

Individual report: crowdsourcing

1. Introduction:

Crowdsourcing has been a popular method that companies and organizations use to generate their business or accomplish tasks. One of the characteristics of crowdsourcing is that a large number of online users with various knowledge and backgrounds gather for specific tasks. Brabham considers crowdsourcing as a mutual benefit way for task accomplishment, because it helps crowd get fulfillment or economic compensation and bring cost-efficiency and new ideas for crowdsourcers. Thus, crowdsourcing connects large potential labors and crowdsourcers with the help of the Internet.

This report will first provide innovation concepts related to crowdsourcing. Then, give two IT-related cases: Dell IdeaStorm and Mycrowd studio, to explain how crowdsourcing is worked for different purposes. After that, there will be a discussion about the 2 cases, both in similarity and difference. Finally, some recommendations will be given.

2. Crowdsourcing literature:

In 2007, Howe defined crowdsourcing: the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. (Jeff Howe, 2007). Brabham then clarifies some misunderstandings of what is crowdsourcing in his book. He gives 4 commonly considered to be crowdsourcing but technically not crowdsourcing activities, which are summarized in table 1. (Brabham, 2013).

Table 1: Misunderstanding of crowdsourcing

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Concepts/activities	crowdsourcing?	Reason	Example
Open source	No	No top-down management of the project.	Firefox
Commons-Based Peer Production	No	No top-down directive. That work is generated and governed by the community	Wikipedia
Market Research and Brand Engagement	No	Involve too much top-down control and not enough bottom-up creativity.	Pepsi's DEWmocracy
Old concept	No	Do not relies on the technology of the Internet.	Oxford English Dictionary

Therefore, crowdsourcing activities should be managed by crowdsourcers like companies and involved a large number of online community. The conditions that make crowdsourcing possible are both technical and conceptual. The speed, reach, rich capability, and lowered barriers to entry enabled by the Internet and other new media

technologies make crowdsourcing more achievable and profitable. (Brabham, 2013). Brabham put forward four dominant types of crowdsourcing based on the problem they solved. Figure 1 shows the 4 crowdsourcing types clearly:

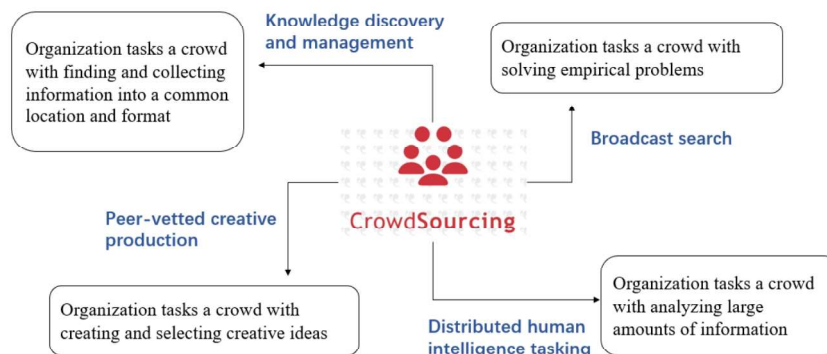


Figure 1: 4 types of crowdsourcing

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Many companies have adopted targeted open innovation for idea generation on online platforms. They build an open platform for their wide users to express their idea for the products. This helps companies save the early stages of resource and allow them to select the best innovation to spend resources on. In turn, the customers get a formal platform to give suggestions and expectations of the product. Therefore, Crowdsourcing enables the idea generation and product innovation.

Another type of crowdsourcing emerged as the increasing demand for software, which is called crowdsourced testing. Crowdsourced testing uses an online platform to assign software test tasks to a group of online testers. (Tao Zhang, Jerry Gao, Jing Cheng, 2017). Latest technologies allow testing tasks be shared with the suitable crowd who are paid for the quality delivered. Crowdsourced testing is cost-effective and efficient, so it is widely implemented among IT companies and developers.

Although crowdsourcing is mutual benefit, implementing crowdsourcing is not an easy task. Brabham gives a typical crowdsourcing process to help firms organize the activities better. Figure 2 reflects the procedure in crowdsourcing according to Brabham's theory. (Brabham, 2013).

