P2Pvalue – Techno-social platform for sustainable models and value generation in commons-based peer production in the Future Internet

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Guidelines on design settings

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Project objectives

The project's objectives are:

- Development of a software platform
  - Understand, experiment with, design and build a collective intelligence techno-social federated collaborative platform that will foster the sustainability of communities of collaborative production.
  - Deploy several customised nodes of the federated platform in which real-world communities will interact, participate, and collaboratively create content
- Theory and Policy
  - Develop CBPP theory, based on multidisciplinary and multi-method research on CBPP, and determine the factors for success, productivity, and resilience in communities ("best practices").
  - Develop a set of value metrics and reward mechanisms that incentivise the participation of citizens in CBPP.
  - Simulate the new sustainability models proposed, showing how robust they are in the face of diverse community conditions.
  - Verify the compatibility of the proposed models with innovation policies and provide a series of policy recommendations for public administrations to encourage CBPP-driven social innovation.
- Data and Resources
  - Provide a directory of existing CBPP communities, together with their main characteristics.
  - Maintain an open web-based CBPP archive, with the collected data-sets, surveys, reports, Open Educational Resources and open-access publications, freely available to other researchers and third-parties under an open copyleft license. This includes a project public repository with all code available as free/open source.

Executive Summary

This document presents a series of design guidelines concerning the proposed features, requirements and specifications for CBPP software platforms that could be integrated into the P2Pvalue platform.

Guidelines have been subdivided in the following categories:

- The platform should allow users to "fork" or "replicate" and "derive" content into a new project.

1. 6. Decision making with regard to community interaction

- The platform should provide tools for differentiated decision making (assemblies, voting systems)

1. 7. Socialization & collaboration

- P2Pvalue should integrate collaborative tools, allowing for content aggregation and co-creation.
- Include mechanisms such as "feature request" tracker, "comments" or "reviews" mechanisms.
- Include features facilitating the assignment of tasks and roles to members.

1. 8. Knowledge sharing

- P2Pvalue platform could implement MOOC support, for seminars and training sessions.

1. 9. Bridging the online and the offline world

- The platform should support the representation/integration of commons produced online & offline

2. Legal Regime

2. 1. Legal certainty

- The platform should be released under a free license, preferably the Affero General Public License.
- The platform should also require contributors to release their work/data under an open license.

2. 2. License choice

- The platform should allow users to choose between different licenses to release their contents.
- The licenses that users can choose from should cover the main copyleft and free/open licenses.

2. 3. Accommodating diversity

- It should provide a licensing guide to help users select the most appropriate license for their case.
- A policy should provided to manage cases that want to combine free and exclusive licensing option.

3. Economic Model

3. 1. Capturing value

- The platform should provide ways of capturing value in different ways depending on the user.

3. 2. System of rewards and strategies of sustainability

- The platform should allow for different modes of sharing and collaborating within the community.
- The platform should allow for monetary strategies, voluntary work and other kinds of donations.
- Sustainability of the platform requires implementing a system to define, manage and realize tasks.

3. 3. Commons-based mutualisation

- The platform should also allow to track the monetary value generated in the market exchange.
- It should redistribute monetary gains to community members based on their contribution.

4. Systemic value

4. 1. Integration and interoperability

- P2Pvalue platform should be designed according to principles of openness and interoperability
- The platform should allow users to integrate value metrics from external platforms.
- Although reliance on corporate platforms as the main external indicators of value is problematic.

4. 2. Task-oriented collaboration

- Implement a number of task-oriented collaborative tools integrating different existing services

5. Reputation

5. 1. Twitter integration

- Users and groups should be able to add their Twitter account to their profile on the platform.

5. 2. Internal reputation metric

- Develop a sort of 'CBPP internal reputation metric' that integrates a wide variety of value horizons.

5. 3. Data visualization

- Display the overlap between the 'values' associated with a community and the CBPP ecosystem.

Contents

Introduction

This Deliverable 1.2 presents a series of design guidelines concerning the proposed features, requirements and specifications for CBPP software platforms that could be integrated into the P2Pvalue platform. The objective is to help the platform development team by identifying the features that would be the most useful to fulfill the needs of CBPP community members in terms of value creation and production, as well as to ensure the long-term sustainability of these communities. To do so, the proposed guidelines highlight important design consideration for software development in the following categories:

- Technical features
- Legal Regime
- Economic Model
- Systemic value
- Reputation

The guidelines are organised as simple recommendations to be considered in WP2 for the implementation of the P2Pvalue platform. They identify the most appropriate infrastructure design, technical features, governance model, sustainability strategy, value metrics and reward mechanisms that might be implemented into the platform in order to encourage or discourage specific type of value creation.

