

open|laws

Deliverable 2.3.d2

BOLD socio-economic and governance framework



Co-financed by the European Commission (DG Justice)
under action grant JUST/2013/JCIV/AG
(April 2014 – March 2016)

This publication has been produced with the financial support of the Civil Justice Programme of the European Union.
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JUST/2013/ACTION GRANTS

Grant Agreement Number 4562

Project Start date: 01.04.2014
Project End date: 31.03.2016

Report No. D2.3.d2 – BOLD Socio-Economic and Governance Framework

Version – 1.0

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Deliverable due date: 31.01.2016
Deliverable actual date: 31.05.2016



Co-funded by the Civil Justice Programme of the European Union

Document History

Date	Revision	Comments
24/06/2015	1	Initial notes
17/04/2016	2	ToC
18/04/2016	3	Revised ToC
1/05/2016	4	Chapter 2 and 3 first draft
21/05/2016	5	Chapter 4
31/05/2016	6	Conclusion and final touches

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Executive Summary

This document describes the main principles of a governance framework for Big Open Legal Data (BOLD) platforms such as OpenLaws. The document starts with an acknowledgment that every social space, including online communities such as the one that will emerge around OpenLaws, needs a set of norms and a governance process able to ensure its *social* sustainability, i.e. the survival of a healthy community. At the same time, the governance framework should be accompanied by an *economic* sustainability model.

On the one hand, the need for regulation is based on the concept of “rule of law” which is understood as the idea that there is a set of rules that must be obeyed by those governed by it. The concept of regulation is further developed along the four dimensions proposed by Lawrence Lessig, i.e. regulation by Law, Market, Norms, and Architecture. For the purposes of this report we take the Law and Architecture dimensions as largely given, and focus mainly on Social Norms and Market considerations. On the other hand, the governance framework can also be analysed and discussed from the point of view of what is being governed, i.e. the various forms of value, for which the Ostrom economic goods framework is useful. In particular, an important element guiding this perspective is the understanding of legal open data (OD) or Public Sector Information (PSI) as public good and of legal data enrichment as commons.

Open data as public good are already protected by national and European norms that make them freely available to all citizens. The first layer of data enrichment is needed in order to make the legal OD understandable and usable, but does not constitute a service per se (so it is not commercial by definition). This layer is a commons that needs to be protected by free-riding and overuse. Commons, in fact, are resources (physical or otherwise) shared by a group of people; they are available for the use of all, but have a certain degree of subtractability so that their overuse by one person can limit others’ ability to use the good for the same aim. For this reasons commons (or common-pool resources) need a careful participative management and governance. The discussion of this topic, presented in Chapter 2, is guided by the work of Ostrom (1990) who, by analysing different examples of commons, extrapolated 7 design principles that need to be followed in order to ensure their successful and sustainable management.

Chapter 3 uses the 7 Ostrom principles for defining the OpenLaws governance framework. OpenLaws will provide free access to the basic legal information originally provided as OD plus some additional functionalities (creation of folders, sharing of folders, creation of groups, etc.) for all users. For other stakeholders such as lawyers, Legal Information Institutes (LIIs), Legal Charities, and legal SMEs, advanced functionalities are provided upon payment, following a Freemium model. In this way the platform will develop two parallel and loosely interconnected communities: a public one of basic users with free access and a professional one. The platform should have a system of identity verification in order to guarantee to the basic users the trustworthiness of the Freemium users and to ensure the visibility to all of the reputation of the Freemium users.

All users will be able to produce new pieces of knowledge, and each user should be able to select the licence system they prefer. The Creative Commons licence should be, in any case, incentivised in order to support the growth of the content offered by the platform. A certain degree of self-organisation should be allowed within the platform by creating self-governing

bodies to support and complement the work of the commercial platform owner (OpenLaws.com). This is particularly important in order to ensure the quality of the contribution and the right balance between willingness to increase the information available and the quality of the information provided. In fact, in order to be vital and sustainable the community has to enlarge the knowledge base of the platform, but this needs to be done without damaging the original body of knowledge (Big Open Legal Data, BOLD). Too much information, not fully interconnected with the original knowledge base or of scarce quality, would result in the death of the community as new users will not find what they need and will turn away from OpenLaws. Following this line of thinking, i.e. the need to engage users in the management of the platform, a monitoring system for member behaviour, sanctions, and dispute resolution systems should be put in place.

Chapter 4 looks farther into the future to the possibility of connecting the Market and Social Norms aspects of regulation or, equivalently, the economic value and the social values created by the OpenLaws community more intimately integrated. This appears to be possible through a so-called mutual credit system. The chapter outlines the principles of operation of such a system, its rationale, and provides a schematic view of the kinds of interactions and transactions it could support.

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1 INTRODUCTION: THE NEED FOR REGULATION AND THE RULE OF LAW

In some ways, the rise of the Internet gives us an interesting case study that exemplifies the need for regulation in general and the rule of law specifically. In his remarkable 1993 article entitled *A Rape in Cyberspace* (Dibbell 1993), author Julian Dibbell recounts the happenings of a virtual world called LambdaMOO, a text-based environment with roughly one hundred subscribers where users adopted assumed personalities (or avatars) and engaged in various role-playing scenarios. Dibbell tells the story of a user who broke some of the unwritten social norms in the virtual environment by taking over other people's avatars, making them perform actions against their will. This was a space without rules, so how a small community was presented with the question of how to regulate itself became a classic in Internet regulation theory studies because it presents us with some of the most basic questions about how and why we need to regulate. How does a community organise itself? Is external action needed, or does self-regulation work? What constitutes regulatory dialogue? How does regulatory consensus arise? And most importantly, who enforces norms?

We generally understand regulation as the exercise of some form of power to control a human activity, or more accurately, it is the sustained and focused application of control over social activities, be this governmental, market-driven or social norm (Baldwin and Cave 1999). It may be easy to assume that the need for regulation is a given, as societies tend to always organise themselves with some form of hierarchical control structure in place. Regulation therefore has always been a part of social order, but this differs from the need of having a specific structure called the law. The rule of law is understood as the idea that there is a set of rules that must be obeyed by those governed by it (Raz 2009).

The need for regulation in general therefore can be tested by whether it is possible to have non-regulated spaces, and this is where the relevance of stories like LambdaMOO comes into play. It has been argued by some (Barlow 1996) that the Internet is such a revolutionary space that our existing system of laws does not apply to it, and that governmental control is neither possible or desirable in such an environment. Barlow was eventually joined by other commentators and scholars who believed that it would be difficult to subject the Web to traditional regulatory methods. Other authors proposed similar theories which tried to explain that the Internet could not be controlled in any effective manner, and so proposed several models of self-regulation that would be able to organise the network in some coherent fashion. Of note amongst these theories is Net Federalism (Johnson and Post 1996), which argues that Cyberspace is a separate entity with clear borders from the physical world, and consequently it should be treated as an independent regulatory sphere for all legal purposes. Because the Internet would still require some form of regulation, they argued that the Web should be able to assemble its own legal institutions in a manner similar to the creation of federal states brought together under a unifying ideal. These self-regulated federal states would generate their own sets of rules consistent with practice in that part of Cyberspace.

However, the self-regulation approach does not fit well with a more general outlook of the need for regulation. In his influential book *Code and Other Laws of Cyberspace* Lawrence Lessig (Lessig 1999) postulates that there are four main types of regulation in an online world: *Markets, Norms, Law* and *Architecture*. Most theories of regulation up until then accounted for the first three. Lessig's breakthrough came in the way in which he rightly identified the prevalence of architectural regulation in technological settings. Lessig argued that the Internet itself is highly dependent on the technological architecture that sustains it, the

“code” in which it is written, the connectivity layers between domains, the protocols used in order to distribute information from one computer to another, the functional layers of said protocols, the domain name server system that tells one computer’s location in the system, and so on.

