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Master Thesis

Disrupting billion dollar industries by leveraging the crowd –
Key success factors for business models that rely on crowdsourcing.

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Abstract

Title: Disrupting billion dollar industries by leveraging the crowd – Key success factors for business models that rely on crowdsourcing.

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Crowdsourcing is a relatively new concept and therefore recent literature primarily focusses on the definition of the term and the analysis of the concept per se. However business models that make use of crowdsourcing emerged rapidly during the last years and sometimes were able to completely reshape whole industries with their innovative concept. Thus it is important to consider what exactly the key success factors for those business models are and what differentiates the successful from the unsuccessful concepts. This thesis first defines the term crowdsourcing and subsequently tries to use recent academic literature to explain how crowdsourcing can be strategically integrated in a business model. In this process common problems that are mentioned regarding business models that make use of crowdsourcing are elaborated. In the end of the literature review six questions regarding possible key success factors emerge.

To approve or disapprove those six success factors and potentially find further success factors a case study analysis is conducted. Within this case study analysis two successful and two failed examples of business models that make use of crowdsourcing are analyzed. The Osterwalder Business Canvas is used to analyze the individual business models of Threadless, iStockphoto, CrowdSpirit and Cambrian House. In the end of the case example analysis three hypothesis regarding the key success factors of business models that make use of crowdsourcing are formulated.

The findings of this thesis propose that a multi-sided platform approach is more likely to succeed than other types of business models that make use of crowdsourcing (H1). Additionally the relevance of the feelings of the crowd during the crowdsourcing process is emphasized, as they should experience feelings of fun and enjoyment (H2). Also the reward system for the crowd is discussed and it is suggested that a business models that makes use of pyramid-shaped reward system that takes into account the individual contribution of each individual crowd member is more likely to be successful (H3).

Keywords: crowdsourcing, crowd, business model, co-creation

Preface

Tendo trabalhado durante dois anos para a maior revista Alemã *on-line* na área de *startups* tive a oportunidade de lidar com novos modelos de negócios inovadores numa base diária. Dados os mais recentes desenvolvimentos no ecossistema de *startups* e a ascensão de modelos de negócios que fazem uso de crowdsourcing (como Uber, AirBnB ou Alibaba) comecei a desenvolver um interesse particular em compreender por que razão estes modelos de negócios são tão bem sucedidos e se existem determinados factores que determinam o sucesso de um modelo de negócio que tenta fazer uso de crowdsourcing.

Em coordenação com a Prof. Susana Frazão Pinheiro decidi combinar uma revisão de literatura académica recente com uma análise através de exemplos de casos de modelos de negócios bem e mal sucedidos de forma a melhor compreender quais os factores de sucesso.

Gostaria de agradecer a gratidão da Prof. Susana Frazão Pinheiro pela sua orientação e conselhos valiosos ao longo de todo o processo. Além disso, gostaria de agradecer a toda a equipa de docentes e à equipa dos *student affairs* da Católica desde que fizeram desta jornada académica uma experiência verdadeiramente valiosa para mim.

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1. Introduction

“Uber, the world’s largest taxi company, owns no vehicles. Facebook, the world’s most popular media owner, creates no content. Alibaba, the most valuable retailer, has no inventory. And Airbnb, the world’s largest accommodation provider, owns no real estate.” (Goodwin 2015)

In 2015 Tom Goodwin published an article in the online-magazine TechCrunch that emphasized the power of the Internet to break traditional value chains and disrupt whole industries. However, the quote also highlights another development: the power of crowds and crowdsourcing. Uber could not exist without its drivers, Facebook could not exist without its users, Alibaba could not exist without its sellers and Airbnb could not exist without its users that offer their facilities and homes on the Airbnb platform. In recent years companies that take advantage of the crowd as an essential part in their business model have emerged rapidly in number and size. But, next to success stories like Uber and Airbnb, there are also examples of companies where this crowdsourcing approach did not work out (CrowdSpirit, Genius Crowds, Cambrian House, etc.).

This raises the question: *Why did some companies manage to tap the full potential of the crowd while others couldn’t?* The leading research question for this thesis, therefore, shall be:

What are the key success factors for business models that rely on crowdsourcing?

The term “crowdsourcing” was characterized precisely for the first time by Jeff Howe in his 2006 WIRED article. He described how new developments, such as rapid changes in technology, connect the world and how companies can subsequently take advantage of those developments by connecting with users and delegating work to the crowd (Howe 2006). While crowdsourcing has received increased attention in academic research during past years (see [Section 3.2. Definition Crowdsourcing](#)), the issue of determining critical success factors for business models that rely on crowdsourcing has not been addressed widely so far. The only mentionable contribution in this field is Sharma (2010). However, this study had a very narrow focus because it was only analysing *“mobile phone based crowdsourcing initiatives in Africa”* (Sharma 2010, p. 1). This thesis will try to have a broader definition of crowdsourcing and to discuss more general problems that business models that make use of crowdsourcing are facing.

2. Methodology

In this thesis a qualitative research approach will be used. To tackle the issue of determining the key success factors for business models that rely on crowdsourcing, a literature review will be combined with a case example analysis.

The literature review will be started by defining the most important terms regarding the research question (Recalling the research question: What are the key success factors for business models that rely on crowdsourcing?). In the beginning, the term “business model” shall be defined with a special focus on the concepts put forth by Alexander Osterwalder. The following part will include a definition of the crowdsourcing concept and a distinction from comparable concepts. The literature review will try to focus on primary sources that discuss crowdsourcing. Also, preliminary to the case study analysis, success and failure will be defined.

After a summary of the literature review was drawn, a case study analysis will follow. This case study analysis will compare two successful business models that rely on crowdsourcing (iStockphoto and Threadless) with two business models that have failed to leverage the potential of the crowd (Cambrian House and CrowdSpirit). To analyse those case examples the Osterwalder Business Model Canvas will be used. Since this analysis requires a comprehensive approach to tackle the business models in a detailed way this qualitative approach using the Business Model Canvas seems superior to possible quantitative methods.

In the end, the findings of the literature review, and the case example analysis shall be combined to formulate a hypothesis regarding the possible key success factors.

3. Definition of Relevant Terms

3.1. Definition of Business Model

The research focus of the thesis is business models that make use of crowdsourcing. For analysing how crowdsourcing can be successfully integrated in a business model, first the term business model will be defined. The term business model emerged in the late 1990's and was frequently used during the timeframe of the Dot-com bubble from 1997 to 2002. Paul Timmers who was working for the European Commission, was the first to clearly define and classify business models in 1998 (Osterwalder 2004). He defined a business model as:

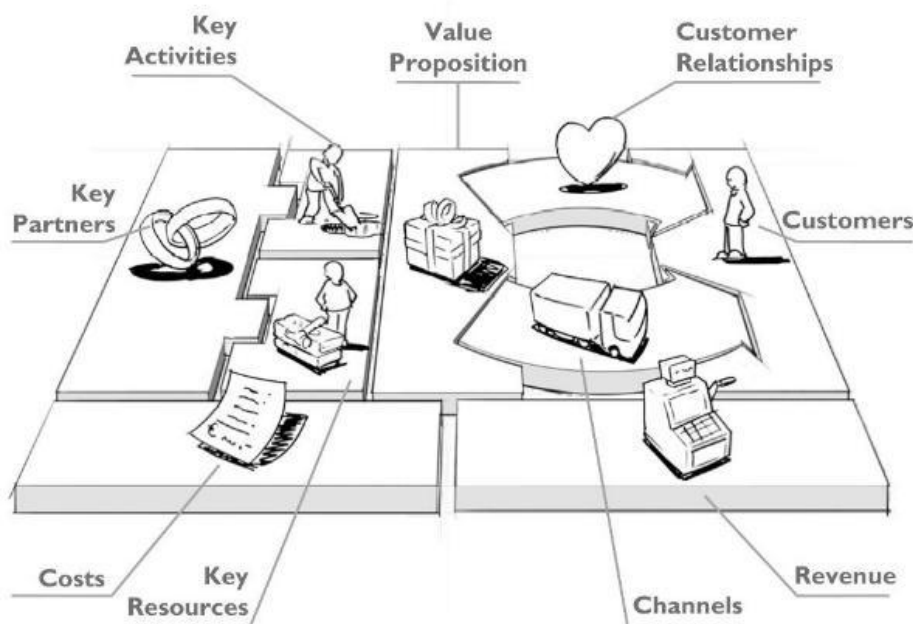
“An architecture for the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; a description of the sources of revenues.” (Timmers 1998, p. 3)

This broader definition represents the understanding of the term during the early 2000's. The term business model was used frequently but a clear distinction with other concepts such as: strategy, marketing and product mix, or organizational design was not made. According to Osterwalder, the term emerged especially during the 2000's due to the increasingly complex business activities that needed an explanation and a clear classification. Those complex business activities are related to the era of the rising Information and Communications

Technology (ICT) which required companies to a.) increasingly work on partnerships b.) build up multi-channel and multi owned distribution networks and c.) generate profits from diversified revenue streams (Osterwalder 2004).

Even though the topic of business models has been a research focus for many years by now, the concept is still not clearly defined. Until today the term business model has been used to explain many different phenomena such as “*e-business types, value creation or value capture by firms, and how technology innovation works*” (Zott et al. 2011, p. 1034). Due to those various research types, different understandings of the term business model have emerged. Generally, however, the concept of the business model describes a new way to analyse a company or a network. Also, a business model is a more systematic and a holistic approach to describe not only *what* a company does, but also *how* it is done. Additionally, a business model analyses activities that are performed not directly by the company, but instead, for example, by partners or suppliers (Zott et al. 2011).

However, no matter how complex a definition or description of the term business model gets, it is always a simplification of a complex reality (Stähler 2002). Using a business model to simplify the complex activities, procedures, networks, and the strategy of a company helps to easily compare those aspects among different companies. This thesis will make use of this simplification to compare different approaches to how crowdsourcing is integrated in the business activities of a company. One of the most popular schemes to compare business models was later developed by Osterwalder A. and Pigneur Y. (2010) in their book “Business Model



Source: Customer Development. [Online]: Available at: <http://customerdevelopment.org/business-model-canvas/> [Accessed: 24.03.2015]

Generation”. The so-called Business Model Canvas reduces a business model to nine blocks that together build the key aspects of the business model.

Those nine blocks picture the customers, customer relationships, channels, value proposition, key activities, key partners, key resources, costs and the revenue of a company. This template with the nine blocks standing in relation to each other helps to simplify and illustrate the business model of a company. But, most importantly, for the analysis, it helps to easily compare different business models. A more detailed analysis of each individual block and the overall usage of this canvas can be found in [Appendix 1](#).

3.2. Definition of Crowdsourcing

To determine the meaning of crowdsourcing it makes sense to start with a definition of the term “crowd” as it is used in this specific manner. The Oxford Dictionary refers to crowd as “A *large number of people gathered together in a disorganized or unruly way*”¹ or “A *group of people who are linked by a common interest or activity*”². Jeff Howe who first identified the term crowdsourcing defined the term crowd as a: “*undefined (and generally large) network of people*” (Brabham 2008, p. 76). Even though that definition is still vague, it helps to understand the term for further usage. When talking about a crowd the term will, therefore, always refer to a generally large group of people that is somehow organized or has the chance to inter-exchange.

To more specifically determine the criteria for a crowd to be sufficient when being involved in a crowdsourcing process, one could refer to Surowiecki (2004), who defined three conditions for a crowd to be, what he called, wise. These conditions are: diversity, independence and a certain kind of decentralization (Surowiecki 2004).

The term crowdsourcing as it is used in this thesis is a relatively new term. While crowdsourcing concepts were introduced as early as 1998 with the launch of the crowdsourcing platform InnoCentive (Schenk & Guittard 2011), the term crowdsourcing was first identified by Jeff Howe in his 2006 Wired article “The Rise of Crowdsourcing”. In his article Howe, describes how “*the age of the crowd*” (Howe 2006) is forcing change in many industries by enabling companies to “*take advantage of the networked world*” (Howe 2006) and, therefore, easily allowing them to connect to users and delegate work (Howe 2006). The crowd can carry out

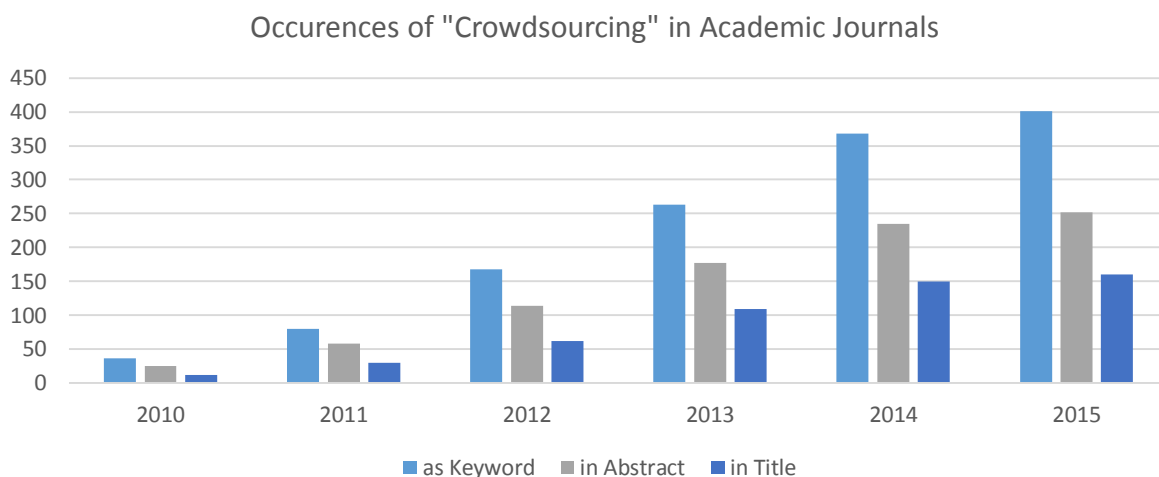
¹ Oxford Dictionary [Online]. Available: <http://www.oxforddictionaries.com/definition/english/crowd> [Accessed: 17.03.2015]

² Oxford Dictionary [Online]. Available: <http://www.oxforddictionaries.com/definition/english/crowd> [Accessed: 17.03.2015]

different parts of business activities such as: ideation, problem solving, micro-tasking, voting for the best opinion, or developing user-generated content, just to name a few (Simula 2013).