The deliverable 1.2 builds upon the quantitative and qualitative analysis of CBPP cases part of WP1. It includes the research tasks:

- Task 1.1 (statistical analysis)
- Task 1.2 (case studies)

- Task 1.3 (digital ethnographies)
- Task 1.4 (survey to participants)

Deliverable 1.3. of WP1 provide a detailed presentation of the researchers developed and the research results. While Deliverable 1.1 provides the datasets produced by the research.

Based on the findings and insights stemming from such research, each partner provided a set of design guidelines on how to maximize the generation of "value" based on their own dimension of value (social/relational/community value; use value; monetary value; ecological value; reputation; etc.) and perspective (individual, community or societal layer).

This documents aggregates the recommendations derived from previous empirical and theoretical research, and evaluates them against the theoretical synthesis that resulted from Deliverable 1.2 to ultimately come up with a set of concrete elements and guidelines that would inform developers during the design of the P2Pvalue platform.

In addition to the proposed software features that could be incorporated into P2Pvalue platform, the document also provides suggestions for the implementation of different governance models aimed at supporting participation and peer-to-peer collaboration. The technical feasibility of the proposed features will subsequently be assessed by the development team of the Universidad Complutense de Madrid, whereas the CNRS will be in charge of assessing each one of these recommendations for consistency with the law, and with the fundamental principles and values shared amongst different CBPP communities, such as individual autonomy, equality, solidarity, commitment to openness, privacy, freedom of expression, etc.

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UAB is the institutional responsible for WP1 coordination and the three deliverables. CNRS has coordinated the preparation of this Deliverable 1.2 on design guidelines.

This deliverable is currently only a preliminary assessment of possible design guidelines to inform the future development of the P2Pvalue platform. All results presented here need to be understood as initial hypotheses, to be further refined through collaborative work on larger data sets.

1. Technical features

Design guidelines from the statistical analysis (Task 1.1)

The following guidelines for the design of the P2Pvalue platform are a selection of insights extracted from our observations and initial elaborations.
Results have been used to suggest features either because a functionality can be seen as typical and accommodative of CBPP practices or because data can encourage the undertaking about an innovative and distinctive feature.
In our focus, we have been privileging the options that shape the initial design of the P2Pvalue platform, that are, in particular to provide a privacy-aware platform based on a decentralised architecture and supported with an internal system of recognition and reward of the contributions.
A special emphasis is also put on the necessity of accommodating diversity in CBPP settings, through modularity and self-selection, and about designing protocols that facilitate the integration with functionalities provided by external platforms.
More and more detailed suggestions are included in the summary of findings of the executive report of task 1.1 in Deliverable 1.2.

A first remark is needed about the combination of the three main objectives of the P2Pvalue platform. While a design that privileges privacy can possibly well combine with a decentralized architecture, it is important to be aware that both these features - privacy and decentralized architecture – can make more complex and difficult the design and implementation of value metrics: both as internal systems of recognition and rewards and as external indicators of value.

P2Pvalue platform design should address this challenge. From one side, this means to look for solutions able to combine a design that respects the right to privacy with the need, for the implementation of value metrics, of transparency, publicity and attributability of the data. From the other side, this means to search for strategies to assess value generation in more decentralized, distributed settings and across more diffused flows. (See more about this, in the guidelines on privacy and decentralized architecture).

1. 1. Privacy and encryption

Data provide evidence of a growing awareness about the critical value and the social demand of such features.

58% of the cases has a privacy policy specified. However 42% doesn’t have such policy specified.

In 79% of the cases, users have some kind of control over their profile. In 35,1% of the cases, users can decide if their profile is public to anyone or if it is restricted to a subset of users. In 26,8%, instead, users can only delete their profile. Still in 21% of the cases users do not have any control on their profile.

Most platforms (71%) allow their users to access and modify their data. However, since this appears as a basic freedom of users, it is remarkable that in 20% of the cases there is no possibility at all to even access personal data. It could reflect either an obsolescence of the technical and social

arrangements of the platforms or rather the more recent eagerness of accumulation of personal data as source of value.
Encryption is more common than expected. According to the Survey, 35% of cases apply encryption to protect the users communication by default and another 22,5% allows encryption.

A detailed privacy policy should be designed and included in the P2Pvalue platform.

