

2 Web 2.0 and crowdfunding platforms

Based on a broad review of existing literature embracing the topic of this thesis, the following chapter will provide the theoretical foundation for the further work. The phenomenon of crowdfunding with all its different shapes will be captured by tearing it down into more general types of funding (subject) and the role that has been taken over by the internet, especially topics linked to Web 2.0 (context). All the themes which will be identified in chapter 2 will be subsumed in order to propose a model of the current setting of crowdfunding platforms. This proposition will be shown at the end of chapter 2 and will be the foundation for the research method that is applied for this work.

The first part describes the main principles of the so called Web 2.0. Developments within this field, such as ongoing growth in internet-access-availability, user generated content, social networking and the emancipation of the crowd (Drury and Stott 2011) are drivers for the success of crowdfunding initiatives. Understanding these pillars will lead to a better understanding of the overall concept of crowdfunding and will shade light on the context in which crowdfunding platforms as the main object of this thesis have to be examined.

The second part, explaining the subject, will first draw up a scheme of potential sources of finance. Based upon these knowledge it will be shown how the principles of crowdfunding have to be taken into account within funding ventures, projects or anything else "the crowd" could be persuaded investing in.

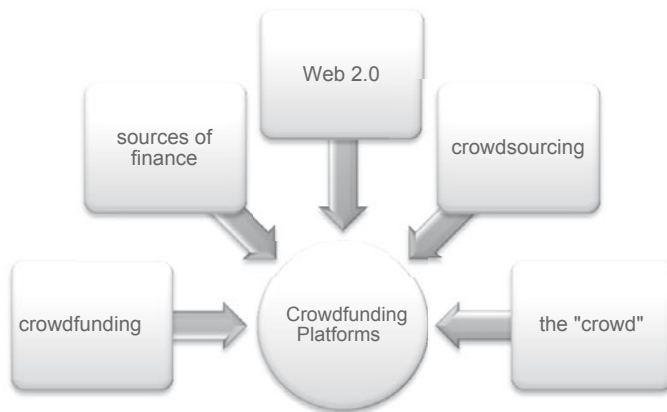


Figure 3: Orchestrating factors for crowdfunding platforms

Source: Author

2.1 Web 2.0 – the collaborative web

As it could already be shown, the Internet is the major enabler of the crowdfunding evolution. Especially new possibilities, introduced by means of Web 2.0 related techniques could be seen amongst this supporting developments. The following section will show the implication of the Internet's metamorphosis towards a Web 2.0 mindset. The author is going to introduce archetypical online business models, as they may contribute to the understanding of crowdfunding platforms. Since crowdfunding has ultimately emerged from the concept of crowdsourcing, the author is going to describe this connection in order to brace the reader's grasp.

Proliferation of the Internet is known as one of the most influential environmental changes within the last two decades. (Wirtz et al. 2010) It is at once a world-wide broadcasting capability, a means of information dissemination and a medium for collaboration and interaction without the boundaries of geographic location. Its influence has overcome the hurdle of being only a technical issue as our society moves towards an increasing use of online tools to accomplish e-commerce, information acquisition and community operations. The evolution of the Internet has not come to an end yet, it will, indeed it must, continue to change and evolve at the speed of computer industry if it is to remain relevant. At the bottom line the Internet started as the creation of a small band of dedicated researchers and has grown to a multi-billion dollar business (Leiner et al. 2009), a project like many others which we see nowadays seeking support on crowdfunding platforms. The Internet ultimately changed the way business is conducted in many ways. (Wirtz et al. 2010)

In the autumn of 2001 everything changed for the web – the bursting of the dot-com bubble marked a serious turning point. Examining what distinguished crashed companies from those who relieved existent led to the idea of Web 2.0. Tim O'Reilly has been responsible for the "birth" of this word, which is still confronted with a huge amount of disagreement about just what it means (O'Reilly 2007). Therefore the following part should deliver a better understanding of what Web 2.0 consists of and what this knowledge may contribute to examining crowdfunding platforms.

