Best Practices for CBPP Communities & Policy Recommendations

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# Document Information

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P2Pvalue Consortium

Project objectives

- **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 is the result of extensive research undertaken by the P2Pvalue project (2013-2016, http://www.p2pvalue.eu).

The first part of this deliverable presents a definition and a set of “best practices” regarding the social, technical and legal organisation of commons-oriented collaboration—also called commons-based peer production (CBPP). These general guidelines, which draw on the findings of Deliverable 2.2 (“Value propositions for P2Pvalue”), can serve to set up digital platforms which will support the establishment of new communities or suggest possible improvements for existing communities. They flesh out key dimensions for the development of collective projects, in order for instance to increase participation, to secure efficiency and to ensure long-term sustainability. They provide suggestions of features and functionalities which can be implemented to further these ends.

Of course, these guidelines should be tailored to specific types of communities, which all have different priorities and modes of functioning.

Moreover, not only did the P2Pvalue project lead us to address the internal dynamics of commons-based peer production (CBPP), it also brought us to investigate what would constitute the proper external environment for such initiatives to thrive – in terms of legal framework and policy agenda. In this respect, a key role can be played by public authorities at the local, national and/or European level.

The second part of this deliverable sets out to provide a set of recommendations for policymakers and regulators who aim at improving such a favorable environment. A series of proposals have therefore been framed, which are based on the empirical evidence collected during the project, literature reviews, in-depth case studies of two experiments aimed at establishing more sustained public-commons partnerships (in Greece and in Ecuador), expertise at the local and regional level (in Barcelona and Catalonia), as well as the results of a process of online consultation and an open discussion and participatory process held during an international event in Barcelona in March 2016 (http://procomuns.net/en/policy).

The deliverable was coordinated by CNRS, in close collaboration with P2P Foundation and UAB.
Best Practices for Collaborative Economy Platforms

I. Introduction

1. Defining commons-based peer production (CBPP)

As described in Deliverable 1.2, commons-oriented collaboration, also referred to as commons-based peer production or CBPP (as theorized mainly by Yochai Benkler, 2006), is an emerging and innovative model of collaborative production frequently taking place or supported through digital platforms. It agglutinates a set of diverse areas of activities and cases that tend to be characterized by peer-to-peer relationships (in contrast to the traditionally hierarchical command and contractual relationships, and with limited mercantile exchange), and/or results in the (generally) open access provision of commons resources that favor access, reproducibility and derivativeness.

Four main criteria can be identified to define commons-oriented collaborative communities:

1. **Collaborative production.** A process among peers that in their interaction form, develop, produce or build something valuable not present before their interaction. What results from this process might be very diverse.

2. **Peer-based.** How individuals relate to each other and in a community. Community interaction is not solely or mainly coordinated by contractual relationships, mercantile exchange or hierarchical command. In contrast, individuals are in an autonomous condition and there is a decentralization in the conception and execution of problems and solutions.

3. **Commons-based.** Commons generally refers to that which is not driven primarily by restrictive/private appropriation but to a process that is driven by general interest. In the digital environment, this tends to take the form of an open access (with a license that assures the right to use [but not necessarily the right to make derivative works] and technically availability to use the resulting products).

4. **Reproducibility and derivativeness:** Peer autonomy and commons-orientation through reproducibility and derivativeness of the process and outcomes. This feature when applied to the digital environment is referred to as “forkability” (the license allows derivative work).
2. Scope and categories

To date, over 300 different communities have been registered and classified by P2Pvalue (see [http://directory.p2pvalue.eu](http://directory.p2pvalue.eu)), which fall into different categories.

When focusing on the type of activity undertaken by a given community, the following categories have been identified:

- **Citizen media** (Global Voices, Usenet etc.)
- **Citizen science** (Moon Mappers etc.)
- **Collaborative archive** (Archive.org etc.)
- **Collaborative consumption** (Blablacar, Homeforhome etc.)
- **Collaborative filtering** (Rate Your Music, Slashdot etc.)
- **Collaborative mapping** (Meipi, Open Street Map, Waze etc.)
- **Collaborative research** (SETI@home, Wikidata etc.)
- **Collaborative video, audio, images** (Jamendo, Indymedia etc.)
- **Collaborative writing** (Wikipedia, Wikihow, Twinery, Wikitravel etc.)
- **Community networks** (Guifi.net, Funkfeuer, Ouishare, Commotion etc.)
- **F/LOSS communities** (UNIX, Drupal, Mozilla, R etc.)
- **Free software social nodes and platforms** (Agora voting, Freenode etc.)
- **Gaming communities** (Ongoingworlds etc.)
- **Hacklabs / collaborative spaces** (CitiLab, Chaos Computer Club, Noisebridge, Burning Man etc.)
- **Internet of things** (Thingspeak, Safecast etc.)
- **Internet protocol** (W3C, IETF etc.)
- **Open data commons** (DNAdigest)
- **Open design** (WikiHow etc.)
- **Open education** (P2PU, The Open University etc.)
- **Open hardware** (Arduino, Fairphone etc.)
- **Open science** (PLoS, Open Science Project etc.)
- **Open technology** (RepRap, Open Source Ecology, Wikispeed, Energypedia etc.)
- **P2P currency** (Ethereum etc.)
- **P2P economy** (Bitcoin, Timebank.cc etc.)
- **P2P file sharing** (Faroo, BitTorrent, Gnutella, Napster etc.)
- **Peer funding** (Kickstarter, Indiegogo etc.)
- **Urban commons** (Mapping Urban Commons, Calafou etc.)
- **Workers rights** (Contratodos)
- **Others** (Spacehive, 4chan etc.)
II. Design solutions and technical features

1. Value metrics, reputation & rewards

1.1. Incentives for participation

In a CBPP community, new and peripheral members may be put off by different problems, such as: the complexity of the project; information overload; community-specific terminology; being underused and not feeling essential to the project. It is difficult to strike the right balance between ensuring low barriers of entry on the one hand, and some degree of moderation to enforce community values on the other. Collaboration works better when based on shared interests.

Low barriers of entry should be maintained, and contributions from new and peripheral members should be encouraged, while at the same time further sustained engagement should be facilitated. This involves: providing guidance on where and how to direct contributions; improving (self-)representation to prevent negative feedback loops; enabling forms of publicity and self-branding on the part of members; encouraging unified communication channels; ensuring active, core members aren’t hindered by newcomers and objectives of the community are not jeopardized.

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<th>Design guidelines</th>
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<tbody>
<tr>
<td>✓ Straightforward registration, identification and permission system</td>
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<tr>
<td>✓ Public presentation of profiles</td>
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<tr>
<td>- Individual profiles (with tasks, identities, skills, activities/contributions etc.)</td>
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<tr>
<td>- Group profiles</td>
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<tr>
<td>- Community profiles</td>
</tr>
<tr>
<td>✓ Clear identification of tasks and priorities</td>
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<tr>
<td>- Each task should come along with required level of expertise and engagement</td>
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<tr>
<td>- This includes micro-tasks or entry-level tasks which shouldn’t require permission/validation procedures</td>
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<tr>
<td>✓ Filtering system (e.g. by classifying contributions using tagging/hashtags)</td>
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<tr>
<td>✓ Easily accessible public discussion spaces (e.g. chatrooms, BB-style forums, Q&amp;A sites such as Reddit or Quora)</td>
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<tr>
<td>✓ Search features for people and content (by hashtag, skills etc.)</td>
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<tr>
<td>✓ Easy integration of 3rd party communication tools/social media already in use</td>
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1.2. Roles

There is often insufficient recognition of some non-technical or non-content-oriented contributions, such as: attention to others; conflict resolution; emotion management. Moreover, core members can be overwhelmed by oversolicitation, by involvement in repeated and/or time-consuming tasks, and by the uncertainty that essential tasks are taken care of.

The different roles and contributions within the community should be valued and incentivized – not only those oriented towards content-production or organisation, but also those directed towards community and emotions (‘affective labor’). Moreover, the sharing of both information (to prevent multiple repeats of explanations) and responsibilities (in order to encourage task delegation) should be encouraged.

Design guidelines

✓ 'Endorsements' or maybe even a mentoring system for newcomers
✓ Social capital indicators, displaying bonding, bridging; strong and weak ties within the community
✓ Dynamic role allocation, assigned to people based on their contribution / activities
✓ Formal system of task delegation for sharing responsibilities within a community

1.3. Reputation and status

Self-promotion is seen as acceptable if it is aligned with the goals of the community. Relying on quantitative metrics is difficult however. First of all, a number of intangible and intersubjective aspects are built over time. Second, an excessive formalisation of reputation, rewards and status may backfire, by introducing a bias towards less collaboration and more competition.

A reputation system can be implemented, in order to help participants leverage the reputation they build within as well as outside the community, and also in order to create incentives and retributions for contributing to the community. However, the social dynamics of the community need to be preserved, by adapting the rewards system to the type of community and its objectives and values. This involves avoiding direct rewards in the case of non-market-based communities. On the other hand, credits-based systems can be relevant when economic value is generated or when there is a scarcity of resources.
### Design guidelines

#### ✓ Participation metrics

- based on clearly documented **objective activity metrics** and indicators (posts published, 'likes' received etc.)
- based on **subjective metrics** (requires qualitative evaluation by others, even if less precise and not easily comparable)
- including when relevant **responsiveness metrics** (“Laura has read your message” or “Laura generally replies within two hours”)

#### ✓ Incentives for evaluating the work of others (e.g. providing reviews, rankings other’s contributions, behaviours, etc.), but also make sure that excessively negative evaluations are checked

### 1.4. Rewards and privileges

Status in CBPP communities may derive from a meritocratic selection of the most active or involved members. However, it is in tension with a key value: upholding a horizontal structure where everyone has the same rights.

Excessive meritocracy should be avoided, insofar as it may turn into overly rigid hierarchical structures. This involves ensuring that earning of privileges is not based only on amount of contributions. When relevant, a clear display of status within the community should be favoured, along with associated rights and responsibilities. However, cases should also be identified where informal recognition is preferable (e.g. simple acknowledgment).

### Design guidelines

#### ✓ Dynamic meritocracy

- **Membership status** or 'badges' (e.g. Arduino medals)
- Associated **privileges** according to level of achievement: admin rights, moderation powers, decision-making privileges etc.

#### ✓ Rewards system adapted to the type of community

- **Appreciation-based** systems (e.g. 'thanks' mechanism)
- **Direct rewards** such as alternative currencies or transferrable credits or tokens
  
  Note: To avoid the emergence of market logics, credits can be made to expire after a certain time and/or be made non-transferrable
2. Governance & participation

2.1. Governance structure

Commons-oriented collaborative communities seek to avoid vertical decision structures, to preserve openness, diversity and innovation. However, excessively flat structures carry risks. A project can be jeopardized by free-riders or by giving decision-making powers to peripheral members who cannot take informed decisions. This generates conflict and can lead core members to become estranged from the community. To avoid this, processes of consensus-formation are favoured, but these in turn run the risk of being inefficient. In practice, governance is often quite centralized with key decisions taken by a small group of core members.

