

The visibility of ethics in open innovation platforms

Dimitra Chasanidou, Amela Karahasanović

Dimitra.Chasanidou@sintef.no, Amela.Karahasanovic@sintef.no
SINTEF ICT, P.O. Box 124, Blindern, N-0373, Oslo, Norway

Abstract

Open innovation platforms (OIPs) are applied to service businesses and aim to increase service innovation, by engaging users and encouraging them to submit ideas, share content, and invite others to participate. The employment of OIPs raises several ethical issues, such as fairness, ownership, and privacy. One approach for addressing these issues is to raise the visibility of ethics on the platform. Following a systematic approach, this paper explores the topic of the visibility of ethics in OIPs, by reviewing related ethical issues and evaluating the application of ethics by OIPs in practice. We conclude with reflections on design and suggestions for practitioners. The visibility of ethics is seen as a proactive design state, and we argue that it can both improve service innovation through OIPs, and improve the fairness of relationships between customers and companies.

KEYWORDS: Visibility of ethics, ethics, open innovation platforms, design suggestions

Introduction

Involving customers in the innovation process is of increasing importance in the delivery of new services and creation of radical innovations (von Hippel, 2005; Verma et al., 2012). In a survey by Eurostat, more than 70% of all companies have named customers as the most common source for innovation¹. Companies are attempting to open their innovation processes by employing the involvement of customers and technology platforms. Following this direction, Open Innovation (OI) aims to open up the innovation process of a company and encourage the inflow and outflow of knowledge and information (Chesbrough, 2006; 2013). OI is based on the premise that organizations cannot innovate in isolation, and relates to organizations that engage with different types of collaborators, such as customers, to acquire ideas and resources from the external environment to stay competitive (Dahlander & Gann, 2010; Chesbrough, 2006). One way to achieve customer involvement is by utilizing

¹ http://ec.europa.eu/eurostat/statistics-explained/index.php/Innovation_statistics

methodological framework that seeks to account for human values in a principled and comprehensive way throughout the design process. The framework was developed by Friedman et al. (2008) and is used to guide designers and enable them to systematically address human values, such as privacy and autonomy, throughout the design process. Key features of the framework include its integrative methodology, which gives attention to both direct and indirect stakeholders, and its iterative tripartite methodology, which combines conceptual, technical, and empirical investigations. Friedman et al.'s study concludes with practical suggestions for using VSD.

Many researchers have studied the ethics of a particular domain. In service design, Carlsson (2012) studied the ethical issues following an ethnographic approach, to explore the ethical design ecology of the field. According to Carlsson,

[...] service designers approach ethical problems in an implicit and consequentialist way and that when ethical situations are dealt with explicitly they are often of a nature in which the consequences of the proposed design solution easily can be foreseen. (Carlsson, 2012)

In addition, he discusses the ethical perspectives that can be adopted by designers, for example, sustainability in design. Furthermore, in the field of persuasive computing, Davis (2009) discussed design methods for ethical issues throughout the process of technology design. The methodological frameworks of VSD and Participatory Design were examined in terms of how they can support the analysis of ethics in persuasive technology. Davis (2009) argues that such frameworks support the designer in engaging stakeholders to uncover and address ethical issues in the design of persuasive technology.

Other studies have focused on a particular ethical issue, such as Pagallo (2012), in which the principle of “privacy by design” in technology is discussed. Privacy by design refers to a preventive design, whereby data protection should be viewed as a proactive rather than a reactive term. Pagallo argues that:

[...] privacy by design should encourage people to change their conduct (e.g. with user-friendly interfaces), or limit the effects of harmful behaviour (e.g. with security measures) by strengthening people's rights and broadening the range of their choices. (Pagallo 2012)

Furthermore, it is argued that some relevant problems for data protection hinge on the information revolution and the lack of clear legal boundaries in digital environments.

Ethics and Open Innovation

As a corporate initiative, OI embeds corporate ethics in the technology platform. However, OIPs should be aligned with user and technology ethics as well. In practice, an online OIP typically includes information about the company and their vision, the innovation process, how the customer can participate, the registration process, potential rewards, etc. In order to delineate the ethics for OIPs, we review ethical issues raised by its component parts: the company, users, and technological platform. Ethical issues exist in every field, with many similarities, and they can provide insights for ethics in OIPs.

Ethics related with OIPs include businesses ethics, such as organizational and strategic communication ethics. One example of business ethics concerns organisational innovativeness. A study by Riivari et al. (2012) suggested that three organisational virtues can most effectively enhance organisational innovativeness: congruency of management, discussability, and supportability. Congruency of management depends on managers and the supervisors who clearly act according to the organisation's normative expectations.

