By consulting the crowd, an organization maintains a close link with the customer base and can eventually improve their brand loyalty by giving their customers the possibility to improve and give remarks on their products. Contribution and collaborations serve as a way to give customers a sense of ownership. Of course, not all crowdsourcing projects will be successful because of several reasons. One can be the added cost to bring a project to an acceptable conclusion, the lack of monetary motivation, the low quality of work, the lack of interest in the project, the difficulty of managing a crowdsourcing project and the difficulties a group encounters when working for a large duration of time (Brabham, 2008). The most important problem in regards to crowdsourcing is that the brand has no control over the quality of entries, thus the question remains what happens when there aren't any acceptable idea's among those submitted.

An example of off-line crowdsourcing was the search for the missing and the killed Steve Fossett. A total of 50.000 volunteers tried to find Fossett by analyzing high-resolutions pictures of the 40.000 km² where his airplane crashed in (Friess, 2007, september). As mentioned earlier in the paper, OpenStreetMap is an obvious example of crowdsourcing. Also, the criticism that Wikipedia is essentially a crowdsourcing project is being denied by founder Jimmy Wales. He reckons this would mean that companies use the Wikipedia project to make free use of the public which is, according to him, not true (Lee, 2007).

Examples of crowdsourcing

Innocentive[9] is a crowdsourcing company that gathers problems in research and development from a variety of companies specialized in engineering, computer science, chemistry and so on and gives cash awards to people finding the best solutions for these

[9] http://www.innocentive.com/

problems. It's an intermediary between problem solvers, the people and scientists who try to find a solution, and problem seekers, the companies that hand in a challenge. In 2008, the company worked together with more than 60 problem seekers, who submitted more than 800 challenges. In total, more than 160.000 problem solvers made sure 348 of these challenges came to a positive conclusion. Cash rewards varied from 10.000 dollars to 100.000 dollars. Innocentive also provides consultancy services for both its problem seekers and problem solvers in order to make sure the legal and commercial framework is established between both parties.

Dolores Labs provides a crowdsourcing service that enables businesses to process high volumes of simple tasks that are difficult to automate. Dolores Labs has various sources of people who participate in processing the work, including Amazon's Mechanical Turk[10]. The Amazon Mechanical Turk is a crowdsourcing Internet marketplace that enables computer programmers (known as Requesters) who are located in America to co-ordinate the use of human intelligence to perform tasks which computers are unable to do. People can choose tasks they want to perform and can directly see which sort of compensation is linked with the tasks provided. It has in many ways some resemblances with the former Google service 'Google Answers', which was an online knowledge market that allowed users to post bounties for well researched answers to their queries (Millis, 2006).

[10] https://www.mturk.com

5.3 Peer production and social networking

Social networking has known a rapid growth over the past few years. Facebook, Twitter, Netlog and many more social networking websites seem to be integrated in the general culture and the daily lives of many people (Derksen, 2009). Obviously, this makes way for a lot of potential in a commercial perspective.

In essence, social networks are a way of communicating via the internet, be it via cell phone or desktop, with your friends. How close your friends on the social networks need to be in order to be implemented in your own social network you can decide by yourself. Obviously, because of its many users, most social networking sites are also a very powerful tool for business networking. Facebook, very example, with its hundred millions of users, creates an ideal platform to connect with people in a certain region and industry or people who have the same interests and hobbies. Social networking sites therefore ultimately create new possibilities for companies to interact with their customers, to get their opinions and advice on several products. It can also help to create and improve brand awareness on the internet.

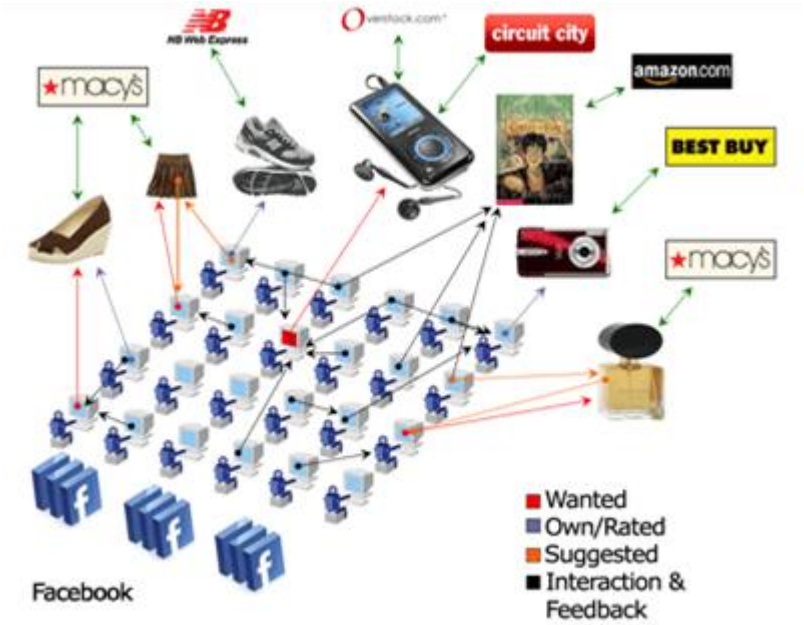

Figure 5.6: Customer connection in communities (One zone digital)

The figure on the previous page shows how a social network a la Facebook can, according to consulting firm One Zone Digital, be a platform for product suggestion and a forum for interaction and feedback methods.

According to a study by Aberdeen Group (Group, 2008), top companies are using social-networking sites like Facebook to achieve improved interaction with customers. The study revealed that companies that use social-networking websites are 17 times more likely to improve customer satisfaction than companies that don't use such sites. That's an astounding figure, and the prove that social networking sites can't be neglected for most companies if they want to jump onto the bandwagon of Web 2.0. Furthermore, the study shows that those companies are eight times more likely than to be satisfied with their return on marketing investement (ROMI).