This attempt towards a more detailed definition of crowdsourcing by Howe, however, is based on the underlying principles that Surowiecki describes in “The Wisdom of the Crowds” (Surowiecki 2004). Even though Surowiecki did not use the term crowdsourcing in the context of business activities he did describe the guiding principles behind it, such as “*diversity of opinion, independence, decentralization, and aggregation of opinions – that are the key criteria that need to be in place for a crowd to be wise*” (Simula 2013, p. 2783).

The novelty of this concept is also shown by the frequency with which crowdsourcing was discussed in academic literature in recent years. To get an idea on how research in this field has developed, a query in the Business Source Premier (one of the most comprehensive business research databases) was performed. Results showed that, in 2010, there were only 36 findings of texts where crowdsourcing appeared as a keyword (12 in title and 25 in abstract). In comparison in 2015 the concept is far more widely discussed and the term crowdsourcing appeared as a keyword in 401 texts (160 in title and 252 in abstract).³



Source: Own diagram. Data from: Business Source Premier through ebscohost, [Online]. Available: <http://web.b.ebscohost.com/> [Accessed: 16.03.2015]

Due to the novelty of the concept, a comprehensive and widely accepted definition of crowdsourcing does not exist. To come towards such a comprehensive definition, many authors have tried to break down the concept of crowdsourcing, for example: Estellés-Arolas & González-Ladrón-de-Guevara (2012), Brabham (2008), Howe (2006), or Schenk & Guittard (2011). Before referring to these authors and approaching a comprehensive definition of the

³ Query in Business Source Premier through ebscohost, [Online]. Available: <http://web.b.ebscohost.com/> [Accessed: 16.03.2015]

term crowdsourcing that will be used in this thesis, first, crowdsourcing shall be differentiated from other comparable concepts.

3.2.1. Comparable Concepts

The concept of crowdsourcing is influenced by other comparable concepts such as open innovation, open source, open business or online distributed innovation, just to name a few. In the following paragraph, those concepts will be defined and it will be shown how they differ from crowdsourcing. Since those concepts are not the focus of the thesis, they will be just discussed very briefly.

Open Innovation: The paradigm of open innovation was first explicitly mentioned by H. Chesbrough in 2003 (“Open Innovation: The new imperative for creating and profiting from technology”). He defined open innovation as:

“A paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology. Open Innovation combines internal and external ideas into architectures and systems whose requirements are defined by a business model” (Chesbrough 2003, p. 24).

Open Innovation in comparison to crowdsourcing is per se not web-based and open innovation can be achieved with a very small number of participating individuals, whereas the concept of crowdsourcing almost always relies on a specific size of the crowd to show success. Some authors such as Marjanovic et al. (2012) refer to crowdsourcing as one specific subtype of open innovation which is distinguished, for example, by the two mentioned criteria (Marjanovic et al. 2012). Further, they distinguish the two terms due to the existence of copyrights. According to this distinction: Ownership rights in crowdsourcing can exist (when it is used for innovation), whereas open innovation generally deals without the attribution of intellectual property and ownership rights (Marjanovic et al. 2012).

Open Business Model: Re-addressing the open innovation paradigm H. Chesbrough also introduced the open business model. In his paper “Why Companies Should Have Open Business Models”, published in MIT - Sloan Management Review, he describes an open business model as an active search to exploit ideas that emerge outside and to allow unused internal technologies to flow outside, so that other firms can unlock the latent economic potential (Chesbrough 2007). While the concept of an open business model has some similarities to the crowdsourcing concept it can be distinguished through the fact that an open business model, besides leveraging ideas from the outside to the inside, in equal measure can also exchange processes and ideas from the inside to the outside. Crowdsourcing, on the other hand, is mainly focussed on a process that leverages ideas from the outside (emerging from the crowd) to use

them inside the organization. Additionally and comparably to the open innovation concept, an open business model can benefit from the participation of a few individuals and is not dependent on leveraging a certain amount of people as a crowd.

Open Source: The concept of open source almost always is used in the environment of software engineering and programming. Open source software “*involves developers at many different locations and organizations sharing code to develop and redefine programs*” (Lerner & Triole 2002, p. 1). Examples for the open source concept include the Apache Web Server, the Linux operating system and the Mozilla Internet browser. A distinction to the crowdsourcing concept, therefore, can be clearly made, since open source is solely focussed on software development and only involves specific groups of individuals (software engineers, programmers) to take part in this process.

Online Distributed Innovation: Online Distributed Innovation (ODI), according to J. Andrei Villarroel (2006), is a form of strategic crowdsourcing that helps companies leveraging their privately controlled resources by transferring certain activities from the formal domain of the firm to the uncontrolled or public domain (Villarroel 2006). The concept of ODI that Villarroel describes in his article is actually quite similar to the crowdsourcing framework that will be used in this thesis. Distinctions can be made regarding the fact that ODI mainly addresses companies that are in a process of change and ODI functions as an additional supplement to an existing company. Cases that will be addressed on the other hand, will mainly focus on business models that were already built with the intention to leverage the concept of crowdsourcing.

3.2.2. Working Definition of Crowdsourcing that will be used in this Thesis

As mentioned above this thesis has a focus on organizations that not only apply the concept of crowdsourcing in some parts of their business activities, but instead have built their whole business model grounded on the concept of crowdsourcing. Hence, literature that is dealing with the definition of the crowdsourcing term will be analysed and, consequently a working definition of crowdsourcing for the thesis will be formulated. This will also define criteria to choose the companies that will be discussed in the form of a case study later in this thesis.

Several authors have tried to conclude a comprehensive definition for crowdsourcing. To formulate a working definition that will be used in this thesis, the focus will be mainly on the findings of E. Estellés-Arolas and F. González-Ladrón-de-Guevara formulated in their article “Towards an integrated crowdsourcing definition”. The article is an attempt to generate an exhaustive definition of crowdsourcing through an analysis of existing crowdsourcing literature. In the process, three elements that are necessary for the crowdsourcing process were

identified, namely: Crowd, Initiator and Process (Estellés-Arolas & González-Ladrón-de-Guevara 2012). Each of those elements can have certain characteristics. Using those three elements as an anchor it was concluded that:

The crowd: a.) Usually consists of a large group of individuals' b.) In terms of their heterogeneity is dependent upon the type of initiative that they take part in c.) Either has to perform a task or has to solve a problem d.) Has to carry out the solution to a problem e.) Has to be rewarded – with rewards either focussed on intrinsic or extrinsic motives (Estellés-Arolas & González-Ladrón-de-Guevara 2012).

The initiator: a.) Can be a company but could also be a non-profit organization b.) Will get the result he seeks for a given task (Estellés-Arolas & González-Ladrón-de-Guevara 2012).

The process: a.) In almost every case is an online process b.) Can be initiated by a type of call, which can be distinguished into a true open call (every individual who is willing can participate), a limited call (only individuals with specific knowledge or expertise can participate), or a combination of both (Estellés-Arolas & González-Ladrón-de-Guevara 2012).

Elaborating on those findings, several of those criteria will be used in the working definition of crowdsourcing. Referring to the first element, which is the crowd, the focus in this thesis are crowdsourcing processes that require a relatively large number of individuals and are generally open to everyone and, therefore, not limited to a specific group of individuals that have specific knowledge or a specific set of skills. As regards the rewarding, a clear distinction can be made between crowdsourcing initiatives that provide compensation for individuals that contribute (such as iStockphoto) and crowdsourcing initiatives that focus on intrinsic motives but do not provide any compensation (such as Wikipedia) (Zhao & Zhu 2014). The case examples will solely focus on crowdsourcing activities in which participating individuals receive a compensation that is either monetary or has the form of quasi-monetary goods.

Concerning the initiator of the crowdsourcing initiatives the focus will be on for profit organizations. Further, for those for profit organizations, crowdsourcing should be an essential part of their business models and, therefore, the crowd should be a reliant factor for the company's success. This, for example, eliminates initiatives such as Amazon's Mechanical Turk or other companies such as Procter & Gamble that use crowdsourcing just as an extension to their current business model to leverage certain R&D processes (Javadi & Tarokh 2012). Instead companies where crowdsourcing is part of the DNA and an essential element of the business model will be focussed.

The findings of the literature analyses performed by E. Estellés-Arolas and F. González-Ladrón-de-Guevara (2010) showed that the process of crowdsourcing in almost every given definition is a process that is performed online via the Internet. Some authors such as Y. Zhao and Q. Zhu (2014) even describe crowdsourcing as a phenomenon that just emerged with the Internet and was a process in consequence of the development of the Web 2.0. According to them “*Web 2.0 is a connective and collaborative technological environment that enables individuals to get involved in internet-mediated social participation, communication, and collaboration*” (Zhao & Zhu 2014, p. 418). This research will solely deal with crowdsourcing initiatives that take place online and rely on an open call, or the “quasi open call” format and are, therefore, principally open to every individual that wants to participate. The term “quasi open call” shall be used as a synonym for the mixed form of an open call and a call that is limited to a certain community.

Based on the three elements of crowdsourcing (crowd, initiator, process), the main criteria that will be used in the working definition for crowdsourcing are the following:

Crowd:

- Large number of individuals
- Per se not focussed on a specific group of individuals (open to everyone)
- Is rewarded for their activities with compensation (monetary or quasi-monetary goods) that is not solely focussed on intrinsic motives

Initiator:

- Is a for profit organization
- Implemented crowdsourcing in the business model since day one
- Is heavily dependent on the crowdsourcing process
- Crowdsourcing is part of the “DNA” of the company

Process:

- The process is either a true open call or a “quasi” open call
- Further, the process is undertaken online either completely or partially

Referring to the exhaustive crowdsourcing definition of E. Estellés-Arolas and F. González-Ladrón-de-Guevara which is the following:

“Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge,

heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage that what the user has brought to the venture, whose form will depend on the type of activity undertaken” (Estellés-Arolas & González-Ladrón-de-Guevara 2012, p. 9-10).

I will modify this definition so that it fits the criteria that will be used for the case examples discussed in the thesis.

The working definition by integrating the above- mentioned criteria for the key elements (crowd, initiator, process) shall be the following:

Crowdsourcing is a type of participative online activity in which a for-profit organization proposes to a group of individuals via a flexible or a true open call, the voluntary undertaking of a task. The undertaking of the task in which the crowd should participate by bringing their work, knowledge and/or experience, always entails mutual benefit. The user will receive an economic benefit that can be monetary or a quasi-monetary good. The initiator of the process is a for-profit organization that is heavily reliant on the crowdsourcing process, which means that crowdsourcing must be an essential element in the business model of that respective company. Further, the company must have integrated the crowdsourcing process since day one of its business activities.

3.3. Definition of Success and Failure

In anticipation of the case example analysis, it is necessary to give an individual definition of success and failure for usage in this thesis. Since the case example analysis will compare two successful and two failed business models, it is essential to know the criteria for success and failure. It is already challenging to define if a company or a product per se is successful or not. However, it becomes even more challenging when dealing with young companies, or, in many cases called startups, that offer a product or a service that is sometimes completely new to the market. Even if the launch for such a company looks promising and the it is able to attract customers, it is almost impossible to predict the success of those new products or services in the future. Enhancing the difficulty of defining success for those companies is the fact that most of those young companies are not publicly listed; thus, there are no disclosed financial statements.

However, there are certain factors that can help to judge whether a company is successful or not. To begin, factors for success can be divided into financial and non-financial factors (Hart 1993).

Financial factors, therefore, might include measures such as: *“profit, sales growth, turnover, return on investment, return on capital, or return on capital employed”* (Hart 1993, p. 24). Whereas non-financial measures might include for example: *“innovativeness, market standing, ethical standing, employee conditions, employment prospects, industrial relation, legal standing, or social responsibility”* (Hart 1993, p. 24).