Whether the Internet can be subject of regulatory control will depend entirely on its underlying architecture. For example, some of the constituent code of the Internet is open, that is, it can be inspected, copied and modified by all sorts of people. This code could not be subject to government regulation. However, the protocols and communication tools that make up the online world are more critical than the underlying code because they are needed for connectivity to take place. So whoever controls the underlying “pipeworks”, and the protocols, controls the Internet.

But Code itself does not answer the question of whether we need regulation. Other authors (Boyle 1997) have pointed out that regulation, and specifically government regulation, is not only desirable, but also possible, even in new technical environment. The need for regulation could be seen in the very fact that countries have been successfully regulating new spaces such as the Internet. When presented with a new space supposedly not subject to any rules, the response has been to try to exert control in the shape of legislation, case law, or even stringent controls on speech, such as the existence of the Great Firewall of China (Goldsmith and Wu 2006). Although this would create a seemingly self-referential realist approach to the need for regulation, it cannot be denied that the status quo makes a strong case for the enactment of such regulation.

Some of these questions fall outside of the remit of the present document. Suffice it to say that the need for some form of rule of law could be taken as a given in modern societies, but that the challenges regulatory approaches face nowadays continue to ask questions about the need to systematise such responses. Figure 1 shows a high-level view of the OpenLaws community, regulatory, and governance context.

OpenLaws will be a transnational platform. For this reason it will need to consider different legal systems as it most probably will be organised in slightly different ways in each of the countries involved. In addition, OpenLaws needs mechanisms for internal regulation and the proposal about possible governance options described in the following sections are meant to support the process of self-regulation of the platform.

Chapters 2 and 3 develop a governance framework for OpenLaws from the point of view of *Social Norms* and *Law*. Building on D2.3.d1 (Socio-Economic Framework for BOLD Stakeholders), Chapter 4 outlines the perspective of the *Market*. The *Architecture* perspective is only touched upon in this document since it is discussed in detail in D3.2.d1 (Initial Architecture and Data Model Specification) and D3.2.d2 (Open¹ API Interface Specification).

¹ Generally speaking, open source software is that which can be modified and shared in a publicly accessible way. Unlike proprietary products or projects, open source ones grant users access to program’s functionality (i.e. source code) and allow them to distribute any enhancements or changes as they see fit as long as the open source principle is maintained. The overarching aim of all open source initiatives is to stimulate innovation by promoting open exchange and knowledge-sharing. Businesses or initiatives that choose open source as a business model often grapple with the same question – how to maintain the solution’s appeal while generating enough revenue for themselves? Financial returns for firms or projects that adopt open source business model do not come from conventional sources such as product sales or license renewals. Instead they come from software related services such as technical support, training, software customisation and troubleshooting, and additional sources like cloud computing, donations and crowdfunding. The sale of proprietary but optional extensions, plug-ins, add-ons, modules and data libraries can also be used as a source of revenue for these initiatives.

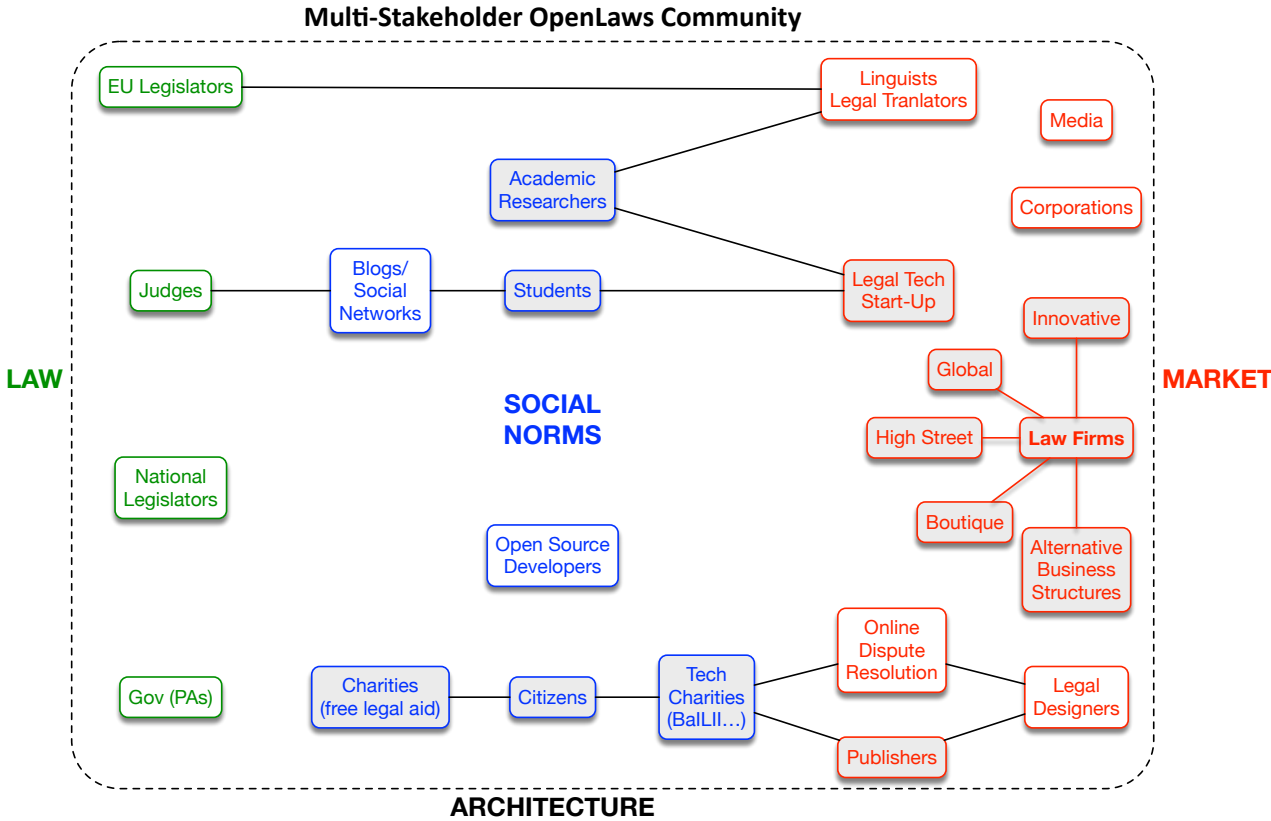


Figure 1: OpenLaws stakeholders map in a governance context informed by Lessig’s four dimensions of regulation. Gray Background indicates primary users of the OpenLaws platform.

2 ELEMENTS UNDERPINNING A GOVERNANCE MODEL

2.1 BOLD as Commons

In D2.3.d1 Socio-Economic Framework for BOLD Stakeholders we considered the possibility of applying the design principles for the successful management of common-pool resources to BOLD. Ostrom (1990) analysed several examples of local community-based commons around the world (and considering 1000 years of human history), and discovered some characteristics that all the commons share, these characteristics are the design principles that follow:

- A clear definition of group boundaries and membership mechanisms (who can belong to the group and who cannot).
- Clear rules governing the use of common goods (how common resources can be used, for how long, etc.).
- Presence of a self-governing body, which ensures that those affected by the rules can participate in modifying them.
- A system, carried out by community members, for monitoring members' behaviour.
- Use of graduated sanctions for members who violate the rules.
- Accessible, low-cost instruments/processes for dispute resolution
- External authorities' recognition of the Commons self-governing bodies and of its rules

In order to proceed it is necessary to:

- clarify the difference between a public good and a commons
- understand which parts of the BOLD ecosystem can be considered commons and which parts should be seen as public good
- verify the applicability of commons management principles to the part of the BOLD ecosystems that can be seen as commons.

The terms *public good* and *commons* are sometimes used as synonymous but, as Ostrom (1990) underlines, when discussing the need for a governance model it is useful to distinguish between them. A public good is available to all, for free, and is both non-excludable and non-rivalrous or subtractable. This means that the good (or service) can be used by all citizens and the use of the good by one person does not reduce the availability of that good for others. Examples are language, the air, common infrastructure, etc. The term 'commons' generally indicates a resource (physical or not) shared by a group of people, and originated from the analysis of physical resources, such as forest and fisheries. Commons are available for the use of all, but have a certain degree of subtractability (see table below). In fact, the over-use of a forest for collecting wood can limit others' ability to use the forest for the same aim. For this reasons commons (or common-pool resources) need a careful, participative management and governance.