Because of the aforementioned statements, we will take a deeper look into the social networks and their potential for businesses.

The real power in this new era of social networks is not about learning from the customer but to collaborate with them. The lines between the consumer and the businesses become very vague. Applications such as Google Maps and Gmail – consumer products in their own right – are becoming integrated for business purposes (Bartholomew, 2009). Bringing together products with social networking is the next step in this process. One way to do that is to outline a form of brand promotion specifically for social networks, as can be seen by the Coca Cola-page on their Facebook-page shown on the next page.

Another way to use social networks is to build relationships with your customers. Cloud computing is enabling this in a way. Everyone who has a computer and an internet connection can communicate with others and even create own applications to share with others (Buyya, et al., 2008).

Figure 5.7: The Coca-Cola page in Facebook (Facebook, 2010)

Research (Derksen, 2009) shows that 75% of the people who use the internet has an online profile at a social network. The time people spend on social networks also is on the rise. We can thus expect that social networking use, because of the growth of applications, will only continue to rise in the near future.

5.3.1 Brand promotion

Inside several social networks, one must separate profile pages and communities. The latter are formed via common interests, while the former have a certain 'friendship' as basis. This distinguishes the possible ways to promote a company brand inside social networks.

By using profile sites, the possibilities for brand promotion mostly rely on visitor behavior. A member of a profile site visits his profile and the profiles of his friends to communicate with them, to make new friends and to see what their friends are up to. There is very little chance that profile site members begin to talk about brands or products. Brand pushing via advertisements seems like to only possible way to connect with these people. However, the system Facebook uses now is called social ads. It's a way of adapting the advertisements

according to the information of the profile member. Singles people will get advertisements for social chat rooms, while married couples will get advertisements for a cheap mortgage loan. This is way more personal than traditional bannering on the web (Brottlund, 2009). As a marketer, your goal is ultimately to make your advertisement as relevant as possible. Of course, simple bannering – how relevant they might be – have to suffer from banner blindness. The chance they will be noticed can be significant. The click-through rate of such banner campaigns on social networks still isn't much higher than the click-through rate of a traditional banner campaign.

Another and better way to promote your brand is via communities. Communities are small networks inside the social network that are created according to certain interests or hobbies. A community about a certain hobby surely attracts a large playing field for companies who make products that fit in with the needs of this group. More remarkable however is that these groups of common interests also can be formed around a certain brand. It's possible that a customer spontaneously builds a community about a certain brand. The chances and possibilities that these communities of interested people offer for the brand are enormous at first sight, but are not very sought after at this time. The reason behind this is because the members of such a brand community have; a very high sense of involvement, interests and trust in the brand; a lot of product knowledge; a large network with many potential clients. Because of the well penetrated internet technology, it's possible to make contact with these groups in a very easy manner. The company representing the brand must give the community the feeling their opinion is important for the brand by listening to them and show appreciation for their commitment. A company can use the community as a discussion forum, to react to complaints and remarks and to give advice to their customers. Another possibility is to make an approach to the customers for gathering ideas and to let them pinpoint rooms of improvement for the products. The community can form the basis of user-centric innovation, the concept why outlined in the previous chapter. It's interesting to stimulate fans of the brand to form a group of ambassadors for the company. One way of doing this is giving the group some exclusive advantages they can

spread online; exclusive news, sponsored widgets and prize games. Communities can thus be the basis for word-of-mouth promotion in the digital environment (Schuler, 2007).

It's becoming obvious that new opportunities on social network sites aren't really possible at profile sites, where traditional bannering campaigns are the norm, but rather in communities. These communities, although often created by the customers themselves, must be stimulated by the company in order to make the best possible use of the large potential available. Creativity of the brand and commitment of the customers are the keys to success. The company must acknowledge that communities show a certain emotional value for the brand, something where a large group of people have put their belief in. It's this group that wants to persuade others of the quality of this brand.

5.3.2 Customer relationship management (CRM)

Social networks can be a means to better interact with existing customers. When brand promotion succeeds in it goal to attract more customers and to make existing customers more loyal to the brand, a further exploitation of social networks can be found in regards to customer relationship management. A company can, for example, make use of the social network as a discussion forum to interact with clients and to solve problems they may have with the product. One must however comprehend that when a company opens up all communication channels, the brand will also be susceptible to some negative remarks and criticism. A company must weigh the pros and cons, but it is sure that social networks are a very powerful tool to integrate the brand into the lives of the customers because, just as e-mail, social networks have become a tool of standard use among the global public. In addition to discussion forums, the company can also ask their customers to send in customer reviews about the products that other potential users can read. This kind of system is already adopted by HP and makes sure the customer puts more faith in what's being told by the company. It's a form of peer production stimulated by the company, but done on a totally free basis by the customers. They aren't rewarded in any kind by the company.

6 Financial performance and peer production

That peer production in all its forms can stimulate innovation, brings customer interaction up to new levels and can support market strategies is something we thoroughly discussed in the previous parts of this paper. Let it be user-centric innovation, crowdsourcing, social network integration or another peer production initiative, each has its own advantages and disadvantages. However, for the CEO's of market-based companies, only one question really stands out: Will adoption of peer production be helpful for the financial performance of the company?

While it is difficult to demonstrate a causal relationship between peer production integration and financial performance, we can however find a pattern that companies who are deeply engaged in social media mostly outperform their peers who are less engaged on this matter. A study (Altimeter Group, 2009) shows that companies who are deeply engaged in social media do better than their peers in terms of profit and revenue numbers over the last couple of years. Moreover, in spite of the current economic climate, these companies succeeded in sustaining growth and revenue.