In order to balance democracy and efficiency, non-hierarchical organisations and democratic decision-making should be favoured – but not at the detriment of efficiency and coordination power of core members. The mobility of ‘fringe’ members towards the ‘core’ of the community should be encouraged. ‘Functional’ roles and responsibilities (administrators, experts etc.) should be allowed to establish privileges and permissions, but ‘organic’ roles (information broker, emotional support, technical support, community manager) should also take part in the overall governance structure.

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<tr>
<td>✓ Explicit governance structure</td>
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<tr>
<td>✓ Well-defined needs and responsibilities</td>
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<tr>
<td>- Emerging according to level of involvement</td>
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<tr>
<td>- Or following bottom-up assignment</td>
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<tr>
<td>✓ Data visualisation providing a clear picture of:</td>
</tr>
<tr>
<td>- Different roles within the community</td>
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<td>- Power-law distribution of contributions to the community</td>
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<td>- Social mobility within the community</td>
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2.2. Decision-making

Lack of communication and transparency in the decision-making process may affect the legitimacy of decisions taken and upset members. Important resolutions are often not well publicized, e.g.
buried inside mailing lists. This may be related to insider leadership practices and excessively strong hierarchy, and can affect collaborative output.

As a general rule, transparency of activities and decisions should be improved, by providing flexible and diverse tools for deliberative processes as well as executive decision-making, and by encouraging forking when consensus cannot be achieved (so parallel sub-projects can be explored without creating undue friction).

### Design guidelines

- **Transparency** in decision-making (e.g. by providing explicit ways to mark, broadcast and log decisions)
- **Deliberation tools** (e.g. Loomio) for assembly organisation, discussion forums, etc.
- **Decision-making tools**
  - Providing specific voting & balloting systems (e.g. Condorcet method) etc.
  - With various hierarchies of votes (actual voting, referendum, opinion polls etc.)
  - With possibilities for vote-delegation (e.g. liquid democracy)
  - Perhaps different weight to different members (e.g. based on their reputation)
- **Video conferencing** for taking part remotely in the decision-making process

#### 2.3. Knowledge sharing

Internally, efforts are often needed regarding adequate sharing of accumulated knowledge – in particular, the lack of documentation about routine tasks can put off newcomers. The ‘knowledge gap’ between ‘leaders’ and ‘followers’ should be reduced, which involves improving data accessibility, fine-tuning permission systems, encouraging greater transparency.

Externally, this is related to coordination of communication activities. Outward communication should be facilitated and its coordination improved (see next section).

### Design guidelines

- **Data accessibility and portability**
- **Open access**
  - Share all user-generated content by default...
- …but allow for different degrees of permissions (from individual to group, community, and public domain level)

✓ Explicit space compiling the list of decisions taken by the community (e.g. statements, timeline, minutes-board etc.)
✓ Extensive archiving for reference purposes (debates and decisions, documentation, past versions of documents, video tutorials etc.)
✓ Content taxonomies
✓ Full-text search

2.4. Communication

Recurring issues are information overload, as well as overly technical language. Moreover, lack of operational communication may lead to feeling excluded from deliberation and decision-making processes. These can hinder involvement in the community and support for its objectives.

Internal and external communication should be improved, while preventing confusion or excess of communication. Operational communication and task management, in particular, need to be improved to ensure low barriers of participation. Great attention also needs to be given to external (informational) communication, to gather support and traction for the community.

Design guidelines

✓ User ‘dashboard’ aggregating information from different sources
✓ Selective filtering of information to keep different 'layers' of communication distinct
✓ Granular notification settings
✓ Interoperable communication channels —linking with popular social networks

2.5. Online vs. offline

Offline-first communities can have a hard time finding adequate online communication tools. Online-only communities sometimes don’t perceive the benefits of offline interactions. Depending on the community, physical resources (office space, equipment etc.) can be crucial but are generally scarce and need to be adequately allocated.
Communication tools need to be adapted to the priorities of the community, in order to bridge the offline and the online world effectively. Organisation of physical events, hackathons, or other forms of meetings at the local, regional, national and global level can also be encouraged.

### Design guidelines

- **Mobile version first** (especially in the case of offline scenarios)
- **Mechanism for easy digitization, storage and distribution** of documents or other content produced offline, for both the community itself and for the wider public
- **Account for contributions or simple participation in physical meetings**
  - e.g. through a check-in/check-out feature
  - e.g. using metrics, such as the number of events organised or contributed
- **Solution for resource allocation** (when physical resources are needed but scarce)
  - e.g. online calendar and reservation system

### 3. Privacy, licensing & forking

#### 3.1. Privacy by design

Private and sensitive data should be protected, in conformity with the General Data Protection Regulation. At the same time, high levels of functionality and usability must be maintained, in terms of design and implementation of collaborative features, as well as the reputation and rewards systems. In any case, data collection practices should be transparent.

### Design guidelines

- **Anonymous or pseudonymous participation**
  - Only require basic user information to access a platform’s default functionalities
  - Further registration required to access more advanced functionalities (e.g. Wikipedia)
- **Customizable privacy settings**, specifying which kind of information and data can be shared and with whom
- **Tools for self-management of privacy**, where users should:
  - Have complete control over their data, including ability to delete their profile
- Be able to grant access rights to the files they want to share specifically with a member or group of members

✓ **End-to-end encryption by default**
- End-to-end encryption for communication between users
- Server-based encryption for personal data stored on the server, e.g. passwords

3.2. Decentralized architecture

Decentralisation offers greater freedom, privacy and autonomy, but also more difficult coordination, lower user experience, lower performance, as well as greater security risks if all users don’t have adequate skills. On the other hand, centralisation offers better management and coordination, and better and faster user experience, but also greater surveillance and control.

Hybrid solutions can be promoted, to combine advantages of both architectures: centralized for better management and coordination, and decentralized for greater privacy and autonomy. Communication should be channelled through different types of networks, depending on the level of required confidentiality and trust, or on the degree of skills on the part of the user.

**Design guidelines**

✓ Whenever possible, **decentralized infrastructures (e.g. peer-to-peer networks)** should be preferred despite the technical and organisational challenges they may sometimes present

- When decentralization cannot be achieved, **federated architectures** can be adopted as hybrid solutions. These are similar to Internet Relay Chat (IRC) or Simple Mail Transfer Protocol (SMTP): users can decide if they want to set up their own server and maintain control over certain data, or whether they entrust a particular server (and the third-party community which runs it)

✓ **General-purpose communications protocol** in the form of a public API, providing some basic functionalities: data storage, real-time collaboration etc.

✓ **Forking feature** which allows code to be ‘detached’ from main project to easily create sub-projects
3.3. Licensing

Forking of the software or the content without adequate permission can lead to copyright infringement. It can rapidly become quite complex and deter users who don't have the necessary legal skills to assess downstream compatibility. Moreover, allowing the use of too many different licenses can create legal incompatibilities, making forking and reproducibility difficult or impossible.

Community replication should be enabled, by allowing forking of both infrastructure and content, to ensure free knowledge sharing and sustained community growth. Make sure that forks can easily be merged back again into the main branch, since cooperation should remain the ultimate goal.

Design guidelines

- Free licenses as default option for all community projects
  - But allowing for other options such as is the case with Creative Commons.
  - Cases combining free and exclusive rights licensing should also be provided for

- Clear information on licensing schemes (including license compatibility)

- Free software licence for the platform, to allow forking of the project itself

- Visualisation of forks and branches of community projects, like on Github

- Contributor License Agreement (CLA), in order to ensure compliance with the community’s choice of license
Policy Recommendations for Policymakers & Regulators

I. Introduction

As is clear from the research undertaken in the P2Pvalue project, one of the central characteristics of commons-oriented peer production initiatives is that they are self-reliant and self-organized. The rules that participants to these initiatives abide by emerge organically from collaborative practices, and the community is the sole responsible for monitoring and enforcing these rules. These rules draw their legitimacy directly from the community, and, in this sense, they involve a shared responsibility.

Consequently, any policy measures which are “exogenous” to a commons – whether they are related to the legal framework within which these commons evolve, or to specific initiatives taken by public actors such as local authorities – must be careful not to interfere with the sometimes fragile equilibrium established within a CBPP community has achieved.

This important aspect had already been established by Elinor Ostrom, who stressed the need for analysts to “ask what internal or external variables can enhance or impede the efforts of communities of individuals to deal creatively and constructively with perverse problems such as the tragedy of the commons.” (Ostrom 1990, p. 21). Moreover, the problem is compounded by the fact that “policy analysts who would recommend a single prescription for commons problems have paid little attention to how diverse institutional arrangements operate in practice.” (p. 20-21). It is thus important for policy-makers to acknowledge that CBPP initiatives come in many shapes and flavors; they are devoted to various objects, operating under different sets of social, institutional or technical arrangements.

Consequently, our aim here is neither to argue for an excessively heavy handed form of interventionism (which would alter the nature of CBPP projects and risk jeopardizing their fragile balance and social dynamics), nor to establish a catalog of possible measures (which would always be lacking compared to the diversity of CBPP initiatives). Instead, we will present a set of general recommendations which can serve to guide policymakers and regulators, by identifying how public action should be oriented in order to further the goals and principles of commons-based peer production.
II. Data & analysis

1. Literature review

A literature review was conducted (see Annex A) to assess the adoption of commons-oriented policies by public authorities, with a focus on policies related to open source technologies (software and hardware), open data and makerspaces. The various approaches and policies implemented were examined in detail, along with their maturity level and expected outcomes, so as to better understand the reasons for their success or failure. Data was collected from various sources such as policy papers, reports, policy evaluations, and government websites.

This review has shown that over the last fifteen years, there has been a growing political will to support open source technologies, adopt open data policies and facilitate the creation of co-working places like makerspaces. Such policies have mostly been implemented in the US and Western Europe. However, also in developing countries, an increasing number of governments, at various levels, have been exploring the potential to implement innovative commons-oriented policies, often in response to the economic crisis and austerity politics.

2. Empirical evidence: An analysis of public-commons partnerships in the Ecuadorian and Greek cases

Two case studies helped us gather evidence for understanding different forms of commons-oriented policies which had been devised and implemented so far, whether they were successful or not, and which types of public-commons partnerships they tried to establish.

Drawing on the FLOK project in Ecuador, we have analysed a series of generalized policy directions which extend beyond the scope of CBPP communities (see for instance Dafermos 2015), but rather aimed at encouraging and facilitating a “Commons Transition” throughout the world. This transition would assign a greater role to commons-based initiatives in an attempt to usher a “social knowledge economy” as a basis for a “post-capitalist” society (http://commonstransition.org – see also Kostakis 2014). This involves defining a new role for public institutions. The State, in particular, is expected to evolve into a “Partner State” (Bauwens 2015) whose role is to support civil society initiatives and enable autonomous social production, while avoiding both the privatisation of common goods on the one hand, and top-down State-based initiatives and planification on the other.