Considering the type of companies that this research will address, not all financial ratios seem to be suitable as factors for success. Especially profitability seems to be inappropriate as a success factor in a high growth environment. As Lang et. al (1996) showed, even leverage ratios do not apply as precise indicators for the future success of a company in a high growth environment, since leverage does not reduce future growth for firms that have good investment opportunities.

However, what might be applicable as a financial criterion to determine success is sales growth. While conducting interviews and articles on how to measure startup success, it is striking to note that growth almost all of the time was mentioned as a possible factor for measuring startup success. John Dillon (former CEO of Salesforce and Engine Yard), when asked in an interview what he defined as the key measures of success for a startup, replied: *“CEOs need to measure their business by market share and share growth as it relates to competitors or the share of their addressable market”* and *“The second thing to measure is the amount of revenue that’s coming from new product initiatives. Or in the retail business, you might measure revenue increases from stores that have been open for less than a year”* (Dillon 2012).

Paul Graham (Co-Founder of the famous Y Combinator) likewise follows this path as he connects the success of a startup with its relative growth. In his opinion rapid growth in a certain market environment is what distinguishes successful startups from unsuccessful startups (Graham 2012).

So, a constant growth in terms of sales and in terms of market share might be a success measure that seems applicable in this case. Graham further suggests that funding, especially if it is initiated by a venture capital fund is a relatively strong indicator of success for a company (Graham 2012). Despite the fact that, in my opinion, this is very disputable as three out of four startups that a venture capital fund invests in still fail (Cage 2012), a venture capital funding

still can be seen as a certain sign of quality for a startup. Judging the success of a startup solely by the amount of funding that it received, however, would neglect all startups that have a positive cash flow since day one and do not require any external funding. Consequently, funds received cannot be an isolated factor for the success of a company, or a startup.

Looking at the other end of the table, a categorization for failed companies might be easier to conclude. In a paper that discusses the success and failure in emerging industries, Duchesneau & Gartner (1988) described a failed company as a company which “*had discontinued operations, or were operated under court order or by creditors*” (Duchesneau & Gartner 1988, p. 301). The definition of failure that will be used in this thesis will be quite similar to that of Duchesneau & Gartner (1988). When talking about business models that failed, this will only refer to companies that went bankrupt and had either liquidated the assets of the firm, or at the moment had discontinued operations, which probably will not be resumed in the future.

For finalizing the definition of success and failure, the following factors to measure those criteria are suggested:

Success	Failure
<ul style="list-style-type: none"> - The company exists since at least 3 years - The company was able to show substantial growth during recent years for certain key metrics (such as customers, sales, orders) - The market share of the company in its main market grew over recent years - The company was able to attract at least one venture capital funding or was able to grow from its own cash flow - The company is still running and will not discontinue its operations in the foreseeable future 	<ul style="list-style-type: none"> - The company is bankrupt meaning that it is not able to repay its debt ... <i>or...</i> - The company has discontinued operations or is operated by the court or by its creditors - The company will not resume its business operations in the foreseeable future

4. Literature Review

4.1. Business Models Based on Crowdsourcing

As discussed earlier, crowdsourcing has been a widely discussed issue in academic and management journals for recent years. Going along with the rising popularity of the topic was quite an immense number of companies that used crowdsourcing as a core mechanism in their

business activities and integrated the concept deeply in their business models. This abstract shall offer a closer first look on those business models that relied on crowdsourcing. Mainly, the questions are: When did business models that make use of crowdsourcing emerge and what are some of the first examples? In what areas do those business models exist? What are the common difficulties when building a business model that is using a crowdsourcing approach?

4.2. Early Occurrences and Categorization

It is recognizable that companies that use crowdsourcing emerged, in particular, shortly after the first big open source software projects were launched (Simula 2013). After the immediate success of the first open source operating system Linux (released in 1991) many big open source software projects followed. Notable examples are the Mozilla Internet browser (released in 2004) or the Apache web server (released in 1994). Even though a distinction of open source projects from crowdsourcing was already made, it is important to mention that those open source projects emerged relatively early. The potential of the crowd was displayed already as early as 1991 with the release of the Linux operating system. For some companies this might have indicated the initial approval that a crowd of enthusiastic people was able to build a high-quality product.

When discussing early examples of crowdsourcing, one can use similar distinctions as they were used earlier in this thesis when the term crowdsourcing was defined. Using parts of the crowdsourcing definition from Estellés-Arolas and González-Ladrón-de-Guevara (2012), the following distinction shall focus especially on the nature of the initiator. The initiator of the crowdsourcing initiative can be divided into:

- a) Companies that use crowdsourcing as an extension to their business model

Examples for this usually are rather large companies that are located in the IT sector. If crowdsourcing is used as an extension to the business model the crowdsourcing process is mostly related to either research or new product development. Characteristic for those initiatives is that the crowd usually is not limited to private individuals, but most of the time the process is also open for small and medium sized companies to participate in. One of the first companies that used crowdsourcing as an extension to their business model was Procter & Gamble with the Connect and Develop initiative (Simula 2013). The Connect and Develop initiative was designed to drive new product innovation by using external expertise and external resources (Dodgson et. al 2006).

- b) Crowdsourcing used for science and research related purposes

Quite early, it was evident how useful the crowd (even if individuals within the crowd have no scientific education) can be for scientific research-related purposes. The underlying process is often called citizen science and “*is a form of research collaboration involving members of the public in scientific research projects to address real-world problems*” (Wiggins & Crowston 2011, p. 1). Crowdsourcing in science is addressing two problems: 1.) There is too much data to analyse and 2.) Data that cannot be analysed by computers and requires human interaction, such as categorization (Cook 2011). One of the first initiatives in this area was Galaxy Zoo. Starting from the two mentioned problems (one million galaxies that needed to be categorized and there was no way to solve this with the help of a computer algorithm), Oxford University made the data public and additionally introduced a small tutorial on how to categorize galaxies (Cook 2011). In a somehow playful way, people from all over the world could now help in categorizing galaxies for scientific purposes. The project soon became very successful and this approach was expanded to other scientific areas.

c) Companies whose business model is based on crowdsourcing (reward for the crowd)

In contrast to companies that only use crowdsourcing as an extension to their business models are those companies that were built with the idea to leverage the crowd and, therefore, have a business model that is very much based on crowdsourcing. Academic literature often refers to Threadless or iStockphoto as a prototype for this type of companies (Simula 2013; Brabham 2008; Estellés-Arolas E. & González-Ladrón-de-Guevara F. 2012; Vukovic 2009). In both cases the end product that is sold to customers (T-Shirts in the case of Threadless and digital photos in the case of iStockphoto) is produced by the crowd and Threadless as well as iStockphoto just serve as a type of marketplace where those products created by the crowd are sold (Vukovic 2009).

A distinction for companies that have business models based on crowdsourcing can be made in terms of whether the crowd is rewarded or not. In the two mentioned cases of Threadless and iStockphoto the crowd is rewarded with a share of the net profits that their product generates in the end.

d) Companies whose business models are based on crowdsourcing (no reward for the crowd)

On the other hand the crowd might receive no rewards for their effort. This, for instance, includes the prominent example of the online encyclopedia Wikipedia. Other projects that fall into this category are: OpenStreetMap (a free editable map of the world), Waze (a free GPS

application that uses crowdsourcing for routing and real-time traffic updates), or TripAdvisor (a vacation platform that relies on crowdsourcing to generate ratings for hotels, restaurants, sights etc.)

As discussed earlier the focus for this thesis shall be business models that are based on crowdsourcing (the last two mentioned; c and d). However, to give an impression of how crowdsourcing in the business domain evolved, it is also necessary to have a short overview of the different types in which the process of crowdsourcing can be integrated in companies and other institutions. The following table presents just a few examples for each of the four mentioned categories (the release / launch year has been given within brackets):

a) Crowdsourcing as extension to the business model	b) Crowdsourcing in science / research	c) Business Models based on Crowdsourcing (reward for crowd)	d) Business Models based on Crowdsourcing (no reward for crowd)
Dell Ideastorm (2007)	Fold.it (2008)	Threadless (2000)	Wikipedia (2001)
IBM Global Idea (2006)	Galaxy Zoo (2007)	iStockphoto (2000)	OpenStreetMap (2004)
Cisco iPrize (2007)	Planet Hunters (2012)	99 Designs (2008)	Waze (2008)
Unilever Innovation (2013)	EyeWire (2012)	Crowd Spring (2007)	TripAdvisor (2000)
LEGO DesignByMe (2005)	SETI project (2012)	AirBnB (2008)	ReCaptcha (2009)
P&G Connect and Develop (2001)	NASA Clickworker (2001)	Uber (2009)	uTest (2007)

Source: Own

4.3. Criticism and Problems of Crowdsourcing

Besides the remarkable hype that crowdsourcing as a business practice experienced especially after the 2006 WIRED article by Howe, there are also some critical voices that question the effectiveness of crowdsourcing in terms of providing a problem solution. Critical aspects and problems in academic literature were, for example, expressed by Simula (2013); Antikainen et al (2010); Bloodgood (2013); or Afuah & Tucci (2013). General criticism against crowdsourcing mainly questions the value that is captured throughout the crowdsourcing process (Bloodgood (2013); Afuah & Tucci (2013); Chanal & Caron-Fasan (2010)). Precisely this criticism is based on the fact that actors that bring external knowledge to a firm (for example, photographers at iStockphoto) are in conflict of interest, in terms of financial and non-financial rewards, with the company that provides the platform to sell the products (for example, the iStockphoto marketplace where the photos are sold) (Chanal & Caron-Fasan 2010).

However, the general question of whether crowdsourcing is an appropriate method to capture value per se shall not be addressed in this thesis. Rather, this section, discusses the difficulties and problems that occur when initiating a crowdsourcing process, or building a business model

that is based on crowdsourcing. Those common problems and difficulties shall be linked later in this thesis to the case examples. Connecting those common problems and difficulties with the successful and failed case examples will give an indication of how certain problems were addressed and if certain key success factors for crowdsourcing can be derived from that.

4.4. Common Problems of Business Models Based on Crowdsourcing

Especially due to the novelty of the concept there are still many insecurities on how to initiate and manage a crowdsourcing process properly. Simula (2013) describes 10 typical challenges that are usually associated with crowdsourcing:

1. **Awareness** (Generic Issue)
 - How is it possible to make the crowd aware of something? How is it possible to generate public awareness for the crowdsourcing initiative?
2. **Contribution** (Generic Issue)
 - How can one get the crowd to contribute? What is the motivation for external users to take part in the crowdsourcing process?
3. **Persistence** (Generic Issue)
 - How does the crowd stay on board? How is it possible to face other crowdsourcing initiatives that also compete for the spare time of users?
4. Possible **resistance** inside the company towards a product that was not directly invented or manufactured by the company
5. Individuals or groups that can try to **tweak** the results of a crowdsourcing initiative.
6. **Tensions** may occur between the crowd and the initiator because of the outcome of the crowdsourcing process
7. Crowdsourcing can enhance **labour exploitation**
8. A crowd on the Internet is **not as heterogeneous** as it seems and, therefore, can't utilize diversity on a certain level.
9. A conflict of interest between the crowd and the initiator regarding **Intellectual Property Rights (IPR)** might occur
10. The outcome of the crowdsourcing process might have a **bad quality** that is not satisfying for the initiator. (Simula 2013)

The first three challenges describe generic issues that every crowdsourcing initiative is facing. All of those three challenges are associated with the crowd and emphasize the following three questions: *"How can you make the crowd aware of something?(1) How can you get the crowd to contribute?(2) How to get the crowd to stay on board? (3)"* (Simula 2013, p. 3-4).

Those three questions regarding the involvement of the crowd shall also be some of the main criteria when analysing the case examples. Analysing how companies face those three generic challenges might be a key issue towards the leading research question of finding key success criteria for business models that make use of crowdsourcing

5. Elaborations on Literature Review – Suggestions Solutions to common Problems

The three generic challenges raised by Simula (2013) basically describe the issue of crowd involvement, which has been discussed already more broadly in academic literature. In this paragraph solutions will be suggested to the common problem of crowd involvement in the crowdsourcing processes.

In a study regarding the motivation to contribute in open innovation and crowdsourcing initiatives Antikainen et. al (2010) analysed a wide range of academic papers that faced this issue. Different motivation principles were found, ranging from altruism (Zeitlyn (2003)) over enjoyment and fun (von Hippel & von Krogh (2003)), a sense of efficiency (Bandura (1995)) to monetary rewards (Antikainen & Väättäjä (2008)), (Antikainen et. al (2010)). An case example analysis undertaken by Antikainen et. al (2010) underlined the importance of monetary rewards in crowdsourcing and open innovation processes. Yet, it was also shown that monetary rewards mainly enhance participation and collaboration. On the other hand, additional processes, such as the ability to exchange between crowd members are also required to build a sufficient crowdsourcing process. Further, *“the results show that one motivation factor we perceived is related to having fun”* (Antikainen et. al 2010, p. 113).