In Table 1 and in classical economic theory, knowledge is considered a pure public good because knowledge used to be non-subtractive. Copyright has existed since the early 18th Century in the UK and the late 18th Century in the US and France (Barron 2006). The emphasis was on the protection of the rights of the authors of works (as the French *droit d'auteur* makes explicit) and it was limited to 28 years; further, the right was initially understood to refer to the facsimile reproduction of printed books, not to copying or communications in general (Ibid.). Gradually, the definition of the legal persons who could

hold the copyright to a work widened, as well as its duration, the type of work, and the type of reproduction (Ibid.). More recent economic forces such as those led by the WTO have pushed the Anglo-American and the Roman law traditions, whose initial purpose was to protect and incentivise cultural production from monopolies in slightly different ways, closer to ‘the use of copyright law to privatise and enclose what remains of the public domain of culture and information’ (Ibid.). In other words, the issue could be seen as a dichotomy between knowledge as a public good and copyright as a legal tool for making knowledge artificially scarce, i.e. a private good.

		SUBTRACTABILITY	
		<i>Low</i>	<i>High</i>
EXCLUSION	<i>Difficult</i>	Public good Knowledge Sunset	Common-pool resources Irrigation systems Libraries
	<i>Easy</i>	Toll or club goods Journal subscription Day-care centers	Private goods Personal computers Doughnuts

Table 1: Public, private, club goods and common-pool resources (Hess and Ostrom 2011)

Digital ICTs, however, have introduced a great deal of additional complexity to the debate (Mansell 2012), for example in the arms race between technologies to encrypt and enclose and technologies to distribute and open information. As discussed by Hess and Ostrom (2007: 4), in the mid-nineties ‘*Commons* became a buzzword for digital information which was being enclosed, commodified, or overpatented’ (original emphasis). The zero marginal cost of reproduction of digital information would seem to insulate it from the problem of overuse. In fact, the greater the knowledge sharing the greater the benefits to society. However, problems of free-riding also apply, for example when the free sharing undermines the economic sustainability of the creative effort, or when the data is corrupted in some way. As Barron (2006) further explains, the view of cultural and artistic works as the product of a single mind is itself a product of Western modernity that fits uneasily with other cultural trajectories and collective modes of creativity. This observation is compatible with Hess and Ostrom’s compromise in characterising the knowledge commons: ‘Consideration of knowledge as a commons [...] suggests that the unifying thread in all commons resources is that they are jointly used, managed by groups of varying sizes and interests’ (Hess and Ostrom 2007: 5).

Therefore, Open Knowledge is threatened by over-patenting, by the high price of scientific journals’ subscriptions, by new hardware such as eBook readers that limit the possibility to swap books among people as was the case with paper books, etc. ‘Typical threats to knowledge commons are commodification or enclosure, pollution and degradation, and nonsustainability’ (Ibid.). Over-patenting, copyright regimes and incorporation of pieces of knowledge in private services can reduce the common-pool resource.

The crucial questions about commons are about equity, efficiency and sustainability. Equity refers to the just appropriation and contribution to the maintenance of the commons, efficiency calls for its optimal use, and management and production of the commons and

sustainability consider the survival of the commons in the long run (Hess and Ostrom, 2007). In order to ensure equity, efficiency and sustainability a rule of law, or a governance model, is needed.

2.2 A Layered Structure for Open Data

When we talk about Open Data and the need for a governance model we need to understand the different layers implied and define what in the process can be understood as public good or as commons and what cannot, thereby defining the boundaries of the governance framework. The image below summarises the typical process involved in OD management and exploitation.

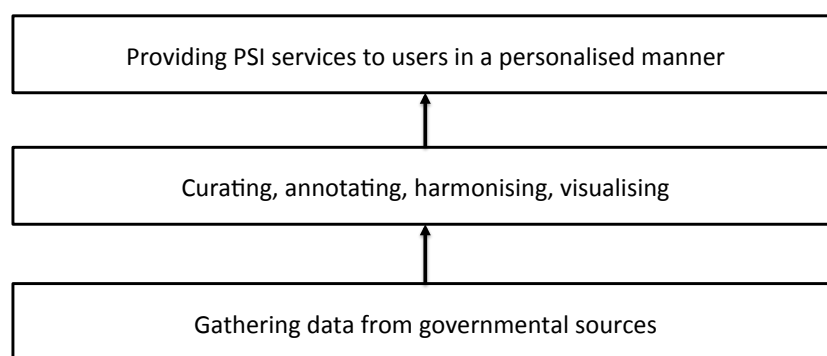


Figure 2: Open data enrichment process

Public Administrations normally take care on the first layer of the process by making OD available, often in a raw form in which they are accessible and machine-readable but not immediately understandable and usable by final users, i.e. citizens, researchers, publishers, and so forth. In order to facilitate the re-use of OD by third parties, OD are released with open licence as is the case of the British open data portal – Data.gov.uk. Since 2010, the open data portal uses the Open Government License, which is based on the Creative Commons License². Thanks to this licence the users of the OD only need to respect the right of attribution in their derivative works.

The second layer represents a first elaboration of data, which includes the creation of meta-data, anonymisation, check for data quality, data linking, commenting and similar (Charalabidis, 2012).

In order to take advantage of OD, the final users will need the third layer, Public Sector Information (PSI), to be incorporated in ad hoc services such as Apps or dedicated websites. The exploitation of OD through ad hoc services can generate profit and not-for-profit services. In both cases the services need to be economically sustainable. For-profit services

² Notes from: http://thegovlab.org/wiki/Open_Data_Governance:_Pushing_Data_Outrvices. In May 2013, the US Open Data Policy defined open data as publicly available data structured in a way that enables the data to be fully discoverable and usable by end users, and consistent with a number of principles focused on availability, accessibility and reusability. Finally, at the G8 Summit hosted by the United Kingdom in July 2013, the “Open Data Charter” was agreed to, based on the principles that government data should be open by default, of high quality and increasing quantity, openly licensed and provided in open formats, and provided with the purpose of improving governance and spurring innovation.

will be based on various business models but basically will base their sustainability on the revenue their sale generates; whereas not-for-profit services will need to find other sustainability approaches. We will see in Chapter 4 a possible way to address the sustainability of some aspects of the BOLD ecosystem through a complementary mutual credit framework.

Having said that, it seems clear that legal open data, in their raw form, are closer to a public good than to a commons. The second layer is the most delicate one and can be seen as a common-pool resource: if treated as such it could be open to all in order to ensure free access to raw open data in a more user-friendly way. At the same time, it will be open also to free-riding, pollution and degradation. At the time of writing this layer is often developed by companies that develop the services of the third layer so that questions about the real accessibility of raw open data for all could arise. This eventuality, however, and the discussion that it generates are out of the scope of this deliverable and will need to be examined in future work.

OpenLaws uses governments' legal raw OD and develops the second and third layers so that users can access legal information more easily and perform other important actions such as (Wass et al. 2013):

- organise legal information in folders created ad hoc
- share their folders with others
- connect different pieces of legal information
- comment them and develop dedicated documents to be shared with all users or with an ad hoc subgroup

The fact that users will be able to enrich the data provided with comment, annotation and by linking different legal information means that the community of users will be requested and will have the possibility to enrich the original OD and contribute to the development of the second layers also creating new data to become part of the original database (first layer). Besides this, as described in Winkels, 2015, there will be also semiautomatic ways of connecting sources of law by using ICT solutions based on natural language techniques and network analysis. Some of the functionalities will be for free, while others will be available only to premium users, who will pay a fee.

The next chapter presents the governance model for BOLD ecosystems dedicated to the OpenLaws scenario.

