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Executive Summary

This report provides an initial summary of the legal open data stakeholder mapping at EU level and in the UK and The Netherlands. The case studies relied on a Soft Systems Methodology (SSM) framework in order to identify the key components of the problem and provide the key specifications for the system that is being built, as well as on a combination of desk research, in-depth interviews, and focus groups.

- Although European legal information may not be as widely reused and repurposed as US federal law, it is nevertheless a best-of-breed example for the Member States to emulate where possible.

- It may be argued that UK legal data is generally open to reuse and access with the exception of case law restrictions – where a virtuous open data circle has been hampered by legacies of closed copyright in the gift of individual judges and in practice their clerks, which remains unreformed. This led to restrictively licensed underfunded systems belonging to legal educational charities BAILII and ICLR. Reforms to case law release and funding would enable the UK to be seen as a 'best of breed' open legal data example.

- For The Netherlands, it is clear that there are forces challenging the status quo of the current legal information market. Netherlands is a pioneer in the open (legal) data movement, enjoys a solid network of universities for a country its size, has a long-standing history of embracing professional publishing houses (e.g. Kluwer, Elsevier) who have started developing new business models, and has generally sophisticated users who are keen to experiment with new models (e.g. digital library licensing etc). Cable broadband and uptake of 4G mobile technology has vastly contributed to the digitalization of legal information. Dutch government has played a fundamental role opening up legal resources in the early days of the Internet and is today committed to the implementation of Open Access policies, especially for publicly-funded research. Further, it also supports Open Data policies for legal information.

The report presents and discusses a value network-based perspective at business modelling, along with an initial set of community governance principles. The underlying logic when applying the value network approach to technological innovation such as the OpenLaws solution is that it is not the technology as such that is a determinant of success, but rather the way in which the network of actors is configured in generating added value around the technology.

For the governance framework of the OpenLaws community we seek the development of an effective and legitimate governance ecosystem by proposing a distributed yet coordinated framework that can accommodate a plurality of existing and emerging decision-making approaches, and that enables inclusion and participation, independent of notions of public-private memberships, by embracing new kinds of collaboration between and among institutions and actors across borders and sectors. A community based approach is also important for supporting technological innovation.

Some reflections are offered on the basis of capitalism in the form of the medium of exchange as a precious commodity, and on how making this unspoken ontological assumption explicit may open new horizons for alternative and complementary economic systems better suited to harbour societal value creation based on the BOLD and PSI commons on par with market activity.

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1 INTRODUCTION

This report provides an intermediate snapshot of the mapping of BOLD (Big Open Legal Data) stakeholders from three case studies: EU, UK, and Netherlands.[1] The objective is to assess whether the socio-economic and political conditions now exist in these contexts that can support an environment in which open access models such as OpenLaws.eu can take root and flourish.

The case studies relied on a Soft Systems Methodology (SSM) framework in order to identify the key components of the problem and provide the key specifications for the system that is being built, as well as on a combination of desk research, in-depth interviews, and focus groups. Within the SSM framework, we followed the CAMPO methodology, which is based on the analytical categories: Context, Actors, Methods, Practices, and Outcomes. This is explained in Chapter 2.

Chapter 3 addresses the development of a (decision-making) mechanism from a *business* viewpoint that supports and joins together the need for an inclusive perspective on innovation and the need for more cooperation and coordination among public and private stakeholder groups. The chapter introduces a "business model thinking" approach to contextualize our OpenLaws interest and, hence, complement our initial BOLD report drawing out business models for stakeholders (D2.4.d1). More specifically, we approach the concept of a business model similarly to e.g. Chesbrough (2006) and Gawer (2010) as a *value network* consisting of actors, roles and relationships that need to find a (strategic) fit to deliver value to various (end) users. Using this operationalization, the underlying logic when applying it to technological innovation such as the OpenLaws solution is that it is not the technology as such that is a determinant of success, but rather the way in which the network of actors is configured in generating added value around the technology (Panagiotopoulos et al. 2012).