Figure 6.1: Social engagement vs. financial performance (Altimeter Group, 2009)

As seen in the graphic above, Mavens succeed in delivering the most revenue growth, the most gross margin growth and the most net margin growth. Mavens are brands with an above-average engagement profile, Selectives have average engagement scores and focus on depth of social interaction, Butterflies have below average scores focusing on breadth of social interaction while wallflowers adopt social media on a very low scale. It seems indeed that social media, along with peer production techniques, can stimulate growth. However, we must be aware of the fact that this hypothesis doesn't necessarily imply a causal relationship. It's however visible that companies who've adopted some of these techniques in the last couple of years mostly experienced the most net margin growth.

7 Theoretic conclusion

Peer production isn't negligible in modern day economies among a wide range of companies as a new trend and means to drive marketing strategies and product innovation. Although peer production in its purest form as first described by Yochai Benkler is scarcely spread among company strategies, it's without doubt that peer production as a way of thinking has triggered an evolution. It's an evolution of user-centric innovation, of customer integration and of much wider and deeper communication with your customers. This was helped by the success of large-scale peer production projects like Wikipedia, SETI@Home and Linux to name a few. Limitations of the peer production model however prevents it from outgrowing existing production models as the market-based production and the state-based production systems. These limitations center around resource problems and coordination difficulties when going out of the sphere of information and knowledge creation, something where peer production only seems to excel in. Furthermore, most peer production projects rely on contributors who are only there to fulfill their own needs, not because potential customers want to use it. This discrepancy makes peer production not useful for everyday production in a broad range of industries.

On the other hand, peer production has led to the existence of new ways of doing business, just as the internet has done as soon as it was globally available. The penetration of internet in the daily lives of all the people makes sure companies have to adapt fast and must find new ways to outperform the opposition. We concluded that literature shows that certainly three trends and derived forms of peer production can be used by companies on a global scale. User-centric innovation as the first one lets customers take care of product development and innovation. Crowdsourcing enables companies to consult peer producers to solve specific challenges while social networks ensures a new way of communication between companies and customers. All of these peer production techniques fit in with the increased need of brand promotion and customer relationship management via the internet and via Web 2.0.

The positive effect of user-centric innovation, crowdsourcing and social media integration on the financial performance of a company seems to indicate that the usage of at least some of the available peer production techniques must become a central part of a company's vision when it tries to restructure some of their marketing and services strategy.

8 Peer production usage by companies – emperical research

We have seen in the previous couple of chapters that peer production as an economic model on his own isn't sustainable for a lot of material products or even immaterial product production. That's why companies came up with some idea's to link the advantages of peer production techniques with everyday practice. Those idea's we described in chapter five, where the derivatives of peer production were explained. Those derivatives concerned three ways of peer production techniques implemented by traditional company models, mostly market-based. They were:

- User-centric innovation
- Crowdsourcing
- Social networking

Those three concepts have been influenced by the peer production rationale in combination with ongoing trends like the increased need to use information and knowledge as a competitive advantage and the use of the internet as the ultimate communication channel between producers and consumers. However, because the concepts of user-centric innovation, crowdsourcing and social networking remain fairly new, the question remains whether those techniques are adopted by a multitude of companies in general, and more specifically by companies who's strategy primarily exists out of expanding their brand on a global scale. We can assume that those companies will be first in line to extract the advantages out of the peer production 'hype', even more because companies with an already fully fledged online presence are bound to be interested in peer production. For those kind of companies, peer production will also be the most useful to implement. For companies who, for example, don't even have a website, peer production isn't even productive to start with. Basically, lesson number one is to have a presence on the web before you can even think about developing that presence to a producer-costumer interaction platform.

Earlier, we observed that companies can use peer user-centric production, crowdsourcing and social networking for two main reasons; one is to use the peer production technique for brand promotion, the other is to use the peer production project as a part of customer relationship management. These two main ways of looking at it can however be tightly interrelated and brand promotion can strengthen the customer relationship and vice versa.

To see how, if and on what scale peer production - with it derived concepts – is integrated among companies, we will conduct an explorative research to check whether we are right in pretending that because of the higher use of the internet as a communication channel (Derksen, 2009), peer production indeed is becoming a trend among traditional companies. To do this, we must find strong brands with a large customer base. This is because of several reasons. Firstly, a strong brand mostly acts as an example for other brands regarding brand strategy and customer relationship management. When strong brands are adopting peer production techniques, this can be an proof that the earlier mentioned concepts aren't only theoretically founded, but also have a vast practical use. Secondly, a strong brand has – in almost all cases – a definite presence on the world wide web. A presence on the web is one of the most important aspects or even the most important precondition to develop a peer production project. Thirdly, because a strong brand is backed up by a large customer base, the effects of a peer production project can become more obvious.