In this context, a set of policies have been framed (Restakis 2015) and presented as a first blueprint for establishing a new – “commons-friendly” – relationship with public authorities. This was the main outcome of the project, despite a disappointing enactment of these policies in the specific case of Ecuador. On the one hand, although the project was officially supported by government agencies,
the lack of political support prevented policies from being effectively implemented. On the other hand, the approach was perceived as excessively “top-down” by existing civil society initiatives and local NGOs, and thus failed to gather sufficient support and momentum. This experience has shown how difficult it is for policy-makers to find the right distance, and for State-centric institutions to adopt a “Partner State” approach.

The process of devising and implementing these policies has been reviewed in Annex B, along with the policies which have been set up in Greece under the Syriza government.

3. Collaborative process of policy deliberation

The P2Pvalue project, along with BarCola (a working group about collaborative economy and CBPP in Barcelona) and the Dimmons research group at IN3-UOC, organized the first edition of Procomuns – Commons Collaborative Economies in March 2016 in Barcelona. This international event gathered over 400 participants, with experts, citizens and public sector representatives working together on a series of policy proposals. One of the main outcome of this event was the production of joint statement of suggested public policies for promoting the collaborative economy (available at http://procomuns.net/en/policy).

This statement was sent to the Barcelona City Council to provide concrete actions for the Municipal Action Plan of the City following a consultative online participatory process. The statement was also sent to other local authorities in Spain and to the Government of Catalonia, to the European Commission, and to various General Directorates which are currently working on drafting regulation for the collaborative economy.
III. Policy proposals

Drawing on the work done throughout the P2Pvalue project, on the empirical material collected, on our analysis as well as on the collaborative discussion process held in Barcelona during the Procomuns event in March 2016, three main categories of policies have been identified.

1. Setting up a favorable legal environment for the information commons

One of the main sources of resistance to the development of commons-based initiatives are ill-advised policies and laws that extend the scope of intellectual property, instead of seeking the right balance between the interests of right holders and the public. Large economic actors try to leverage these rules in order to generate more rents from their innovations, rather than exposing themselves to possible competition on the part of commons-based projects. This was done, for instance, by Microsoft when it decided to fight Open Source alternatives in the late 1990s, and by the cultural industries doing their best to eliminate non-market forms of cultural production and sharing (Lessig 2001, Lessig 2004).

To address this issue, the main course of action consists in preventing enclosures, which involves two key sets of policies:

- Support **open licensing schemes** (e.g. Creative Commons to be used by public institutions)
- Provide a legal basis for a **positive definition of the commons**

2. Fostering open infrastructures for the commons

Beyond intellectual property, current legal frameworks also impose restrictions on the infrastructure necessary for the commons to flourish. These include both the logical dimension (e.g. protocols and standards) and the physical infrastructure (cables and airwaves) that CBPP heavily rely upon in the digital age. As with information, these are also being increasingly captured by private interests, as it has happened in other key industries before (Wu 2010). In order to provide a more favorable environment, we suggest that key policies **support commons-oriented core infrastructures** by providing independent telecommunications regulation agencies with clear mandates to defend pluralist networks:

- Enforce **net-neutrality regulations** to support a ‘generative internet’ (Zittrain 2006)
- Improve **radio spectrum management** by providing shared spectrum access and making sure frequency allocation leaves room for commons-oriented players (O’Dwyer 2013) – e.g.
local wireless initiatives such as MESH networks, non-profit Internet Service Providers, as well as telecommunications infrastructures (such as guifi.net).

3. **Encouraging public actors to adopt more commons-friendly practices**

Finally, although public actors should refrain from direct intervention in the functioning of CBPP endeavours, they are in a position to provide further support and endorsement in two main ways.

**First, by altering their own administrative functions** through the adoption of some of the products or practices stemming from these endeavours:

- Adopt **open source software solutions** by default for administration and public authorities, as well as for projects funded by public resources
- Adopt **open data** oriented workflows by default for administration and public authorities, as well as for projects funded by public resources

**Second, by directing at least some of their policy instruments (in terms of subsidies, taxation, in-kind advantages, etc.) towards CBPP collectives and initiatives**, instead of focusing only on classical forms of economic growth:

- Develop **public funding** (subsidies) for commons-oriented infrastructures – e.g. underlying decentralized architectures such as SwellRT on top of which new applications and services can be built. This involves setting up **independent commission and evaluation committees** for distributing subsidies to target projects
- Set up **tax exemptions**, as a recognition that in some cases profit-making can be a collective (rather than private) good.
- Encourage the **use of public spaces and infrastructures** – particularly real estate – for the development of collaborative commons production projects
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ANNEX
Analysis of public-commons partnerships

Part A – Literature review

1. General framework

There are several arguments for the adoption of commons-oriented policies in governments. This section attempts to look at these characteristics, and analyze what actions have been taken and policies implemented on a governmental level that seem to embrace openness and a commons-oriented philosophy.

Specifically, we will focus on policies which are related to open source technologies (software and hardware), open data and makerspaces. We examine the various approaches and policies implemented, their maturity level and their expected outcomes. Data is gathered from various general and country-specific sources such as policy papers, reports, policy evaluations, and government websites.

2. Open Source technologies

2.1. Open Source Software

Open source software (OSS) is a relatively recent phenomenon that has been gaining in popularity. Rather than hiding their source code away from the world, practitioners of open source allow everyone to see it. The majority of them even allow anyone to copy it and make changes to it. Through this revolutionary model, many impressive pieces of software have been made – most prominently, Linux. The open source concept is a powerful new paradigm that’s here to stay.

While many corporations have taken definite stands (both for and against) on open source, many governments began to do so only a few years ago. The phenomenon of governments formulating legislation and policies on OSS is a recent trend that seems to be gathering some momentum in certain regions (O’Connor et al., 2004).

Following Bouras et al. (2014), there are five policy implementation areas that relate to OSS:
i. *Data openness and reusability* - policies on the openness and accessibility of data and public sector information, strategies for the interoperability of e-government services and the reusability of software solutions and components in the public sector;

ii. *Licensing, procurement and software market policies* - policies for software licensing and procurement, rules and procedures for public tenders, fair market competition;

iii. *OSS adoption, integration and sustainability* - policies on assessing, adopting and integrating open source as a sustainable solution for governments and public administrations;

iv. *Research & innovation* - policies for investing in open source Research & Development as a means to support innovation, entrepreneurship and regional development; and


Prior to 2001, there was almost no activity in policy related to open source, which could be the result of a lack of maturity in OSS development up until this point and/or difficulty in finding documentation of older open source policies online. The first year in which we see a significant increase in open source policies is 2002, followed by a sharp jump in 2003 (figure 1). Potential explanations for the marked surge in open source policies in 2003 could include increased lobbying efforts by large multinational firms invested in open source and the development of strong viable open source alternatives (Lewis, 2010).
Between 2006 and 2007, we see a second boost in open source policies, which could be attributed to a reaction to the global release of a major closed source software package, to avoid vendor lock-in. This reaction was likely driven in part by the desire of governments to avoid costly software renewal as well as unfavorable reception of the closed source software package (Lewis, 2010).

Regarding the regional distribution of open source policies for the period between 2001-2009 (figure 2), Europe is the most active open source policy maker in the world, followed by Asia and Latin America (Lewis, 2010). Legal and institutional frameworks, social, economic and technological aspects are some of the differentiating factors that explain gaps or divides between regions and countries on the awareness and penetration level of open source (Bouras et al., 2014).

It becomes evident that many governments have implemented policies related to OSS (for a detailed list see Lewis, 2010). For instance, in 2009 the UK’s Cabinet Office announced that “the Government will actively and fairly consider open source solutions alongside proprietary ones in making procurement decisions” (EU Open Source Observatory and Repository, 2009). In addition, the Chinese Ministry of Information Industry established in 2004 the Open Source Software Promotion Alliance to encourage the development of China’s OSS industry (Lewis, 2010). It is composed of enterprises, non-profit organizations, representatives from NGOs, and individuals under the guidance of the Chinese government. Moreover, the National Information Technology Office of Argentina promotes Linux in all applications in public administration. The rationale for this decision is lower costs, creating local employment, and security (Mannila, 2004).
On the municipal level, the Education Office of Oslo aims to use Linux throughout all the Schools in the city and integrated with the municipalities’ administrative systems (EU Open Source Observatory and Repository, 2003). Last, the Software Evaluation Policy of San Francisco requires departments to consider open source alternatives, when available, on an equal basis to commercial software, as these may reduce cost and speed the time needed to bring software applications to production (County of San Francisco, 2010).

To sum up, it could be argued that, nowadays, many countries recognize that there may be benefits from using OSS. That is why they have either shaped, revised or have under development software strategies that include open source as a key factor of policy making.

2.2. Open Source Hardware

In addition to public policies related to software, during the last few years, we have seen a number of public institutions and organisations utilizing other types of open source technologies, such as open source hardware. Following the definition edited on the wiki at Freedomdefined.org (2016):

Open source hardware is hardware whose design is made publicly available so that anyone can study, modify, distribute, make, and sell the design or hardware based on that design. The hardware’s source, the design from which it is made, is available in the preferred format for making modifications to it. Ideally, open source hardware uses readily-available components and materials, standard processes, open infrastructure, unrestricted content, and open-source design tools to maximize the ability of individuals to make and use hardware. Open source hardware gives people the freedom to control their technology while sharing knowledge and encouraging commerce through the open exchange of designs.

Open source hardware (OSHW) precursors include the open source and free software movements, from which it derives its basic principles. Despite this legacy, “open source hardware” is not yet as well known or widespread as the “open source software” concept, since it emerged only recently. This was mostly due: i) the rise of the Internet, which made sharing hardware designs possible; ii) the commercial success of open source software, which gave it public visibility; and iii) the decrease in cost of production tools, which made it feasible (OSHWA, 2013).

Although OSHW is a quite recent phenomenon, there are some initiatives that exemplify its potential use by governments and other public institutions. The most prominent case is the use of open hardware tools in education. For instance, students of the North Carolina School of Science and Mathematics (USA) used the Arduino, an open source microcontroller for prototyping electronic devices, to hack robotic arms, added sensors to a car, and developed a wearable air pollution monitor that crowdsources ozone levels across a city (Davis, 2014).
Likewise, in 2015 a pilot phase of the Indian government’s ‘Learn to Code’ project was launched in Kochi, under which 2,500 selected students were given Raspberry Pi computer programming kits and trained by IT experts to write code. This was the first such project in India and one of the few state-sponsored programmes of its kind in the world (Tech2, 2015).