The definition and development of a governance framework for the OpenLaws community that is outlined in Chapter 4, therefore, springs from two overarching motivations. On the one hand, we seek the development of an effective and legitimate governance ecosystem by proposing a distributed yet coordinated framework that can accommodate a plurality of existing and emerging decision-making approaches, and that enables inclusion and participation, independent of notions of public-private memberships, by embracing new kinds of collaboration between and among institutions and actors across borders and sectors. This proposed framework builds on already emerging (paradigm) shifts in the ICT ecosystem toward more collaborative, global and decentralized models of service creation and decision-making. On the other hand, value generation through 'endogenous' technological innovation is also well-understood by the economics of innovation perspective, e.g. Freeman and Louça (2001), Antonelli et al. (2007). Thus, paying due attention to the robustness of the governance framework for the OpenLaws community is also important from the point of view of the technological innovation that is engendered by the community itself.

Finally, Chapter 5 offers some preliminary conclusions.

[1] The Austria case study (D1.2.d4) will be included in the next and final comparative report (D1.3.d2).

Political economy reflections on dynamic capitalist growth, circular flows, the legal commons, and participative democracy

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 explains 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).

As a consequence, in political economy deliberations a great deal of time and energy is spent debating the tension between *economic and social priorities*, and the forces and institutional interventions that are deployed by both camps to protect and advance them. Whereas such debates are perfectly reasonable on the surface, they overlook a subtle and pervasive, but very powerful, underlying effect: the financialization of the 'real' economy. To say that this effect is overlooked is not quite right, of course, since most people are familiar with the strong pull of financialization. However, it is accepted as inevitable because it is perceived to be an integral part of how the capitalist economy works, and no alternative seems to be available.

In the context of OpenLaws, a crucial point is that the aim of the PSI Directive is for public administrations (PAs) to make public data freely available – although this is an ideal that may not be reached in all cases. To the extent that it can, it represents a zero-cost "raw material" that legal ICT firms, publishing houses, and any other private sector stakeholders can use to develop value-added services for a profit. Therefore, from the private sector point of view the problem of sustainability is not as difficult as it might have been without this directive. In other words, in the OpenLaws context the tension between economic and social priorities has been decreased by the PSI Directive relative to other areas of the online economy.

There are, however, three further considerations:

1. In cases where PAs experience a shortfall in funding allocations they are limited in other ways of generating revenue by the general understanding that the state cannot compete with the private sector.

2. In open source communities, for-profit software firms donate some of the time of their programmers to contribute to shared open source toolkits that are then utilized by all the firms whose services and apps rely on that toolkit. Similarly, it is in principle possible for law firms to donate some of the time of their lawyers to annotate the OpenLaws BOLD knowledge bases.

3. An environment that is exclusively focused on profit-making is not conducive to experimentation in the generation of other forms of value.

These points invite more reflections from monetary theory that lie squarely 'outside the box' and, therefore, whose relevance to the normal economic and business mechanisms and practices is not immediately evident.

For example, if the medium of exchange is taken as one of the parameters under discussion, it is not difficult to see Adam Smith's point that the store-of-value function of money militates against the market. This can be adjusted by decreasing the "price" of money, i.e. its rate of interest. A zero interest rate means "free" money, which is perfect for trade but not for investment, pensions, and other essential functions of the economy.

Second, capitalism is also beset by concerns about *rising or permanent inequality*. Is this due to social and family context that provide a discriminant for educational, career, and overall economic opportunities? Or do the power asymmetries reflect more simply different levels of hard work and entrepreneurship? Both perspectives can argue their position convincingly, but fail to notice the fundamental role played by the medium of exchange, which necessarily permeates all such activities. In particular, since money is perceived as a precious commodity that is 'earned' or otherwise appropriated, the struggle focuses on its control vs. (re)distribution. The fact that the centre of power in capitalist systems resides with the institutions that *create* money, and that such institutions are not under democratic control, is overlooked.

As discussed at some length in D2.3.d1, the sociological perspective on monetary theory, by contrast, highlights the fundamental, in the sense of *ontological*, nature of money as a social relation of credit and debt. As such, its creation is within the grasp of any individual or citizen, and can be integrated within a democratic institutional framework. This view, therefore, highlights the distinction between the power deriving from *having* money and the "meta-power" deriving from the ability to *create* it. Since the meta-power to create money is the most powerful function of capitalism, it is difficult to imagine that a true democracy can be attained in a capitalist system until this function has been allocated more fairly – in fact, *democratically* – among the citizens and economic agents.