McGonigal (2008) also pursues this idea of fun and enjoyment as being one of the main drivers for individuals to engage in crowdsourcing processes. She mentions certain fun mechanics that need to exist in a crowdsourcing process to be successful. However those fun mechanics are not described in greater detail. By referencing online games though, she indicates that gamification elements, such as the possibility for users to increase their “level” might be a possibility to increase engagement in a collaborative crowdsourcing environment (McGonigal 2008). Including those fun mechanics McGonigal (2008) mentions four elements for a crowdsourcing process to enhance user engagement:

- a) Fun mechanics that are mainly achieved by introducing a certain “flow”. For this flow to exist a crowdsourcing initiative should offer *“immediate feedback, a clear sense of*

objectives and failure states, and a challenge level that is not too easy or too hard" (McGonigal 2008, p. 21)

- b) Emotional incentives (Positive emotions such as "*pride, curiosity, love and feeling smart*" (McGonigal 2008, p. 16) as a reward for participation might encourage a crowd to engage)
- c) Diverse rewards and the pyramid of participation (Several types of users within the crowd must be individually rewarded according to their degree of engagement; a focus on the most active members is essential)
- d) Extending the lifecycle of participation (By keeping the crowd active and avoiding a state where crowd members have nothing to do)

Regarding the motivations to engage in a crowdsourcing process Saxton et. al (2013) analysed 103 crowdsourcing organizations. A vast majority of those organizations enhanced crowd engagement by offering various types of rewards (89) and roughly half of it (50) offered explicitly monetary rewards (Saxton et. al 2013). Especially in situations where crowdsourcing is organized in the form of a marketplace, he further suggests trust-building mechanisms as essential tools to decrease uncertainty and risk and, therefore, increase engagement of the crowd (Saxton et. al 2013). Moreover, it is suggested that the crowd has the tools to vote, rate, or comment on the work of users. Such tools also function as strategic virtual management tools and help in controlling the quality of crowd members and their work (Saxton et. al 2013).

Howe (2006b) describes 10 golden rules to make crowdsourcing work. Those are:

- 1.) Pick the right model (four different models exist: utilizing the collective intelligence or crowd wisdom; using the crowd to evaluate certain things and vote; using the crowd to create the product or service that you want to sell; using the financial resources of the crowd)
- 2.) Pick the right crowd
- 3.) Offer the right incentives (different incentives for different people; monetary rewards work well as incentives)
- 4.) Keep employing people (do not just utilize the crowd to get work done; there is a need to exchange with the crowd and therefore people on the company side need to be employed)
- 5.) Find benevolent dictators (the right person to guide a project)
- 6.) Keep things simple (don't waste the time of the crowd; be straightforward in what you want them to do)

7.) Be prepared for fluff (the crowd will also produce output that is not as you want it to be; be prepared for that)

8.) Look for diamonds in the rough (Install a voting process for the crowd, so that more beneficial output can be easily spotted)

9.) The community's always right (Trying to put too much control on the community will backfire)

10.) Give the crowd something (Satisfy people not only with monetary incentives but also think of enjoyment and fun) (Howe 2006b)

5.1. Elaborations on Literature Review – Summary of Suggested Solutions

The following shows a summarization of all those mentioned guidelines and procedures that have the goal to keep a crowd satisfied and engaged. This might help to formulate further criteria on which the case examples will be analysed.

Author	Suggested Procedures and Mechanisms
Antikainen et. al 2010	<ul style="list-style-type: none"> – Monetary rewards for participation – Possibilities to exchange among the crowd – “Having fun”
McGonigal 2008	<ul style="list-style-type: none"> – Fun mechanics – Emotional incentives – Diverse rewards for different users (pyramid of participation) – Keep the crowd busy (avoid a state of “nothing to do” to increase the lifecycle of participation)
Saxton et. al 2013	<ul style="list-style-type: none"> – Offer rewards (in the best case: monetary rewards) – Trust-building mechanisms (rating mechanisms) – Allow the crowd to vote and comment
Howe 2006b	<ul style="list-style-type: none"> – Pick the right model and the right crowd – Offer the right incentives – Look for diamonds in the rough (install a voting process) – Give the crowd something (give the crowd some kind of satisfaction with fun and enjoyment)

Source: Own

I intentionally, neglected some of the rules suggested by Howe (2006b), since some of them are formulated a bit too broadly, which makes it difficult to analyse them with regard to the case examples. However, on comparing the suggested rules and guidelines of the different authors more than a few similarities can be identified. Always recurring is the reference to choose the right incentives and, in particular, the focus on monetary rewards. Additionally, fun and enjoyment in some way was mentioned by all authors as a mechanism to keep the crowd active and engaged.

Combining the findings from the different authors the following questions emerge:

1. Are there monetary rewards for the crowd? (of any kind: revenue share, or simple payment per work hours)
2. Are the rewards adjusted to different degrees of engagement for different members of the crowd? (crowd members who are more engaged and deliver more work shall receive a higher reward)
3. Are there any kinds of emotional incentives for the crowd to participate?
4. Are their trust-building mechanisms in place? (mechanisms that prevent the crowd and other users from fraud; a rating mechanism for example)
5. Are crowd members able to exchange among one another? (voting and commenting on each other's work and exchanging messages)
6. Are there any kinds of obvious mechanisms that enhance the fun or enjoyment for the crowd and additionally help to keep the crowd "busy" (such as some gamification elements like levelling system, a ranking between users, etc.)

These six questions shall be considered when analysing the case example and possibly defining the key success criteria for business models that make use of crowdsourcing.

6. Case Analysis

6.1. Introducing the Case Examples

Before choosing the case examples for further analysis, a clear distinction had to be made regarding the crowdsourcing using business models that were to be addressed. After doing so (see Sub-Section [3.2.2. Working Definition of Crowdsourcing](#)), it was decided to analyze a total of four case examples (two successful and two failed business models). Since the business model analysis will cover many parts and is quite extensive for each individual case, a larger number of different business models cannot be analysed.

For choosing successful business models, there is a wide range of possibilities that is possible to address. Despite the possibility of analysing some of the more recently evolved business models that were mentioned in the beginning, such as AirBnB or Uber, it was decided to choose some more persistent business models as successful examples. The online community and e-commerce marketplace Threadless (founded in 2000) and the online marketplace for stock photography iStockphoto (founded in 2000) have proved to be successful business models even in the long run. Referring to Howe, both business models leverage the crowd on a broader scale in a way that they use the crowd to create the product or service that they want to sell (apparel such as t-shirts in the case of Threadless and stock photography in the case of iStockphoto) (Howe 2006b). Even though both cases have been discussed already in academic literature, a deeper analysis and especially a comparison with comparable business models (using the Osterwalder Business Canvas Model) has not been realized by now.

When it came to choosing two failed business models, the process was not that easy. First of all reports and documentation on failed business models are not that extensive. Additionally, for further analysis it was important that the company reached a certain state. Companies that already failed in the startup stage could have failed for many other reasons that are not directly related to the business model (for example, because they could not acquire much needed funding, or disagreement in the founder team). Therefore, companies shall be addressed that were already in the market for quite some time. But then consequently, relating to the definition of failure, the companies were shut down or liquidated. After comparing possible examples, the decision was made to analyse the crowdsourcing community for software ideas, Cambrian House (founded 2006) and the innovation community CrowdSpirit (founded 2007). Both companies were able to attract an impressive number of users but failed shortly after (Cambrian House in 2008 and CrowdSpirit in 2010).

6.2. Matching the Case Examples with the Crowdsourcing Definition

Earlier along with the working definition for crowdsourcing a set of criteria was defined for the crowd, the initiator and the process that needed to be fulfilled to fit the particular crowdsourcing definition that is used in this thesis. Subsequently those criteria shall be matched with the case examples to see if they fit the definition that was set up earlier in this thesis.

Crowd	iStockphoto	Threadless	CrowdSpirit	Cambrian House
Large number of individuals	✔	✔	✔	✔

Open to everyone (everyone can possibly join)	✓	✓	✓	✓
Is rewarded for activities	✓	✓	✓	✓
Initiator				
For profit organization	✓	✓	✓	✓
Uses crowdsourcing since the beginning	✓	✓	✓	✓
Is heavily dependent on the crowdsourcing process	✓	✓	✓	✓
Process				
Open call, or quasi open call	✓	✓	✓	✓
At least some parts of the process are undertaken online	✓	✓	✓	✓

Source: Own

After analysing each case example, it seems that all four business models fit the working definition of crowdsourcing that was formulated earlier in this thesis. Therefore, they seem comparable in the way they use crowdsourcing and, consequently, a comparison between the business models seems reasonable and will follow in the next part.

6.3. Matching the Case Examples with the Success and Failure Definition

Now that all four business models fit the crowdsourcing definition it is still necessary to see if the case examples also fit the success definition (for iStockphoto and Threadless) and failure definition (for CrowdSpirit and Cambrian House). First, for the definition of success, five criteria were defined.

- 1.) The company exists since at least three years

This is true for both companies, since iStockphoto and Threadless were both founded in 2000.

- 2.) The company was able to show substantial growth during recent years for certain key metrics (such as customers, sales, orders)

Both companies are not publicly listed and, therefore, do not disclose any official sales figures. Nevertheless unofficial calculations show a substantial growth for iStockphoto. In 2007, the company publicly reported gross revenue of 72 USD million and 17.55 million downloads. In

2011, the total downloads were expected to be around 21.5 million and due to increases in sales prices gross revenues rose to 350 USD million (Pickerell 2012).

For Threadless, on the other hand, even though officially disclosed figures are not available, press reports noted 5 USD million in annual sales as early as 2005. This was initiated by a yearly revenue growth of almost 500 percent since the launch in 2000. A report in 2015 further revealed that the number of Threadless members grew from 70,000 in 2004 to more than 700,000 until 2008 (Chafkin 2008). The latest press reports that mentioned revenue figure are dated to 2011 and still mention double digit growth per month (Wolinsky 2011).

It can be concluded therefore, that this criterion is true for both companies.

3.) The market share of the company in its main market grew over recent years

This criterion is particularly special for iStockphoto, since it opened a new market of amateur stock photography (or so called microstock market). But according to the heavily increased sales figures that were presented in the previously one can assume that the market share, for both iStockphoto and Threadless, grew substantially. To be precise on this criterion, one would need to compare the size of the individual market with the revenue numbers that were reported over the last years. But for simplification, since this is not the research focus of this thesis it will be assumed that along with the substantial revenue growth the market share also increased.

4.) The company was able to attract at least one venture capital funding or was able to grow from its own cash flow

Both companies, Threadless and iStockphoto, were able to grow from its own cash flow and did not receive any venture capital funding.⁴

5.) The company is still running and will not discontinue its operations for the foreseeable future

Both companies are still running and do not show any sign to discontinue its operations. Whereas iStockphoto was acquired by Getty Images in 2006⁵ and is now often also displayed under the name iStock, Threadless is still an independent and private company.

⁴ Verified at Crunchbase [Online]. Available at: (<https://www.crunchbase.com/organization/threadless> ; <https://www.crunchbase.com/organization/istock>) [Accessed: 14.04.2015]

⁵ Press Release of iStockphoto, 9. February 2006 [Online]. Available at: (<http://www.sec.gov/Archives/edgar/data/1047202/000119312506025049/dex991.htm>) [Accessed: 14.04.2015]

Consequently, the failure criteria shall be now matched with the case examples of CrowdSpirit and Cambrian House. The definition of failure that was formulated involves two main criteria: the company is either bankrupt, or has discontinued operations and additionally will not resume its business operations in the foreseeable future.

Cambrian House discontinued its business operations in 2008 and initiated fire sales of its assets (namely the intellectual property, assets and the website) to Spencer Trask Ventures (Schonfeld 2008). While the website⁶ is still online it clearly shows that Cambrian House does not have any running business operations right now and will not have in the foreseeable future.

CrowdSpirit, on the other hand, closed in 2010. Without any known press release the platform just vanished in 2010. As it stands today, the website⁷ is offline and there are no signs that the company might continue its business operations in the future.

Summarizing, it can be said that the case examples fit the overarching crowdsourcing definition, as well as fit the criteria that were defined earlier for success and failure.

6.4. Individual Business Model Analysis

To compare the successful and failed business models, an individual analysis of each business model will commence. As already mentioned earlier in this thesis, the Business Model Canvas will be used as a tool to disassemble each business model into nine blocks (customers, customer relationships, channels, value proposition, key activities, key partners, key resources, cost structure and revenue structure) and, afterwards, a final analysis of each business model will be completed (Osterwalder & Pigneur 2010). The needed information to analyse each business model will be extracted from press reports, interviews, academic journals and the personal judgment of the researcher based on the information that he had.

A detailed description and criteria for each of the nine blocks that exist in Osterwalder's Business Model Canvas can be found in [Appendix 1](#).

6.5. Threadless

6.5.1. Threadless Introduction

Threadless is a private company, headquartered in Chicago, which was founded in 2000 by Jake Nichell and Jacob DeHart. At the core Threadless is a community-driven design platform where artists, designers, but also general users can upload their designs. The community can later choose which design will be printed on a product that is sold on the Threadless marketplace.