Hardware development has been growing in popularity lately and starting to look much more like software development. This is partly because open hardware reference designs and open interface standards are becoming more readily available, and major industry players are collaborating to support them. So, hardware can be deployed in all sorts of ways that it couldn’t before, and at much lower cost. Therefore, given that the impact of the OSHW movement goes well beyond electronics and touches any industry that produces physical goods, it could be argued that there will be many more public policies related to OSHW in the near future.

3. Open Data

According to the US Department of Commerce (2016), open data is “information that is accessible to everyone, machine readable, offered online at zero cost, and has no limits on reuse and redistribution”. Advances in collecting, processing, disseminating, and preserving information have resulted in the proliferation of data from a wide variety of sources. Governments collect information from their citizens, compile that information into de-identified datasets, and release those datasets to the public as open data (Tran & Scholtes, 2015).

Entrepreneurs can access open data to create new products and services, and citizens can use it to access government procedures (Tran & Scholtes, 2015). Various time saving and other useful applications have emerged from open data feeds, including accurate traffic information, public transportation live feeds, and information about crime. However, data held by the government is solely about individuals. While open government is often viewed uncritically, open data can identify individuals or groups, leading to invasion of privacy and negative impact on vulnerable social groups (Tran & Scholtes, 2015).

Following a report compiled by the Sunlight Foundation (2012), open data policies with regards to government can among others: i) mandate: open formats for government data; the release of specific new government information; continuous publication and updates to data, ii) create public Application Programming Interfaces for accessing information, iii) create websites devoted to specific issues related to data publication or specific policy arenas, iv) create new legal rights or other legal mechanisms to empower the public, v) remove restrictions for accessing and reuse of government information and appropriately safeguard sensitive information, vi) appeal to values and goals, such as accountability, efficiency, innovation, civic engagement, and public services provision, and vii) incorporate public opinions into policy implementation.
According to Davies (2014), at the start of 2009 there were no recognisable national Open Government Data (OGD) policies. However, a survey conducted by Reale (2014) found that in 2013, 56% of OECD countries had a national strategy on open data, a 40% had adopted open data policies in only a few areas of the public administration while only 4% of the OECD countries lacked a strategy about open data (figure 3).

![Diagram of OECD countries approach to OGD in 2013. Source: Davies, 2014.](image)

**Figure 3**: OECD countries approach to OGD in 2013. Source: Davies, 2014.

There are numerous examples of policies related to open data which have been recently implemented. For instance, many governments like the United States (US)\(^1\), the United Kingdom\(^2\) and France\(^3\) have developed open data portals to promote access to government data and encourage the development of creative tools. France has taken a step further by creating the function of State Chief Data Officer who, among others, will organize a better flow of information in the economy and within the administration. Moreover, the US government has issued a Memorandum on Open Data Policy with the aim “to promote openness and interoperability, and properly safeguard systems and information” (Tauberer, 2014).

Similar policies have also emerged on the local level, such as the creation of the City of Chicago’s Data Portal which hosts over 200 datasets about city departments, services, facilities and performance (City of Chicago, 2010).

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1. [https://www.data.gov/](https://www.data.gov/)
2. [https://data.gov.uk/](https://data.gov.uk/)
3. [https://www.data.gouv.fr/](https://www.data.gouv.fr/)
To conclude, there is an increasing number of governments which embrace the concept of open data and have established open data portals on the Internet. However, many governments are still slow to embrace open data due to budgetary and cultural constraints.

4. Makerspaces, FabLabs, hackerspaces

During the last two decades, the wide distribution of information and communication technologies and the dropping costs of desktop manufacturing technologies\(^4\) have sparked global interest and experimentation with grassroots creative possibilities. Individuals and groups have been building community-run physical places to pursue their common interests. In other words, we have been observing the emergence of makerspaces.

Makerspaces, hackerspaces, fablabs are in flux: there is no single definition that perfectly captures all such spaces (Sleigh et al., 2015). This report will follow a rather simple and inclusive definition, using the term “makerspace” as an umbrella for a physical location where people get together to share materials and knowledge, network, learn new skills, and make things. Artists, programmers, engineers, tinkerers and others have access to prototyping tools in makerspaces, allowing them to collaborate in order to produce small-scale solutions for problems of daily life (Niaros, 2016).

There is a rapidly increasing global network of hackerspaces which spans all over the world (figure 4). According to hackerspaces.org, perhaps the most popular virtual network of hackerspaces, there are currently 2,035 hackerspaces all over the world, with 1,248 of them marked as active, 353 as planned, and the rest inactive or closed (hackerspaces.org, 2016).

\(^4\) It should be noted that anything from three-dimensional (3D) printers or laser cutters (i.e. hi-techs) to simple cutting tools or screwdrivers (i.e. low-techs) can be considered desktop manufacturing technologies.
During the last few years some governments, especially on the local level, have been facilitating the creation and maintenance of makerspaces. A prominent example is that of the Barcelona City Council which in 2013 created the Ateneu de Fabricació Digital in Les Corts. This initiative was based on the FabLab concept, which began in 2001 as a research project of Massachusetts Institute of Technology (MIT) to investigate how underserved communities could be empowered by digital technologies at the grassroots level (Mikhak et al., 2002). The aim of Ateneu de Fabricació was to create a space for debate and technological creation that was within everyone’s reach and today it serves as a place where all those who wish to do so can express their talent and creativity, as it is the first public FabLab in the world (Barcelona.cat, 2016).

Another example is the municipality-supported media lab in Madrid called MediaLab-Prado. MediaLab-Prado was established in 2002 as part of the Department of Arts, Sports and Tourism of the Madrid City Council and has been active in the production, research, and dissemination of digital culture (MediaLab-Prado, 2016). It serves as a public institution that promotes commons-based research, experimentation and peer production, especially through its ‘Commons Lab’ (Garcia, 2015). Since its creation in 2007, the Commons Lab tries to learn from commons-based practices and apply them in the public realm - sometimes succeeding, and sometimes not.

Moreover, makerspaces have recently generated much interest in diverse educational circles (Sheridan et al., 2014). Several libraries and museums have created spaces with the aim to empower creative activity, resource-sharing and active engagement with making, materials, processes and ideas in relation to their collections and exhibits (Britton, 2012).
Figure 5: Makerspaces in US-based libraries, museums & schools - 12/06/2016. Source: Makerbridge, 2016.

Such initiatives are mainly taken by specific institutions and not on a national level. Some prominent examples are that of the ITLAb in the Municipal Public Library in Piekary Śląskie (Poland); the Skaparbibblan at the Library of Vaggeryd (Sweden); the 3D Printing incubator at Rijeka City Library (Croatia); the Stavanger Library (Norway); and the MediaLAB at the State Library for Young Adults in Moscow (Russia). Similarly, there are many innovative libraries, museums and schools across the US which are establishing areas for makerspaces (figure 5).

5. Conclusions

During the last fifteen years, we have been witnessing a political will to support open source technologies, adopt open data policies and facilitate the creation of co-working places like makerspaces. Such policies are mostly implemented in the US and the Western Europe. However, there is an increasing number of Governments, in various levels, which explore the potential and draw innovative commons-oriented policies, often in response to the economic crisis and austerity politics.

Given that commons-private partnerships could open new channels for the participation of civil society in solving common problems and meeting public needs, the aforementioned trend could facilitate a further integration of open solutions by public administrations. In all, it could be argued that, through public policies and institutions that incubate new commons-oriented projects, the reinvention of public institutions could be possible.
6. References


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US Department of Commerce (2014). Fostering innovation, creating jobs, driving better decisions: The value of government data. Retrieved from:
http://www.esa.doc.gov/sites/default/files/revisedfosteringinnovationcreatingjobsdrivingbetterdecisions-thevalueofgovernmentdata.pdf
Part B – Empirical case studies

1. General framework

This section will present a set of existing cases in which public administration has implemented or attempted to implement policies in order to boost and encourage the emergence and sustainability of CBPP communities. The case review will go beyond a simple description of the experience since it will cover the institutional application, implementation strategies and design principles that characterise each of the cases that were investigated.

The Greek case was selected because Greece is quite advanced with regards to issues related to open data in a European level5. Additionally, during the past few years, there has been an effort to promote a commons agenda through the newly established government of Syriza. Another important factor is that the financial and social crisis that have been ravaging the country the last years, activated a high level of social experimentation like the emergence of different types of social cooperatives and the demand for open access to data and higher transparency levels. The aforementioned initiatives exhibit tendencies of common use of resources as well as attempts to create wider communication networks between them.

The case study of Ecuador was selected due to the global originality of the Free/Libre Open Knowledge Society project (FLOK project6) that took place during 2013-2014. FLOK was a project funded by the Ecuadorian Government with the aim to change the productive matrix based on free knowledge towards a social economy of knowledge.

Ecuador was the first country in the world which committed itself to the creation of an open commons knowledge based society. In order to achieve the transition to a “buen conocer” (e.g. “good knowledge”) society, which is an extension of the official national strategy towards a “buen vivir” (e.g. “good living”) - based society, the Advanced Studies Institute (IAEN) in Quito, Ecuador, led by the rector Carlos Prieto, has initiated a strategic process, called the FLOK Society Project, which aimed to organize a major international conference in March 2013 (called “Cumbre”) and to produce 10 strategic documents proposing transition policies towards the good knowledge society, which were presented to the Ecuadorian citizens through intensive participatory processes, similar to those that took place for the establishment of the new Constitution and the ambitious National Plans, which set the guidelines for government policy7.

5 http://index.okfn.org/place/greece/
6 http://en.wiki.FLOKsociety.org/w/Main_Page
7 https://blog.p2pfoundation.net/framing-the-FLOK-transition-project-in-ecuador-why-open-knowledge-is-not-enough/2014/01/31
In order to document the objectives of public policies related to the commons; outline the implementation strategies that were followed; and analyze the success level of the outcomes, we firstly studied related material for the cases of Greece and Ecuador, like interviews, declarations and related published material. We then examined how the policy proposals were formed and what were their main goals. Subsequently we interviewed different key players: Ministerial and governmental officials, representatives from institutes and initiatives that are related to the commons and finally some national and international experts. Then we cross-examined the data that were collected and formed the narrative for each case.

Because CBPP initiatives are at an early stage in both countries, we had to broaden the field of the investigation and include public policies for Social and Solidarity Economy (SSE) under which commons-based initiatives are often perceived and classified. Moreover the researchers were based in Greece and therefore the amount of information collected was inevitably higher in the Greek than in the Ecuadorian case.

### 2. Public policies reviewed

The tables below presents the public policies reviewed in the case of Greece (table 1) and Ecuador (table 2).