We argue that the shortfall in funding for "non-profit" activities that results from the financialization of the economy is to a significant extent a result of this lack of democratic control over the creation of money as the centre of power of the capitalist economy. This motivates further reflection.

The disintermediation of the money-creation function requires an ontological shift from the Aristotelean view of money as a precious commodity to money as a social relation. Once this shift has been accepted as plausible it, in turn, engenders awareness of the importance of a strong institutional and legal infrastructure for sustainability: transparency, accountability, and trust are clearly essential for the emergence of empowered economic agents who are also responsible citizens. The suggestion then ensues that, when such conditions are met, economic activity and participative democracy might not only be independent concepts, but can in fact be mutually reinforcing.

Third, the *instability and periodic crises* typical of capitalism indicate that indeed something is not right. The atrocious working conditions for most of the workers in the initial stages of the growth of any economy that decides to embark or is coaxed into embarking into capitalism, combined with the long list of negative effects on democratic process, the environment, product safety, and so forth with which we are very familiar then reinforce the impression that something ought to be done to contain "the beast" while, if possible, still benefiting from its huge power.

This system-oriented utilitarian view, or something equivalent in practical terms, is slowly gaining ground. This is visible in the increasing practice of social entrepreneurship, the increasing awareness on the part of corporations of the social costs of their business activities and, last but not least, the fundamental challenge that open knowledge, open source, and open data have mounted against intellectual property. Compatibly with the prevailing political economy landscape, this report problematizes this challenge as a tug-of-war between the maximization of profit and the maximization of societal value. The main point of these 'reflections' is that this tug-of-war can be alleviated if the

pull of financialization is "turned down" or – at least in some parts of the economy – eliminated altogether. The postulated advantage would be to make more room for societal benefits without harming the market dynamics. The hope is to create a space where the 3 points above would have more room to grow and be explored.

As advanced in D2.3.d1 (Socio-Economic [Sustainability] Framework for BOLD Stakeholders) and as will be further developed in D2.3.d2 (BOLD Socio-Economic and Governance Framework), 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'.

The stronger importance of social interactions and social values at smaller socio-economic scales is nothing new. If, as claimed in D2.3.d1, the more deleterious aspects of capitalism can be filtered out locally by a zero-interest complementary currency or mutual credit system like Sardex,[2] therefore, such a multi-scale approach may bring compound benefits. For example, participatory democracy also appears to work best at a scale where the contributions of individual citizens to common decisions are recognized and recognizable.

Thus, can we entrust the fair provision of value-added services built around open data and BOLD in particular to the capitalist market? Will this approach foster greater democratic participation and engagement? As far as the business models of SMEs in the legal ICT sector are concerned, for example, such a future does not seem unfeasible. On the other hand, larger and publicly listed players such as multinational publishing houses seem to fit uncomfortably in a non-capitalist context. The call for a multi-scale approach at business *and economic* modelling, therefore, seems increasingly urgent if we want to keep all the stakeholders at the table.

This report does not address these difficult questions head-on. Rather, it provides a stakeholder mapping of three important European countries, an overview of a value network approach at business modelling, and an initial outline of the principles of governance of multi-stakeholder communities. Deliverable D2.3.d2 will address the integration of the economic, business, social, and governance dimensions of the OpenLaws community, including the funds-starved LIIs (Legal Information Institutes) present in many countries.[3] For the present, a preview of the longer-term vision is as follows.

Democratic participation is built on social and political processes. Both kinds of processes are built on trust, and require face-to-face communication. Therefore, if we wish to integrate open legal data with the economic, social, and political lives of European citizens we must be mindful of the importance of the local scale. The architecture of the OpenLaws community, technology, business models, socio-economic sustainability framework, and governance framework must therefore be able to balance the local dimension with the national and European dimensions. As a consequence, our initial puzzlement

[2] http://sardex.net
[3] https://en.wikipedia.org/wiki/Free_Access_to_Law_Movement

at how local mutual credit systems specific to the legal sector could become sustainable can be resolved by accepting that the legal dimension should be treated for what it is: a part of the "multi-sector" life of citizens.