What we will do first, is gathering a collection of strong brands. A brand can be the identity of a product, a service or a business (Aaker, 1991). How to define a strong brand is a little more difficult. Some will say that it's a combination of brand awareness, brand recall and brand preference (Dolak, 2003), others take a more psychological approach and sum it up as an unshakeable long-term relationship between a company and its customers (Hakuhodo, 2008). However, when it comes to strong brands, brand management is of great importance and to rank several brands we will use the 'brand awareness' parameter as the one to differentiate all the them. When on the look-out to brands with the highest brand awareness, several studies have been carried out in this respect. We will use the report of the global brand consulting firm Interbrand. Every year it carries out a study to find the 100

best brands around the world, the brands who have the highest brand value, based on several underlying tests such as a financial analysis (revenue of branded products and branded profits based on publicly available information), a brand analysis (in-house market research), a brand strengthen score (ability to secure future earnings by achieving loyalty, advocacy and customer trial) and finally the brand value as such. The brands will only list in the report if there is substantial financial data available on them, if one third of the brand revenues come from outside its country of origin, if the brand is positioned to play a significant role in the customer's purchase decision, if the brand has a broad public profile and many more. Based on the criteria above, certain brands which you might expect in the list aren't there. The Mars and the BBC brands for example are privately held and do not publish financial data. Wal-mart, although it does business in international markets, does not do so under the Wal-Mart brand and is therefore not sufficiently global. Also, certain industrial sectors are not included in the study, for example telecommunication brands. Those tend to have strong national roots and face a couple of other challenges because the high grade of mergers and acquisitions in that specific sector. Another example are pharmaceutical companies. While those are very valuable businesses, they do not appear as companies tending to build a relationship with their products brands rather than the corporate brand itself (Interbrand, 2009).

After gathering the top brands, we will test customer experience on the world wide web that has relevance for peer production techniques. We will test and search company and brand websites, social networks of companies and brands and take a look if companies promote our aforementioned techniques on the web. Because the essence of peer production is collaboration with the customers, we will follow the approach of the customer who has the intention to learn more about the brand and to expand his brand experience online.

8.1 Analyzing the top brands

As seen in the table below, we have the ranking of the ten best global brands according to the study of Interbrand. Their ranking is determined by their brand value in million dollars. For each brand, we will check their customer experience on the web and how that is possibly linked with peer production techniques. For the top 25, we will conduct a thorough explorative research. However, good examples of brands that aren't present in the top 25 trying to develop their brand, projects and customer relationships via peer production also exist. The explorative research must give us the possibility of showing the real world adaption of peer production among a broad range of companies, if this indeed is the case. This will gives us the necessary arguments of concluding peer production has become, or has the potential to become an integrated means for companies to exploit customer interaction, brand promotion and other linked concepts.

Ranking	Brand	Sector	Brand value ($m)
1.	Coca Cola	Beverages	68.734
2.	IBM	Computer services	60.211
3.	Microsoft	Computer software	56.647
4.	General Electric	Diversified	47.777
5.	NOKIA	Consumer electronics	34.864
6.	McDonalds	Restaurants	32.275
7.	Google	Internet services	31.980
8.	Toyota	Japan	31.330
9.	Intel	Computer hardware	30.636
10.	Disney	Media	28.447

Figure 8.1: Top brands in 2009 (Interbrand, 2009)

As we can see in the table on the previous page, Coca Cola is ranked on the number one position with a brand value of 68.734 million dollar, 13% more than IBM and some 20% more than Microsoft. Analyzing the Coca Cola brand, we can see that the number one producer of beverages around the world has hold this position in the Interbrand research during many years and since the start of their analysis.

Coca Cola

In 2009, the Coca Cola company expanded its Coke Zero brand to 107 countries and launched a new message for its marketing campaign. The campaign, “Open Happiness,” was targeted to ‘consumers striving for comfort and optimism in a tough time’. Analyzing the strategy of Coca Cola regarding social networks and peer production, we can see that Coca Cola actively promotes it social network via the brand website. As of 2010, Coca Cola has some 5,4 million fans on its Facebook-page. Furthermore, it connects with its customers via newsletters (mobile and e-mail). It has also set up a website for an personal Coca Cola experience called mycoke.com via which you can play games or run other Coca Cola-product related applications. From time to time, Coca Cola also conducts surveys to its customers, mainly related to improve the on-website experience. Besides that, a couple of years ago, Coca Cola actively connected its users to her product ‘Fanta’. It stimulated its users to send in pictures of them together with a Fanta-related theme via the Internet. The best of these pictures were chosen and were then put onto the Fanta products for some time. The campaign was aimed at brand promotion but primarily to create a special connection between the brand ‘Fanta’ and its customers. Coca Cola also has an official channel on YouTube, a page on MySpace, Twitter and Bebo.

Under no illusion, Coca Cola, as the number one brand in the Interbrand study, actively promotes it brand. Furthermore, we can see that the peer production concepts we discussed are also actively adopted by the Coca Cola company. On the user-centric innovation part,

Coca Cola conducts surveys and sets up campaigns to involve its users to modify the Coca Cola 'look and feel'. However, the product itself and the recipe of Coca Cola will apparently never be changed. The customers' share in Coca Cola's innovation is purely cosmetic and related to packaging, slogans, their website and other marketing-related elaborations. Admittedly, Coca Cola makes very good use of social networks related to brand promotion and customer interaction.

User-centric innovation: Yes, but not direct product-related
Supported social network: Yes

IBM

IBM, number two on the list, received the most U.S. patents for the 16th year in a row. It is the market leader in computer services solutions and has expanded its presence in more than 170 countries. Regarding social networks and peer production, it has an advertising channel on YouTube and announced plans for cloud computing. Via these channels it tries to communicate better to the masses. Also, IBM is a frontier user of blogs. The company created an entire network of blogs and allowed their employees to write about their experience. The end goal is to give consumers insight into what happens behind the scenes. Constumers can see how IBM operates, which gives a direct connection with the employees of the company. All in all, IBM is one of the most important examples of successful peer production implementation. It was one of the first companies who jumped on the Linux bandwagon and accepted open source software products and processes and the philosophy behind it. This strategy benefited IBM in two ways. First, contributing to Linux was a way for their programmers to become experts on the system. Second, the contributions IBM delivered to the Linux community created a considerable amount of goodwill. IBM has used that goodwill to get the help of the community in meeting the own software goals of IBM. This open-ended collaboration has served both IBM and the broader Linux community, creating value for both parties. By using this philosophy, software development costs could be lowered while IBM could focus more on their core business of selling support services.