<table>
<thead>
<tr>
<th>No.</th>
<th>Public policies</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social and Solidarity Economy (SSE) equal partner with the State</td>
<td>SSE forms a new paradigm of value creation. Therefore its institutionalisation is under formation. Legislation concerning SSE presents gaps and the form it will take consists of high importance.</td>
</tr>
<tr>
<td>2</td>
<td>Simplify procedures for SSE</td>
<td>SSE’s relevant legislation is frequently failing to cope with the constantly evolving reality. Professional sectors remain outside the provision of the law and a number of bureaucratic or practical problems need to be solved like for example, the starting of a cooperative or a Fablab. Improve legislation for starting a cooperative, a Fabab etc.</td>
</tr>
<tr>
<td>3</td>
<td>Reciprocity principle and tax system reform to support SSE</td>
<td>SSE can play a major role in dealing with the crisis. This is why supportive state regulations can be particularly important, in order to create proper feedback loops that will benefit the growth of SSE.</td>
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</tr>
<tr>
<td>4</td>
<td>Public participation in decision making</td>
<td>There is a lack of mechanisms that will encourage citizens’ active engagement in the open decision making processes. For example, informative events, demonstration of successful paradigms and control mechanisms for the level of embodiment of citizens’ comments into the final decisions are necessary.</td>
</tr>
<tr>
<td>5</td>
<td>Data-centric base</td>
<td>Crucial for the facilitation of retrieval of open data is the organisational form under which they will be stored. There is a number of complaints from the public and private sector about critical mistakes in the opening process of public data (e.g. wrong files formats, underestimation of the importance of the process, fragmentation of the information). Design institutions/legal changes etc to effectively use the openness of data in all levels</td>
</tr>
<tr>
<td>6</td>
<td>Protect open hardware</td>
<td>The complete absence of a legislation about open hardware is a factor of uncertainty for open innovation projects. The setting of a proper institutional framework faces various difficulties, for example, because of non-existent practices worldwide or because of the absence of a proper specialised legal team.</td>
</tr>
<tr>
<td>7</td>
<td>Open public data</td>
<td>Due to the reason that the development of open public data is in its beginning, there are multiple needs to be covered like funding infrastructures for open data; open access to data for all projects funded by the public; open research data and connect them with public open data; creative commons licenses for all public created data.</td>
</tr>
<tr>
<td>8</td>
<td>Establishment of an Independent Institute</td>
<td>An Independent Institute concerning the commons and the SSE could boost their advancement. Such an institute could provide education, forums, know-how on SSE initiatives, international and national networking and research.</td>
</tr>
<tr>
<td>9</td>
<td>Education</td>
<td>Even though education might be considered as one of the most advanced fields of commons-oriented policies, much remains to be done. For example education for openness, e.g. training in all levels of</td>
</tr>
</tbody>
</table>
education for teachers and pupils; creation of FabLabs and Wiki educational platforms in schools; train public servants for open data use.

<table>
<thead>
<tr>
<th>No.</th>
<th>Public policies</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Crowdsourcing</td>
<td>A platform that will promote citizenship participation and enhance self funding is considered important.</td>
</tr>
</tbody>
</table>

Table 1: Greek public policies reviewed

<table>
<thead>
<tr>
<th>No.</th>
<th>Public policies</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cooperative networks</td>
<td>The creation of networks between cooperatives using commons-based tools can be an empowering practice.</td>
</tr>
<tr>
<td>2</td>
<td>Build interface between State and Social Economy</td>
<td>It is important to open dialogue channels for joint planning between local enterprises and the government. For this reason, proper legislation, user participation in decision making and institutions need to develop. Create institutions for joint planning between local enterprises and the government</td>
</tr>
<tr>
<td>3</td>
<td>Remove barriers from policies and trade agreements</td>
<td>The review of legislations and agreements and the removal of barriers in order to help the development of initiatives, cooperatives, products etc based on openness is crucial.</td>
</tr>
<tr>
<td>4</td>
<td>Fund technical assistance training</td>
<td>Technical training that will concern the procedures for creating cooperatives is needed.</td>
</tr>
<tr>
<td>5</td>
<td>Support shared service consortia controlled by user members</td>
<td>These consortia will provide strategic shared services on the basis of local and regional jurisdictions.</td>
</tr>
<tr>
<td>6</td>
<td>Social innovation labs</td>
<td>Social innovation labs need to be further developed, in an independent form or within the state.</td>
</tr>
<tr>
<td>7</td>
<td>Education</td>
<td>Education for openness in all levels at schools and public sector should be developed.</td>
</tr>
<tr>
<td>8</td>
<td>Open access to data</td>
<td>The “Good Living” model of Ecuador prerequisites open access to information.</td>
</tr>
</tbody>
</table>

Table 2: Ecuadorian public policies reviewed
3. Cases studies

3.1. Greece

3.1.1. Sources

Within the Greek case study we investigated commons-oriented public policies that have been implemented since 2015. Our main sources of data were: i) declarations and recorded interviews from the current government of Syriza; and ii) 18 semi-structured interviews conducted for the purposes of this deliverable between April and May of 2016, including governmental officials, representatives from several institutions and initiatives, as well as experts on the field of CBPP (figure 1).

![Figure 1: MindMap of the Government, institutions, initiatives and experts that were interviewed for the Greek case study](image)

Regarding the officers from the **Greek Government** (members and ex-members of Syriza party), we interviewed people from: i) the IT consultation of the general secretariat of coordination and governmental work; ii) the Central Committee and Political Secretariat of Syriza party; iii) the Ministry of Environment and Energy\(^8\); and iv) the Management Organisation Unit (MOU\(^9\)) which assists public authorities in the effective management of EU-funded programmes.

\(^8\) [http://www.ypeka.gr/Default.aspx](http://www.ypeka.gr/Default.aspx)

Further, we conducted interviews with representatives from institutions which are actively involved in the promotion of the commons and SSE policies. For example, the Institute Nikos Poulatzas\(^\text{10}\) which was founded in 1997, is associated with Syriza’s party and its objectives include the fostering of the values of the radical and ecological Left and the training of its staff. It was the first organization in Greece that showed interest in the commons and has invited various leading experts to give talks. Another institution involved in this project is Solidarity4all\(^\text{11}\), an organization which identifies and supports social solidarity initiatives in Greece and aims at becoming a nation-wide meeting and facilitation hub. The Solidarity4all maps all the solidarity initiatives that appeared in Greece during the crisis and promotes cooperation amongst them. It also disseminates information regarding the legal establishment of such projects. In addition, the Greek Free/Open Source Software Society (GFOSS)\(^\text{12}\), a non-profit organization founded in 2008, is an association of 29 Universities and Research Centers which promotes openness through the use and the development of open standards and open technologies in education, public administration and business in Greece. The GFOSS has managed to become an important deliberation partner with central government bodies. The case of the Hellenic Electricity Distribution Network Operator S.A\(^\text{13}\) was also of interest as it is in charge of the operation, maintenance and development of the power distribution network in Greece and was involved in efforts to create renewable energy cooperatives. Last, the Industrial Property Organization\(^\text{14}\) is the only legally qualified institution in Greece for the protection of patents and industrial designs.

The interviews with representatives of commons-based initiatives were crucial, as they demonstrated the actual impact that each policy had in empowering CBPP initiatives. The initiatives which participated in our interviews were: i) Hackerspace.gr\(^\text{15}\), a place for creativity, collaboration, research, development and education. It is a dynamic community with ideas inspired by the Open Source philosophy funded in 2010 and based in Athens; The team is very active, organising events for open source culture dissemination and creating various successful projects\(^\text{16}\) ii) Sarantaporo.gr\(^\text{17}\), a non profit organization operating since 2010 in the rural area of Sarantaporo (northern Greece) building a community wireless networking system. Sarantapo is one of the very few successful IT for the commons projects in rural Greece; and iii. Consumer Association - “The Quality of Life” (Ekpizo)\(^\text{18}\), an non-governmental organization established in 1998 working towards the creation of a favorable legislative and institutional framework for consumer rights.

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\(^\text{11}\) http://www solidity4all.gr/en/node/220
\(^\text{12}\) https://gfo ss.ellak.gr/greek-freepen-source-software-society-gfoss/
\(^\text{13}\) http://www.deddic.gr/en/i-sareara/profil
\(^\text{15}\) https://www.hackerspace.gr/
\(^\text{16}\) e.g. https://2016.spaceappschallenge.org/challenges/earth/aircheck/projects/climate-watch
\(^\text{17}\) http://www.sarantaporo.gr/
\(^\text{18}\) http://www.ekpizo.gr/en/
Another important source of data were national and international experts who were involved in the formation of some of the public policies aiming in the empowerment of CBPP in Greece. George Dafermos\(^ {19} \) is an expert on issues related to the governance of the commons, peer production, open/user innovation, open licensing and new organisational structures enabled by the Internet. Dafermos was an advisor of the Deputy Prime Minister, focusing on the development of public policy proposals and applied policies related to commons. Moreover, George Papanikolaou\(^ {20} \) is actively contributing to the Greek P2P Foundation blog/wiki and to groups supporting digital rights in Greece. Over the last years he is regularly giving talks on the Commons and peer production in meetings and conferences all around Greece. He has translated several articles on the aforementioned topics in Greek. John Restakis\(^ {21} \) has been active in the cooperative movement for over twenty years, was Research Coordinator on Social Infrastructure and Institutional Innovation for the FLOK Project in Ecuador (see Section 2.3.2) and has also been an advisor to Syriza for the development of a national strategy for the social and solidarity economy. In addition, Michel Bauwens\(^ {22} \) is the founder of the Foundation for the Peer-to-Peer Alternatives and works in collaboration with a global group of researchers in the exploration of peer production, governance and property. He is in collaboration with commons-based initiatives in Greece and with some commons-related Greek institutions like Institute Nicos Poulatzas. Last, Richard Stallman\(^ {23} \) is a software freedom activist and computer programmer who pioneered the concept of copyleft and free software licenses. Stallman is related with people that are active on issues around the commons in Greece and was repeatedly invited as a speaker by the Institute Nicos Poulatzas. Some of the interviews, especially the ones with experts, might not appear explicitly in the text. However, they were critical for our understanding of the commons ecosystem as well as the the formulation of the policy proposals in the following chapters.

3.1.2. Analysis

In January 2015 (weeks before the national elections) the Greek Free/Open Source Software Society organization addressed a set of questions\(^ {24} \) to all political parties, concerning their agenda (if any) on open governance and common goods. Based on the detailed responses of Syrizas’ party on this set of questions as well as on the public policies announced through speeches and interviews of main political officials of Syriza, we created a list of policy proposals (table 1). This list was used as the
guideline in order to conduct the interviews where we examined the advancement on each specific public policy that was announced, the main forces at play and the legal or any other related issues.

The analysis of our interviews follows, where the relevant policies have been aggregated under thematic subsets and the source of each information is referred in a footnote.

**Social and Solidarity Economy**

According to the Solidarity4all\(^{25,26}\), a nationwide facility node that -among other actions- maps the alternative movements of Greece, after the mass occupation of the squares in the summer of 2011, the resistance to an extraordinary additional tax on housing property brought up actions of civil disobedience, which found allies in many left wing and progressive mayors and was developed in parallel with the blossoming of a plethora of networks and structures of practical solidarity.