2.1.1 *Basic principles of Web 2.0*

Research on Web 2.0 coined the term high velocity environments to describe such dynamic markets and their frequent changes in demand, competition, regulation and technology. These changes come together with a new and radically shifting Internet user behaviour. Established Internet business models seem advisable in order to meet recent Web 2.0 developments, such as the increased pervasiveness of social networks and relevance of user generated content. (Wirtz et al. 2010)

The concept of Web 2.0 was born in a brainstorming session between the two web pioneers Tim O'Reilly and Dale Dougherty. Due to the incidents around the burst of the dot-com bubble they saw the web as more important than ever before. Exciting new applications and sites kept popping up with surprising regularity. The Companies that had survived the collapse seemed to have some things in common, so they decided to call this turning point for the web "Web 2.0". They tried to capture the term by distinguishing Web 1.0 and Web 2.0 characteristics. The following table should give an idea what they have seen in the one or in the other category: (O'Reilly 2007)

Web 1.0	Web 2.0
DoubleClick	Google AdSense
Ofoto	Flickr
Akami	BitTorrent
Mp3.com	Napster
Britannica Online	Wikipedia
Personal websites	Bloggng
Evite	Upcoming.org and EVDB
Domain name speculation	Search engine optimization
Page views	Cost per click
Screen scraping	Web services
Publishing	Participation
Content management systems	Wikis
Directories (taxonomy)	Tagging ("folksonomy
Stickiness	Syndication

Table 1: Differentiation of Web 1.0 and Web 2.0

Source: Author, adopted from O'Reilly 2007

As O'Reilly states, Web 2.0 doesn't have a hard boundary, but rather, a gravitational core. As for a definition it could be visualised as a set of principles and practices that tie together a solar system of sites that demonstrate some or all of those principles, at a varying distance from that core. These principles are shown in figure 4:

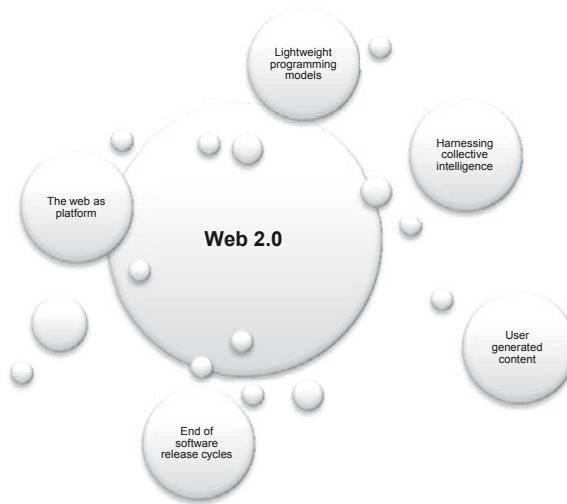


Figure 4: Principles of Web 2.0 according O'Reilly

Source: Author, adopted from O'Reilly 2007

Additionally Wirtz et al. (2010) propose four broad factors as being fundamental to the Web 2.0 phenomenon, which are slightly different to O'Reilly's contribution shown before, but have an increased impact on contemporary online ventures, due to the evolving Internet user mind-set and technological progress:

- **Social networking:** Social networking is commonly known as structures of human online interactions. The number of active users is growing dramatically. Such services are often built around certain topics, connecting friends or allowing to assess products and services. User's motivation to employ social networks may vary from self-reflection, image building and entertainment to access of relevant content.
- **Interaction orientation:** This factor concerns participant's ability to manage effectively the rising customer demand for a more intense dialogue between firm and customer.
- **User added value:** This concept covers a lot of phenomena, including user generated content/ -creativity and -innovations.
- **Customization and personalization:** This concept has a long history in e-business and information systems literature. It addresses the opportunity for Internet users to re-configure websites, products or services according to their specific needs. As Wirtz et al. state, this factor is becoming increasingly vital for Web 2.0 applications.

In addition to these fundamental issues Wirtz et al. also identify several key-sub-factors, shown in figure 5:

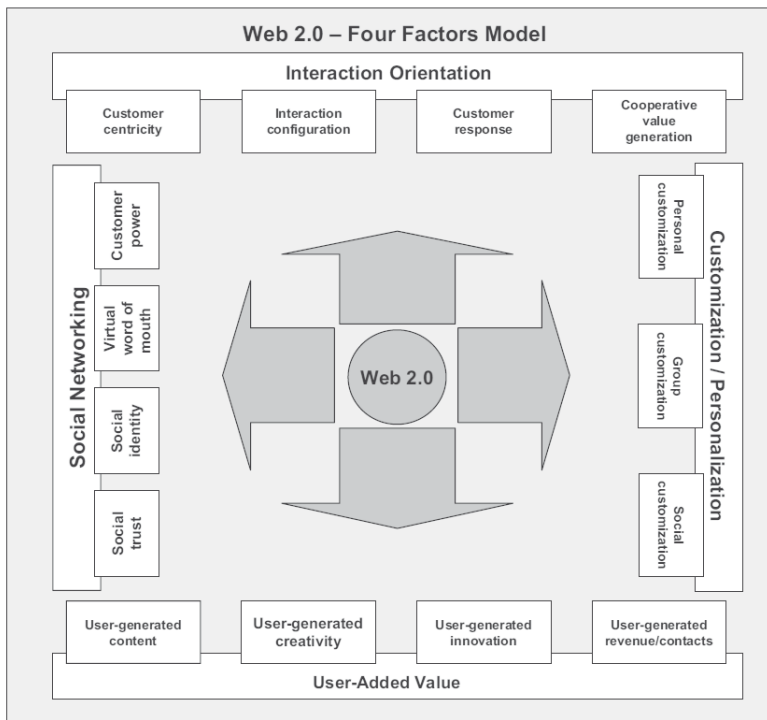


Figure 5: The Web 2.0 - 4 factors model

Source: Wirtz et al. 2010

Though there is Lee's approach of defining Web 2.0, the literature lacks a systematic analysis of the broad characteristics and trends associated with Web 2.0. Such a contribution would be clearly useful for online ventures in offering a clearer picture of the new challenges and opportunities involved. (Wirtz et al. 2010)

The major companies born in the Web 1.0 era are ensuring their success because they have embraced the power of the web to harness collective intelligence. You can take any of the big ones like eBay, amazon, google or Wikipedia, all of them rely on the content and wisdom of their users. So O'Reilly marks out network effects from user contributions as the key to market dominance in the Web 2.0 era. (O'Reilly 2007)

Web 2.0 came up with a lot of new web-based services. Creating lightweight connections by snapping together two existing services makes it easy to come up with new business models (O'Reilly 2007), and that is what also could be claimed in accordance to crowdfunding platforms. The underlying mechanism of Social Networking – as one fundamental aspect of Web 2.0 – is increasingly developing from a fun-tool into a business networking instrument, allowing professionals to interact and establish contacts. (Wirtz et al. 2010) The crowd funds what the crowd wants and basically this crowd is composed of members of online communities and users of social networking sites. (Ley and Weaven 2011) Leisse (2012) points out the growing importance of such communities and social networks. He claims a cold world where individuals nowadays are more likely to grow lonely. These individuals try to set up new social networks by means of the internet. Social media will be part of everyday life, it will be adopted like other technologies (e-mail, mobile phones) before. We are just at the beginning of a new era, spending more and more time online and will be faced with a growing importance of online social networks, thus representing potential chances for the crowdfunding environment.

Direct and personal communication between the crowd and entrepreneurs is driven by the interactive methods, offered through the means of Web 2.0 techniques (specialized blogs, Facebook, twitter) (Larralde and Schwienbacher 2012) Also the rise of online payment systems facilitates transactions between creators (people who request funds) and investors (people who give money) (Gerber et al. 2012)

Another major contribution of the Internet linked to the paradigm of crowdfunding is that it facilitates communication across large distances at ultimately low costs. A crowdfunding platform seems to eliminate most distance-related economic frictions, but not the social related ones. These social ties are fundamental for establishing a consideration set, necessary to decide whether or not to invest in a certain case. (Agrawal et al. 2011)

To situate the new phenomenon of crowdfunding platforms amongst Web 2.0, the 4C typology of Web 2.0 business models, based on Wirtz et al. (2010), seems to be a proper contribution. It is intended to be a straightforward yet holistic and exhaustive approach to cover the vast majority of common business activities in e-markets. The resultant framework is shown in figure 5. Wirtz divides 4 archetypes, namely

- **Content:** This business model is known, for example, from online newspapers. Aiming at the collection, selection, compilation, distribution and/or presentation of online content, the value proposition augurs to deliver user-friendly online access to relevant content. Whilst it has been the common way to generate revenue streams indirectly – in particular by means of online advertising – there can be ob-

served a shift towards direct revenue streams from offering premium content.

- **Commerce:** This business model can be defined as the opposite of the traditional brick-and-mortar businesses. It offers cost efficient transactions (initiation, negotiation, payment and delivery) for buyers and sellers of goods and services. Internet-based processes disintermediate traditional ones and create revenue streams in form of sales revenues and/or indirect revenue streams such as commissions.
- **Context:** Heavily relying on indirect revenue streams such as online advertising, this business model aims to increase transparency and reduce complexity amongst the abundance of existing websites. Such companies – like Google – primarily structure information, rather than creating new content.
- **Connection:** This business model aims at providing the network infrastructure that enables user participation in online networks, either physically or virtually. Revenue streams are generated directly on a subscription (physical connection) or indirectly, based on transaction-independent revenue sources.

Additionally one should know that a specific Internet based venture may employ several of these types at once, in hybrid or integrated versions.