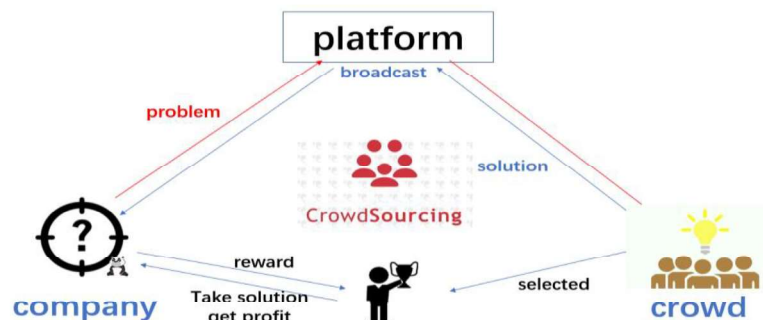


Figure 2: crowdsourcing process *created by Xiaoyun Ma for INFO5992*

3. Case study

Case 1: Dell's IdeaStorm

IdeaStorm is a website launched in 2007 which communicate directly with customers. The original purpose of IdeaStorm is to create an online community where customers can submit ideas to improve company's products and services. After the operation, Dell found that some customers were not well motivated. Thus, they developed the optimized platform that provides opportunities for customers to share ideas and collaborate not only with Dell but also among themselves. (Fernando L. Mompó, 2014). In addition, users can comment on other posts and promote and demote them by voting. This helps Dell select the popular suggestions and requests among massive ideas. (John Qi Dong, Weifang Wu, 2015). By October 18, 2017, over 265,985 ideas, 746,774+ votes, 102982 comments had been submitted by users. Among the submitted ideas, over 550+ have already been implemented. (IdeaStorm, 2017)

With IdeaStorm, Dell responds quickly to users' suggestions and has made various improvements and changes in its products, services, and processes. For example, the most popular suggestions in early days concerned the inclusion of free software and operating systems in Dell computers. Dell quickly knew that customers preferred Linux distributions, and started selling three computer systems with Ubuntu 7.04 preinstalled on 24 May 2007. (John Qi Dong, Weifang Wu, 2015). The IdeaStorm help Dell build a relationship with its customers. Dell found that IdeaStorm members spend more money, purchase more frequently and have a higher value over their lifetime. (Jvaishnav, 2015). Crowdsourcing platform makes Dell get both great ideas and revenue.

Case 2: Mycrowd studio

Mycrowd studio is an extraordinary platform for crowdsourced testing websites and mobile applications. With market need, the new version of mobile apps, landing pages and websites are released all the time which combine thousands of languages, devices, and browsers. This makes testing and bug finding extremely difficult and expensive. Mycrowd QA solves this problem by providing an online on-demand platform with a large community of testers from all over the world. Testers at MyCrowd QA execute test cases quickly and these tests are run on real devices, in a real environment, and by a real user. In addition, MyCrowd customers can save 50%-70% annually through crowd-testing. (Mycrowd QA, 2017). The platform thinks that real people who complete and collaborative can find issue fast. It supports Multilanguage tests as well, that's means foreign languages tests are performed in different countries. (Software testing help, 2017).

Here is the process of the Mycrowd studio work: First, users access Mycrowd website or Web API. Second, users provide mobile devices or website they own. Third, including the instructions and select the target devices or browsers. Fourth, budget setting. Then, the network testers in the platform will start the testing project immediately. Finally, they will produce a detailed bug report including steps reproduce

and the screenshots in few minutes. The figure 3 shows how Mycrowd studio works. (Mycrowd QA, 2017).

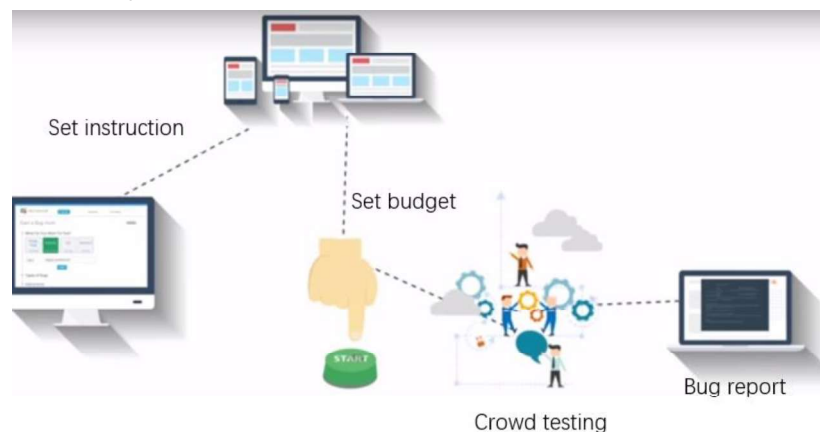


Figure 3: The process of Mycrowd studio

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4. Discussion:

The process of crowdsourcing in IdeaStorm and Mycrowd studio are quite similar. Firms or individuals first set the problem and task on the platform that they want the crowd to solve. Then a large number of crowd submit their ideas or solutions on the platform. During this process, both of them take some measure to monitor. Dell hires its most vocal community critic to become the new IdeaStorm community manager. They help to bridge the customer-company gap. Mycrowd studio creates a system which integrates testers' solutions during the crowdsourced testing time. After that, the company receives the perfect result, and the crowd gets rewards.