The solidarity movement is now comprised of hundreds of self-organised collectives and initiatives (to a recent estimation, 400 structures), which are active in a series of fields. The solidarity forms, initially attempting to respond to the most basic needs within specific fields (e.g. health, food, education and culture, housing and debt, legal support, social and alternative economy, workers and immigrant's solidarity and international solidarity) and to the desire for collective organisation, gradually functioned as a social transformer, thus extending their activities to other sectors. For example, in the sector of health there are social clinics and pharmacies that provide services mainly to the uninsured and unemployed. Their function is supported exclusively by the volunteer work and donations of the people, usually only in material rather than financial resources. Some municipalities also supported them by way of offering facilities. A picture of the degree of mobilisation of the people can be drawn by the data of the Metropolitan Clinic of Ellinikon-Argyroupoli, in which 60 volunteers were active in the first months of its function (spring of 2012) while recently there are more than 150. The Social Clinic of Rethymnon (Crete) served 780 persons in 2008-2009, 1.100 in 2010 and 1.580 in 2011. The Metropolitan Clinic of Ellinikon (Athens) since its inception in February 2012 until August, served 1.200 incidents. Correspondingly, the Social Clinic of Thessaloniki, between November 2011 and November 2012, had a total of 6.000 visits.

Furthermore, there is a series of cooperatives, ranging from coffee shops and taverns, courier delivery companies and computer repair-shops to bookshops and agricultural cooperatives of unemployed women. These concrete cases have contributed immensely to spreading the idea and the practices of socialised and self-managed forms of employment and solidarity economy. In recent years, there is a development of social enterprises, not in the framework of common cooperatives as was the case in previous years, but in the frame of worker-driven cooperatives as an answer to

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unemployment. Under a broader sense, the majority of the above initiatives can be considered as based on concepts and practices which encapsulate the commons.

The proliferation of initiatives described above, however, has not been accompanied by broad legislative activity that would foster and promote their further expansion. The main objectives of policies proposed and implemented were to simplify bureaucratic procedures, such as to provide an appropriate legislation that would facilitate the establishment of a cooperative or a FabLab and the reform of the tax system in order to support the SSE (table 1, Public policies no. 1, 2, 3 and 10).

More specifically during the last year, a number of important changes were made on the legal procedures concerning the SSE. For example, according to Mpekridaki, the time needed for the approval of a new cooperative decreased from 8 months to 1 and the procedures for changing the status or restructuring a cooperative became much easier. Additionally, in line with the same source of information, the important state funding tool called “Partnership Agreement for the Development Framework” include SSE initiatives as beneficiaries and funds the ¾ of the total budget needed for the starting of a cooperative.

On the contrary, a tax system reform which intended to support the SSE in broader ways (table 1, no. 3) was not implemented due to the fact that another special fee in the taxation system seemed unbearable under the current economic condition (Panagiotakis).

Moreover, the absence of an association under which the cooperatives of Greece could have a common voice and thus form a solid partner in the consultation with the state is recognized as a major disadvantage both from governmental representatives (Panagiotakis) and from initiatives (Mpekridaki). What was interesting though is that the Ministry of Labour initiated a deliberation process in the provinces to inform the public on the new legislation related to cooperatives. Such an action provoked spontaneous coalitions between cooperative initiatives in an attempt to formulate a more concrete and valid feedback for the Ministry (Mpekridaki). In that case, even though there was not a bottom-up attempt for the creation of an association, the strategy of openness followed by the Ministry initiated a reflective bottom-up coalition.

Social enterprises have been described in an official EC communication relating to the Social Business Initiative27 as:

A social enterprise is an operator in the social economy whose main objective is to have a social impact rather than make a profit for their owners or shareholders. It operates by providing goods and services for the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed in an open and responsible manner and, in particular, involve employees, consumers and stakeholders affected by its commercial activities.

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The narrow way that this definition is perceived appears immediately thereafter of the above paragraph where it is defined that the term “social enterprise” is used to cover merely the following two types of business:

- “businesses providing social services and/or goods and services to vulnerable persons
- businesses with a method of production of goods or services with a social objective (social and professional integration via access to employment for people disadvantaged in particular by insufficient qualifications or social or professional problems leading to exclusion and marginalisation) but whose activity may be outside the realm of the provision of social goods or services.”

This is why Mpekridaki commented that the European Union (EU) has been following a narrow definition concerning the economical sectors where the SSE could be develop, which creates a barrier for the expansion potentialities of this kind of activities. More specific, it was mentioned that the EU is perceiving the SSE as an economic activity which concerns only vulnerable societal groups and, thus, utilizes only a fraction of the SSE’s potential. An indicative problem occurring from the aforementioned perception in the national level is that professionals, such as lawyers and engineers, cannot be insured by their insurance institutions for cooperative-related activities and are, therefore, excluded from forming co-ops.

**Open access to data**

Steps have been taken towards the achievement of open data that would promote a sense of equal access to information and create fertile conditions for social innovation. According to some interviewees, a very good institutional framework related to the open data is present today but, it is often limited by the lack of regulatory acts, secondary legislation and will for implementation (Prodromos, Panagiotakis, Mitropoulou). There are numerous projects related to open data that were completed successfully: 50 cultural organizations, the association of academic libraries and a number of public organizations have opened their datasets (Prodromos). Some indicative examples are the Greek Universities Network (Gnut28), the Academy of Athens29 and the National Documentation Center30. Moreover, 3,000 educational courses are now open (Prodromos).

Usually, opening up the public data requires economic resources, both for already existing databases and for newly created ones. As the Greek Free/Open Source Software Society commented, in order to facilitate its financial support, such procedures should be foreseen in the budget of each publicly

funded project as a prerequisite and an extra fund could be provided specifically for updating data or for compatibility tasks.

According to the Greek Transparency Program Initiative called “Diavgeia”\(^\text{31}\), which is in effect since 2010, all governmental institutions should make publicly available their acts and decisions, with special attention to those dealing with issues of national security and sensitive personal data. Following the latest legislation of the Ministry of Internal Affairs - Administrative Reform and e-Governant (Law 4210/2013), administrative acts and decisions are not valid unless published online at Diavgeia. Moreover according to the Law 4305/2014 all public bodies are obliged to: i) make lists of their available data; ii) announce which of them will be provided openly; and iii) justify why some of them will not be provided openly (Mitropoulou).

In addition, several toolkits have been developed to facilitate the digitization of data, to indicate which are the proper repositories for each type of data and to demonstrate how the data could be made machine-readable. An important detail is that the data should be stored and updated frequently and that this task should be performed by the source institution, since when intermediaries are involved part of the data is lost or misrepresented (Mitropoulou).

The figures below depict the arithmetic progression of the associated public bodies (figure 2) and their posts (figure 3) in the Central Portal of Public Data\(^\text{32}\). In total, there are 70 registered bodies and 847 posted data sets\(^\text{33}\).

![Figure 2: Integration of associated bodies to the Central Portal of Public Data\(^\text{34}\)](http://www.data.gov.gr)(Export date: 5.2.2016)

\(^{33}\) [http://www.opengov.gr/ypes/?p=3538](http://www.opengov.gr/ypes/?p=3538)
\(^{34}\) [http://www.data.gov.gr](http://www.data.gov.gr)
As illustrated in figure 4, according to an “Open Data Maturity in Europe” report, published from the European Data Portal in 2015\cite{data_maturity}, Greece is placed in the “trend setters group” in EU28+ with regards to readiness and maturity of open data.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Progress of posts of open datasets in Central Portal of Public Data\cite{data_portal}}
\end{figure}

\textsuperscript{35} \url{http://www.data.gov.gr} (Export date: 5.2.2016)
\textsuperscript{36} \url{http://www.europeandataportal.eu/en/content/open-data-maturity-europe}
However, a concern expressed by various interviewees was related to the extent to which the civil society does adequately benefit from open data (Mitropoulou, Panagiotakis, Tsiavos, Papanikolaou). At the moment, it seems that the ones that are mainly benefiting are large scale “players”, who have the means and resources to handle these data (Panagiotakis, Papanikolaou). For this reason, special applications have to be developed which will make data use broadly attainable. This could be a task to be developed either by the government or civil society (Panagiotakis).

Nevertheless, according to many interviewees, the process of data opening has not been fully implemented yet due to various reasons (Mitropoulou, Panagiotakis, Tsiavos, Papanikolaou). One major deficiency mentioned from various sources is the lack of technical skills. Some interviewees estimated that in some public sectors they might still not fully understand what open data is, although there are various attempts to train public bodies personnel (Tsiavos). Another reason for the incomplete process is the lack of political will, not always in the sense of being against it but legislations are not always adequately enforced (Mitropoulou). Last, in some cases the procedure of data opening was not executed under a citizen-centric approach, so for example the repositories were not designed to facilitate the end user (Alevritou). According to the General Secretariat of Coordination and Governmental Work (Panagiotakis) some additional drawbacks are: i. the antinomies that emerged between ministries; ii. the several technical improvements that still need to be done in the digital platforms that host open data; and iii. the complexities that emerged on the necessity of solving past issues that should be made public.

**Figure 4:** Open data maturity in Europe
As Panagiotakis commented, the owners of copyrighted data in the cultural sector bring oppositions to the process of data opening as they are overrepresented in the general assembly of the relevant management body. Also, peer projects are fragmented and thus there is not an association to debate or lobby for issues concerning the commons in the public discourse. What’s more, some of the commons based initiatives do not even want to converse with the state due to ideological reasons. Finally as he also stated, the conceptions about property rights within some ministries are based on administrative and punitive measures (e.g. copyright oriented) and therefore the effort of opening data is facing a strong opposition from within.

While the integration of data into a unique “datacentric” base (table 1, no. 5) was announced in the initial public policies from the present government, Industrial Property Organization has commented that the politicians have a lack of understanding of the importance of the “datacentric” base and of “Diavgeia”. Moreover, major setbacks in “Diavgeia” have affected the degree of implementation of the “datacentric” base: two ministries (Ministry of Foreign Affairs and the General Accounting Office) need secondary legislation and regulatory acts so as to be able to implement all the foreseen procedures of “Diavgeia” (i.e. Greek Transparency Program Initiative) (Prodromos). So, as it was repeatedly argued by Papanikolaou, having a technocratic and law team writing the laws together with the secondary legislations and regulatory acts is of great importance.

**Public participation**

In Greece, public participation is effective at a legislative level since 2011 and even though some important advancements have taken place, it has not been implemented properly yet (Tsiavos). The main platforms designed for public participation are the OpenGov[37], the Open Government Partnership[38], the Open Data Institute[39], the Public Spending[40] and the Open Budgets. Despite the above platforms, citizen participation in the digital public deliberation is very low since there is not an effective way to control accountability (Mitropoulou). In other words, there are no tools for the control and measurement of the extent to which citizens’ comments are taken into account in the final texts. This is something that has to be integrated in the procedure. Given the current situation, it has been noticed from Mitropoulou that it is easier for citizens to engage in the public dialogue on a local level where they are able to track the final progress more easily and therefore can have a way of assessing the extent to which their comments were taken into account. Additionally, public participation is often underestimated and seen as a luxury or a restrictive obstacle in the decision-making process by the governmental officers (Pandos).