<p>Content</p> <p>Definition: Firms collecting, selecting, compiling, distributing, and/or presenting online content</p>	<p>Value proposition: Providing convenient and user-friendly access to various types of content</p> <p>Revenues: Mostly online advertising (but increasingly subscription and pay-per-use)</p>
<p>Commerce</p> <p>Definition: Firm initiating, negotiating, and/or fulfilling online transactions</p>	<p>Value proposition: Providing a cost-efficient exchange place for buyers and sellers of goods and services</p> <p>Revenues: Sales revenues, commissions</p>
<p>Context</p> <p>Definition: Firms sorting and/or aggregating available online information</p>	<p>Value proposition: Providing structure and navigation for Internet users to reduce intransparency and complexity</p> <p>Revenues: Mostly online advertising</p>
<p>Connection</p> <p>Definition: Firms providing physical and/or virtual network infrastructure</p>	<p>Value proposition: Providing the prerequisites for exchange of information over the Internet</p> <p>Revenues: Online advertising, subscription, time-based billing, volume-based billing</p>

Figure 6: The 4C typology of internet business models

Source: Wirtz et al. 2010

Though there can be found a lot of benefits amongst Web 2.0 features, there are also critics. New technologies increase rather than decrease the potential of fraud. The internet and social networks are fertile environments for scammers. Such scammers have always found ways to adapt their corrupt purposes to new technologies. (Hazen 2012)

2.1.2 From crowdsourcing to crowdfunding

Though there is a lot of attention in public media, scholars cite that research specifically on crowdfunding is almost inexistent and therefore it is often seen as part of the broader concept of crowdsourcing. (Larralde and Schwenbacher 2012) Product design, development and production are no longer solely the task of specialized companies, but can now be accomplished by disparate groups of individuals – the crowd. (Howard et al. 2012)

The term crowdsourcing was born as a buzz word, first used by Jeff Howe and Mark Robinson in 2006 in the June issue of Wired Magazine. Following Kleemann et al. (2008) “Crowdsourcing takes place when a profit oriented firm outsources specific tasks essential for the making or sale of its product to the general public (the crowd) in the form of an open call over the Internet, with the intention of animating individuals to make a [voluntary] contribution to the firm's production process for free or for significantly less than that contribution is worth to the firm.”

This paradigm leads to the rise of the so called working consumer (Kleemann et al. 2008). The working consumer could be described by three key characteristics:



Figure 7: The working consumer

Source: Author, adopted from Kleemann et al. 2008

The working consumer focuses on bringing products to the market in new ways, taking advantage of collaborative networks and the crowd. Almost every stage of a traditional product development process can be achieved by them, at the same time being competitive on quality and ahead on quantity/time levels. (Howard et al. 2012)

Including the user as a participant in the value creation process of Internet business was a key factor in shifting from earlier web models to second generation ideas and methods. (Wirtz et al. 2010) The development of Web 2.0 could be identified as a necessity to the evolution of crowdsourcing. As reaching networks of consumers easily is the key to success, the structure

of Web 2.0 is mandatory for companies to accomplish that. (Kleemann et al. 2008)

According to Lee et al. (2008) Web 2.0 could be described from several points of view:

- Technologically it represents the automated processing of information throughout a computer network, allowing for easily spreading and re-combining these information
- Sociologically it is the enabler for creation of networks consisting of people sharing the same interests
- Economically Web 2.0 enables anyone to create content (user generated content) and upload it.

Table 2 shows a categorization of different crowdsourcing types. This should help to align crowdfunding into its superior paradigm.

Type of Crowdsourcing	Description
Participation of consumers in product development and configuration	Companies ask for comments and suggestions on current and future products
Product design	Companies ask to develop a whole new product from A to Z
Competitive bids on specifically defined tasks or problems	Companies ask to give a solution to unsolved problems
Permanent open calls	Companies ask for any new information or documentation
Community reporting	Same as before apart that the work is done by a known community instead
Product rating by consumers and consumer profiling	Companies ask for product reviews and opinions for other users to see
Customer-to-customer support	Companies ask customers to help other customers and use it for consumer knowledge and product design

Table 2: Different types of crowdsourcing

Source: Author, adapted from Lee et al. 2008

The motivation of companies using the crowd for former internal tasks is mainly driven by the goal of reducing costs. Crowdsourcing, applied in a proper way, reduces the length of product development, creates a better customer acceptance of new products and therefore creates value for the company. In the case of crowdfunding individuals provide requested capital (but not mutually exclusive) instead of non-pecuniary contributions. Crowds are seen at times more efficient than individuals or small teams. (Howe 2008)

The efficiency of crowds in problem solving is driven by its composition – the more diverse it is, the more efficient it can be. Translating Surowiecki's defi-

Archetypes of Crowdfunding Platforms

A Multidimensional Comparison

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