P2Pvalue platform should permit the option to participate anonymously (possibly with a personal user account but without putting any personal data).

Ideally, encryption by default - or easily implementable by non-technical users - should be provided for communication between users and with the platform. Personal data, including personal files, should be encrypted in such way that only the user can access it. The encryption of group files should be an option.

As noted, privacy settings can compromise the possibility or render more complex the design and implementation of internal systems of recognition and reward. In the conciliation of these two objectives of the P2Pvalue platform lies one of the main challenges that the design of the platform has to face. However, in case of doubt, we recommend as rule of thumb to let the user choose through his/her privacy and profile settings.

Self-management of privacy settings should be more in general the policy applied. Users should be able to: 1) access and modify their data, including the complete deletion of their profile; 2) also users should have the option to

completely delete any personal files they may have uploaded to the server. Moreover, users should be able to: 3) choose which data they share; 4) and to decide with which groups of friends/contacts/followers.

1. 2. Decentralized architecture

Regarding the type of infrastructure architecture, the most common option - almost half of the cases - is an architecture centralized but reproducible (45,4% of cases have FLOSS platforms). The second most common is an architecture centralized not reproducible (32,1% of the cases have one central proprietary server). The other three, more decentralized options are very infrequent: the option of several communities with their own node centralized in one entrance point is applied in 2,6% of the cases; the federated option in the 3,3%; and the Peer-to-peer architecture in the 5% of the cases.

Thus, the more centralized options of infrastructure architecture are largely the major part of the sample. The fact that not many platforms adopt decentralized architecture can reflect the still existing technical difficulties around such architectures. However, it also could be a consequence of the privileged option of centralization followed by the platform providers (and another indicator of the increasing value attributed to the collection of users data).

To build the P2Pvalue platform on a decentralized – federated – architecture can pose important technical challenges. However it would also be a distinctive and innovative feature of the platform, that meets an increasing unsatisfied demand.

As noted, like privacy, also decentralization in the infrastructure architecture can make more complex and difficult the design and implementation of value

metrics. This is true for the design of effective and reliable internal systems of recognition and rewards of the contributions. Likewise, it makes the application of external indicators of the social and reputational value of the communities engaged in CBPP more difficult. As we observed, in fact, the external indicators of value that we applied, fail to effectively recognize the value produced by more decentralized communities, within which the generated value flows tend to get closer to what we have defined as "ecological value", for which, we did not find effective indicators. Yet, this is a challenge that future research and development of the P2Pvalue platform should address: looking for strategies to assess value generation in more distributed settings and more diffused ("ecological") flows.

1. 3. Flexible and modular settings.

According to the Index of openness the most common (according to the moda=5 and the mean=4 for a maximum of 9) among the cases is to have half of the indicators considered. This suggests there is a quite high level of adoption of mechanisms to render the site open to contributions, but also that there might be a high variety of functionalities of openness adopted. In other words, the cases are diverse in the way they are open.

Such a variety applies to openness as well as to many other organizational features in CBPP. Similarly, for example, it can be observed in legal forms and in licenses and in strategies for sustainability (see below). Furthermore, the same plurality sometimes is observed within the same community, along time and depending on project ad-hoc arrangements.

This suggests P2Pvalue platform should be designed as an environment able to host a diverse and dynamic population of projects. Thus, we recommend that P2Pvalue platform provide flexible and modular settings, that could allow ad hoc negotiated and self-determined configurations in organization, legal policies, system of recognition and reward, and so on.

1. 4. Combining freedoms of participation and hierarchies

Regarding policy of participation, the most "free" option is highly the most common: 70,9% of cases allow automatic participation and publication without filters. However, the rest (29%) is based on moderated participation. According to the Index of freedom, CBPP is characterized by a high degree of freedom among the participants: 77,2% of the cases have at least two of the three indicators of freedom adopted in the analysis (registration policy, participation policy, and user profile policy). This has not changed over time. At the same time, at CBPP, ¨hierarchies¨ are very frequent and 88,8% of cases have different types of account/role with diverse levels of permission.

A system with low barriers to entry and providing to participants a rich range of "freedoms of contribution" and room for self-determined actions fits more with the characteristics of CBPP. Automatic registration and some forms of publication without filters should be allowed to users, without that excluding the possibility of moderation on certain layers or distributed versions of the CBPP. (More insights about how to combine these two distinct requirements, are provided in the guidelines on "forkability").