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[38] http://www.opengovpartnership.org/
[39] https://odi.ellak.gr/
[40] http://publicspending.net/greece/home
Last, it has been observed that when more deliberative processes are drawn by the Government (as in the case of the Ministry campaign for the SSE in the provinces mentioned above), then more citizen participation is triggered and more coalitions between initiatives are formed to submit joined proposals, strengthened their voices and broadening their influence. Similar actions in the field of the commons could possibly have the same effect (Mpekridaki).

Education

Education appears to be a sector where positive narratives exceed the negative ones. There are recorded efforts to advance awareness on the open source philosophy in both governmental, institutional and grassroots level, albeit not particularly interconnected.

Various interviewees stated that building awareness and developing skills on the commons are key elements, since such a novel concept needs a lot of time and effort to be understood (Kotsaka, Tsiavos, Papanikolaou, Restakis).

A strategy followed by a team of people interested in promoting the commons was to organize relevant public informational events and also to introduce some key governmental officials of Syriza to the concepts of the commons before the elections. For this reason meetings and workshops for Syriza officials had taken place (Kotsaka).

In a formal level, two project management teams on a ministerial level were established, which formulate law drafts about open technologies in education and digital/open governance. Nevertheless, there are no specific results from these teams as of yet (Mitropoulou).

As it was stated from Mpekridaki and Papanikolaou, while a rich educational activity related to the commons is taking place, it is often fragmented and dependant on the voluntary work of some “enthusiasts”, rather than an organized institutional framework. Two indicative examples are the Linux terminal server project which is implemented on an experimental level in some Greek schools (Papanikolaou) and the Raspberry pi school laboratory project (Mitropoulou). Another more organized educational action is the “Excellence Units of Open software”42. The Excellence Units are groups in universities and research centers that implement the project “Electronic Services for the Development and Dissemination of Open Source” with dissemination and promotional activities through conferences and events in ten thematic areas. Additionally, according to Papanikolaou short courses, content creation, artistic creation and learning tools related to open source technologies and practices have taken place.

41 [http://ts.sch.gr/wiki/Linux/LTSP](http://ts.sch.gr/wiki/Linux/LTSP)
42 [https://ma.ellak.gr/](https://ma.ellak.gr/)
Furthermore, as we were informed by Mitropoulou, there is a directive of the Ministry of Education, Research and Religions which states that schools’ laboratories should be equipped only with open technologies.

Various Hackathons had taken place under ministries, institutional organizations or grassroots groups (Mitropoulou). The Ministry of Interior and Administrative Reconstruction and eGovernment has organized an IT for Gov\textsuperscript{43} contest inviting people to submit proposals for applications in public administration. Moreover, according to Law (4305/2014), the Ministry of Internal Affairs and Administrative Reconstruction has to organize at least one hackathon per year (Mitropoulou). Finally, workshops about consumer education were realized by the consumer rights organization (Ekpizo) but there is no educational material on consumer rights or on products’ data openness (Alevritou).

Papanikolaou has also mentioned that there is not an established certification for free software users and this lack will probably bring about difficulties in the public sector when migrating to free software.

Furthermore, as we were informed by Mpekridaki, there is neither an established certification for SSE advisors nor for people training them. Due to the above, only loose consulting work concerning the SSE can proceed. For example, the Solidarity4all organization cannot provide educational training and consulting in new cooperatives. As a result, new cooperatives often turn to mainstream consulting centers which focus more on business perspectives rather than on social interest. Finally the idea of a counterpart of the FLOK project for Greece was mentioned from various interviewees like Tsiavos and Karitzis.

**Open Software/Hardware**

While public policies on data openness in Greece are in a development trajectory, we did not observe respective evolution on open software and open hardware policies. The Hellenic Electricity Distribution Network Operator S.A. (HEDNO) has a framework agreement with the Greek Free/Open Source Software Society and the Public Power Corporation S.A. in order to initiate a project for the migration to free software. It was commented that the existence of an IT department within HEDNO is enhancing the feasibility of such an internal change (Margaris).

Unfortunately, an important drawback regarding the possible migration to free software in a pivotal public sector has recently occurred, due to the renewal of the contract for closed software provision for the School of Public Administration (Karitzis).

\textsuperscript{43} [http://www.minadmin.gov.gr/?page_id=12958](http://www.minadmin.gov.gr/?page_id=12958)
According to the Industrial Property Organisation, the protection of open hardware is at the state of preparing the relevant legislation for the creation of the institutional framework. However, there is an immense lack of absolutely necessary technocratic support (Tsiavos, Papanikolaou).

Independent institute

The creation of an independent institute was also proposed, which would have a cooperative form and would undertake multiple actions like education, fora setups, provision of know-how on cooperatives and commons, national and international networking and research. Currently as it was stated from the General Secretariat of Coordination and Governmental Work (Panagiotakis), this is not in the governmental priorities due mainly to economic reasons. The Solidarity4all initiative could be considered a preliminary form of an institution towards this direction even though its responsibilities at the moment are far from what was described by the policy proposals (Mpekridaki).

NGOs related to commons

There are three examples of commons-oriented NGO’s in the Greek case, two of which can help us draw some preliminary thoughts: the cases of GFOSS (Greek Free/Open Source Software Society) and Sarantaporo.gr. The third example is the Athens Wireless Metropolitan Network (AWMN)44 which is functioning in collaboration with the Ministry of Infrastructure, Transport and Networks and shares some of the data collected by its network (Kleisiaris, Papanikolaou).

GFOSS constitutes a unique case as it is a consortium of 29 public universities and research centers. This gives the advantage of high prestige and of strong negotiations competence that couldn’t be achieved if, for example, each university had to negotiate alone. Moreover, this coalition brings together lead minorities from different public institutions. It has been proven very effective and is probably a unique case in the European commons ecosystem (Papanikolaou, Tsiavos).

Sarantaporo.gr was initiated as some citizen efforts to build a modern wireless community network in a Greek remote rural area and over time it was evolved in a non-profit organization that with the support of the CONFINE EU project, GFOSS and a Technical University has connected 14 villages45. Sarantaporo.gr aims to open the public infrastructures to citizens. As the founding member Kleisiaris explained, some of the main obstacles that Sarantaporo.gr is facing is that local municipalities have no perception of sharing common resources but instead are used to contracting public works to private companies. Another difficulty faced is the hostile legal environment for such small organizations: for example Sarantaporo.gr is been taxed regardless of incomes while in some cases abroad there is tax exemption for similar initiatives. What the members of Sarantaporo.gr have

44 [http://www.awmn.net/content.php](http://www.awmn.net/content.php)
45 [http://www.sarantaporo.gr](http://www.sarantaporo.gr)
observed is that in Greece, instead of distributing the public infrastructures under a commons management, the public common infrastructures are being privatized.

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Results</th>
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<td>Simplify procedures for SSE - Support SSE</td>
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<td>Open access to data / Data-centric base</td>
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<td>Produce applications that help openness and transparency</td>
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<td>Protect open hardware</td>
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<td>Establishment of an independent Institute</td>
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<td>Remove barriers from policies and trade agreements</td>
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<td>Relation with EU</td>
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*Table 3: Estimated overview of the implementation level of the public policies concerning commons in Greece*
3.2. Ecuador

3.2.1. Sources

In the Ecuadorian case study we investigated the extent to which commons-oriented public policies have been implemented in the aftermath of the Free/Libre Open Knowledge Society (FLOK) project (2013-14). The FLOK project was proposed in 2013 by the National Institute of Advanced Studies, the Coordinating Ministry of Knowledge and Human Talent and the National Secretary for Science and Innovation. The main goal was the formation of policy proposals for the transformation of the society’s productive matrix towards a Social Economy of Knowledge.

Our main sources of data were: i) outputs of the FLOK project\(^{46}\) and ii) interviews conducted between April and May of 2016 for the purposes of this deliverable with 7 researchers from the core team of the FLOK project (figure 5).

![Figure 5: MindMap of the FLOK project interviewees](image)

More specific, **Daniel Vasquez** was the project leader of the FLOK project and currently is affiliated with the association ALabs; **Michel Bauwens**\(^ {47}\) was the research director of the FLOK project and is also the founder of the Foundation for the Peer-to-Peer Alternatives; **Juan Manuel Crespo** was part of the Coordination Team of the project and responsible for the research of Ancestral Knowledge. Crespo has been working on the indigenous worldviews and was the linkage between researchers and indigenous communities; **Bernardo Gutiérrez**\(^ {48}\) was the Communication Networks responsible & Marketing Director of the FLOK project. He is a journalist, networks researcher and media activist, as well as founder of the network of innovation FuturaMedia.net;

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\(^{47}\) [http://p2pfoundation.net/Michel_Bauwens](http://p2pfoundation.net/Michel_Bauwens)

\(^{48}\) [https://wiki.p2pfoundation.net/Bernardo_Guti%c3%a9rrez](https://wiki.p2pfoundation.net/Bernardo_Guti%C3%A9rrez)
John Restakis\(^{49}\) was the Research Coordinator for Policy on Social Infrastructure and Institutional Innovation for the FLOK project. Restakis has also been an advisor to the government of Syriza in Greece for a development of a national strategy for the SSE and Research Associate for Co-operatives UK. George Dafermos\(^{50}\) was a researcher and coordinator for the development of proposals in the fields of Biodiversity, Agriculture, Decentralized Industry and Decentralized Energy. Dafermos at the same time was advisor of the Deputy Prime Minister of Greece. Giannis Margaris participated as a postdoc researcher on distributed energy.

3.2.2. Analysis

According to Bauwens, the FLOK project was a publicly funded academic research project connecting indigenous movement with hacktivist movement under the concept of the commons. The introduction of the concept of buen vivir (e.g. “good living”) as a core value in the National Plan of Ecuador in 2007-2008 is considered a big political step signifying the influence of indigenous values in the political history of Ecuador (Crespo). Buen vivir comprises the indigenous-ancestral understanding of what can be defined as “good living”, encapsulating powerful traditional values that can usually be traced outside tight economic terms. The FLOK project combined the values of the commons with the heritage of “buen vivir” and through this process generated the concept of buen conocer, although it does not fully encapsulate the full meaning of the term “good knowledge”. As was stated by Gutiérrez, the FLOK project created an academic and activist ecosystem, which operated as a kind of neuron's system, creating a new interface between government and citizenship.