IBM doesn't have an official page on a social network, but because of its vast use of blogs it is somehow social network-related on a much different scale. Which way to do it effectively – blogs or real social networks – has the most success remains to be seen.

Peer production initiatives: Yes, on a large scale
Supported social network: Yes, via blogging

Microsoft

Microsoft occupies the third place in the standings and for obvious reasons. It is still one of the largest computer technology corporations in the world. However, it's policy isn't supportive at all for peer production projects. Microsoft's software isn't open source. It also doesn't really make use of social networks to promote its brands via means of customer integration. Microsoft can be called a typical example of a pseudo-monopolist regarding some of its products. On the pc-level, it doesn't really have much competition. That can be one of the reasons why Microsoft isn't keen on innovation on a large scale. Interaction with its customers is kept very low profile and user-centric innovation and crowdsourcing initiatives aren't present.

However, on the other hand, Microsoft itself owns a part of Facebook. It means that it can partly use the advertising channels for brand promotion. As mentioned in the theoretic exposition, this means of advertising has become very old and therefore can't be called really efficient at all. The contradictory between not supporting peer production projects and customer interaction at the one side, and meanwhile owning part of the largest social network on the net, is however interesting to have as an example.

Peer production initiatives: Yes, but on a very low scale (Microsoft Research)
Supported social network: No

General Electric

General Electric, is an American multinational conglomerate corporation incorporated in the State of New York. In 2009, Forbes ranked GE as the world's largest company. The company has 323,000 employees around the world (Trading markets, 2009). GE's divisions include GE Capital (including GE Commercial Finance and GE Money and GE Consumer Finance), GE Technology Infrastructure (including GE Aviation, the former Smiths Aerospace and GE Healthcare), GE Energy Infrastructure (including GE Energy Financial Services), GE Fanuc Intelligent Platforms and NBC Universal, an entertainment company. Because of the broad field of industry General Electric works in, it's not possible to subtract a global strategy regarding peer production. We can however see departments are working on better customer interaction via social networks. Also, because General Electric mostly works in the business-to-business atmosphere, peer production in general is less useful.

Peer production initiatives: No
Supported social network: Yes, dependable on the divisions

Nokia

Nokia is a Finnish multinational communications corporation that is headquartered in Keilaniemi, Espoo, a city neighbouring Finland's capital Helsinki. Nokia is engaged in the manufacturing of mobile devices and in converging Internet and communications industries. In Finland itself, Nokia is regarded as one of the best Finnish brands (Nokia, 2007).

What it has on the peer production side is some concepts like Ovi, the name for Nokia's internet services. It has some significance in that Nokia is moving deeper into the world of Internet services, where head-on competition with Microsoft, Google and Apple is inevitable. (Niccolai, 2007). It also has a 'My Nokia', a free personalized service where customers can download and view ringtones, wallpapers and settings for their mobile phone. This however, although communicated via the internet, acts as a part of the Nokia

products and isn't really linked to development of new products in a way of user innovation and crowdsourcing. But Nokia indeed has a couple of those projects in the pipeline that are aimed at their lead user groups as mentioned in the theoretic part of this paper. Those users are the ones who visit the Nokia blogging sites where the Nokia products are discussed. One of those things is a 'Design by community' part which is capturing the collective thoughts of blog readers to define the ultimate concept mobile device. Once the product specs have been defined, we'll get Nokia's design team to turn them into a series of concept sketches which you can vote for. The plan however isn't to actually make the product, this is more an exercise in collaboration sprinkled with some future thinking (Nokia, 2010).

Nokia also has official pages on Facebook, Twitter, YouTube and Netlog. Interesting to see is that Nokia has put up such pages for each country independently. There isn't 'one' official Nokia page but several, each in their own language. This has its advantages on one side – removing language barriers to let you interact with all of your customers. At the same time however, the community feeling isn't that large because the customer group is very much scattered around the different pages. The Facebook page of the Belgian-Dutch Nokia community has only 300 fans, the Netlog-network only 22 which is miserably low. Also, the social network strategy between several countries doesn't seem aligned with each other. While Belgium has her official Nokia pages on Facebook, there isn't one available for the customers of Nokia in the United Kingdom.

Peer production initiatives: Yes, on a small scale and not for real product development
Supported social network: Sometimes, dependently of the country-specific strategy

McDonalds

McDonald's has performed well in 2009. It now serves six million more customers each day than it did before the "I'm Lovin' It" campaign. Due to its low prices and numerous locations McDonald's has been able to continue to grow its sales–and even captured new market share–with its McCafé and healthier offerings (Interbrand, 2009). It uses social networks as

Facebook, with more than two million fans, and Twitter, with more than 20.000 followers, to communicate with its customers. On those pages, McDonald's highlights their sponsored events and charity actions and it also shows their TV-advertisements. Food and menu options are also available here. Besides this all, the official McDonald's website is the medium which is used to provide the customers with all the possible info about the McDonald's brand. Peer production related projects aren't present and possibly not very wanted. One idea could be to let costumers vote on the next McDonald's hamburger or to let them invent names for a new kind of hamburger.

Peer production initiatives: No
Supported social network: Yes

Google

Google continues the drive on innovation and is the company with the greatest increase in brand value over the year 2009. Continued diversification drives the business, from new advertising models to online publishing. The common theme is low price and high functionality with a lot of transparency. That transparency also comes in the form of peer production. Google's philosophy is to throw in the help of thousands of users to test their products and innovations in an early beta phase to gather comments and information from the community. This is furtherly used to improve the products launched at the test group of customers. The link with social networks is another obvious element. Facebook is one of Google's rivals, as it is trying to set-up a proper social network themselves.