Different types of roles may exist, such as group operator and node administrator, according to the needs of the management of the platform and of the individual projects developed on the top of it.

1. 5. "Forkability"

From the cases we know both licenses (only 62,6% of the sample), 52,9% of the cases are "forkable", meaning that both the software and the content has

a free license. 41,3% has or the software or the content license free. Only 2,1% of the cases have both a proprietary software and content license.

The platform should allow users to "fork" or "replicate" and "derive" content (insofar its license permits it) into a copy or fork, and continue that as s/he desires. Ideally forks can be merged back into the main branch (or any other for that purpose). As forking can be complex for users to follow, a suitable visualization of branches should be included, such as for example at Github.

1. 6. Decision making with regard to community interaction

According to the Survey, the 64,7% of the cases have decision making systems in place at the community, while 35,3% does not have them.

Though we cannot at this stage draw any linear conclusion from the results, we tend to privilege the hypothesis that the presence of some kind of decision making system improves the productivity of the communities. In any case, to provide tools for differentiated decision making systems, would be an interesting and quite innovative feature (e.g. one functionality for the organization of assemblies, supplemented with one or different voting systems).

Design guidelines from the survey to participants in CBPP cases (Task 1.4)

1. 7. Socialization & collaboration

Over 60% of the respondents described collaboration as a key component of the commons. Different activities such as socializing, working on projects, helping others had all high scores from the respondents. The platform should

facilitate content sharing and provide tools to socialize. In this sense, fostering interaction between members that are weakly related (even allowing unexpected connections between members) would facilitate the socialization of different users.

Thus, the platform should integrate collaborative tools, allowing for both the aggregation of different contents and the co-creation of new content, including (but not limited to):

- Synchronous communication (possibly with different channels for different activities)
    - Video and voice communication [e.g. integration with chab.org]
    - Collective / Private text-based chat: like jabber / irc
- Asynchronous communication: e.g. messaging (emails), forums (usenet), mailing-list, etc.
- Text-editing tools: Wiki, Etherpad, Gdocs, or other collaborative editing tools
- Task management: Calendar, TODO, Tickets, Task-assignments, deadline, milestones..
- Polls / surveys to engage users & facilitate administration/governance: e.g. limesurvey

The platform should incorporate specific mechanisms such as "feature request" tracker, as well as "comments" or "reviews" mechanism, encouraging community members to share ideas and inspirations that will hopefully become part of the end product.

Features facilitating the assignment of tasks and roles to members might also benefit the coordination of activities and the management of the project.

1. 8. Knowledge sharing

Learning and knowledge sharing were observed as the key motivations for participation. The platform should facilitate free knowledge sharing by

featuring tools that easily offer the option to share. The option to share openly all generated content could, perhaps, even be the default option.
The tool could also implement MOOC support: seminars and training sessions where the experts in the community can guide the newbies.

- Integrate a Moodle plugin for lectures
- Rotisserie: interface for online discussion, to support self-managed seminars after the lecture, See Harvard instructions
- Implement a system to assign mentors and mentees

The cross-pollination of knowledge bases and the mixing of different profiles would benefit on the community's creativity and innovative capacity.

1. 9. Bridging the online and the offline world

A large part of the respondents in the survey responded that the nature of the commons is both online and offline. One of the challenges of the platform will be to deal with the collective-generated output that is not digitally-supported. The platform should take in consideration that interaction is often offline, especially in local communities, and offer features to help to coordinate localized types of interaction. It is also worth noting that even if the output is physical, part of the knowledge can be codified digitally.In this regard, the platform should facilitate not only the representation, but also the integration of commons produced online and offline within a single platform, by means of, e.g.:

- a mechanisms for sharing multimedia content that describes physical commons;
- an evaluation system that properly account for the value of physical commons;

2. Legal regime

2. 1. Legal certainty

From a legal perspective, it is important to ensure that none of the content produced / uploaded on the platform is infringing. To the extent that the platform is provided on a centralized server (the Wikipedia model), it should therefore include detailed Terms of Use, and/or a mention during sign-up for contributors to release their work/data under an open license.

2. 2. License choice

While over 60% of the respondents believe that the output of the commons activity have a value in the market, a large number of respondents described that the commercialization of the commons by third parties would reduce their motivation to contribute. The platform should consider all possible options to allow or impede commercialization by the community, some members, or third parties according to some pre-established and agreed rules.