The recommendation that is emerging from our research, therefore, suggests that mutual credit systems should become commonplace in a wide range of regional and cultural European contexts, in all cases acting as *complementary financial mechanisms* to the global capitalist economy. In this view of enfranchised, media-literate, and democratically engaged citizens and SMEs, BOLD becomes an essential ingredient for the bottom-up growth of *legal* literacy apace with business activity and an open dialogue with PAs and public sector stakeholders. As a very simple but concrete example of an entry point for such integration, the legal costs of firms could be integrated in the mutual credit mechanism, whereby legal settlements between firms could be handled with mixed Euro-credit payments in the same way as B2B transactions. The benefit of a credit buffer – especially for SMEs – could thus be extended to the often crippling legal litigation and mediation fees. In other words, rather than trying to shoehorn mutual credit into the legal sector, it is much more plausible to connect the legal sector to existing or budding mutual credit systems. The expectation of this approach is that the market for legal information will grow to a much larger scale than the "starved" neoliberal projections – which are based on a logic of scarcity – could hope to achieve. Increases in volume will therefore compensate the larger private sector stakeholders such as the legal publishing houses for the probable decrease in prices as the legal commons gradually rebalances the democratic scales.

2 CAMPO SYNTHESIS

In this Chapter we draw upon our previously conducted analyses of our OpenLaws country case studies.[4] Before compiling a final comparative report (D1.3.d2) in which a series of suggested reforms to systems based on country case studies will be presented, here our analysis further explains how and whether an environment (institutions, policies and the legal community) is finally developing in which open access models such as OpenLaws.eu can take root and flourish. For this purpose, the key functionalities of the existing legal publishing system are summarized and described. This activity involved a review of the existing information systems and legal databases already in use and will produce a specification of the requirements of the system on the basis of the analysis of social, legal and market requirements. The case studies represent the key socio-economic and legal aspects of the services and illustrate the main functionalities, structure and operation of the proposed services. The findings have been informed by key informant interviews and form a working assumption. The interviews were supported by the literature review and the insights of workshops.[5]

The range of stakeholders interviewed is broad and includes experts from: academia, Non-Departmental Public Bodies (NDPB), trading funds, private entrepreneurs, corporations, standards bodies, non-governmental organizations, and government policy officials with both domestic and international responsibilities. Note that the case studies relied on a Soft Systems Methodology (SSM) framework in order to identify the key components of the problem and provide the key specifications for the system that is being built, while the third activity relies on a combination of desk research, in-depth interviews, and focus groups. Rich multimedia flowcharts and other illustrative material are used in further drafts in order to describe the problem in the context of an SSM approach and to facilitate discussion between the user and the development communities.

Explicitly acknowledging these perspectives forces us to consider the impact of any proposed changes on the people involved. Note also that the qualitative interviewing of experts and other stakeholders has been carried out using 'snowball' sampling (Goodman 1961) based on prior search of literature, policy presentations and otherwise publicly acknowledged experts and representative stakeholders (Baker and Edwards 2012; Edwards and Holland 2013). Finally, note that the publication of draft case studies and a draft of the final comparative report are accompanied by dissemination and feedback mechanisms both online (e.g. via posting on open access websites, promotion via social media and comment promotion via referral to the WS1 Wiki) and offline (via workshops and conferences in-country, at EU and international levels) to create a close expert panel which will provide a constructive critique for future iterations of the reports, with a final version published at the conclusion of the OpenLaws project.

2.1 CAMPO Framework

First, we provide an explanation of the method which we will use to investigate the field. Previous studies of government data – notably law – have demonstrated the need for an interdisciplinary methodology such as SSM. This suggests the need for a framework that examines technical, bureaucratic ('socio-institutional'), economic and legal barriers to wider access to law. In fact, an approach which focuses only on law, market, technology or bureaucracy would fail to provide a holistic explanation of successes and failures of national approaches explored in case studies.

The framework used in here and proposed for further studies is CAMPO – Context, Actors, Methods, Practices, and Outcomes. Within each category, an interdisciplinary approach is taken. It has been designed and deployed in the European Internet Science project notably Marsden and Pavan (2013),[6]

[4] Note that case study 3: Austria (D1.2.d4) is still in progress.
[5] Including the LASPSI workshop on 3 September 2014.
[6] Plus draft catalogue of design responses to needs analysis, Internet Science Consortium at http://www.internet-science.eu/biblio/reports

and is based on a straightforward descriptive framework appropriate for examination of a discrete environment such as legal information.