As already mentioned in the theoretic part, when Google's search engine is concerned Google is a peer-production enterprise. It ranks their search results according to what people on the internet think is relevant to link to. Innovation in Google was to use as a primary way of ranking how many linked to a site. It guesses accurately what is relevant. It gives web searchers a snapshot of what is relevant, farming out the most important aspect to peer-production – showing what "peers" think is important.

Peer production initiatives: Yes, on a large scale

Supported social network: Yes

Toyota

The Japanese car constructor Toyota is the world's largest automobile manufacturer by sales (Marr, 2009). Toyota makes use of social networks in her marketing campaigns for promoting new cars. It also has a general Facebook-page for customers in the US but none for customers outside the US. This may mean that Toyota's strategy's concerning peer production aren't aligned on an international level. Some widgets on all of Toyota's websites however lets visitors post Toyota-related news on their social network.

Peer production initiatives: No

Supported social network: Yes, dependable on the country

Intel

Intel is an American multinational firm specialized in development and production of chips, motherboards, software and other computer components, computer networks and communication systems. It is very well aware of the advantages of using the collected intelligence of their customers. That's why it is using peer production techniques as user-centric innovation via their website. Intel has put up 'Intel communities' and the 'Intel software network', where customers can connect with developers and the engineers of Intel. It has a lot of separate communities, each handling their own specialty, like the mobility community, the multi-core community, the graphics community and the open source community. Customers are stimulated to participle in discussions and share new ideas. Intel also promotes their Intel blogs, where research and now technologies are showcased.

Intel also has an official fan page on Facebook and Twitter where it showcases events, movie clips about Intel and promotions. The Intel fan page has around 80.000 fans and is almost daily updated.

Peer production initiatives: Yes, on a large scale

Supported social network: Yes, dependable on the country

Disney

Disney is the largest media and entertainment conglomerate in the world (Siklos). The company is best known for the products of its film studio, the Walt Disney Motion Pictures Group, today one of the largest and best-known studios in Hollywood. It also owns and licenses 11 theme parks around the world. Although Disney seemingly isn't involved in peer production, it uses social networks to interact with Disney customers – in this sense, it tries to persuade them to go watch a Disney movie and to go to a Disney theme park. The Disney fan page has more than three million fans, a huge amount and the page is updated almost daily with new video's, pictures and many more. Disney is also active on Twitter and YouTube.

Peer production initiatives: No

Supported social network: Yes

8.2 Taking a look at the most improved brands

Ranking	Brand	Sector	Brand value incr.
1.	Google	Internet services	+ 25%
2.	Amazon.com	Internet services	+ 22%
3.	ZARA	Apparel	+ 14%
4.	Nestle	Food	+ 13%
5.	Apple	Computer hardware	+ 12%
6.	H&M	Apparel	+ 11%
7.	IKEA	Home furnishings	+ 10%
8.	Wrigley	Food	+ 10%
9.	Danone	Food	+ 10%
10.	Heinz	Food	+ 9%

Figure 8.2: Most improved brands brands in 2009 (Interbrand, 2009)

Among the 100 brands with the highest brand value, the table above shows the brands whose brand value increased the most in 2009. At the top we have two internet services companies, Google and Amazon. Noticeably, we also have four food companies among the ten most improved brands of the past year. Google, as we know, has strong links with its customers via peer production and social networks. The same applies for Amazon.com. It would be wrong to state that if a company shows up in the list above, and at the same time adopts a strategy of peer production and social network integration, it is due to these last two factors that it makes a leap in brand value. However, we can assume that companies who are at the peak of their performance capabilities in regards to raising brand awareness, mostly adopt measures in order to integrate these new kind of philosophies to gain a head start in relationship to their rivals. The presence of four food companies is striking. Testing the customer online experience of these four; Nestle, Wrigley, Danone and Heinz we can conclude the following. The first one is Nestlé, that in fact has an Innovative Consumer Research Center where it tests products together with existing customers. Also Nestlé

launched health, water, and nutrition initiative in partnership with governments, NGOs and customers. Besides that, it also has an online community which it supports to create shared value in emerging markets. Wrigley, a producer of chewing gum, doesn't have any noticeable peer production or social network related projects in the pipeline. The same applies for Danone, although they are very informative and helpful towards customers via their website, offering a lot of information. Heinz on the other hand does have a supported social network application, but is non-informative and purely focused on fun. The Heinz brand is focusing on a customer-centric health and wellness model, developing healthier products and taking advantage of consumers dining at home (Interbrand, 2009).

8.3 Social network usage by strong brands

Position	Brand	Social network?	# of fans (april '09)
1.	**Coca Cola**	**Yes**	**5.456.024**
2.	**IBM**	**Yes**	**(blogging)**
3.	**Microsoft**	**Yes**	**(projects)**
4.	**General Electric**	**No**	**/**
5.	**Nokia**	**Yes**	**17.405 (UK)**
6.	**McDonald's**	**Yes**	2.222.293
7.	**Google**	**Yes**	1.257.472
8.	**Toyota**	**Yes**	98.928 (US)
9.	**Intel**	**Yes**	82.714
10.	**Disney**	**Yes**	3.441.488
11.	**Hewlett-Packard**	**Yes**	95.442 (US)
12.	**Mercedes-Benz**	**Yes**	333.911
13.	**Gilette**	**Yes**	Up to 200.000 combined
14.	**Cisco**	**Yes**	52.124
15.	**BMW**	**Yes**	Up to 200.000 combined
16.	**Louis Vuitton**	**Yes**	1.016.506
17.	**Marlboro**	**No**	/
18.	**Honda**	**Yes**	349.539
19.	**Samsung**	**Yes**	Up to 300.000 combined
20.	**Apple**	**No**	/
21.	**H&M**	**Yes**	1.985.524
22.	**American Express**	**Yes**	53.332
23.	**Pepsi**	**Yes**	710.648
24.	**Oracle**	**Yes**	37.032
25.	**Nescafé**	**Yes**	592.755