The platform should also allow the use of diverse licenses to the use of the contents and ensure the effective application of them, by providing guidance mechanism to help users choose between different licensing schemes based on the interests of the commoners involved in the project

c.f. Open Licensing Guidelines (adapted from Lapsi deliverable)

The Creative Commons licenses are a set of standard public copyright licenses which have been tested in several courts and can be considered as legally valid and robust agreements. They come with a set of machine-readable metadata in open formats which make it easier to mark content with the license and additional information such as attribution, and to discover content with search engines like Google. The Open Knowledge Foundation has developed several similar licenses for databases.

- *The most liberal licensing option is to release content into the public domain by waiving your copyright and related rights by dedicating the PSI to the public domain. For that purpose, you can use the CC0 (read "CC Zero") Public Domain Dedication. The Open Data Commons Public Domain Dedication and Licence (PDDL) is an equivalent tool for dedicating works to the public domain. Then, anybody will be able to perform any activity with your work without asking for permission or paying a remuneration.*
- *The second most liberal licensing options have been identified by the Open Definition, which include the following licenses:*
    - *Creative Commons Attribution, requesting only the reuser to attribute you and authorising them to alter the content and even to sell it*
    - *Creative Commons Attribution Share Alike license, which seeks to maintain the future derivatives of the work in the commons by asking the release them under the same license which will authorise copying and redistribution, even for commercial purposes. However, these licences raise interoperability issues and are difficult to enforce if the re-user wants to aggregate or mine a large amount of other datasets submitted under different licences.*
- *For those willing to maintain a certain level of control, it is possible to use non-free licenses :*
    - *No-Derivatives licenses prevent the creation of derivative works, but have the potential to to make translations or data mining or repurposing of content difficult as permission will be needed.*
    - *Licences that contain a NonCommercial clause will forbid a large number of uses without reusers asking for permission of the author who can request the payment of a fee. The drawback are difficulties of enforcement and conflicting interpretations in the NonCommercial term itself, see Creative Commons Defining*

NonCommercial Report). Charging for some usages will require someone to manage the authorisation requests and the licensing for commercial use, which royalties may be inferior to the processing costs. They will require a side-contract with the potential commercial re-users.

2. 3. Accommodating diversity

General Public License (GPL) (18,9%) and CC BY-SA (18%) are among the most frequent licenses in the sample. Then, BSD/MIT/Apache License, Lesser GNU Public License (11,9%), and CC BY (10,2%). Additionally, of all cases at least 48% includes a copyleft (or "share alike") clause in the license, i.e. it requires users to continue applying the same license conditions down the stream. However, the 18,4% of the cases applies copyright (all right reserved), that is a combination of proprietary and closed conditions of usage.

It is recommended to provide a licensing guide to help communities and users select the most appropriate license for their case.

However redundant it may seem, a foundational design guideline is the publication of the platform software under a free license, preferably the Affero General Public License, which is in particular suitable to protect the software freedom of web applications. Furthermore the development of the software should take place in an open process.

Communities should be able to choose the license under which they prefer to build their digital commons resource. While the exact license is into some extent sector-specific (software communities tend to use free software

licenses, hardware communities open hardware licenses, etc), the licenses to be included by default in the license selector should cover the main copyleft and permissive free licenses. A preliminary list to be included would be:

Software:

- General Public License (GPL)
- Affero Public License (AGPL)
- Lesser General Public License (LGPL)
- BSD License
- MIT License
- Mozilla Public License

Hardware:

- TAPR Open Hardware License
- CERN Open Hardware License

Data:

- CC0 Public Domain Dedication

Content or other:

- GNU Free Documentation License (FDL)
- Creative Commons BY-SA
- Creative Commons BY
- Cooperative non-profit protection:
- Peer Production License

Other: users can request the inclusion of another license

While privileging and facilitating the adoption and flexible use of free licenses should be the distinctive default option of the P2Pvalue platform, a policy should be studied and provided to manage cases that want to combine free and exclusive licensing options (such as all-rights-reserved).

3. Economic model

3. 1. Capturing value

Issues related to the monetization of the created output and monetary compensations are not normally appreciated by CBPP community members. The platform should take in consideration this fact in order to avoid feelings of economic exploitation of the collective endeavor.

The platform should consider the different levels to provide ways of capturing value in different ways depending on the user. For instance, the value captured changes depending on the stakeholder; contributors might be motivated by reputation and sporadic users by the quality of the output. The platform should thus allow different interaction modes for different users.

3. 2. System of rewards and strategies of sustainability

Evidence corroborates a broad application of recognition and reward systems in CBPP. This validates the objective of P2pvalue project.