The concept of visibility has been addressed in many fields. In social computing, Erickson and Kellogg (2000) defined visibility within the context of “social translucence,” as “*the degree to which socially-significant information is made visible in the system*”. They also described the concept of “social translucence” as an approach for “designing systems to support communication and collaboration among large groups of people over computer networks” (Erickson and Kellogg, 2000). Social translucence concerns ways to build social technologies that support social life, where online social behaviour should become visible to facilitate awareness, ultimately creating social spaces (Erickson and Kellogg, 2000). Additionally, another relevant term for ethics in OIPs is “transparency,” which is employed in different ways. In information technology, Turilli & Floridi (2009) studied the ethics of information transparency and argued that “transparency is not an ethical principle in itself but a proethical condition.” In other fields, such as in collaborative networks, transparency refers to “shared rules, roles and responsibilities” (Grodzinsky et al., 2003), while in the media and communication fields, transparency is defined as the “revelation of someone’s identity” (Franke et al., 2013). Finally, in information systems, McBride (2014) referred to transparency as “the extent to which the derivation of content and process in an information system is made clear.”

Adopting the perspective of Erickson and Kellogg (2000), in this paper the term “visibility of ethics” will refer to “*the degree to which ethics that are socially significant, is made visible in an OIP.*” Socially-significant ethics in OIPs can be the common ethics for a company, company associates, and a technology platform itself. Three additional dimensions can further define the visibility of ethics-related information in OIPs: context, location, and time. The first dimension refers to “which” context an ethical issue relates, for instance, in an idea submission phase, in communication with a customer, etc. Location refers to “where” the information is displayed, such as at the main page, secondary menu, external link, etc. The time refers to “when” the information is revealed, for instance, before the innovation call, after the idea submission, etc. Using an example of a customer who visits the online OIP to participate in an innovation call, the customer goes through the idea submission process, the customer submits an idea in the submission form (context), and afterwards, a business ethics-related document (“terms and conditions”) regarding the innovation process is revealed in the last step (location), after the customer has already described his idea (time).

Emerging ethical themes

To summarize this section on related work, ethics in design are mainly discussed in a specific area, with limited focus on providing design guidelines and limited generalizability to other fields. Ethics from relevant areas provide a general view on what the ethics of OIPs might encompass. The ethical issues discussed in this section can be categorized as, but are not limited to, one of four emerging themes. The themes refer to the content of online OIPs:

User data protection refers to the content that concerns the protection of user information in OIPs, i.e., how the company will collect, treat, or share the user data. Privacy, security, ownership, and intellectual property are some examples of ethics for this theme.

User motivation refers to the content that can provide a motivation for users to utilize an OIP, i.e., rewards for user contribution. Examples of ethical issues include remuneration, autonomy, visibility, collaboration, and free expression.

Justification of the company’s values refers to the content that reflects a company’s ethics in an OIP, e.g., a description of a company’s profile and potential impact on society. Examples of ethical issues include trust, stakeholder management, and responsibility.

Dimensions Themes	Context	Location	Time	Activities in OIPs
User data protection	In the submission process> terms & conditions (Philips ²)	Menu: Our approach> terms & condition (AkzoNobel ²)	Always visible in a menu (Unilever ²)	Check weblinks, related documents, submission process
User motivation	In Welcome page>Lists with submissions (Starbucks ²)	Main page>Open Campaign (Statoil ²)	Under menu “How it works”>Prizes & rewards (LEGO ²)	Check pages, menus, images, related documents
Justification of the company’s values	Vision for innovation (Beiersdorf ²)	Main menu>About Co-creation Lab (BMW ²)	Always visible in a menu “Why Choose Pearlfinder” (Beiersdorf ²)	Check company profile, menus, related documents
Feedback to users	Communication with users>Browse Directory (P&G ²)	Main menu> Read our blog (Dell ²)	Always visible in a menu: “Corporate information”>Contact us (Starbucks)	Check contact options, submission forms

Table 1: Example of content analysis, with notes from all OIPs.

Justification of the company’s ethics and values was communicated through the description of a company’s profile (e.g., BMW’s OIP has a link “About Co-creation Lab”), activities such as current trends in innovation (e.g., Dell’s OIP main page has a list of “trending ideas”), corporate responsibility (e.g., Dell’s OIP includes one link for “Corporate responsibility”), justification of the innovation process with an implementation plan (e.g., Starbuck’s OIP includes in the main page one section called “Ideas in Action”), future activities (e.g., LEGO provides an overview of how their innovation process works, with options such as “Project guidelines,” “Review periods,” and “Acceptable project content”).