Figure 8.3: Companies and their Facebook fans

As we have seen in the examples mentioned in this explorative research, it's becoming obvious that companies jump on the bandwagon of peer production if they notice it can be advantageous for their operations. The way the internet has changed people's behavior however isn't fully realized up to the same standard by all companies. On one hand, we can see a lot of measures taken by companies to interact with their customers, but on the other hand, the deeper integration of this measures in the global strategy differs a lot from one company to another. If we look at the number of fans companies get on their social network pages, we can notice a difference as big as four million fans between the companies with the largest amount of fans and the companies with the least amount of fans, although all companies listed belong in the top 25 of the strongest international brands. This inevitably means that one company does a better job in connecting with their customers than another one. That, however, can't be all of the story. It can be possible that a certain product ensures more attention from customers than another, its mostly dependent on how interrelated the product is with the daily life of the customer but also how intimidate the company wants to be with their customers. The brand can be open for the sake of customer intimacy, thinking it can take the brand to new and higher levels, but a brand can also be negative about too much customer intimacy, having the opinion it can destroy the brand altogether. This may explain why Microsoft isn't even bothered with setting up peer production networks or social networks, while IBM has this story embedded in its global strategy. Consumers have made the full transition from the days of the 1950s, when people were happy to passively enjoy information as it was pushed out to them via radio or television. People today have a proactive, interactive, "go find out" mentality. They seek out information on brands, products, and services from multiple (and often third party) sources, and explore and challenge this information to create their own informed opinions and make their mark (Interbrand, 2009).

One constant factor in this whole story of social networking is that the brands who integrated this philosophy into their corporate strategy are often multinationals or at least brands with a great number of customers. Local or regional companies are often not seen on

social networking sites, the advantages of being so can be relatively small, but nonetheless present. Why social networking is favorable for big companies seems logical; the effort of setting up and maintain a social network is relatively small for big companies when it knows it can deal with more than thousands of customers in real time. As a small company, the effort you must put in to get a relatively low return is nevertheless significant because of the geographical scope of the company.

The reason why some brands are unsuccessful in social networking efforts can by manifold. The first factor seems the presence of the unofficial brand pages and communities in social networks. As a company, when you're too late to jump onto the bandwagon, an individual may have claimed the brand name. Brands like Disney and Marlboro all have pages on social networks, but they are maintained by individuals who have no real link with the brand or the company. Furthermore, it's also the case that some companies did reserve their names on social networks, but choose not to participate. When a company indeed decides to exploit the social network potential, it must be sure it can produce relevant content. It can make announcements, answer questions or launch a bigger campaign. In many cases, there is no individual tied to the account and no one knows if they're talking to an intern, or the CMO. A brand, or the person who represents the brand, must also acknowledge not to use the social network purely for advert purposes. Customers don't seek brand pages to get the latest adverts, but to improve their brand experience. Also, about some brands, regardless of how they use a social network, no one will care. Either their product isn't known, or not releavnt, or the brand hasn't done due diligence to first find out if their market is even in Twitter, as a result, tweets go unheard in the forest, yet no one minds.

In the end, it's pretty unclear what the return on investment is from using Facebook and Twitter.

8.4 Top brands engaged in social media

We will take the research somewhat further by consulting a study carried out by Altimeter, that ranked the top 100 brands according to their social engagement on the internet as we can see in the table below. Over 40 attributes for each of the 100 companies were evaluated – in general, the number of channels in which a company participates was evaluated in conjunction with its respective level of engagement in each channel.

Rank	Company	Industry	Channel	Score	Engagement
1	Starbucks	Leisure	11	127	Maven
2	Dell	Technology	11	123	Maven
3	eBay	Retail	9	115	Maven
4	Google	Media	11	105	Maven
5	Microsoft	Technology	10	103	Maven
6	Thomson Reuters	Media	8	101	Maven
7	Nike	Consumer products	9	100	Maven
8	Amazon	Retail	9	88	Maven
9	SAP	Technology	10	86	Maven
10	Intel	Technology	10	85	Maven

Figure 8.4: Top ten brands engaged in social media

We can notice that three of the top brands engaged in social media also happen to be in the top ten of the most valued brands across the globe, that is Google, Microsoft and Intel. However, the number one brand engaged in social media is Starbucks. Starbucks has a team of six people for handling social media and it outclasses advanced media and technology brands such as Dell, Microsoft, Google and so on (Altimeter Group, 2009).

Noticeably, four companies in the top ten are active in the technology industry. According to the Altimeter study, companies in the technology industry have higher engagement figures than others. They're only preceded by companies in the media industry and are followed by the retail sector.