Reputation and Meritocracy seem the main regulatory orders applied. However in this case, as for other features, a guideline emerges from the first observations: diversity must be accommodated. From one side, monetary exchanges and rewards are used by a significant section of the sample. From the other side, a large portion, doesn’t use and apply internal metrics.

The same applies to sustainability strategies. Since sustainability strategies of the studied cases vary greatly, the platform should be able to cover these varying needs.
Thus, differentiated settings and differentiated policies seem necessary to accommodate such diversity.

We recommend the platform to allow for monetary strategies, voluntary work and any other kinds of donation and reward. Ideally any platform node should be able to configure its preferred options. For example, the P2Pvalue platform could permit the adoption of monetary strategies, in conventional state currencies, as well as in any social currency, or in a cryptocurrency, such as Bitcoin, Freicoin, Ripple or other. In each case, different modules could be provided, e.g for membership fees, donations, exchange between members, crowdfunding. While for non-monetary strategies, distinct modules could facilitate the application of other systems, such as reputation systems, metrics based on the collaborative work applied, physical donations, etc.

The provision of a system to define, manage and realize tasks could serve both the sustainability of the platform as the development and maintenance of the commons resource of the particular communities. On the one hand, users should be able to define tasks and (all the relevant) users should be able to assign a weight collectively to how much they value a certain contribution. On the other hand the performed work, dedicated time and/or donations of a user should be visible. The result of the valued (weighted) contributions could lead users to be more visible in the community (on lists of top contributors) and obtain certain badges based on demonstrated skills or performed tasks. Also there could be a redistribution mechanism to share the collected monetary resources over the weighted contributions (following the pioneering work of Sensorica's Open Value Network). It would also be interesting to build in the automatic assignment of certain privileges

(enhanced user permissions, roles, access rights) based on the user's weighted contributions (cf. the karma system used in Slashdot, Stackoverflow). For example to reduce SPAM, the platform could require the fulfillment of a few minimum contributions (e.g. set up user profile, present yourself in a group) before getting enhanced creation and editing rights.

3. 3. Commons-based mutualisation

Close to 50% of the respondents described that they would like any monetary gains from the project to be distributed within the community.

- The platform should have a way to capture contributions (such as open value accounting) and automatically distribute the monetary gains to the members based on their contribution.
- Ideally, the platform should also allow to track the monetary value generated in the market exchange and even allow its management and distribution for the a) common benefit of the community, or b) the individual use of the members that contributed in the collaborative endeavor.
- Additionally, the platform should take in consideration different modes of sharing and collaborating depending on the focus of the community. Different contents features and tools could have different access and permission rights, some with whole society ("commons") or with only community members ("common property regimes"). In this last case, the platform has to easily filter members with certain rights from other types of contributors or users. In the case of the proportional distribution of benefits among contributors, the platform, apart from determining who is a member, has to allow to track the different contributions to the collective-generated good.

c.f. Collective management

A possible solution could be the adaptation of the collective management observed for commercial music where a part of the sums collected for private copying in some countries are dedicated to creation funds managed by collecting societies. Instead, the remunerations collected from commercial use could be redistributed according to a collective decision on to which future project to finance with this money collected from past projects.
Such a commons-based mutualisation model has been implemented in 2007 to share the revenues of the sale of music on the platform Pragmazic, a project of the Musique Libre non profit organisation (dogmazic.net). See https://web.archive.org/web/20070521101640/http://www.pragmazic.net/bin/accueil.php

4. Systemic value

Considering the importance of sharing the created value with the society in general, the platform should include features to easily share the content and created knowledge with individuals and other communities external to the community. To do so, the platform should offer a user-friendly interface to easily find and use the output of the collaboration for example through APIs and protocols to facilitate the integration with other systems. In this view, the notion of inter-connected communities to create a "community of communities" with CBPP focus could lead to an ecosystem of value exchange between different communities without economic exchanges.

4. 1. Integration and interoperability

Only the 15,2% of the cases does not use any social network. While more than 60% use two or more social networks.
The diffused use of the main social networks is, however, just one example of a broader practice that we observed during the research: the distribution

of CBPP practices across a multiplicity of platforms, rather than on one single platform (see on this, also the section on the dilemmas of unit of analysis).

This suggests P2Pvalue platform should be designed according to principles of openness and interoperability and should pursue the maximum advantage and co-existence with other systems and functionalities. Ideally, such a policy should be applied to already existing platforms and applications as well as to new potential applications that can be developed by external actors on the same P2Pvalue platform.