Feedback to the users is addressed through communication channels, such as contact forms (e.g., AkzoNobel’s OIP provides contact options for specific company departments). In addition, feedback can be addressed through comments, for example in the evaluation process for user submissions (e.g., Starbuck’s OIP users can comment on ideas and vote for them), discussion communities (e.g., BMW’s OIP filters user characteristics and preferences in order to categorize them into suitable discussion and co-creation groups), blogs (e.g., LEGO’s OIP has a blog with posts regarding interviews from creators, process deadlines, and other news), and social media (e.g., AkzoNobel’s OIP has a link to follow the company on online media channels, such as Twitter, Facebook, YouTube, and others).

To summarize our results, the four emerging themes have been addressed in the examined sample of OIPs in various ways, and we found that the visibility of their ethics varies more in context than in location and time.

² See Philips: www.simplyinnovate.philips.com/index.php, AkzoNobel: www.akzonobel.com/openinnovation/, Unilever: <https://oiportal.yet2.com/>, Starbucks: <http://mystarbucksidea.force.com/>, Statoil: <http://innovate.statoil.com/pages/default.aspx>, LEGO: <https://ideas.lego.com/>, Beiersdorf: <http://pearlfinder.beiersdorf.com/about-pearlfinder>, BMW: www.bmwgroup-cocreationlab.com/home, P&G: <http://www.pgconnectdevelop.com/>, Dell: <http://www.ideastorm.com/>

Beiersdorf platform uses a smart way to keep the user focused on the overview of the project details, and also provides information on demand with wrapped text (Fig.1, C). In addition, many platforms use various means to highlight text, especially with long legal documents. A similar example is LEGO's platform, which presents content using readable text formatting (Fig.1, D).

User motivation

Motivations for users: Provide clear motivations in the main page for users to participate.

A driving factor for the success of an OIP is user motivation. Various motivations are addressed to captivate the interest of users. Monetary rewards delivered after an idea is adopted, such as in LEGO's innovation process, will gain the attention of other users. Very few OIPs use monetary rewards, and they strive for intrinsic user motivation. The OIPs primarily rely on a call for innovation, sometimes in the form of a question in the main page. In addition, the use of gamification elements, for example in Dell's, LEGO's, and Starbucks' platforms, provide a more visible motivation for users.

Suggestions for designers:

- a) Organize a call for innovation.
- b) Provide incentive mechanisms, monetary or non-monetary, in a visible position.
- c) Provide an easy submission process for users.
- d) Gamify the process through the use of various gamification elements.

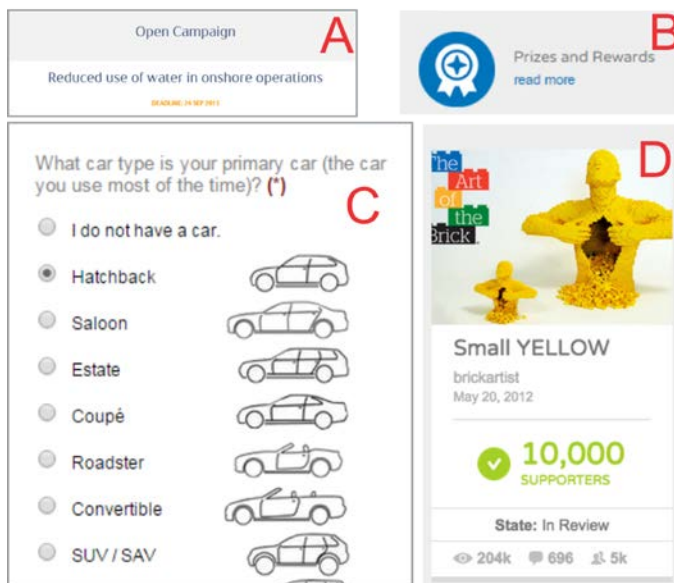


Figure 2: Screenshots of OIPs from Statoil (A), LEGO (B), BMW (C), and LEGO (D).

Examples: Statoil's OIP communicates in the main page a call for their open campaign, with limited time for user participation (Fig.2, A). In a central position in the main page, the call is visible immediately. On the other hand, the area for "Prizes and rewards" in LEGO's platform is organized in a separate section, although it is not visible from the beginning because of its position under a menu item (Fig.2, B). Furthermore, an easy submission process, such as in Starbucks' OIP, could be a motivation for users. BMW's platform utilizes a welcoming form for filtering user characteristics (Fig.2, C), and provides an easy

providing information on how the company progresses through user-developed ideas (Fig.3, D).