3 BOLD GOVERNANCE FRAMEWORK

Our BOLD governance model is drawing on several emergent shifts within governance which aim to improve individuals' lives and welfare by improving the ways we provide for (public) goods and services and solve societal problems, often by using technology (cf. Friedman, 2008). Keywords are collaboration, meritocracy, decentralisation, evidence-based decisions making processes, diverse/iterative, open, and platform (cf. Heise, 2011). Thus, governance is being 'reimagined' by highlighting that problems can be solved better by a wider range of stakeholders and experts. In this new vision the use of technology can involve more voices in the governance process, an information-rich, experimental governance culture can lead to improved decision making, more voices can equal new ideas allowing for more experimentation and trial-and-error, an open, inclusive system can lead to more transparency, accountability and effectiveness in problem-solving, and a platform can be curated by multiple stakeholders rather than just, for example, the government, or, the owner.

3.1 Membership mechanisms

The BOLD ecosystem stakeholders can be listed as follows:

- *Citizens,*
- *Lawyers,*
- *PAs,*
- *Publishers,*
- *LIIs, Legal Charities, Legal SMEs,*
- *(Legal) IT Companies,*
- *Students,*
- *Open Source Developers,*
- *Researchers*

The OpenLaws users will be a subgroup of the above, and specifically:

- *Citizens,*
- *Lawyers,*
- *Publishers,*
- *LIIs, Legal Charities, Legal SMEs,*
- *Students,*
- *Researchers*

All of them have, as said, free access to the basic legal information originally provided as OD plus some additional functionalities (creation of folders, sharing of folders, creation of groups, etc.), while some of the stakeholders, mainly lawyers, LIIs, Legal Charities and legal SMEs, will have, in addition, access to more advanced functionalities upon payment, following a Freemium model³. Publishers will probably need a dedicated access – also following a

³Typically, Freemium tools have several account types that vary in price. Free accounts offer to users the lowest storage space and the lowest number of layers available for mash-ups. They provide limited functionalities in terms of data analysis and visualisation and their format support is also limited. For example, advanced querying, password protection, data synchronisation and technical support are unavailable to free account holders. If OpenLaws is to become a Freemium platform it would need to consider the composition of each price plan as well as all the elements of the business canvass – that is, target audience, value proposition, customer interaction, activities and resources, costs and revenue sources.

Freemium model – with specific functionalities through which to offer potential additional services/data.

It is possible to think about two parallel and loosely interconnected communities: one made of citizens, students and researchers who will access the free available data/services and another made of legal experts, SMEs and other related organisations. The two communities will run mainly in parallel, but it is possible to imagine that citizens would request an opinion or ask for a direct contact with lawyers if interested by his/her online activity. These activities may or may not happen inside the OpenLaws (multi-sided) platform but should be taken into consideration in order to facilitate such contacts (cf. Evans et al., 2011).

The two communities will have, as said, different levels of access to data/services; in terms of the membership mechanism, the first community could have free access without any special requirement to become a member, while in the second community a mechanism for verifying the identity of the users could be useful. In this way:

- citizens will be sure to ask and obtain opinions from real professionals
- professionals could bring into the platform their already-existing online (and off-line) reputation and be linked to their pre-existing online identity
- the same applies to publishers

Verification of identity can be done in different ways:

- by connecting the platform with the national registers of lawyers, bar associations and law first national lists following a centralised approach as in the case of WireLawyer (see D2.3d1).
- By following a more peer-to-peer approach in which the membership mechanism is by invitation only so that peer members assure the identity of the new members, and this is the route chosen by Foxwordy (see D2.3d1).

As pointed out in D2.3d1, one of the core objectives and challenges of OpenLaws is to reach a critical mass of users among legal professionals. In terms of the membership mechanism the process needs to be as easy as possible in order to avoid any red tape for the person/firm who wants to join. Moreover, in order to attract more legal professional users the possibility could be considered to see who is already a member even before signing-in (this is what LawLink does, see D2.3d1).

3.2 Use of common goods

This is the core topic for OpenLaws: how to ensure that a large number of users enrich the available data with commentaries, links, and add and produce new pieces of knowledge without making the original data “polluted”. In other words, ensuring the quality of the contribution and that the amount of contributions will not generate a mass of information difficult to navigate and disambiguate. As mentioned earlier, in fact, pollution and degradation of the common knowledge good are the main threats for this kind of commons.

Wikipedia could be used as a good example of (good) governance in terms of knowledge co-creation (cf. Hyde, 2010) and, as discussed in D2.2d1, this is based on the so-called five pillars of the community:

1. Wikipedia is an encyclopaedia
2. Wikipedia is written from a neutral point of view
3. Wikipedia is free content that anyone can use, edit and distribute
4. Editors should treat each other with respect and civility
5. Wikipedia has no firm rules

Pillar 1 and 2 do not apply to Open Laws. We will see that pillar number 3 might apply to OpenLaws only to a certain extent. Pillar number 4 should be taken as is, for OpenLaws, since it will guide the netiquette that the platform will need to establish as soon as possible.

With reference to pillar number 5 it is advisable to let each user select the preferred licence system, as is done in Flickr (www.flickr.com). After each sufficiently long piece of text the author will be asked to apply a licence, one of the choices being the Creative Commons licences, which are the only ones available in Wikipedia. The use of the Creative Commons licence should be incentivised as this will make it possible for users to build on top of other users' contributions, thereby enlarging the available knowledge for all. This will also be consistent with the OD logic of the platform. In order to support the use of a Creative Commons licence,⁴ it is possible to make the piece of knowledge searchable by Google (so in this way increasing the visibility of the authors also outside the OpenLaws community), or to make them appear higher in the internal search engine of OpenLaws. Other kinds of incentives such as a positive feedback to the authors in the internal reputation mechanism should be considered.

However, it is possible to imagine that some lawyers and law firms will prefer to copyright their contributions. If this is the case we should ensure that this will not restrict the original OD or pieces of knowledge produced by other users using Creative Commons licences, which need to remain open to all. In other words, enclosure risk must be prevented.

3.3 Self-governing body

Common-pool resources are managed by the users of the commons through self-governing bodies that ask for participation and sharing of responsibilities. In the case of OpenLaws we have to consider the fact that the platform is owned and managed by a private company so that the responsibility of managing all the knowledge created and shared on the platform could be under the full control of the company as in the case for example, of Facebook. In this case the users, when signing in, will agree to a formal contract defining all the terms of use. If this path is chosen the company will be also responsible for monitoring members' behaviour, for sanctioning misbehaviour, and for resolving possible disputes between users. The details of the terms of uses of an possible contract to be accepted by users when signing-in to the platform is out of the scope of this deliverable and so are the derived monitoring systems, sanctions system, and dispute resolution system (see following sections). However, this scenario is not the only one possible and there are good reasons for advocating a more distributed governing model. The benefit could be relevant:

- users will feel a stronger sense of ownership of the platform and of the content shared on it and this could limit misbehaviour and free-riding
- another consequence of a stronger sense of ownership would be a more intense use and a more open-access orientation; i.e. users will probably create and share more knowledge

⁴ The most useful licence in this context would be no-commercial, attribution, share-alike licence.

- users will perceive the platform as something that contributes to change via democratic (or similar) processes so that it will be not perceived as something fixed and decided by an external authority but as something that can evolve together with the community. This could have a positive impact on the sustainability of the platform in terms of capability to adapt to future challenges and survive on the long period.