Users and groups should be able to add their Twitter account to their profile on the platform. Additional fields for other social networks should be available, such as Facebook, Github, Google+ and free fields of social networks to be added by the users themselves.

Given the increasing importance and social adoption of existing social networks as indicators of reputation and social use value, it would be interesting to allow the platform to integrate value metrics from these external platforms. E.g the provision of an application that permits the visualization of these external indicators of reputation within the P2Pvalue platform; or included, to permit that groups aggregate their external measures of "value" into their common projects on the platform (More details on this aspect are provided in the Reputation section of this document). Specifically, it would be important to allow the inclusion of such metrics from external sources, as deemed useful by the communities. Therefore a plugin architecture would be ideal to allow to develop and add applications applied to any kind of external metrics. That would leave the freedom to self-configure their use in the platform as desired (e.g. to permit the visualization of Github metrics if that's a platform used by the community).

At the same time, the reliance on corporate platforms of the main external indicators of value (as those applied in this research) should be seen, from the perspective of a CBPP environment, as problematic: if nothing else, for the lack of full transparency in their functioning, for the not open management of the standards they apply, for the unequal distribution of power and value they shape between platforms and users. This suggests as a terrain of further research for the P2Pvalue project the exploration of principles, policies and protocols more in tune with CBPP practices (also looking at existing ongoing experiments).

4. 2. Task-oriented collaboration

Since we suggested that further research should explore the diverse forms of organizing communication processes related to CBPP, like communities, publics, and crowds to enquire for the nature of social capital in relation to the production of outcomes in terms of performance and value creation, we believe that a CBPP platform could be informed by a number of task-oriented collaborative tools integrating different existing services (GoogleDocs, Drive, Dropbox, etc) into a single environment where the user could make profitable use of collaborative tools in a highly personalisable way - having also the possibility to shape the 'dashboard interface' of the platform according to her own current tasks and needs which would then be visible and accessible in a quick, ready-at-hand and efficient way in a single space.

5. Reputation

Design guidelines from digital ethnography (Task 1.3)

The digital ethnographic analysis (together with the survey) revealed that the use of Twitter is prevalent among the different cases observed. The semantic horizons of CBPP collectives comprise persistent attention not only to technical issues but also to ethical and social dimensions of action. This implies that CBPP collectives operate with a diverse range of value horizons in relation to with statements, including statements relating to the value of actions or actors, are performed. There also appears to exist persistent macro clusters of value, indicating something similar to a number of 'ideologies of CBPP' (i.e. the 'sharing economy cluster', the 'free software cluster' etc.).

Our analysis confirms established findings that indicate that CBPP publics are composed of a large group of weakly connected contributors along with a small group of strongly connected contributors, and that the later are also strongly engaged in discourse that go beyond merely technical concerns to encompass 'ethical or social concerns'. This would indicate that also issues of value (the value of contributions as well as the value of contributors and of collectivities as a whole) are deliberated in relation to two or three different 'orders of worth': technical, social and ethical worth.

Further research should explore the prevalence of diverse forms of organizing communication processes related to CBPP, like 'communities' (high bonding social capital), publics, (high bridging social capital), and crowds (low social capital), as well as their relevance for exploring performance and value creation.

As a result of our enquiry, we are now able to provide a number of initials guidelines that may be of help for the design of the P2P platform:

5. 1. Twitter integration

The high relevance of Twitter in the context of interaction within and across CBPP online collectives suggests that our platform should get into direct interaction with Twitter, either by (a) integrating Twitter feeds and interaction as part of the visualization of the value of individuals and/or collectives on the collaboration platform or, whether this not being possible, (b) by simulating a number of Twitter functionalities alike. In this regard, we are able to suggest that Twitter-based interaction is often seen as valuable reward for a CBPP community in terms of providing reputational value, as reputation emerges as a central factor for CBPP participation. In order to do so we suggest that the metrics which may be more useful for this purpose are those which aggregate and measure how much an account (eg., Kickstarter) is able to generate communitarian interaction, such as the number of mentions and RTs. Below an example.