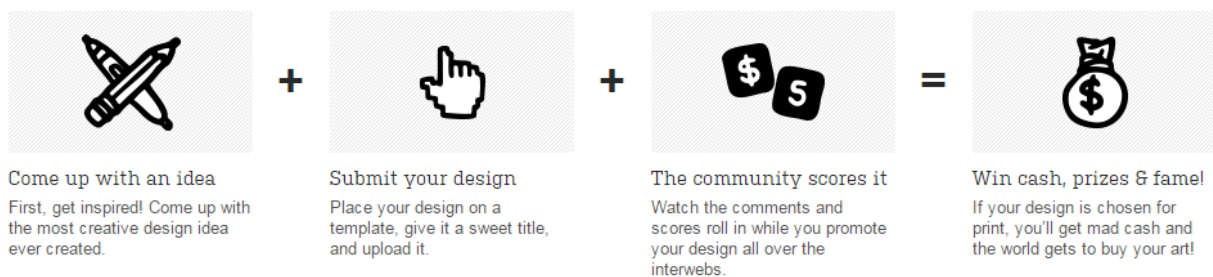
⁶ Cambrian House Website [Online]. Available at: www.cambrianhouse.com [Accessed: 15.04.2015]

⁷ CrowdSpirit Website [Online]. Available at: www.crowdsprite.com [Accessed: 15.04.2015]

While Threadless at first solely focussed on t-shirts as design products, nowadays the product range also includes other apparel (such as hoodies, sweatshirts and tank tops), phone cases and wall art.

All the product designs are created and judged by the community. If the design of a certain community member is chosen, he receives monetary rewards (up to 5,000 USD in cash), quasi-monetary rewards (for example, Threadless gift cards) and non-monetary rewards (the designer will be displayed as the winning member). Thus, Threadless is outsourcing the design process to the crowd. Registering and entering a contest is free for anyone with a valid e-mail address. Once registered, users can submit designs, vote on designs, and shop (Brabham 2010).

The design process is simplified as displayed on the Threadless homepage:



Source: Screenshot from Threadless homepage [Online]. Available at: (<http://www.threadless.com/how-it-works>) [Accessed: 15.04.2015]

6.5.2. Threadless Business Model Analysis (Detailed Analysis in [Appendix 2](#))

The Business Model Canvas: Threadless

Key Partners <ul style="list-style-type: none"> - Designers and artists - Logistic partners (shipping) - Hosting providers (to host the platform) - Payment providers - Producers of T-Shirts and other apparel - Partnerships with companies that host design contests 	Key Activities <ul style="list-style-type: none"> - Platform development and maintenance - Production of products - Hosting the design contests - Generating partnerships with designers and blogs - Constant exchange with the community 	Value Propositions <ul style="list-style-type: none"> - Unique Design of products - Possibility to make money - Develop individual skills - Connect with a large audience - "Love" of the community - "Addiction", enjoyment and fun 	Customer Relationships <ul style="list-style-type: none"> - Co-creation of the final product (Voting, Commenting) - Social Media - Word-of-mouth - Partner Programs with designer (individual shops) - Building a community (active internal forum) 	Customer Segments <p>Multi-Sided Platform</p> <p>One Side: T-Shirt and Apparel mass market</p> <p>Second Side: Amateur and professional designers</p> <p>Diversified approach nowadays (Wholesaler such as Gap and Dell used to sell products)</p>
Cost Structure <ul style="list-style-type: none"> - Relatively high variable costs (depending on how many T-Shirts to print) Costs: <ul style="list-style-type: none"> - Running the platform - Holding the contests (prize money etc.) - Payment Fees - Costs for stock products (plain T-Shirts for example) - Salaries for employees and fixed costs for the offices and the production facilities 	Key Resources <ul style="list-style-type: none"> - Production facilities - Website and online shop - The brand Threadless - Logistics Center - Website Programmers - Customer Support 		Channels <p>Sales Channel in the beginning:</p> <ul style="list-style-type: none"> - Own direct sales channel (web shop) <p>Sales Channel Nowadays:</p> <ul style="list-style-type: none"> - Sales through wholesaler <p>Communication Channel:</p> <ul style="list-style-type: none"> - Internal forum - Telephone - E-Mail 	
			Revenue Streams <ul style="list-style-type: none"> Asset Sale - Direct sales through Threadless Webshop - Revenue share from partner shops (that designer and artists create with the help of Threadless) 	

6.6. iStockphoto

6.6.1. iStockphoto Introduction

In 2000, iStockphoto was founded by Bruce Livingston as a free stock photo website. Over time, however, they adopted a micropayment model for stock photography that they follow even today. By doing so, they basically generated a new market, so called microstock photography. Today, many competitors have emerged that copied the iStockphoto business model. Mentionable are, for example: Shutterstock, Fotolia, Dreamstime, 123RF and many others. iStockphoto allows professional photographers and designers, but also, very importantly, amateurs to offer their pictures to end-customers (which can include, for example: small businesses, journalists, publicity agencies, website operators and basically everyone who needs a picture and the right to use it publicly).

Photos can be bought using iStockphoto credits which can be purchased online. The portfolio on the iStockphoto marketplace not only includes digital photography, but also icons, graphics and illustrations. The price for those stock photos usually ranges from 9 EUR to 50 EUR and photographers receive a share of 15 percent to 40 percent for each sale.⁸ Heavy contributors usually receive a bigger share and it is not unusual that they are able to make a living from selling microstock photography (Peterson 2007).

⁸ iStockphoto website [Online]. Available at: <http://www.istockphoto.com/plans-and-pricing> [Accessed: 17.04.2015]

6.6.2. iStockphoto Business Model Analysis (Detailed Analysis in [Appendix 3](#))

The Business Model Canvas: iStockphoto



Key Partners <ul style="list-style-type: none"> - Payment providers - Hosting providers - Users that take part in a partnership program 	Key Activities <ul style="list-style-type: none"> - Platform development and maintenance - Quality management of content - Promoting the platform 	Value Propositions <p>For end-customers:</p> <ul style="list-style-type: none"> - Cheap Price (stock photography much more expensive if purchased through other channels) - Easy Accessibility <p>For photographers:</p> <ul style="list-style-type: none"> - Make money - Improve skills - Creative outlet - Fun 	Customer Relationships <p>Customer Acquisition:</p> <ul style="list-style-type: none"> - Word-of-mouth - Referral marketing - Display marketing - E-Mail marketing <p>Customer Retention:</p> <ul style="list-style-type: none"> - Community feeling between users - Rating and commenting - User Blogs 	Customer Segments <p>Multi-Sided Platform</p> <p>One Side (end-customers):</p> <p>Stock photography mass market (small business owners, website operators, publicity agencies etc.)</p> <p>Second Side: Amateur and professional photographers</p>
Cost Structure <ul style="list-style-type: none"> - Relatively high amount of fixed expenses - Hosting and maintaining the platform - Personnel expenses 	Key Resources <ul style="list-style-type: none"> - Website programmers - Website operators - Web space - Hosting facilities - Brand "iStockphoto" - Support and QM staff 		Channels <p>Sales Channel:</p> <ul style="list-style-type: none"> - Direct Sales through website <p>Communication Channel:</p> <ul style="list-style-type: none"> - Internal forum - Telephone - E-Mail 	
Cost Structure <ul style="list-style-type: none"> - Relatively high amount of fixed expenses - Hosting and maintaining the platform - Personnel expenses 		Revenue Streams <p>Transactions of digital content (licensing)</p> <p>iStock credits</p>		

6.7. Cambrian House

6.7.1. Cambrian House Introduction

Cambrian House was launched in 2005 by Michael Sikorsky. The company tried to crowdsource the whole process of generating a new software or online product. Everything was to be managed and judged by the crowd: from generating the idea, ranking and improving those ideas, to founding and developing the product. The goal of Cambrian House was: “to harness wisdom and participation of online crowds to filter, build, and commercialize software ideas and businesses” (McGonigal 2008, p. 1).

Despite attracting several investors and collecting almost 8 USD million in funding⁹, a promising membership of 50,000 people, more than 7,000 suggested ideas and 15,000 visitors per month the company sold its assets in 2008 (McGonigal 2008). Founder and CEO Michael Sikorsky as well as related press reports and academic literature name one main problem for the fail of Cambrian House: the fact that most members just preferred to look and rate the ideas, instead of actively participating in the realization process (Schonfeld 2008). This led to the issue that most of the “hard work” which involved actually developing the products that were approved by the crowd was handed to a relatively small group of members.

⁹ Verified at Crunchbase [Online]. Available: <https://www.crunchbase.com/organization/cambrianhouse> [Accessed: 18.04.2015]

6.7.2. Cambrian House Business Model Analysis (Detailed Analysis in [Appendix 4](#))

The Business Model Canvas: Cambrian House

Key Partners <ul style="list-style-type: none"> - Distribution Partners - Marketing Partners (e.g. software vendors) - Investors - Hosting providers 	Key Activities <ul style="list-style-type: none"> - Platform development and maintenance - Quality management - Attracting software programmers - Managing the product development process 	Value Propositions <ul style="list-style-type: none"> - Improve Skills - Community feeling - Make money with Glory Points or Cambros (digital currency) - Receive a share of the revenue of the final product 	Customer Relationships <p>Customer Acquisition:</p> <ul style="list-style-type: none"> - Word-of-mouth - Referral marketing - Blog cooperation - Public Relations <p>Customer Retention:</p> <ul style="list-style-type: none"> - Community - Co-creation of the final product 	Customer Segments <p>Niche market</p> <ul style="list-style-type: none"> - Software Programmers, Creatives, Developers, Entrepreneurs, Investors, Marketers
	Key Resources <ul style="list-style-type: none"> - Software programmers - Website operators - Web space - Hosting facilities - Financing - Support Staff 		Channels <ul style="list-style-type: none"> - Cambrian House website - Internal forum - Community Profiles 	
Cost Structure <ul style="list-style-type: none"> - High amount of variable costs (Depending on how many products are developed) - Hosting and maintaining the platform - Personnel expenses - Product creation process (Prototyping, Testing, Developing) 			Revenue Streams <ul style="list-style-type: none"> Digital currency (Cambro) Royalties from developed products 	

6.8. CrowdSpirit

6.8.1. CrowdSpirit Introduction

The French company CrowdSpirit was founded in 2007 by Lionel David. The CrowdSpirit platform provided toolkits that enabled users to submit designs, suggestions and ideas. Afterwards the crowd could vote and comment on what design should be built. Ideas that were chosen by the crowd later would be funded by members of the CrowdSpirit community (Antikainen & Vääätäjä 2008). The whole process of beta-testing and building a prototype would also lie in the hands of the crowd. In the end, the products would be delivered to the market and community members that were involved in the process would benefit by receiving a share of the revenues that the final product is generating (Antikainen & Vääätäjä 2008).

Regarding the products CrowdSpirit focused on electronics, such as “MP4 players, DVD players, computer peripherals, headphones, etc.”¹⁰. A screenshot of the CrowdSpirit platform with various challenges for new product ideas can be found in [Appendix 6](#). In the very early days of the business the CrowdSpirit team phrased the strategic vision as the following: “*To be the first platform and worldwide community allowing the design, industrialization and selling of consumer electronic products, and ensuring a fair payment of all contributors* (Chanal & Caron-Fasan 2008, p. 9)”.

The CrowdSpirit business model was changed in the beginning of 2008. From then on, the company tried to focus less on the direct sale of products developed by the community, but they tried to give companies a chance to leverage the wisdom of the crowd by using CrowdSpirit as an innovation intermediate (companies could pay money to raise challenges and questions to the CrowdSpirit community). However, this business model also failed in the long-run and for simplicity reasons this analysis will solely focus on the business model as it was pursued in the beginning.

¹⁰ Crunchbase Database [Online]. Available: <https://www.crunchbase.com/organization/crowdsprite> [Accessed: 20.04.2015]

6.8.2. CrowdSpirit Business Model Analysis (Detailed Analysis in [Appendix 5](#))

The Business Model Canvas: CrowdSpirit



<p>Key Partners</p> <ul style="list-style-type: none"> - Manufacturing partners - Marketing partners - Distribution partners - Hosting partners 	<p>Key Activities</p> <ul style="list-style-type: none"> - Platform development and maintenance - Attracting the "right" people to join the crowd - Managing the product development process - Marketing for developed products 	<p>Value Propositions</p> <p>Intrinsic motivation:</p> <ul style="list-style-type: none"> - Be involved in product creation - Take part in an "economic revolution" <p>Make money:</p> <ul style="list-style-type: none"> - Receive a share of the revenues that the final product is generating 	<p>Customer Relationships</p> <p>Customer Acquisition:</p> <ul style="list-style-type: none"> - Word-of-mouth - Blog Cooperation - Partnerships <p>Customer Retention:</p> <ul style="list-style-type: none"> - Community - Internal Forum - Direct Messaging between users - Commenting on new ideas and products 	<p>Customer Segments</p> <p>Niche market</p> <ul style="list-style-type: none"> - "Geeks" (technic lovers) - Entrepreneurs - People interested in innovation
<p>Cost Structure</p> <ul style="list-style-type: none"> - Hosting and maintaining the platform - Personnel expenses - Product creation process (Paying manufacturing, marketing and distribution partners) 	<p>Key Resources</p> <ul style="list-style-type: none"> - Website Operators - Web space - Hosting facilities <p>The crowd needed to have several key members:</p> <ul style="list-style-type: none"> - Idea initiator, Designer, Investor, Tester, Ambassador, Project Leader, Reseller and Customer 		<p>Channels</p> <p>Sales Channel:</p> <ul style="list-style-type: none"> - Partnerships with e-business websites - CrowdSpirit website to directly sell the products <p>Communication Channel:</p> <ul style="list-style-type: none"> - Internal forum 	
	<p>Cost Structure</p> <ul style="list-style-type: none"> - Hosting and maintaining the platform - Personnel expenses - Product creation process (Paying manufacturing, marketing and distribution partners) 		<p>Revenue Streams</p> <ul style="list-style-type: none"> - Royalties from developed products 	

6.9. Comparison of Business Model Analysis

After disassembling each of the four business models into the nine blocks of the Osterwalder Business Model Canvas and individually analysing each case, the analysis will continue by comparing these findings. Especially differences that occur between the successful and failed business models might help to determine success criteria for business models that make use of crowdsourcing. Of course, due to the small sample size (two successful and two failed business models), those findings cannot give a clear indication for overall success criteria, but might help to determine these in the future.