Feedback to Users

Communication with the users: Support communication channels with the users.

User communication through the company’s OIP should be supported before, during, and after the submission process. Usually, OIPs include general contact details, but a more targeted communication channel is needed. Along with a dedicated group who work on the innovation process or the call for innovation, it should be visible how, when, and who the users should contact for direct communication with the company.

Suggestions for designers:

- a) Support user feedback throughout the idea submission process.
- b) Keep the user informed about the current state of his/her submissions and the innovation process.
- c) Provide communication channels among users, such as contact forms, blogs, discussion communities, or similar.
- d) Provide an “FAQ” section with common user issues.

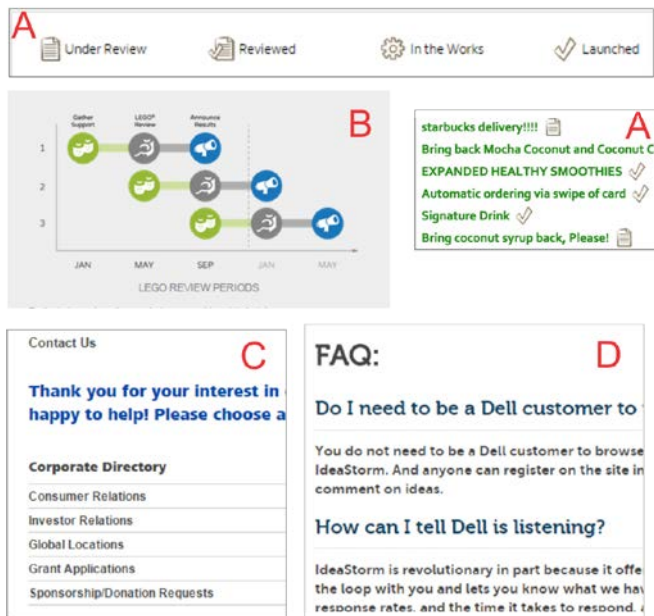


Figure 4: Screenshots from Starbucks (A), LEGO (B), P&G (C), and Dell (D).

Examples: LEGO’s platform provides descriptions of the review phases, keeping the user informed about his submissions (Fig.4, A). Also, during the submission phase, there is dialogue with the user in case of any incompatibility with the submissions in LEGO’s OIP. Thus the user can improve the ideas and submit them again. The Starbucks platform uses different icons to visualize the current state of each submission, and provides a message informing the user about the current stages in the idea-submission process (Fig.4, B). The P&G platform provides various options for user communication, such as choosing from a corporate directory (Fig.4, C). Lastly, the Dell platform (Fig.4, D) provides a list of Frequently Asked Questions (FAQ) for further support of the users.

Conclusion

The visibility of ethics in OIPs serves to raise awareness of issues important for the fair treatment of users in innovation processes. Because the success of these platforms depends on customer participation, we argue that more attention should be paid to the design of OIPs. By addressing ethical issues in OIPs, such as user data protection, user motivation, justification of the company's values, feedback to the users, and other issues, companies can design for the visibility of ethics as one way to engage user participation. Our results indicate that the visibility of ethics can be improved in OIPs, in order to better facilitate customer participation on a large scale. However, ethics need to be clearly communicated with explicit design. First, the selection of "socially significant" ethics for an OIP needs to be decided upon and clearly communicated to customers. Our reflections on design for OIPs can help to address the visibility of ethics, in connection with other design guidelines, although this is only one approach to the ethical treatment of customers. We also encourage researchers to apply design suggestions from other areas, such as in digital service design, and to invite users or HCI experts for evaluation. Furthermore, interaction designers and platform designers can also use the design suggestions. The application of design suggestions in similar types of platforms needs to be studied as well.

The study had a number of limitations. The research area of ethics is very broad, and we therefore selected representative studies to review, while trying to treat ethics in OIPs in a holistic way for the customer, company, and platform perspectives. The heterogeneity of the studies and definitions of ethics, and their many conceptual levels, was a barrier for the literature review, and we focused only on the studies with clear formulation of ethical issues. From these, we extracted four general themes of ethics. In addition, the use of the content analysis method was an insightful way to gain understanding both for the application of ethics and their visibility. However, a long-term commitment to and active participation in those platforms, probably with an ethnographic study (e.g., netnography), are needed in order to examine in depth the ethical issues. Additionally, a larger number of OIPs would provide rich examples of design practices. Future work includes the application and evaluation of the design suggestions in various OIPs, and the utilization of other methodologies for the evaluation and long-term studies of ethical issues, with both HCI experts and users, as part of an iterative design process.