In order to do this, the platform could allow for a certain degree of self-organisation. For example, one of the functionalities of OpenLaws would be that of creating private groups. More active groups (i.e. groups with more users and more intense exchange) could be asked to nominate a representative to participate in an OpenLaws administration board. Another option could be that of admitting to the board only those users with a certain number of contributions (i.e. a threshold) as is the case in the of many open source developer communities community, or with a certain number of followers. The administrative board could be consulted when planning new releases of the platforms or for sharing the monitoring task, deciding on users misbehaviours and for applying sanctions and solve conflicts. This can be done by opening up the decision-making process to these representatives of the community or by giving them a more limited consultation role (so that they can suggest changes and actions but the final decision stays in the hands of the OpenLaws.com company). Another option would be to make available to users (all or a limited number of them as in the previous case) a referendum-like process through which users can raise issues and propose solutions if they are able to aggregate on the topic a certain number of users. (Imagine if this were possible on the platforms we are using everyday such as Facebook, Pinterest, LinkedIn, etc!). All these suggestions will support the platform to be more open to users' need and, definitely, to changes.

In order to make any of these options viable, the first step would be that of defining a voting system and provide the platform with transparent pool software so that all the operations could be monitored by all the users involved.

3.4 Monitoring system for member' behaviours

As discussed above, if the platform is managed centrally by the OpenLaws.com company the monitoring system can be also managed professionally by the company that will define it in detail in the term of use of the platform. However, classic ways of monitoring members' behaviour is that of asking users to alert the platform management in case of violation of community norms. Similarly, it is possible to ask users to leave negative feedback if the interaction with a user was not satisfactory (as is done on eBay for example). In this way the manager of the platform can see the post/chat/feedback, verify the misbehaviour, and apply the corresponding sanction.

If the company opts for a more distributed management of the platform the alert system can still be in place but the final decision about sanctions will be performed by the platform board and not only by the platform owner, at least in cases that need a certain degree of deliberation. But, before this, the administrative board should be asked to define collaboratively a netiquette, a set of internal rules, and to define sanctions that, as suggested by Ostrom, 1991, have to be proportionate to the nature of the misbehaviour and gradual.

3.5 Sanctions

Once the monitoring system has been defined, administrative sanctions need to be put in place. In fact, the certainty of sanctions is vital in order to reinforce the respect of community norms. As pointed out by Kraut and Resnick (2011), in some communities also sanctions are carried out by the members, as in the eBay community where the monitoring system implies also a sanction: a bad feedback to a retailer is already a sanction as it will negatively influence its business. The same authors point out that administering the sanctions can be costly for users as sanctioned users can fire back determining long and emotionally expensive interactions⁵. For example a bad feedback on Tripadvisor can result in offensive emails from the hotel manager asking to change the review. For this reason in 2008 eBay decided to remove the possibility for retailers to give negative feedback to users.

Accordingly to Kraut and Resnick (2011), in order to support users in managing sanctions it is of help:

- To have a cohesive community, because solid communities tend to be more motivated to protect the quality of interactions within the community than non-cohesive ones.
- To define clearly the rules of the community and sanctions for misbehaviour: this will reduce discussions and need for justifications.
- Support people who have clearly recognised roles in the community to manage the sanctions: it is easier to accept a sanction from the moderator or the group founder than from a peer. This can be of help in OpenLaws sub-groups.

3.6 Dispute resolution system

As mentioned above, it is important that community norms and sanctions are clearly defined; this will not only help the management of misbehaviours, but will also reinforce community identity and provide the users with a sense of security. In the same way, also the dispute resolution systems have to be clear and not expensive (Ostrom, 1990). An excessive and costly process, both economically or socially/emotionally, will result in dispute avoidance with possible negative effects on the whole community.

As mentioned in the introduction and visualised in Figure 1 the governance framework here described create a set of social norms that are effective within the OpenLaws platform; the have to be aligned with national and European legal systems of community members. The dispute resolution system applies to the platform social norms, and, of course not to the infringement of national or international laws that will be solved using standard legal resolution systems such as trials in courts etc. ..

3.7 External recognition

This is not something that can be decided by OpenLaws itself but is a topic to be taken in due consideration. As OpenLaws uses government OpenData at national and European level, recognition from these institutions would be a very positive sign of the usefulness of the platform and of its trustworthiness. In this sense recognition can take different forms. For example, some governments' OD portals, such as the English one (www.data.gov.uk), list the

⁵ This issue is also mentioned by Ostrom (1990).

app created on top of their OD, in this way providing visibility to the app but also offering a sort of approval. A sign of a more formal recognition would be the presence of governments' logos on the OpenLaws platform/app or formal collaboration agreement between governments and OpenLaws.com. Any of these forms, however, will reassure the OpenLaws community about the good quality of the resources made available and of the reliability of the platform.

4 A SUSTAINABILITY MODEL FOR BOLD BASED ON COMPLEMENTARY MUTUAL CREDIT

4.1 Introduction

This chapter builds on report D2.3.d1 (Socio-Economic Framework for BOLD Stakeholders) and provides a brief analysis of ‘OpenLaws economics’, in order to complement and support the governance framework presented in the previous chapters.

The starting assumption is that the OpenLaws community operates in an economic context that cannot afford to transcend and forget about practical concerns for economic sustainability. Therefore, in reference to Figure 1 in the Introduction, *Market* imperatives could be perceived as more urgent than some of the other governance dimensions loosely grouped under Lessig’s categories for Internet regulation, with *Social Norms* being the most vulnerable. Through lobbying the legislature and standards bodies *Market* imperatives can also influence the *Law* and *Architecture* dimensions, respectively. Therefore, it is important for the design of a sustainable socio-economic *and* governance framework for OpenLaws that *Market* dynamics are aligned with the other governance dimensions.

The concept of ‘economic sustainability’ is sometimes mistaken for ‘economic growth’, implying that sustainability is assumed to refer to a sustainable *rate of growth*. There are indeed contexts where this interpretation is intended and legitimate. However, in the OpenLaws context by ‘sustainability’ we mean ‘resilience of the OpenLaws community through time’. This interpretation necessarily implies social as well as economic concerns.

Our definition of sustainability does not preclude economic growth, but it does not require it either. As discussed in some detail in D2.3.d1, the capitalist system is intrinsically unstable: it either grows or it crashes, it is not built for ‘maintaining’ a given set of economic conditions. Hence, Lessig’s four categories are appropriate because we can draw also on the legal and architectural dimensions to help shore up the whole edifice, given the otherwise destabilising effects of the economic dimension working on its own. To achieve this, clearly we need to ensure that the four governance perspectives are mutually compatible and are in fact working together. To that end, let us look at the economics of OpenLaws from the economic history perspective.

4.2 OpenLaws Economics

The economic history perspective enables the observation of human affairs from a global bird’s eye point of view and over a desired time period. If we focus on the last few centuries and in particular on the history of capitalism, a first arresting thought comes from Adam Smith’s description of the economy as a ‘circular flow’ of trade propelled by a medium of exchange that ought not to be hoarded, lest it impede the smooth operation of the market. Such a description of the economy, however, cannot account for ‘capitalism’s capacity for dynamic growth and constant revolutionary transformation of the means of production’ (Ingham 2011: 37).

Ingham goes on to explain that Ricardo’s labour theory of value and, more famously, Marx’s theory of surplus value extraction from the workers partly address the growth question, but do not go as far as Schumpeter, who based economic growth largely upon the greater value

generation and greater efficiency afforded by technological innovation. The work of entrepreneurs, however, cannot be carried out without investment, and this links capitalist growth to the creation of money by the banking sector. ‘However, money’s role in the development of capitalism is largely taken for granted in the social sciences. Economic development is seen to be triggered by other factors – the division of labour, technology, population growth, property rights, and so on. There is a strong implication that money simply emerges in response to the functional needs of expanding economic activity’ (Ingham 2011: 65). Figure 3 captures these concepts in schematic form.