First obvious differences between the successful and failed business models occur when determining the customer segment. While Threadless and iStockphoto focus on an approach that Osterwalder and Pigneur (2000) describe as a multi-sided platform approach (serving two or more interdependent customer segments; creating value by facilitating interactions between those groups), CrowdSpirit and Cambrian House both focus on niche markets. In the case of Cambrian House, customers are primarily people with a creative mindset or people that are interested in creating a business (such as developers, entrepreneurs, investors and marketers (Turner 2007)). The founder of CrowdSpirit referred to the targeted customer segment with the term “geeks” (Chanal & Caron-Fasan 2008, p. 9-10), meaning people that are heavily interested in new technology. This definition for the customer segment of CrowdSpirit is true for the users of the platform (the crowd that they want to leverage) as well as for the end-customers (people that would buy the developed products).

This is clearly distinctive from the customer segments that Threadless and iStockphoto are aiming for. Each of those two companies is dealing with two clearly distinctive customer segments. While there is a relatively small group of designers that is suggesting designs for t-shirts at Threadless on the one hand, the end-customers (meaning people that buy the design products in the end) are most of the time “ordinary people”. Especially with the latest developments and Threadless products being sold at Gap and Dell, it is obvious that, at this end, the company is targeting a mass market (Coburn 2012). In this way, the company serves two completely different customer segments that are still interdependent in a way.

A comparable approach is used at iStockphoto. While there is a relatively small group of professional and amateur photographers on the one hand, the market for stock photography (the end-customer in this sense) is a mass market. Referring to the four models of crowdsourcing that Howe (2006b) was describing, this multi-sided approach for the customer segments fits the

model that makes use of the crowd to create the products that the company wants to sell. Summarizing this observation leads to the first hypothesis:

H1: Business models that make use of crowdsourcing are more likely to succeed if they integrate a multi-sided platform approach.

Additional differences can be found by analysing the value proposition of those business models. Brabham tried to determine the motivation of the crowd to participate at Threadless (2010) and iStockphoto (2008b). What he found was that, in both cases, the factor “fun” was very important to get users to participate. In the case of iStockphoto, 79 percent of all survey respondents replied to the question of why they participate at iStockphoto with “it is fun” (Brabham 2008b). Results for Threadless showed that there is a certain addiction that users develop towards the crowd interaction at Threadless. Additionally, respondents often replied regarding their motivation, that the process itself is fun. One survey respondent replied “*I write slogans all day long and it’s always a source of fun and inspiration for me now, and come up with ideas to make with artists* (Brabham 2010, p. 1132)”.

When analysing the value proposition for CrowdSpirit and Cambrian House, it seemed, that even though they focussed on intrinsic motivation such as to “*take part in an economic revolution at CrowdSpirit*” (Chanal & Caron-Fasan 2008, p. 10), the fun factor of taking part in the crowdsourcing process was never emphasized as much as it was in the case of iStockphoto and Threadless. This analysis regarding the “fun factor” can also be linked to the earlier discussion in this thesis where the factor “enjoyment and fun” was mentioned by several authors (von Hippel & von Krogh 2003, Antikainen et. al 2010, McGonigal 2008) as possible motivations to take part in a crowdsourcing process. Having this argument supported by the analysis of the case examples one can phrase the second hypothesis as:

H2: Business models that make use of crowdsourcing are more likely to succeed if the crowd is experiencing a feeling of fun and enjoyment, while being involved in the crowdsourcing process.

While analysing the literature regarding business models that are based on crowdsourcing in Sub-Section [5.1. \(Elaborations on Literature Review - Summary of Suggested Solutions\)](#), six questions emerged after combining the findings of different authors. Those six questions shall be recalled now to see if, together with the case example analysis, they can give any indication for further hypotheses regarding the success criteria.

1. Are there monetary rewards for the crowd? (of any kind, like revenue share, or simple payment per work hour)

All case examples that were discussed had either monetary, or quasi-monetary rewards as incentives for the crowd to participate. Threadless offered a monetary reward for winning a design contest and iStockphoto offered a revenue share for each sold picture. Cambrian House and CrowdSpirit both rewarded the crowd with a revenue share of the final product for their participation in the process. Due to the fact that all examples (successful and failed) had monetary rewards in place there is no hypothesis that can be defined with the help of the case examples analysis.

2. Were the rewards adjusted to the different degree of engagement for different members of the crowd? (Crowd members who are more engaged and deliver more work shall receive a higher reward)

When talking about iStockphoto and Threadless it is clearly the case, that members who were more engaged received more rewards. In the case of iStockphoto, members had a higher chance of making money if they uploaded more photos and kept their galleries updated. At Threadless members who either participated in several contests or offered a lot of products in their own shops had a better chance to make more money.

While the reward system for CrowdSpirit and Cambrian House aimed to exclude those members from rewards who did not participate in developing a product, they lacked, as McGonigal (2008) described it, a pyramid-shaped reward system that had much higher rewards for members who did most of the work. In the case of Cambrian House the CEO recognized this as one of the reasons they failed, as he mentioned that “*What we learned: it would have been better to back great teams with horrible ideas because most of the heavy lifting kept falling back on us, or a few select community members*” (Schonfeld 2008). What he described was that members who just suggested the idea for a certain product received a decent share of the possible rewards, even though they might not have been involved in the development process at all. Almost the identical problem can be recognized when analysing the rewards system of CrowdSpirit (see [Appendix 5](#)). Since this question is supported by the findings of the case example analysis, the following hypotheses can be formulated:

H3: Business models that make use of crowdsourcing are more likely to succeed if the reward system takes into consideration the different degrees of participation (highly active crowd member shall receive higher reward and vice versa).

3. Are there any kinds of emotional incentives for the crowd to participate?

Studies of Brabham (2008b & 2010) revealed, that the motivation for the crowd at Threadless and iStockphoto is also driven by emotional motives such as fun, enjoyment and a kind of addiction. Additionally participating in these activities helped the crowd members to improve certain skills such as design or photography. This can be linked to the earlier discussion which emerged in the second hypothesis. In the analysis, it was recognizable that iStockphoto and Threadless prioritized emotional incentives such as fun and enjoyment. Therefore this can be linked to the second hypothesis that was formulated earlier.

4. Are their trust-building mechanisms in place? (Mechanisms that prevent the crowd and other users from fraud; a rating mechanism for example)

In all of the four analysed business models there are trust-building mechanisms in place. On every platform members had the chance to vote for and comment on the work of other members (desings in the case of Threadless; photos and accounts in the case of iStockphoto; ideas and suggested solutions in the case of Cambrian House and CrowdSpirit). In all of the four business models, it is the case that members of the crowd who receive a lot of votes and positive comments are associated with a higher ranking within the crowd. There is no hypothesis that can be formulated with regard to this questions since there is no difference between the four case examples.

5. Are crowd members able to exchange among each other? (voting and commenting on each other's work and exchanging messages)

Threadless, iStockphoto, Cambrian House and CrowdSpirit all had an internal forum where the crowd could exchange ideas, experiences, or simply exchange ideas on everyday topics (see Channels and Value Proposition analysis in Appendices 2-5). Additionally, the commenting on the work of other crowd members is possible in all four cases. Overall, the crowd had several different channels to exchange among each other in all four of the analysed business models. Therefore, again, there is no hypothesis that can be formulated with the help of this question.

6. Are there any kinds of obvious mechanisms that enhance the fun or enjoyment for the crowd and additionally help to keep the crowd "busy" (such as some gamification elements like levelling system, user-ranking, etc.)

The design contests that Threadless is hosting can be described as a gamification element, since they use the competition and rewarding concept of a typical game to motivate the crowd to participate. Even though iStockphoto has several mechanisms to keep the crowd "busy", such

as internal fora or several photo contests, it is missing those obvious gamification elements. Cambrian House, on the other hand, used several gamification elements to keep the crowd active. For example, members had the chance to earn Glory Points ([see Appendix 7](#)) with their participation. Those Glory Points gave them the chance to enter a leaderboard where the most active and engaged members of the community were listed ([see Appendix 8](#)).

Once again there is no clear difference regarding this question between the successful and failed business model examples. Therefore, there is no hypothesis that can be formulated regarding possible success criteria with the help of this question.

7. Conclusion

This thesis was designed with the aim to analyse business models that make use of a crowdsourcing process. At first, the term crowdsourcing was clearly defined and differences from comparable concepts were highlighted. Due to the novelty of the concept of crowdsourcing, it was recognizable that, despite several approaches (Estellés-Arolas & González-Ladrón-de-Guevara (2012); Marjanovic et. al (2012); Schenk & Guittard (2011); Brabham (2008)), a clear and exhaustive definition of the term is missing in academic literature. Therefore, a unique crowdsourcing definition that is based on the literature of Estellés-Arolas & González-Ladrón-de-Guevara (2012) was created and used in this thesis.

Subsequently the researcher tried to provide an overview of different types of business models that make use of crowdsourcing and to itemize common problems from academic literature that are related to business models that make use of crowdsourcing. Combining the findings of several authors led to six questions and recommendations that shall maximize the chance to identify key success criteria for business models that make use of crowdsourcing. The case analysis that was conducted later had the goal to find possible differences between successful and failed examples of business models. After analysing the four individual examples the six questions/recommendations were matched with the findings of the case analysis. Three of the initial six questions and recommendations could be approved with the finding of the case analysis. Therefore, the following three hypotheses were formulated regarding the key success criteria:

H1: Business models that make use of crowdsourcing are more likely to succeed if they integrate a multi-sided platform approach.

H2: Business models that make use of crowdsourcing are more likely to succeed if the crowd is experiencing a feeling of fun and enjoyment, while being involved in the crowdsourcing process.

H3: Business models that make use of crowdsourcing are more likely to succeed if the reward system takes into consideration the different degrees of participation (highly active crowd member shall receive higher reward and vice versa).

The first hypothesis is related to the issue of choosing the correct crowdsourcing concept (Howe 2006b). Looking at the initially mentioned latest success stories of startups such as AirBnB, Uber or Alibaba it is recognizable that all of these business models make use of a multi-sided platform approach. Further research might show if this concept is indeed more viable and has less chances of failure than other crowdsourcing concepts.

The second hypothesis mentions that the crowd should have a feeling of and enjoyment while being involved in the crowdsourcing process. The feeling of fun and enjoyment per se is a relatively generic description and hard to prove. Nevertheless, it shows how important it is always to be aware of the crowd. Especially, in the very early stage of a company (when the first model is launched), a focus on this hypothesis might help reduce the chance of failure.

Finally, the third hypothesis is linked to the reward system and mainly focusses on the findings of McGonigal (2008), who mentioned that a pyramid-shaped reward system is the key to engaging the crowd to take part in the crowdsourcing process.

These three hypotheses that were created with the help of existing literature and a case analysis might help in further defining key success factors for business models that make use of crowdsourcing.

8. Limitations & Suggestions for Further Research

Limitations in this thesis mainly occur due to the low number of examples that were chosen. Analysing two successful and two failed examples of business models that make use of crowdsourcing might give a first indication on possible success factors, but it is certainly not exhaustive. This is why the findings were only labelled as hypotheses, which leaves them open for further research to prove or disapprove these hypotheses. For doing so, the case example analysis should be executed with a larger number of case examples. Comparing a greater number of successful and failed case examples might show if there is a certain pattern regarding the formulated hypotheses that can be approved. Due to the low number of examples that were used in this thesis there might be certain factors that were mistakenly disapproved. Therefore,

further research might go back to the six questions and recommendations that were formulated in [Sub-Section 5.1. \(Elaborations on Literature Review - Summary of Suggested Solutions\)](#) and reinsure the results of this thesis once again.

This thesis did not make use of any quantitative research because the aim was to first build a fundamental understanding of the difficulties that business models that make use of crowdsourcing are facing and later approve or disapprove those findings with a small number of case examples. To carry out this business models analysis a comprehensive analysis of each case example was necessary. The best way to approach this comprehensive analysis was in a qualitative way by using the Osterwalder Business Canvas and individually discussing every case example. However, for further research there is definitely a chance to elaborate on the results of this thesis with a quantitative research approach. Especially in order to approve or disapprove hypothesis 1, a data set could be prepared to see, if the multi-sided platform approach is indeed more likely to be successful.