We believe that ethical issues should not be seen as constraints for customers or general users that limit participation in OIPs. Design for visibility is considered a proactive state that can support the ethical treatment of customers and engage the customers. Companies should communicate their socially-significant ethics and make them visible. Socially-significant ethics in OIPs can be the common ethics for the company, company associates, and technology platform itself. We argue that designing for the visibility of ethics can improve service innovation through OIPs, and promote fairness in customer engagement with companies.

Acknowledgments

This research is funded by the Norwegian Research Council through the Centre for Service Innovation (csi.nhh.no).

References

- Carlsson, B. (2012). The Ethical Ecology of Service Design – An Explorative Study on Ethics in User Research for Service Design. *Proceedings of ServDes 2012*. Helsinki, Finland.
- Chesbrough, H. (2006). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston: Harvard Business School Press.
- Chesbrough, H. (2011). Bringing open innovation to services. *MIT Sloan Management Review*, Winter 2011.
- Chesbrough, H. (2013). *Open business models: How to thrive in the new Innovation Landscape*. Boston: Harvard Business School Press.
- Dahlander, L., & Gann, D.M. (2010). How open is innovation? *Research Policy*, Vol. 39 No. 6, pp. 699-709.
- Davis, J. (2009). Design methods for ethical persuasive computing. *Proceedings of the 4th International Conference on Persuasive Technology - Persuasive '09*. Article No. 6. Claremont, CA.
- Dolmaya, J. M. (2011). The ethics of crowdsourcing. *Linguistica Antverpiensia*, Vol. 10, pp. 97-111.
- Erickson, T., & Kellogg, W.A. (2000). Social translucence: an approach to designing systems that support social processes. *ACM Transactions on Computer-Human Interaction*, Vol. 7 No. 1, pp. 59-83.
- Franke, N., Keinz, P., & Klausberger, K. (2013). Does This Sound Like a Fair Deal?: Antecedents and Consequences of Fairness Expectations in the Individual's Decision to Participate in Firm Innovation. *Organization Science*, Vol. 24 No. 5, pp. 1495-1516.
- Friedman, B., Kahn, P.H., & Borning, A. (2008). Value Sensitive Design and information systems: Three case studies. In *Human-Computer Interaction and Management Information Systems: Foundations*. Armonk, NY: M.E. Sharpe.
- Fortner, R. S., & Fackler, P. M. (2011). *The Handbook of Global Communication and Media Ethics*. (Vol. 1-2, pp. 1-1002). Hoboken, NJ: Wiley-Blackwell.
- Følstad, A. (2008). Living Labs for Innovation and Development of Communication Technology: A Literature Review. *The Electronic Journal for Virtual Organisations and Networks* Vol 10, pp. 99-131.
- Grodzinsky, F.S., Miller, K., & Wolf, M.J. (2003). Ethical issues in open source software. *Journal of Information, Communication and Ethics in Society*, Vol. 1 No. 4, pp. 193-205.
- McBride, N.K. (2014). ACTIVE ethics: an information systems ethics for the internet age. *Journal of Information, Communication and Ethics in Society*, Vol. 12 No. 1, pp. 21-44.
- McManus John, (2011). Revisiting ethics in strategic management. *Corporate Governance: The international journal of business in society*, Vol. 11 No. 2, pp. 214-223.
- Pagallo, U. (2012). On the Principle of Privacy by Design and its Limits: Technology, Ethics and the Rule of Law. In *European Data Protection: In Good Health?*. pp. 331-346.
- Riivari, E., Lamsa, A., Kujala, J., & Heiskanen, E. (2012). The ethical culture of organisations and organisational innovativeness. *European Journal of Innovation Management*, Vol. 15 No. 3, pp. 310-331.
- Sainz, J.F. (2012). Emerging Ethical Issues in Living Labs. *Ramon Llull Journal of Applied Ethics*, Vol. 3 No. 3, pp. 47-62.
- Turilli, M., & Floridi, L. (2009). The ethics of information transparency. *Ethics and Information Technology*, Vol. 11 No. 2, pp. 105-112.
- Verma, R., A., Gustafsson, A., Kristensson, P., & Witell, L. (2012). Customer co-creation in service innovation: a matter of communication? *Journal of Service Management*, Vol. 23 No. 3, pp. 311-327.
- von Hippel, E. (2005). *Democratizing Innovation*. Cambridge: MIT Press.