The core team of the FLOK project consisted of 15 academic researchers who, in a period of two years, had to build a participatory model of research and draw policy proposals for the commons transition on a national level. These policy proposals were allocated to 14 thematic work-tables which were broadly discussed from more than 200 persons during the “Cumbre”, a 3 days event that took place in May of 2014\(^{51}\) (Vasquez). The composition of each work table was one third local people, one third experts and one third public officials (Bauwens). Based on the material that was developed before and during “Cumbre”, a one-year process of analysis and synthesis was initiated which lead to the creation of a book of policy proposals. The book illustrates high social and techno-political consensus on regional and national level resembling more a proposal from the academy, institutions and the social movements rather than a legal imposition (Vasquez).

The project leader estimated that during the two years of the project, more than 1500 persons had participated in the FLOK project. This project opened a discourse about the commons in the Ecuadorian public sphere which before did not exist. According to Dafermos, one of the most important achievements of the FLOK project was not only the development of policy proposals

\(^{49}\) [http://p2pfoundation.net/John_Restakis](http://p2pfoundation.net/John_Restakis)

\(^{50}\) [http://p2pfoundation.net/George_Dafermos](http://p2pfoundation.net/George_Dafermos)

\(^{51}\) [http://cumbredelbuenconocer.ec/](http://cumbredelbuenconocer.ec/)
with a high degree of acceptance but the elaboration of an open model for the development of such proposals.

The challenge was to open the research process, to work with open tools and deal with the local commons-oriented cooperatives. For example, there are 200 “comunas” in Quito with a size slightly smaller than a neighborhood where there is a kind of collective property (Gutiérrez).

It is estimated that the FLOK project output book, has had high major impact: for example there is a proposal of the public libraries of Medellin in Colombia to print 1000 books (Gutiérrez) and there are officials who are using the book in municipal councils in Spain (i.e. Ada Colau, Ahora Madrid52) and in Latin America (i.e. Ajuntos del Sur53, Party Revolucion Democratica from Chile that works with the government to fight against patents (Gutiérrez)).

After the completion of the FLOK project, there was not a concrete follow up. A few municipalities were interested in advancing some of the FLOK proposals and in this way a small number of researchers continued working in specific individual programs. As it was clearly stated from the interviewees, FLOK was a project mainly for making policy proposals and not for implementing them. Therefore, some of the proposals are at the beginning of their realization, mainly those concerning knowledge and human talent, while the remaining depend on issues of political will (Vasquez).

Social and Solidarity Economy

The main objectives of policy proposals related to the SSE were to develop cooperative networks and build an interface between State and Social Economy (table 2, no. 1,2). Daniel Vasquez, the director of FLOK project explained that there is a debate between the SSE and the finance sector. He mentioned that there are 250 small cooperative banks in Ecuador and 1200 neighborhood cash registers of gold. Currently, a technological cooperative is being created in order to make an overall estimation and an economic viability analysis of what will be needed for the development of a free software for the cooperative banks. This free software could form an interconnection system for the whole solidarity economy and the cooperative funding system.

Working on the above direction, the technological cooperative is organising workshops for the cooperative banks describing what could be done with free technologies and is coordinating informative reunions with the cooperative bank regional directors. The people who create and analyze the viability of the aforementioned proposals and realize the informative events are usually volunteers and activists but sometimes the cooperatives hire contractors who can guide them and make the necessary work (Vasquez).

52 https://conoce.ahoramadrid.org/
53 http://www.asuntosdelsur.org/
Open access to data

As it was reported from Crespo, an open, online law proposal took place which counted 100,000 users and was drafted under the guidance of the FLOK project (even though some of the users might have been pressured from the government in order to participate, e.g. public servants). At the end, the government didn’t respect the protocol of the open law proposal and did not follow the transparent procedures for the integration of the comments of the deliberation process. Despite that, it was estimated that a first important step was made.

In general, a difficulty that was reported is that government did not feel comfortable with open participation, especially when such processes could directly affect the final decisions. For example during the Cumbre event, state representatives were trying to control the conversations under the pretext of elevated importance due to them financing the project. The FLOK research team struggled to make clear that the project would flourish only if all participants would enjoy the same level of freedom to affect the final outcome. Furthermore, it was reported that the Province of Cañar Regional government\textsuperscript{54} together with the help of the FLOK project proceeded to open web government tools like applying open access to information, open budgets and open contracts (Crespo).

Crespo also reported that similar difficulties with the ones described in the Greek case study were present concerning the opening of data. Specifically, although open government and open data projects are put in practice, the final result is admitted to be poor. There seems to be low understanding of the importance of the process and of the appropriate procedure for implementing such actions. Finally it was mentioned that a local government in south Colombia is using a lot of the FLOK proposals on their public policies concerning processes of opening public data (open gov) and public participation without any further details (Crespo).

Open Software/Hardware

According to Dafermos, a law\textsuperscript{55} for free software in the public sector was written jointly by the Government and the FLOK project. Moreover, the “Cooperative National Industry of Technology of Free Software” was created in order to facilitate the migration toward free software (Vasquez). As of this moment (May of 2016), the transition to free software at the first Ministry of the Sectoral Council of Knowledge and Human Talent of Ecuador is completed by 50% and it is estimated that it will be fully implemented in all the Ministries of this Sectoral Council by the end of 2016. This Sectoral Council consists of Ministries and sub-Ministries which will all be migrating to a

\textsuperscript{54} http://www.gobiernodelcanar.gob.ec/public_html/
\textsuperscript{55} Highest level of law is the Constitution, then stands the Program of the Government and then the Organic Laws.
distribution of Ubuntu Cinnamon especially tailored for their needs. At the same time, public servants are trained in free software use by the aforementioned organization (Crespo).

Gutiérrez explained that due to the public events that were organized by the FLOK project in all the provinces of Ecuador, the indigenous cooperative of the village Sinchos and the local government became interested in initiating two projects: one about seeds as commons and one about a micro-factory for open farm machines. John Restakis, the Research Co-ordinator on Social Infrastructure and Institutional Innovation, collaborated with the Sinchos local cooperative in order to accomplish the above projects. They received help both from the Mayor, who bought the land that was needed and from the Community Evolution Foundation, a Canadian foundation (Bauwens). The project regarding the manufacturing of open farm machines started in a dynamic way and had a good development until the financial support of the local government went down mainly because of the oil crises in Ecuador (Crespo).

Currently John Restakis with the help of the Community Evolution Foundation as well as the municipality, initiated a regional ecotourism project involving the producer associations of Sinchos that are cultivating commonly owned land (Restakis).

**Law and Trade agreements**

As we were informed from Gutiérrez, the free and open innovation juridic code of the country is based on FLOK project ideas and texts. Additionally, FLOK project members participated in the formation of the new cultural law and the FLOK proposals about intellectual property law have been discussed in the National Assembly (Crespo). It has also been noted that some deputies are using FLOK’s book as a useful guide in the municipal assemblies.

Furthermore, there was an effort on behalf of the FLOK project in order to modify the intellectual property clauses. In this attempt, the EU was extremely inflexible and constricted the process. As was stated by Vasquez, during some trade agreement negotiations in which Rafael Correa was escorted by some FLOK researchers, the EU asked Ecuadorian government to accept the intellectual property clauses in order to continue exporting bananas in Europe. In that sense, there are barriers in the process of law reforms that exceed national limiting factors.

**Education**

As explained in the introduction of this chapter, the FLOK project was focused on the concept of free/open knowledge and therefore various educational actions were realized. Educational programs series were developed based on the FLOKs’ policy proposals and were covering different sectors

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like agriculture and energy. These workshops were realized by the FLOK project in various universities and institutions in order to educate but also in order to trigger the interest of the institutions for the implementation of the proposals. FLOK projects’ team was prepared to offer help and cooperation to the institutions that might express interest in realising some of the commons-based policy proposals (Crespo, Vasquez).

The procedure that was followed for the Cumbre event has particular interest. The team of academic and activists had to prepare draft policy proposals that would be jointly worked during the Cumbre. In order to do that, apart from the theoretical analysis and the academic research that they conducted, they opened the procedure from the very beginning, establishing online and face to face communication with various activist and indigenous groups. Given the low level of internet access in Ecuador, they decided to do at least one workshop in each province (Crespo). Therefore, more than 60 workshops, meetings, visits or assemblies (Dafermos) were realized in order to map the social knowledge economy and document different opinions and ideas (Gutiérrez). An interesting detail about these meetings is that the FLOK project team tried to detach themselves from the municipalities or from acting like representatives of the state. In order to do that, they visited the social or indigenous movements in their own place (like social centers, occupied spaces and cooperative workplaces) and their main objective was to listen and document the people rather than speak (Gutiérrez).

Moreover, in order to make the vision of the knowledge society readily understood from a daily life perspective, the FLOK project outsourced a team from Ecuador in order to develop educational theater shows which were based in the Paulo Freire and Augusto Boal method named “Theater of the oppressed” (Bauwens). The Theater of the oppressed uses theater as a mean of promoting social and political change. In such a theater the audience becomes active; they explore, analyse and transform the reality in which they are living and thus can simulate different proposals for social organisation.

The usefulness of the tools selected by the FLOK project can be depicted by the simple example of the mailing lists. As we were informed by the Communication Networks responsible of the FLOK project (Gutiérrez), the lists that were created as campaigns communication tool by the FLOK project back in 2014 are still in use, operating outside FLOK’s range and facilitating various communities and projects.

Regarding the need for public administrative training on free software use, a project named Mooc was running in parallel to the FLOK project. According to the Crespo, the Mooc project created the Formax educational platform by using the edx educational platform (a massive open online course provider), where online courses for administrative public training were developed. Indicatively, by developing one open online training course, the Mooc project managed to save 200.000 dollars from the public budget. As Vasquez states, an important revolutionary change that happened in education

57 [https://www.formax.edu.ec/](https://www.formax.edu.ec/)
was the introduction of the lesson of programming based on open source tools starting from ages of 5-6 years old and spanning until the university level. Additionally, educational courses and proper educational material prepared for the professors of programming in schools. Finally, it was mentioned that the sectoral council of education is working towards the migration to free software use.

Regarding educational books, Crespo mentioned that there was an attempt in conjunction with the Ministry of education in order to launch book contracts based in creative commons licences. The strong lobbies and high financial interests behind those contracts make such a change difficult and moreover the current contract needs five more years in order to expire. However, the Ministry of Education expressed his interest for such a change.

In the higher educational level, Yachay Tech university\(^{58}\) was an important case of a university that was created under an open knowledge perspective and was part of the Yachay City\(^{59}\), the first City of Knowledge, located in northern Ecuador. Unfortunately, Crespo commented that Yachay Tech is now stepping away from its original direction by signing contracts with many big corporations. However, another promising experiment is in progress, in which the FLOK team is working intensively in conjunction with other groups in order to create a new university based on open science perspectives and specialized on biodiversity.


\(^{59}\) [http://www.ciudadyachay.com/](http://www.ciudadyachay.com/)
Table 4: Estimated overview of the implementation level of the public policies concerning commons in Ecuador