CAMPO	Description	Added value
Context	Initial part of the case study outlines the overall context in which the community emerges/operates – type of legal informatics technology	Systematic catalogue of cases/actors/issues
Actors	What type of community is observed (primary groups, market actors, user groups etc.)	
Methods	Investigation method: Details of procedures to map the case study and the techniques used to perform analysis (research design details + actual methods)	Catalogue of methodological approaches to investigate different communities
Practices	Dynamics of interaction: Illustration of dynamics observed in each case study	Detailed insights on interplay
Outcomes	Summary of integration at EC level	Conclusions, limits of analysis for member states

Table 1 CAMPO framework

OpenLaws populated the study with empirical research, and conducted a web-based survey in May-June 2014, which produced over 200 responses.[7] The detailed responses to the survey support the country case studies. The empirical interviews follow a general template adapted to local circumstances for each stakeholder/country case. This work has been presented in the Workstream 1 analyses of institutional and business model barriers to open access using the CAMPO methodology to structure the four country case studies of the European institutions, United Kingdom, Netherlands, and Austria[8]. While actors are clearly country-specific, the Context, Methods, Practices and Outcomes can more easily be compared. We begin with providing a summary of the Context next:

[7] For raw anonymized analytics, see https://docs.google.com/forms/d/1MVdScU8Unm0sdNBXsTgMM2A36TPvnlduMsjdIWo4DLE/viewanalytics

[8] Work Stream 1 reports include D1.1 State-of-the-art report for legal, social, technical and business aspects of re-use of legal information; D1.2.1 Template for country case studies; D1.2.2. Case study 1: European Institutions D1.2.3. Country case studies: UK; D1.2.4. Country case studies: Austria; D1.2.5. Country case studies: Netherlands; D1.3.2. Comparative country report: White paper on the OPENLAWS.eu open innovation community

CAMPO	EU	UK	Netherlands	Austria
Context	1958, Official Journal to publish multinationally uses permissive 'copyleft' licensing to ensure the widest possible dissemination and knowledge of European law at national level. The task of disseminating European law across the six original members, then to the 12, 15, 27 and current 28 has been a preoccupation of legal informatics in the European Union. Eur-Lex free to end users – comprehensive database. EU institutions, objectives and norms in Commission Decision 2011/833/EU	Large mature market with main working language English. Commercial dominance by large multinational legal service providers and law firms. UK not an original EEC member, 1974 expansion member with drafting language status. UK High Court and commercial arbitration cases heard in London have a very significant influence over international trade law due to the historic position of London as an arbiter of international disputes.	Mature and well-developed legal information services market (albeit language constrained), long-standing history of professional publishing (Kluwer, Elsevier etc). Particularly active and innovative public sector, so far focused on accessibility to legislation and case law. EU legislation and case law have a strong impact on the legal system. Court's interpretations and gap-filling decisions are integral part of what is 'the law'.	Austria has a civil law system with legislation as the central source of law. Case law is important for the interpretation though. EU legislation and case law have a strong impact on the legal system. There is an advanced public legal information system for Austrian legislation and case law, operated by the Austrian Federal Chancellery. The system is not interconnected with European sources of law. Several private publishing companies provide added-value information, mainly publishing commentary in printed and electronic form.

Table 2 CAMPO context

The second category, Actors, is the most heterogeneous of categories, given the national diversity expected of the case studies (indeed, were actors homogenous the case studies would have been poorly selected). The following three Tables (3-5) are provided without commentary, as comparison is straightforward. The final category, Outcomes, is deserving of greater analysis, and the majority of this section is dedicated to it.