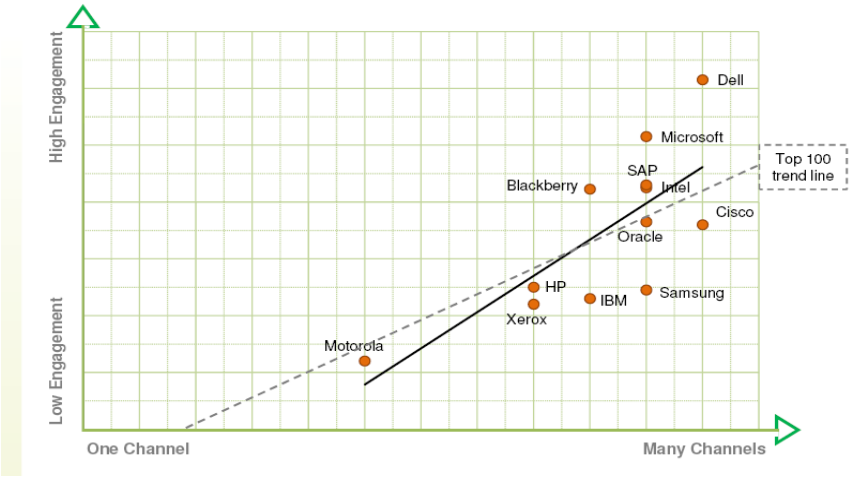

Figure 8.5: Engagement in technology firms (Altimeter Group, 2009)

The figure above shows engagement for the top technology companies. It's no surprise that those engagement figures differ for various industries.

But even within industries, there is a wide spectrum of engagement. In the auto sector, some brands like Toyota are highly engaged in many channels, especially around the Prius. In contrast, luxury brands Mercedes Benz and Porsche are in just two channels each (Altimeter Group, 2009).

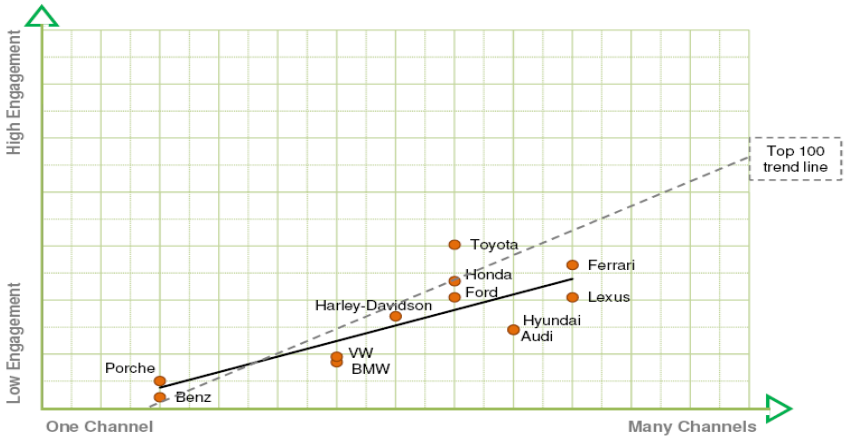

Figure 8.6: Engagement of auto companies (Altimeter Group, 2009)

8.5 Link between strong brands and top brands engaged in peer production

We will now combine our efforts from first analyzing peer production among the top 100 of the global brands with the study that showed us the top brands engaged in social media. We will take the 20 most valued global brands as a sample and we will analyze their position in the Altimeter study that checked the engagement level of these brands in relation to other strong brands.

Coca Cola, emerging on the first place as the best global brand, holds a fairly low position in 51st place. Although it occupies a fair amount of channels to communicate with customers, engagement of Coca Cola remains low. Some of the Coca Cola pages aren't managed in-house but are dealt with by fans themselves. In general though, we can observe that 12 of the 20 brands with the highest brand value are positioned in the 30 best brands engaged in peer production. There are some exceptions however, with McDonald's, Luis Vuitton, Gilette, Marlboro and Mercedes-Benz as the more prominent examples. They are ranked lower than 77th place. McDonald's has the same problems as Coca Cola in the way of having a lot of peer production channels but a very low level of engagement of the company itself.

For some brands, low social integration seems obvious, as for Marlboro. Although Marlboro is present on Facebook, they keep customer integration very low-profile because of the restrictive tobacco legislation and advertisement restraints. Luis Vuitton on the other hand is a luxury brand, which mostly isn't inclined to communicate with her customers on a large scale because of the exclusivity of the brand. Luis Vuitton ranks just 80th with four channels but seemingly very low engagement levels.

The German automobile manufacturer Mercedes Benz, ranked 12th in the brand value standings, is a low 95th in the social engagement ladder. Almost all of its engagement pages are maintained by customers themselves and aren't supported by the company in an official way. On the other hand, as mentioned before, 12 of the 20 top brands are present in the first 30 brands with the highest engagement score. Google tops the list in fourth, followed by Microsoft in fifth. Also Intel is still active within the first ten brands. This doesn't really come

as a surprise as we have mentioned in the peer production analysis of the top value brands a couple of chapters back.

8.6 Conclusion

After conducting our explorative research, our conclusion can be pretty straightforward. While the theoretic part of this paper showed us that peer production can form a boost for the customer relationship management and the brand promotion, explorative research indeed shows that peer production techniques are being used to elaborate on this via the internet as a mass communication device. More than that, companies with top brands are using peer production techniques like user-centric innovation, crowdsourcing and social networks as one of the premier ways to involve their customers in their next phase of product and service development.

Of the three techniques previously discussed, social networks is the most popular to implement because of the relatively low costs. We can see that social networks are becoming omnipresent for the top international companies. Their use for regional companies is however limited. The mentality of user-centric innovation is maturing steadily but surely with some companies implementing this in their customer interaction platform. The same goes for crowdsourcing, with some successful projects to mention up to this date.

We however cannot conclude that use of peer production techniques is evenly advantageous for every international company. A lot depends on the brand positioning of the company and how it wants their customers to perceive their products. There is also a noticeable difference between various sectors. Technology sectors are very customer-engaged while retail companies still adopt push-information strategies.

However, companies must admit that peer production techniques can’t be neglected. With social networks at the lead of the pack, companies use this channel as a low-cost and useful tool to create a special and vast relationship with their customers. As the research shows, all top international brands are using these techniques; the only difference between them is the intensity and the scale on which peer production techniques are implemented.

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