Further, in the beginning of this thesis, crowdsourcing was defined very narrowly with the help of the working definition. This limited the potential case examples to a certain extent. Later research could relax these limited restrictions and focus on a broader definition of crowdsourcing.

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10. Appendices

Appendix 1 (Osterwalder Business Model Canvas parts)

All information taken from Osterwalder & Pigneur (2010)

Customer Segments (Different groups or people that the enterprise tries to reach)

- Mass market
- Niche market
- Segmented
- Diversified
- Multi-sided platforms

Value Proposition (Bundle of products and services that create value for the customer)

- Newness
- Performance
- Customization
- Design
- Brand/Status
- Price
- Cost reduction
- Risk reduction
- Accessibility
- Convenience/Usability

Channels (How the company reaches and communicates the customer segments; including sales channels, delivery channels and communication channels)

- Direct or Indirect
- Own channels or partner channels

Customer Relationships (The type of relationship that the company establishes with the customer segments)

- Personal Assistance
- Dedicated personal assistance
- Self-service
- Automated Services

- Communities
- Co-creation

Revenue Streams (Represents the cash that the company generates from each customer segment)

- Asset Sale
- Usage Fee
- Subscription Fees
- Lending/Renting/Leasing
- Licensing
- Brokerage Fees
- Advertising

Key Resources (Most important assets required to make the business model work)

- Physical
- Intellectual
- Human
- Financial

Key Activities (Most important things a company must do to make the business model work)

- Production
- Problem Solving
- Platform/Network

Key Partnerships (Network of partners and suppliers that make the business model work)

- Optimization and economy of scale
- Reduction of risk and uncertainty
- Acquisition of particular resources and activities

Cost Structure (All different costs that occur when operating the business model)

- Cost-driven
- Value-driven
- Fixed costs
- Variable Costs

Appendix 2 (Detailed Threadless Business Model Analysis)

Customer Segments:

Mass market and multi-sided in the beginning, diversified nowadays: The customer group for Threadless is multi-sided. On the one hand there are end-customers that just use Threadless to buy unique apparel and maybe vote for new designs and on the other hand there are designers (professionals and amateurs) that help Threadless to generate new designs, but also buy products.

T-shirts and apparel per se are very generic products and basically target a mass market, the unique design of the products attracts a specific customer group makes it a bit of a niche, but due to the nature of the products it needs to be considered as a mass market.

Nowadays according to latest press reports Threadless is also aiming to work together with wholesale-stores to sell their products. For example, first batches of Threadless t-shirts for example were sold at Gap and iPhone cases with Threadless designs were sold by Dell (Coburn 2012). The customer segments therefore is diversified and can be distinguished between those two main groups.

Value Proposition:

For the end customer that buys the products Threadless offers due to its unique designs a particular value for the end-customer. Osterwalder mentions that design is particularly in the fashion industry an important value proposition (Osterwalder & Pigneur 2010).

A survey of Brabham (2010) regarding the motivation to participate at Threadless revealed the following: For designers Threadless offers a platform to make money, maybe get introduced to a large audience and take up freelance work and to further develop the individual skills. Also the love between the Threadless community members is an important motivation for designers, since it offers a place to exchange with colleagues (for example in the Threadless forum that can be accessed after registration (Brabham 2010)). Finally survey respondents described their motivation to participate as a kind of addiction and constantly mentioned the fun that it brings to participate at Threadless.

Channels:

Own direct channels in the beginning, but nowadays also including wholesaler: As mentioned in the customer segments, Threadless lately started to partner with certain wholesale stores to

sell their products. In the early days the sales was solely focused on web sales, using the Threadless e-commerce store.

Feedback and concerns of users can be articulated using the internal forum, the telephone support, or the e-mail support.

Customer Relationship:

For Threadless two main techniques are used to retain customers. First of all Threadless invites customers to co-create the future product. While being involved in the voting process and discussion about new products, customers can certainly decide which design will be printed and therefore what product will be offered on Threadless.

Customer acquisition mainly works through word of mouth (using the community), social media (860,000 Facebook Likes, 197,000 Follower on Instagram, and 21,300 Twitter Follower) and blogger relations. Especially in the beginning word of mouth through design blog cooperation was essential for Threadless to build its community in the first place (Coburn 2012).

Also important are partner programs with designers. On threadless.com designers can open their own store and directly sell their products using the Threadless production and dispatching system.

Additionally Threadless tries to build a community that goes beyond the voting process for new products. Designers and artists, no matter if they are professional or amateur, as well as “average” users can exchange on Threadless regarding design trends, techniques etc. This certainly helps in retaining customers for Threadless.

The community can exchange in the internal forum that is open to any registered user at Threadless. This forum is very active and heavily used not only by designers, but by the whole Threadless community (Brabham 2010).

Revenue Streams:

Revenue streams for Threadless are very straightforward. Threadless sells apparel and other products that are designed by users online directly via an online-shop on threadless.com, or lately also to wholesalers, such as Gap. Osterwalder describes such a type of revenue stream as asset sale (Osterwalder & Pigneur 2010). Additionally Threadless gives designers and artists the chance to create their own individual partner web shops with the help of Threadless. If a product is sold in this shop Threadless receives a portion of this revenue.

Key Resources:

Whereas in the beginning the production was outsourced, Threadless opened their own production facilities around 2010 in Chicago which from then onwards can be counted as a key resource (Coburn 2012). Additional key resources especially include the website and online-shop (<http://www.threadless.com>), the brand Threadless that nowadays is known to many amateur designers, the logistics center that is based in the headquarter in Chicago, software programmer that keep the website online and updated and customer support staff to deal with end-customers on the one hand and the group of designers on the other hand.

Key Activities:

Key activities for Threadless mainly involve the platform development and maintenance (including website, online shop and forum), the production of the t-shirts, hosting the design contests, attracting new designers and generating partnerships with designers and blogs (also including platform promotion).

Constant exchange with users and community management as well is a key activity for Threadless which they highly prioritize (Brabham 2010).

Key Partnerships:

In the case of Threadless the users present one of the key partners for the business. Users not only vote for designs and therefore decide what products shall be produced, but designers and artists also offer the designs.

Additional key partnerships include logistic partners (for shipping products), hosting providers (to host the platform online), payment providers (such as PayPal to ensure a seamless buying process for users) and producers of t-shirts and other apparel (which deliver plain t-shirts that Threadless can print on).

Threadless is also partnering with companies to host certain design contests (for example movie studios that want to promote an upcoming movie launch a design contest for that specific movie).

Cost Structure:

Using Osterwalder's & Prigneur's (2010) definition for different cost structures, the Threadless cost structure can be described as cost-driven (minimizing costs), while having a relatively high amount of variable costs (for producing the t-shirts and other design products).

Specific costs include for example running the platform (hosting, webspace etc.), costs for holding the design contests (prize money, gift cards, etc.), costs for producing the products (e.g. buying plain t-shirts and printing the t-shirts), payment fees, costs for stock of products, salaries for employees and fixed costs for the offices.

Appendix 3 (Detailed iStockphoto Business Model Analysis)

Customer Segment:

The customer segment for iStockphoto is multi-sided. On the one hand there are professional and amateur photographers who upload photographs to the iStockphoto platform and offer it for sale (including various rights that might include copying, multiple use and more).

On the other hand the end-customers that purchase the digital photographs are much diversified. Buyers of the digital content as already mentioned can range from private persons, small business owners, public agencies, website operators to big multinational companies.

Value Proposition:

For the end-customer that purchases the digital content it is especially the price that creates value. The price that they have to pay at iStockphoto in comparison to offline competitors such as professional picture agencies is only a margin. Additionally iStockphoto makes professional and semi-professional stock photography accessible to customers who had no chance to reach out to professional picture agencies.

The value proposition for photographers that induces them to upload photos can be divided into four criteria. A survey that Brabham (2008b) conducted at iStockphoto revealed that for 89% the participation was to make money, for 79% the motivation to improve their photography/video/illustration skills, 76% mentioned a creative outlet as their motivation and 71% simply replied regarding their motivation that it is fun (multiples responses were possible).

Channels:

Concerning sales channels there is only one way to purchase digital content at iStockphoto which is directly on the online platform (web sales).

For customer and user feedback and concerns there is an internal forum, telephone and e-mail support which they can use.

Customer Relationship:

One aspect which helps a lot to engage users at iStockphoto is the community feeling. The iStockphoto community mostly consist of graphic designers, illustrators and amateur photographers. Many of them communicate in the internal forum to exchange ideas and improve their skills (Stothers & Grant 2007). Additionally there are possibilities to comment on pictures and member profiles which further promotes the communication between users.

Customer Acquisition channels in the beginning was focused heavily on word-of-mouth between amateur photographers, designers and illustrators. However the community members were actively used to promote iStockphoto. Users had the chance to print business cards and received “refer-a-friend” bonuses to spread the word (Stothers & Grant 2007).

Today iStockphoto relies not so much on social media marketing to attract customers (183,000 Facebook fans, 115,000 Twitter fans), but instead has a focus on display marketing and e-mail marketing. Also iStockphoto members have the chance to create blog entries and comment on the blog entries of other members (Stothers & Grant 2007).

Revenue Streams:

All the revenue that iStockphoto is generating comes from transactions of digital content. However users must first purchase a digital currency called iStock credits and afterwards they can spend this credits on digital content, such as photos. According to Osterwalder & Pigneur (2010) the iStockphoto revenue stream can be described as licensing. iStockphoto gives its customers the permission to use the with intellectual property protected digital content.

Key Resources:

Key resources for iStockphoto mainly involve everything that helps to keep the platform running. Therefore mentionable are website programmers to keep the platform updated and online, web space and a good hosting facility to deal with the huge amount of traffic that the platform is facing.

Besides the technical issues of the platform the brand iStockphoto is also very valuable nowadays. Additionally the support and quality management staff is key to iStockphotos business model. Every picture that is uploaded gets checked by an employee of iStockphoto before it is visible on the platform (Peterson 2007).

Key Activities:

Key activities again involve everything that is considered with managing the platform. The further development and maintenance of the platform is very important. Also the already

mentioned quality management concerning the pictures is a key activity to ensure a highly qualitative offering of digital content. Promoting the platform (with any kinds of marketing activities) became also substantially important during the last years because of the growing number of competitors.

Key Partnerships:

Users that upload and sell a certain amount of content through iStockphoto have the chance to take part in a partnership program. Those heavy contributors are a key partner to iStockphoto. Additionally payment providers and providers of hosting facilities (web space) can be mentioned as key partners.

Cost Structure:

The main cost drivers are related to the maintenance and hosting of the platform. The huge amount of data that iStockphoto has to deal with requires expensive hosting facilities. Furthermore personnel expenses, especially regarding support and quality management staff is also an important matter of expense.

Overall however iStockphoto definitely has a relatively high amount of fixed costs (to run the platform and pay the staff), whereas with any additional content that is uploaded to the platform the costs just gradually increase. However costs can be considered as relatively low compared to the revenues, which is emphasized by the fact, that iStockphoto was profitable since day one (Schonfeld 2009).

Appendix 4 (Detailed Cambrian House Business Model Analysis)

Customer Segment:

Judging by press reports that described the members of Cambrian House the customer segment can be describes as a niche market. Members primarily were people that are interested in an innovation process and like to think creatively and are interested in business creation, e.g. creatives, developers, entrepreneurs, investors and marketers (Turner 2007). Especially software programmers were needed to participate, since the idea was to use the crowd to code the software products (Howe 2006c).

Value Proposition:

Cambrian House offered a place for members to exchange ideas by judging over ideas and communicating through the internal forum. But also it was a chance for people, especially

software programmers who were in charge for developing the final products to further improve their skills.

Additionally Cambrian House had a quasi-monetary incentive for users that engaged a lot. Cambrian House awarded so called Glory Points to members for submitting and voting for ideas, starting a business, posting on forums, or spreading the word by blogging about Cambrian House¹¹. Those Glory Points could be converted¹¹ into shares of Cambrian House (they reserved 1% of the company shares for their members).

Additionally the crowd had the chance to make money with the products they develop. For selling the product, sharing their ideas, or developing the product members could earn a virtual currency called Cambro (1 Cambro = 1 USD). Those Cambros were intended to work as a currency to pay for work between community members. Furthermore members had the possibility to give away Royalty Points, which basically present shares of the products that they found through Cambrian House. Those Royalty Points would later determine what percentage would be allocated to every member that was involved in developing the product.¹²

Channels:

To communicate with its members Cambrian House solely used internal channels, such as the Cambrian House website and the internal forum.

Also the founding members and support staff of Cambrian House could be reached via their community profiles and e-mail.

Customer Relationships:

Customer acquisition was achieved using word-of-mouth and rewarding members with Glory Points for posting or blogging about Cambrian House. Furthermore blog cooperation and public relations in the innovative and creative environment was used to make aware of Cambrian House and attract members.