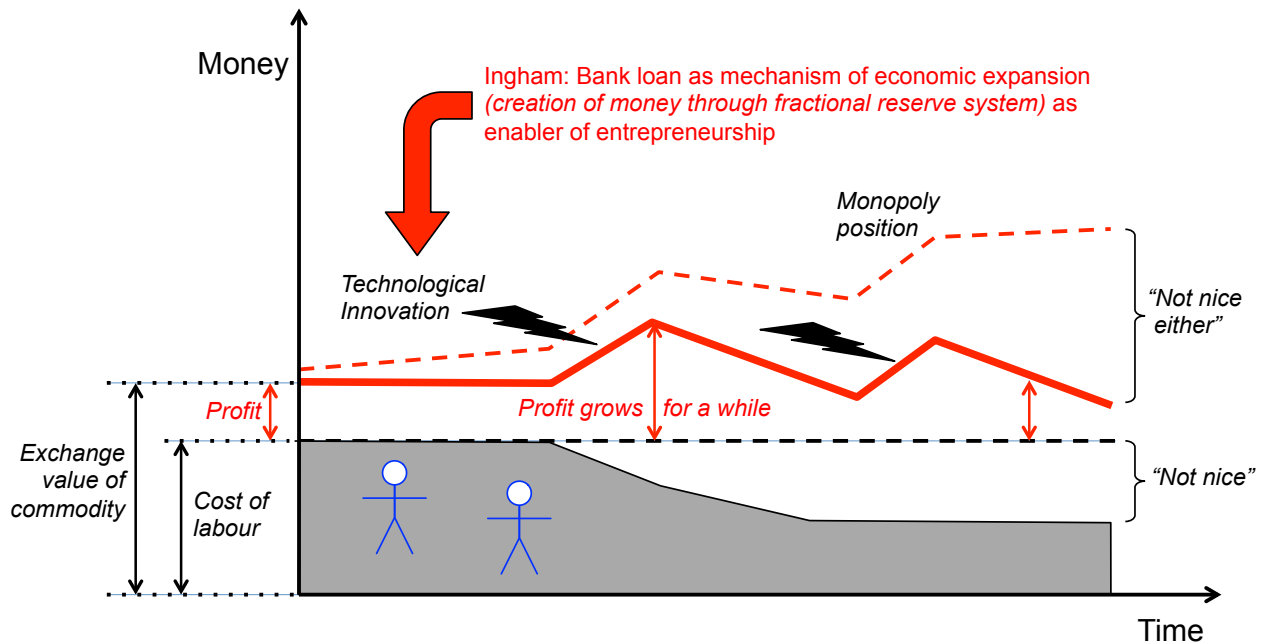


Figure 3: Economic expansion according to Marx, Schumpeter and Ingham (2011)

OpenLaws adds to this picture by introducing social value explicitly, as shown in Figure 4. In this view, collaboration and community are seen to add, indirectly, to technological innovation. This sounds commonplace today, but actually was first proposed by Schumpeter (Gudeman 2001: 102). However, in this view social value remains incommensurate with economic value.

As discussed in D2.3.d1, Gudeman’s (2001) economic anthropology framework helps bring the social relationships and commons domains of value under the umbrella of Economy, along with capital and the market. Figure 5 shows a possible mapping of these domains to the OpenLaws context, using the same colour coding as Figure 4 but adding the *Market* domain in yellow.

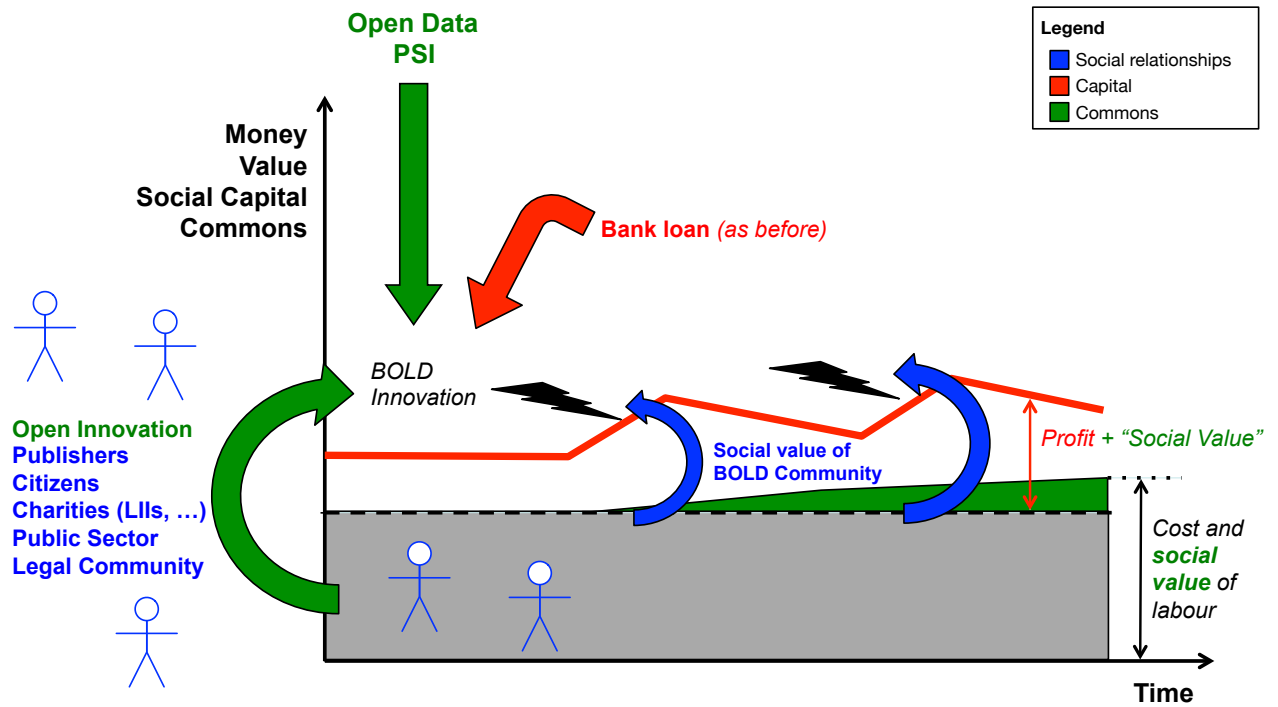


Figure 4: Integration of social dimension with economic expansion in the OpenLaws context

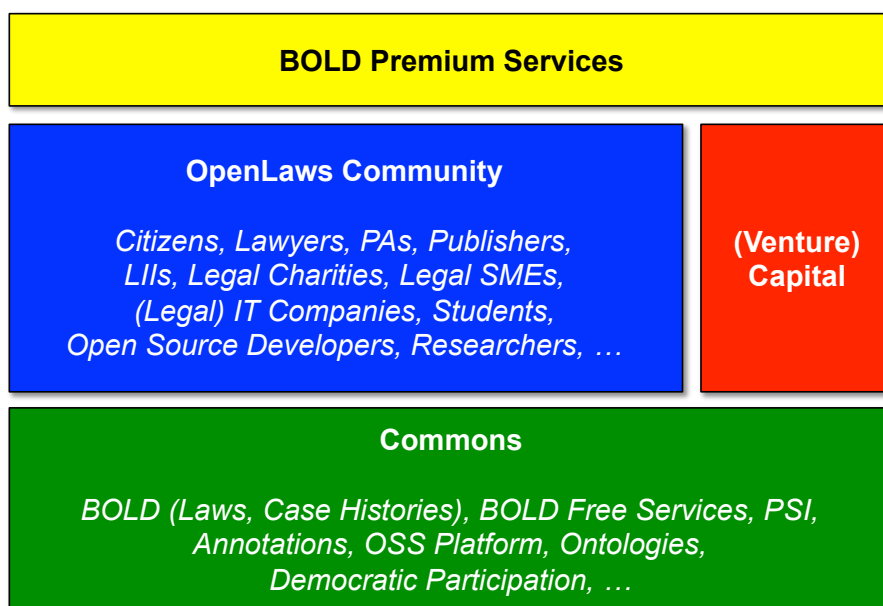


Figure 5: Domains of value of Gudeman’s (2001) economic anthropology in the OpenLaws context

In the OpenLaws context, the relative size of these domains of value changes, as shown qualitatively in Figure 6.