Account	Followers	Active users	Avarage. Tweets/users	% 1 Tweet
KICKSTARTER	824000	48588	1,7	79,57
GITHUB	247000	8348	1,33	61,62

% 2+ Tweets	% RT	% 0 RT	% 1 RT	Avarage @+RT	Modularity	% Main comp.
20,43	13,55	26,02	63,32	5,25	3375	60,62
38,38	10,15	15,29	76,96	4,93	677	41,29

5. 2. Internal reputation metric

The composition of CBPP publics as made of a large group of weakly connected contributors along with a small group of strongly connected

contributors' suggest the potentially significant importance represented by the acquisition of a reputation within CBPP aggregations. Therefore it might be a good idea to develop a sort of 'CBPP internal reputation metric' that integrates a wide variety of value horizons using twitter data, among other data sources - constructed as a more democratic, open and transparent version of currently existing (and controversial) online metrics which attempt to objectify the influence of a user's online activity upon the other users in the same social networking site - i.e., Klout (for more detailed discussion on how Klout is constructed and the many different critical aspects attached.[1]

5. 3. Data visualization

Since the emergence of the 'orders of worth' could stimulate further research into metrics that would potentially arrive at an empirically grounded account of the 'ideologies of CBPP', and in reason for the relevance of this item, we suggest that a collaborative system might want to integrate some visualization of the relation between the different current values expressed by a community and its position vis-à-vis the overall values of its 'appropriate' cluster. A possible measure could be some sort of visualization of the overlap between the 'values' associated with a particular CBPP collective and the 'values' associated with the subsection of CBPP to which that collective belongs (i.e. relating BlaBlaCar to the Sharing Economy Cluster, relating Drupalto the Free Software cluster). In terms of metrics, this can be calculated by visualizing through word clouds the hashtag generated by each account, for instance those which we expect from the orders of worth here emerged, such as Context, (e.g. #startup, #videogames, Ethical (#opensource, #sharingeconomy), Meta/Social(e.g. #yay #ff, #rt, #share) Technical (e.g. #phyton, #arduino). A plus would be to 'induce' users to

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1 Gandini, A. 'Online Social Influence and the Evaluation of Creative Practice. A Critique of Klout'. In Suhr, H.C. (eds), Online Evaluation of Creativity and the Arts. New York: Routledge (September 2014, more info here: http://www.routledge.com/books/details/9780415749855).

create content, for instance blog posts, and tag the content with these labels (that may be similar to the tagging system of YouTube which requires users to state whether the video they are uploading falls into the main categories, music, entertainment, etc).

Conclusions and further research questions

The conclusion is that a platform for estimating the value of peer production should include some basic design components, such as:

- Communication tools for ex-ante and ex-post collaboration among community members;
- Tools for socialization, community building and knowledge sharing;
- Contractual safeguards for ensuring compliance with legal norms;
- Contractual tools to help users releasing their content under an Open license;
- Mechanisms for capturing value and redistributing it within the community;
- Reputation system and rewards mechanisms

The main responsible partner and beneficiary of this deliverable is the Universidad Autonoma de Barcelona. The deliverable constitutes the basis on which to assess whether the original objectives have been accomplished, or whether possible deviations from the original goals might be required.

Over the next few months, the Universidad Complutense de Madrid (technical lead) will evaluate the technical feasibility of these guidelines, whereas the CNRS (legal lead) will assess their legal compliance and viability. These analyses, in conjunction with the modelling task of Task 2.2, will allow us to identify which one of those guidelines and proposals are the most desirable for the P2Pvalue platform. We will also determine how they could be implemented in a way that will be both viable and sustainable, providing formal specifications to WP3.

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Fundamental questions that need to be further explored relate the implementation of specific indicators of and rewards mechanisms, allowing for the generated value to flow back into the community in order to support the long-term sustainability thereof.

Internal indicators of value are problematic to the extent that different communities might require a different indicators to assess the value produced within the community, according to the internal metrics of the community. External indicators are even more problematic because they are not consistent with one another, and they often extend beyond the control of the community. Indeed, the core issue with the establishment of accurate indicators of value in the context of CBPP platforms is that value is ultimately subjective: every individual, every community, and culture has its own idea of value. Thus, any system that purports to interface between these different (and sometimes competing) value systems must be wary of not imposing nor favoring one group's values of the others.

In terms of rewards mechanisms, the difficulty lies in the fact that introducing reward mechanisms to CBPP contributors might actually distort the type and quality of contributions they provide: certain components will become more attractive to certain users eager to obtain a reward, whereas other users might no longer be willing to contribute if their contribution is to be assessed.

Hence, any value indicator or any reward mechanism needs to be very carefully developed in order to understand the impact it might have on the overall level of contributions to the CBPP platform: what sort of actions it is likely to promote, and - conversely - what sort of contributions it is likely to discourage.