Using the criteria of Osterwalder & Pigneur (2010) the customer relationship can be categorized as “community” and “co-creation”, since Cambrian House employees were actively engaged in judging the ideas and developing the final products.

¹¹ Verified at Cambrian House Website [Online]. Available: <http://www.cambrianhouse.com/people/leaderboard/> [Accessed: 18.04.2015]

¹² Verified at Cambrian House Website [Online]. Available: <http://www.cambrianhouse.com/how-it-works/you-profit/> [Accessed: 18.04.2015]

Revenues Streams:

Revenue for Cambrian House should have emerged from the products that the crowd generates. Just like members can spilt their Royalty Points to exchange shares for a certain idea/product Cambrian House would have a certain base number of shares for every product that was created using the crowdsourcing process of the platform. Afterwards Cambrian House would have made money due to royalties from the revenue that a certain product was generating or by receiving a portion of the money.

Also Cambrian House was able to make money by offering the virtual currency Cambro that enabled members to pay for the work of other members.

Key Resources:

Key resources for Cambrian House mainly involved everything that was related to keep the platform updated and running. Therefore website programmers and website hosting facilities can be declared as a key resource. Additionally a support staff was needed to deal with the large number of submissions of duplicated ideas and the relatively high amount of bad ideas that was submitted (Roebuck 2011). As mentioned before software programmers were a key asset in the crowd of Cambrian House to develop the final products.

Also financing was much needed for Cambrian House since its revenue model was not able to cover the expenses in the beginning. Therefore the company was required to collect more than 7 USD Million in funding.¹³

Key Activities:

As mentioned above the quality management was a key activity for Cambrian House, since it was confronted with a relatively high number of bad and duplicated idea submissions (Roebuck 2011). This quality management, along with managing the process of product development (for example judging about misunderstandings and problems between members) are the activities that are necessary to manage the crowd-driven innovation process. Due to the focus on software products it was necessary for Cambrian House to maintain a certain number of software programmers in the community to develop the final products.

Additionally of course the maintenance and development of the platform is vital for the business model of Cambrian House.

¹³ Verified at Crunchbase [Online]. Available: <https://www.crunchbase.com/organization/cambrianhouse> [Accessed: 18.04.2015]

Key Partnerships:

For Cambrian House key partners were distribution partners and marketing partners (such as software vendors) that helped in promoting the products that were developed via Cambrian House¹⁴, as well as investors which help them to fund the market launch of products that were approved and developed by the crowd.

Again, of course hosting providers are vital to keep the platform online and running.

Cost Structure:

Costs for Cambrian House include the maintenance and improvement of the platform. But also the product creation process bears a heavy portion of the costs for Cambrian House. Project management, prototyping, developing and marketing activities are costs associated with developing and promoting a product at Cambrian House (Turner 2007). Of course also employees working in quality and project management, as well as software engineers and website coders are a cost factor for Cambrian House.

Costs for Cambrian House obviously vary depending on how many ideas are actually turned into products.

Appendix 5 (Detailed CrowdSpirit Business Model Analysis)*Customer Segment:*

The customer segment that CrowdSpirit was focusing appears to be a nice market. When being asked who the customers are the founding team often replied with the term “*geeks*” (Chanal & Caron-Fasan 2008, p. 9-10) and by this means referred to people that are in love with new technology and like to be involved in an innovation process. One could argue that on the end-customer side (people who use the products that are developed by the CrowdSpirit community) a mass market could be targeted. But due the nature of the users that are involved in the creation process (geeky technic lovers) the products showed a very high degree of innovativeness which made it unlikely for those products to be appealing to a mass market and ordinary people.

Value Proposition:

Chanal & Caron Fasan (2008) that worked together with the founding team of CrowdSpirit during the startup phase referred to the value proposition with the following criteria: an intrinsic motivation to be involved in founding a new innovative product; the satisfaction to take part in

¹⁴ Verified at Cambrian House Website [Online]. Available: <http://www.cambrianhouse.com/about-us/history/> [Accessed: 18.04.2015]

an “economic revolution” (Chanal & Caron-Fasan 2008, p. 10). Next to those intrinsic motives however, CrowdSpirit members also had monetary incentives to participate. Products that were developed by the community should have been sold directly via the CrowdSpirit website and members that were involved in creating the product would have received a share of those revenues (Chanal & Caron-Fasan 2010).

Channels:

Due to its customer focus in a nice segment it was rather difficult for CrowdSpirit to find appropriate marketing channels. At the beginning the team was in need to develop partnerships with web sites in their segment and e-business companies that can help them to market their products. To create the products they also had to build partnerships with manufacturers (Chanal & Caron-Fasan 2008).

Communication within the crowd could happen in the internal forum and within the voting process for new products the crowd had the chance to exchange suggestions and experiences. Regarding the sales channels the founding team used the CrowdSpirit platform to directly sell products to end-customers, using web sales.

Customer Relationships:

As mentioned above CrowdSpirit had difficulties in finding marketing channel and therefore customer acquisition was also a concern. In the beginning the company relied very much on word-of-mouth marketing in the geek community which should be enforced by creating partnerships with related blogs and web sites (Chanal & Caron-Fasan 2008).

Customer Relationship was mainly handled with the idea in mind to build a community that can exchange at any time using the internal forum, direct messaging between users, or commenting on new ideas and products.

Revenue Streams:

In the beginning the revenue model of CrowdSpirit was solely focused on selling the products that the community created via the CrowdSpirit platform and therefore it was based on a volume strategy (Chanal & Caron-Fasan 2010). Later however as this revenue model appeared to not be viable (due to the nature of electronic products with low margins and the unavailable marketing channels for CrowdSpirit) they changed and tried to license or sell intellectual property of products that were created by the CrowdSpirit community. Additionally companies also had the chance to get in touch with the CrowdSpirit community to either raise a challenge

for them to solve or get in contact for leveraging their experience (Treichl 2008). This new adapted revenue model however is not further discussed in this thesis.

Key Resources:

Key Resources for CrowdSpirit certainly involve the crowd which is needed throughout the whole process of product creation. CrowdSpirit identified several different types of members that are required to have successful product creation process: “*the idea initiator, the design team member, the investor, the tester, the ambassador, the project leader, the reseller and the customer* (Chanal & Caron-Fasan 2010, p. 328).

Additionally of course the platform is a key item to the CrowdSpirit business model and therefore website programmers as well as hosting facilities and web space are key resources for CrowdSpirit.

Key Activities:

Next to maintaining and developing the platform it was also important for CrowdSpirit to attract “right” types of people to join the crowd (see Key Resources). Also managing the product development process (quality management, prototyping, testing etc.) is a key activity for the business model of CrowdSpirit. Additionally the marketing process for the final products that are developed can be mentioned as a key activity.

Key Partnerships:

Key partners that are required for CrowdSpirit in the product creation process are partners that help in manufacturing the products and partners, such as e-business websites that help in selling to final products.

Also distribution partners are needed to ship the products to the end-customers and hosting partners are needed to host the CrowdSpirit platform online.

Costs:

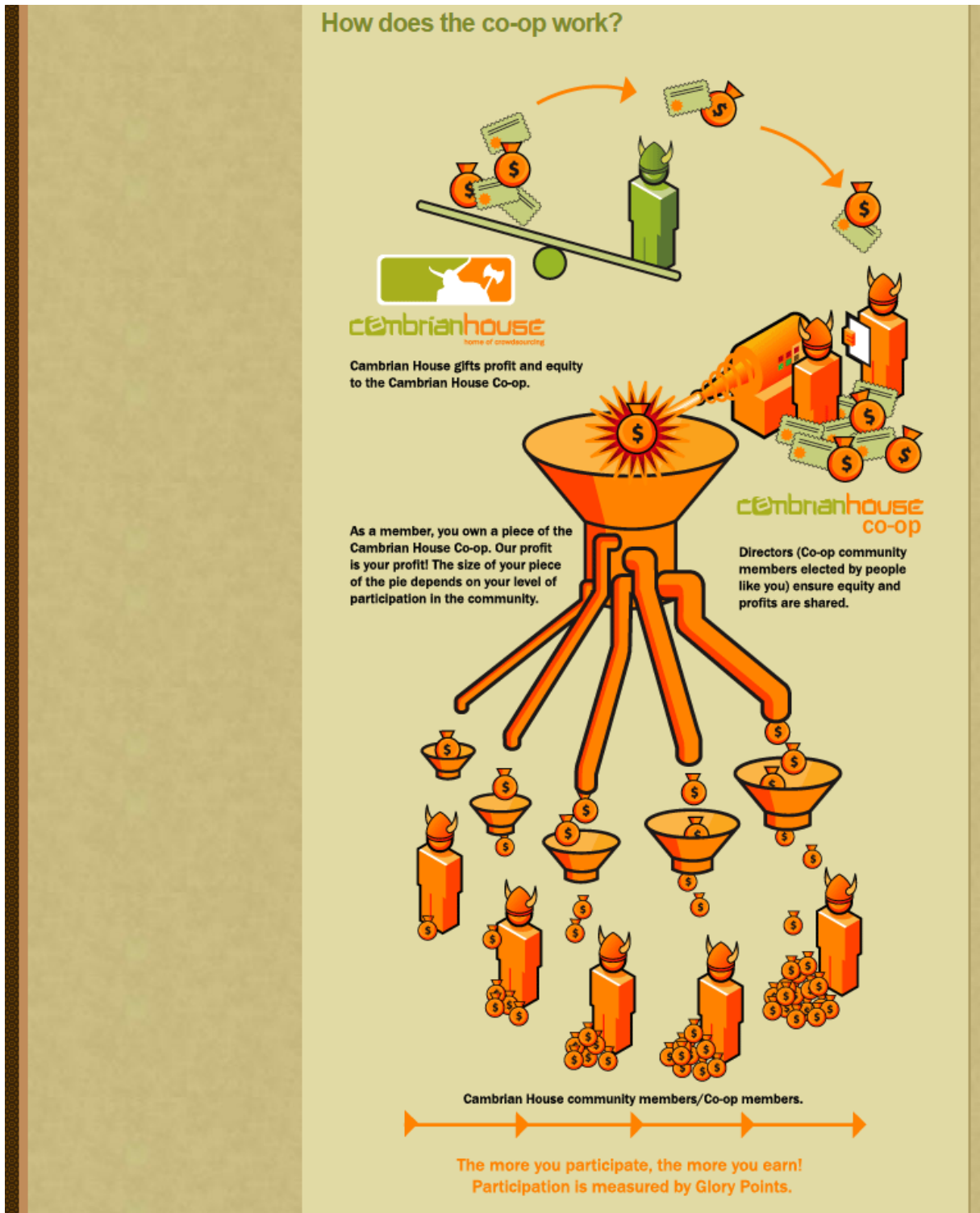
Costs especially emerged from maintaining and further developing the platform (personnel expenses and expenses for service providers).

But also the whole product creation process certainly was costly in terms of finding partners for production and marketing, ensuring quality management throughout the whole product creation process which is especially linked to personnel expenses.

Appendix 6 (CrowdSpirit: Challenges Screenshot)

The screenshot shows the CrowdSpirit website interface. At the top, there is a navigation bar with the following links: Home, Challenge, Innovators, Companies, Contributions, My account, Blog, and CrowdSpirit?. A 'Post your challenge' button is located in the top right corner. Below the navigation bar, there is a large banner with the text 'Here are the current challenges' and a yellow arrow pointing down. To the right of the banner is a 'Login' form with fields for 'Mail' and 'Password', a 'Remember me' checkbox, and a 'Login' button. Below the login form is a 'Search' section with three input fields: 'Search a participant', 'Search an initiator', and 'Search a challenge'. The main content area is titled 'Challenge on the top' and features four challenge cards. Each card includes an image, a title, a description, and a progress indicator (a lightbulb icon and a percentage). The challenges are: 1. 'What custom application would you like to have on your mobile phone?' by Mootwin, with a 100% progress indicator. 2. 'Find a new application for a new image search technology' by Milpix, with a 100% progress indicator. 3. 'Invent innovative marketing solutions for a breakthrough innovation' by Institut cohérences, with a 0% progress indicator. 4. 'Introduce 2 people and win a USB flash drive' by Crowdspirit, with a 100% progress indicator.

Appendix 7 (Cambrian House: Glory Points system screenshot)



Appendix 8 (Cambrian House: Leaderboard screenshot)

PEOPLE

Explore **Leaderboard** Search Forums Chat Council

Meet the community leaders

Cambrian House awards Glory Points to our most active members. Submit and vote on ideas, start a business, post in forums, or write about us on your blog and Glory will rain down upon you.

Glory Point Leader

Brenden
Total Points: 9857

Glory Point Leaderboard

vanhees 8701	Kevin_Cox 7980
Rizal 7843	JelmerBV 6309
fish99 5458	GordonMcDowell 4687
techguy 4606	ccoza 4346
DennisJ 4206	

Find other members...

Current Berserker:

interviewables
butner, US
Ideas: 7
Glory Points: 0
Joined: Mar 05 2008

interviewables now has three IdeaWarz wins under his belt. Need we say more? Congrats on being this month's Berserker.

*You're invited!!
help change the shape of
things to come*

WELCOME

*learn about
Cambrian House 2.0*