Figure 6: Different relative sizes of the OpenLaws domains of value at different geographical scales (qualitative comparison only)

At the global scale premium BOLD services are expected to provide sufficient economic sustainability for publishers and other professional stakeholders. At the same time, academic research is expected to contribute to social value in the form of knowledge as well as annotations to laws in the OpenLaws databases. At the local level, by contrast, the sale of premium services is expected to be more difficult. Here free services for the citizens will be dominant. The sustainability model, therefore, is likely to rely on public sector provision of value-added services funded through tax revenues, where applicable, or by freemium services offered by the private sector stakeholders (such as OpenLaws.com).

The intermediate or national scale appears to be the most challenging, because at this scale operate what are arguably the most important stakeholders of all, the Legal Information Institutes (LIIs). Since they are not part of the public sector they are not entitled to a tax-based income as the Public Administrations are. However, since they are non-profit legal entities they cannot easily rely on standard market mechanisms to ensure their sustainability. The Canadian LII (CanLII, <https://www.canlii.org/en/>) relies on members' (lawyers') annual membership fees, but these are not really sufficient. Other countries' LIIs are in even more dire straits. Here, then, is where a mutual credit system can be helpful. However, since a fairly detailed monetary theory discussion is already provided by D2.3.d1, here we only highlight the main points very briefly.

4.3 Mutual Credit Systems at the Local Scale for Sustainability

Sociological monetary theory makes it possible to see that many of the more problematic properties of capitalism can be “deflated” very effectively by changing the properties of the medium of exchange, in particular by decreasing the effectiveness of its store-of-value function relative to the medium of exchange and unit of account. The result is something that we might simplistically call a “non-capitalist market” and that, in fact, comes close to Adam Smith’s ‘circular flow’. The problem, however, is that in so doing we deprive capitalism of a good part of its dynamic potential for growth.

As discussed in D2.3.d1, the empirical record points to a multi-scale architecture as the best compromise currently available: a capitalist system with ‘regular’ money at the national and international levels, and a “non-capitalist” circular flow mediated by a zero-interest complementary currency at the local level. Of the many such alternative or complementary currencies available, B2B mutual credit systems seem the most suitable to OpenLaws because the emphasis on the SME scale of interaction allows them to grow to a scale that is macroeconomically relevant, thereby achieving market-based sustainability. This, in turn, implies that there is no need for voluntarism or ideological commitment on the part of the members of such an ‘economic circuit’.

A possible source of confusion, however, arises from the plausible but erroneous assumption that such a mutual credit system would necessarily be in support of the purchase and provision of legal services – in other words, that it would be limited to the legal and legal ICT sectors. Nothing of the sort. The only way such an approach can work is if the mutual credit system encompasses all the sectors of the local economy, as a complementary currency that facilitates (1) B2B: zero-interest ‘trade credit’ between firms as a ‘top-up’ when the purchasing firm is short of cash (national currency); (2) B2E: the option on the part of the employees of firms that are members of the circuit to receive part of their salary in credits; and (3) B2C: the purchase of retail goods by anyone who has a positive credit balance, whether they are employees or principals of the participating firms. Included in the membership are legal firms. This framework is based on the Sardex mutual credit system (<http://www.sardex.net/>), explained and discussed in D2.3.d1.⁶

As summarised schematically in Figure 6, the increase in turnover on the part of the participating companies due to import substitution and a greater opportunity for local trade can be used as the basis for a fee on positive balances that can contribute to the sustainability of the national LIIs. This fee can be exacted from the participating law firms, but it would make sense to charge a smaller amount also from the positive balances of non-legal participating firms, on the grounds that they also benefit from the legal system and from a well-functioning BOLD framework. Such a fee would necessarily need to be extracted in the national currency rather than in credits, since different regions of a given country – for reasons that are too involved to explain here – would be operating a different credit system, and non-convertibility between the credits and the national currency as well as between the different credit systems is a fundamental requirement of the financial architecture of mutual credit if it is to act as a safe harbour against the liquidity and credit crises typical of the capitalist economic system.

⁶ A series of interviews partly funded by OpenLaws were conducted with 29 member firms of the Sardex circuit between July 2014 and February 2016. Of these, 5 were lawyers and 1 was a notary.

It is difficult to appreciate that the higher trust levels typical of such mutual credit systems enables an open discussion about things like the fee mentioned. At this point this is only a theoretical idea, but one that will be pursued and tested in the field through discussion with the stakeholders. The point, from the perspective of OpenLaws, is that as soon as a company agrees to pay for something, their interest in understanding what it is and in extracting some return from it will grow. In this case, this translates into a greater interest in the activities and operations of the LIIs. This is expected, in turn, to lead to greater legal and case-history literacy and, ultimately, to a stronger culture of democratic participation. Figure 7 shows the commons overlay of a possible mutual credit exchange network, showing the main stakeholders and flows of data and credits.⁷

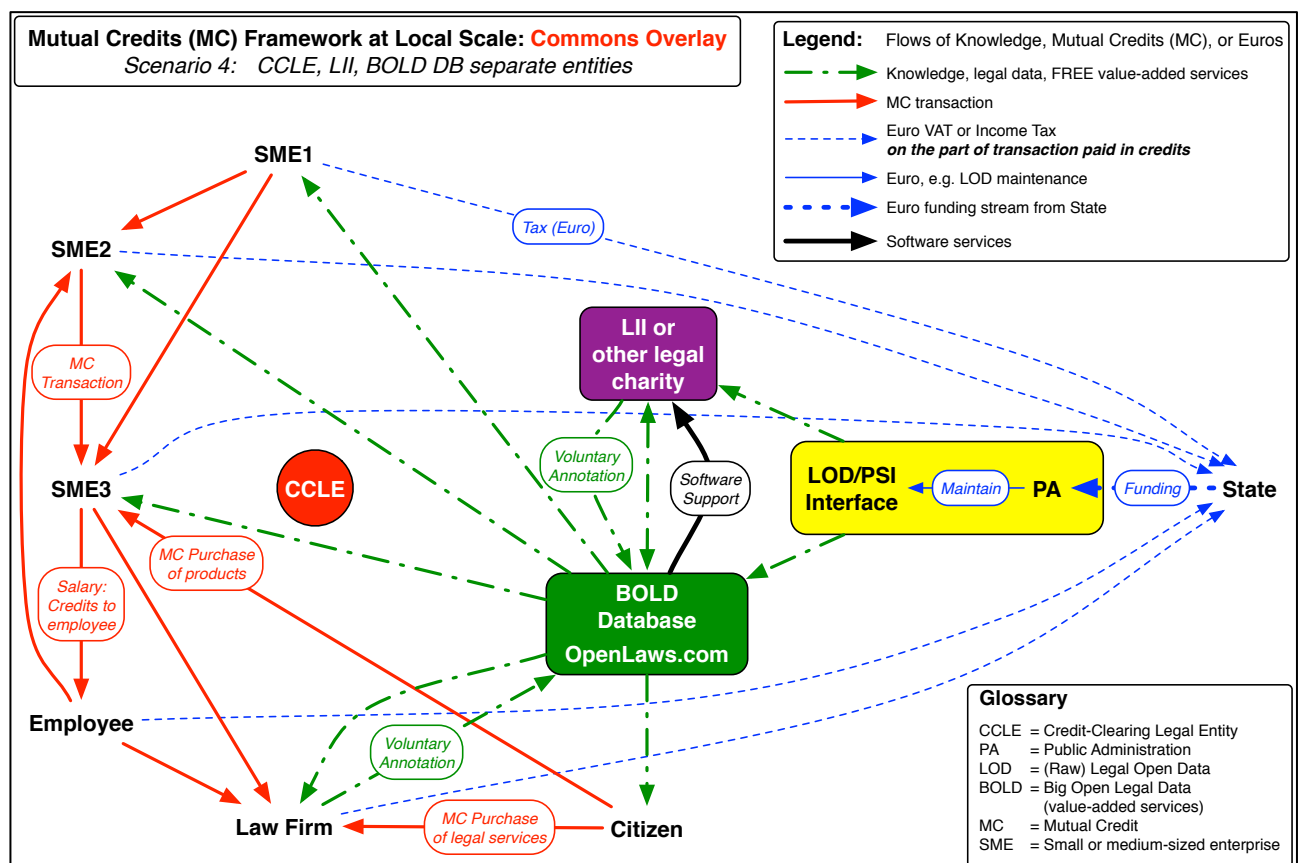


Figure 7: Mutual credit exchange framework: Credits and free services

Figure 8 shows the same network but with flows of Euros. The two currency systems are complementary in two ways. First, the same SME may benefit from free services (shown as green dot-dash arrows in Figure 7) as well as purchase premium services (shown as a black dot-dash arrow in Figure 8). Second, for a given commercial transaction the payment may be effected partly in credits and partly in Euros. The second form of complementarity, however, is by no means mandatory. The mutual credit system can be allowed to develop at its own pace, and OpenLaws.com may or may not choose to participate in the circuit of the region where it is located.