Difference between IdeaStorm and Mycrowd

Table 2: Difference between IdeaStorm and Mycrowd

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	IdeaStorm	Mycrowd
Type of crowdsourcing	peer-vetted creative production	broadcast-search approaches
Target crowd	Dell customers	Professional testers
Way of motivation	Points reward	Monetary reward
Idea or solution selection	Voting system, professional team for idea selection	Embrace all solutions, integrate them together

- The type of crowdsourcing

According to Brabham: the peer-vetted creative-production approach, the creative phase of a designed product is opened to a network of Internet users, who send in a flood of submissions, including some superior ideas. (Brabham, 2013). Dell's IdeaStorm encourages plenty of customers or public to share their expectations and suggestions about products, which helps Dell get the popular solutions and user preference. Thus, Dell uses peer-vetted creative production approach for crowdsourcing. In comparison, broadcast-search approaches are oriented toward

finding a single specialist, who probably is outside the direct field of expertise of the problem and who has the time and is able to adapt previous work to produce a solution. (Brabham, 2013). In Mycrowd studio, submitted websites or mobile applications are considered as problems with existing right answers. Online testers with various backgrounds find bugs together to make the perfect testing report and solution for crowdsourcers. The bugs can be counted to the right answers for the problems. Thus, the crowdsourcing type of Mycrowd studio is the broadcast-search approach.

- Target crowd

Though both of them have a clearly defined crowd, they are seeking different kinds of people for task performing. Dell usually seeks new ideas of products so that they can design new products based on users' preferences and requirements. Therefore, the wide customers of Dell are the main crowd on IdeaStorm. By contrast, the scope of crowd Mycrowd studio looking for may be a little smaller than IdeaStorm, because the crowd must be testers who know software testing well.

- Way of motivating crowd

IdeaStorm rewards contributing community members with points. The top 80 points scorers become designated Dell Rock Stars who will be treated as the top tier of community influencers and included in special programs and activities. (Fernando L. Mompó, 2014). Therefore, people engage with crowdsourcing to contribute to a large project of common interest or have fun. However, Mycrowd studio give a monetary reward for those testers after finding bugs. Mycrowd studio asks crowdsourcers for a budget to software testing, then reward participants. Thus, people engage with crowdsourcing to earn money or sharpen their skills.

- Idea or solution selection

Two platforms are using different ways to select the perfect solution among the large number of solutions. Dell uses the voting system to take an initial idea selection. People can support or demote one idea through voting, which helps Dell get the popular ideas. Then, the professional team from Dell will check these solutions seriously based on the company's situation. Finally, they will decide the best selection and give reward points for the providers. By contrast, Mycrowd studio encourages all its online testers to take testing missions, since the more tester involved in testing, the more possible the bugs can be found. Thus, they don't have a particular method for selecting various testing results.

5. Recommendation for future development

The target for two cases in crowdsourcing is different, they may have different business strategies in future development.

For Dell's IdeaStorm, the main purpose of the crowdsourcing platform is idea generation that helps increase revenue and reputation. Thus, Dell is supposed to enhance the speed and quality of idea selection, since only 3% of ideas submitted by the crowd is implemented recently. (Mokter Hossain & K. M. Zahidul Islam, 2015). In

addition, they should establish transparency with users, so they feel assured that their ideas are being heard and given serious consideration.

For Mycrowd studio, as a new start-up crowdsourced testing platform, it is important to increase competitive advantages among its competitors like pay4Bugs and Testbirds. One of the advantages of Mycrowd studio is the speed. Thus, they should emphasize this advantage clearly for the customers. Moreover, provide a monetary reward to motivate testers may not enough in a long-term, so Mycrowd studio must create new ways to attract more participants.

6. Conclusion

More companies realized the power of the crowd, so they developed various measures to gather crowds and utilize their resources or knowledge. Recently, companies are seeking effective ways to manage the large crowd. In addition, many motivation methods also emerged to attract participants. In the future, crowdsourcing can become a pervasive method the companies use for development and innovation.

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