⁷ The exchange of software support to the LII by OpenLaws.com for data and annotations was suggested by Clemens Wass (BYW).

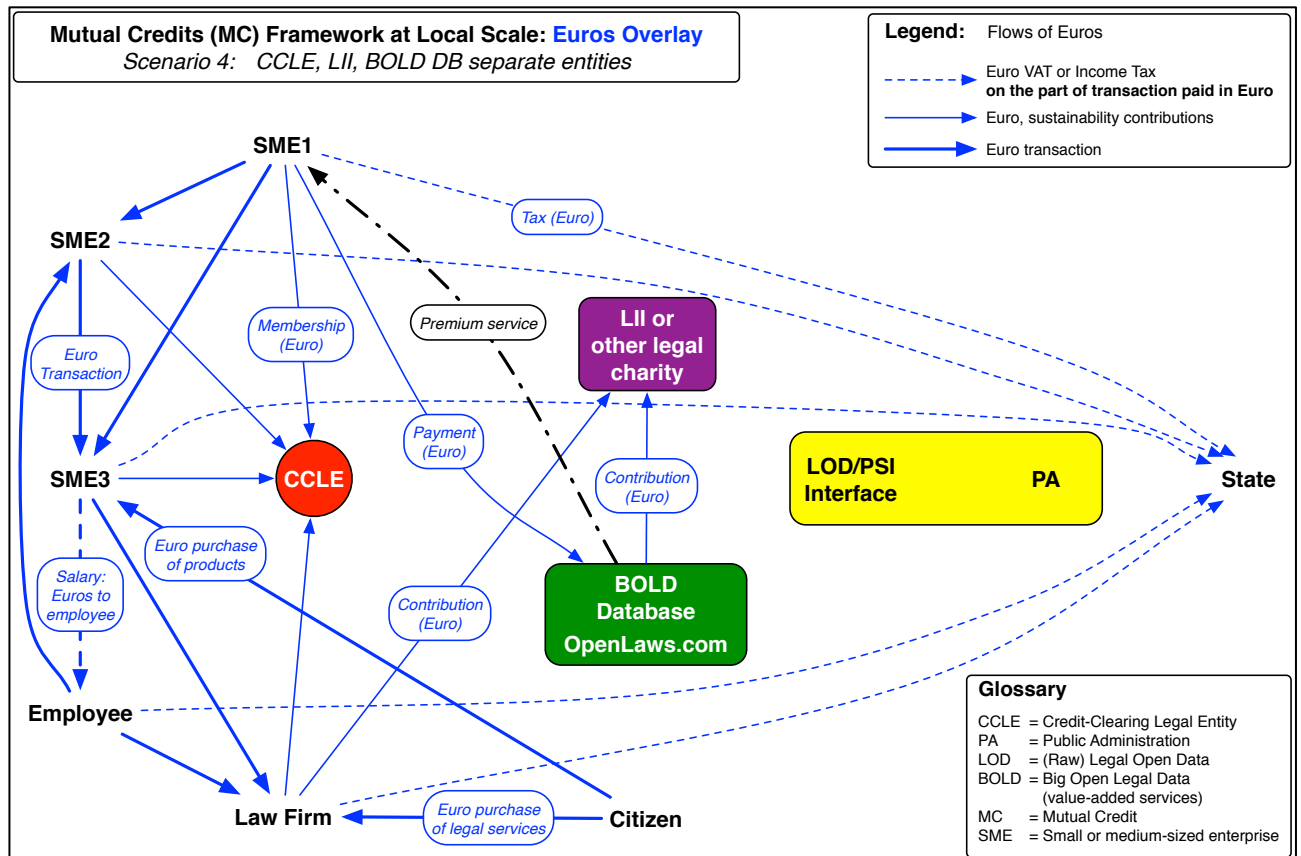


Figure 8: Mutual credit exchange framework: Euros and premium services

The introduction and subsequent adoption of such a mutual credit approach, with multiple local instances in different parts of Europe each with its own cultural and socio-economic identity, is not and should not be a fast process. Since mutual credit is a mechanism that creates money out of trust, clearly the trust must first be built – between the stakeholders and between the stakeholders and the state – and building trust takes time. Therefore, the socio-economic sustainability framework described here is designed to be an optional “add-on” to the “normal” way of doing things. It is not necessary for the operation of the OpenLaws governance and sustainability framework presented in this deliverable or for any of its features.

However, assuming that this very different way of thinking can be communicated to and understood by the stakeholders, it could offer the beginnings of a sustainability solution for open data, and in particular, in the OpenLaws context, for the legal charities. From this point of view it is meant to offer a possible opening for a better, more democratic, and more sustainable future.

5 CONCLUSIONS

This document outlined the principles and possible operational solutions for the social and economic sustainability of an online platform based on BOLD. This has been done adapting the literature on the commons and current research on mutual credit systems to the needs of the OpenLaws platform and community. The result is a framework that needs to be further detailed in order to be operationalized in practice, but that presents the guiding principles and the rationale for doing so.

More importantly, this document addresses the need to look at online platforms not only as commercial investments that need to enrol as many users as possible and motivate them to contribute to the sustainability of the platform by contributing to it, but as communities: social spaces that need to be managed properly if they are to survive. In other words, the users should not be seen as ‘prosumers’ but as ‘digital citizens’ that by contributing to the platform acquire certain rights to participate to its management and carry certain responsibilities. In D2.3d1 “Socio-Economic Framework for BOLD Stakeholders” we reported cases in which the choices made by the commercial management of a platform radically changed or disappointed the original community to the point of losing many users. For this reason, this report on the one hand suggests to engage the community in the self-management of the platform following the principles of management of the commons and, on the other hand, it explains how engaging the local communities outside the online platform can result in a more solid economic sustainability of the platform itself that relies on and fosters egalitarian principles.

The framework proposed wishes to show how a positive interaction between social values and economic values is achievable by adopting the lessons learnt from the open source movement, the experience of the physical commons, and the migration of local mutual credit systems to an online environment. The challenges for a successful application of this framework are many, first of all the necessity to foster the culture of free contribution and participation to a set of stakeholders, as lawyers and legal SMEs, who are accustomed to act mainly as market players and therefore can see free contribution as non-professional and/or as threats to their business models. This challenge needs to be kept in mind constantly in order to be sure to offer to these potential users something they really need and in order to communicate to them the platform’s aims and philosophy as clearly as possible.

Another challenge is that of connecting the online community with local face-to-face communities in order to implement the economic sustainability model proposed but also in order to support the growth of local communities of citizens better informed on their rights and empowered in terms of their understanding of legislation and case history.

A platform based on BOLD as OpenLaws has the potential to become a critical tool for local social innovation since it can support citizens in changing their relationship with the legal system and in interacting better with legal service providers such as lawyers and, at the same time, it can stimulate professionals in rethinking their business models and the way they interact with customers and offer services. It will be extremely interesting to see the actual creation of different instances of the platform in different European countries, and to monitor their evolution and the evolution of the communities that will grow around them.

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