CAMPO	EU	UK	Netherlands	Austria
Actors - government	Office of Official Publications; EurLEX unit DG Justice	Office of Public Sector Information (OPSI); Legislation.gov.uk unit Her Majesty's Courts and Tribunals Service (HMCTS) Ministry of Justice	Ministry of Interior (Executive) -Knowledge Centre for Official Government Publications (KOOP), part of the Ministry of Interior, as centre of expertise for the publication of (official) legal information and open legal data. -Parliament (Legislative) -Judiciary (Council for	Parliament Ministry of Justice Ministry of Finance Austrian Federal Chancellery Judiciary Public authorities

			the Judiciary) -Ministry of Justice (pays for legal system)	
Actors – non governme nt	Multinational legal publishers (member state analysis in country case studies)	Multinational legal publishers (member state based – e.g. Reed Elsevier)	Legal Publishers: *Commercial* incl. SDU (historically close to the public sector) and SMEs, Kluwer and Boom, eminently oriented at the private sector. Content Integrators (Legal Intelligence, Rechtsorde)	Legal publishers: Lexis Nexis, Manz (Wolters Kluwer), Linde, Verlag Österreich (Springer was acquired by …) Chamber of Commerce
Actors – non profit and user	No Legal Information Institute for EU, Italian start-up (EuroLII) in process. Commentary provided by Brussels affiliates of international law firms + European law academics based in national universities	British and Irish Legal Information Institute (BAILII) Incorporated Council of Law Reporters (ICLR) Commentary provided by London affiliates of international law firms + law academics based in national universities	*Non-commercial*: Ars Aequi (ties with academia, non-profit) - Learned societies, legal communities: journals: Commentary (law firms, practicing lawyers, law students, legal academics)	Literature/commentary: law firms, practicing lawyers, law students, legal academics Businesses (end users) Citizens (end users)

Table 3 CAMPO actors

CAMPO	EU	UK	Netherlands	Austria
Methods	Significant methodology challenges to researching this 'community', if European law can be said to have created a single community, as opposed to enabling several communities at national level with European coordination or at least input. Relatively little academic empirical study of European legal informatics, until recently. Ethical implications similar problems as national legal	Access to legislation good Case law uncertain – reforms to ICLR & BAILII ongoing Commentary mixed: information available but not collated User community strong, risks of disintermediation.	Public sector publishing: *overheid.nl* as central access point to government information incl. (consolidated) legislation and government regulation (*wetten.nl*) and official publications (*officiële bekendmakingen.nl*) running consolidated legislation on basis of public tender. Parliamentary reports: zoek.officielebekendmakingen.nl. Case law database *rechtspraak.nl* CC0 public domain dedication as default	Public sector publishing Legislation and case law via the "Rechtsinformationssystem des Bundes (RIS)" (www.ris.bka.gv.at Federal Chancellery), stored in different databases. Case law on finance-related cases is reported in Findok (Ministry of Finance findok.bmf.gv.at). Database opening can be observed (https://www.data.gv.at 3rd party applications can be developed. Private sector

	communities.		copyright licensing policy where applicable. Private Sector publishing: Open Access is increasingly offered as an add-on by commercial publishers, slow uptake, though, as the value proposition remains unclear. Commentary/Literature remains with the private sector/academia. Increasingly tiered content (free/premium)	publishing: Open access is increasingly offered as an add-on by commercial publishers, slow uptake, though, as the value proposition remains unclear.

Table 4 CAMPO methods

CAMPO	EU	UK	Netherlands	Austria
Practices	EurLex merger with CELEX very positive. EU lawyers use EurLex relatively infrequently- supplements their national databases which are largely commercial. Little evidence of dedicated online EU legal user community or 'hackathon culture as in US.	Access to legislation good Case law uncertain – reforms to ICLR & BAILII ongoing Commentary mixed: information available but not collated User community strong, risks of disintermediation.	Good access to legislation and case law Changing law firm landscape leading to a more savvy information management (pay per use, customization). Also, increasing distinction of low-value added from high value added, one-offs from trends, lawyer/non-lawyer. Lawyers in some areas of the law are more active than others, online, blogs etc. and more experienced in OA propositions (eg. IP). However, still committed to pay for value propositions. Except for some closed legal communities/networks, the legal professional remains wary of reputational issues, very cautious with the where and how to publish Universities: : tend to	Free access to legislation (federal and state law). Free access to case law from high courts. Only few case law from the first instances published. Public bodies pressure to reduce expenses Legal professionals publish short summaries of cases and some general news on their websites Publishers remain the hub for the publication of commentary/literature Publishers sell printed books and access to databases While search in databases from publishers was traditional hidden behind a pay wall, the search functionality is now often available for free; access to the

	favour OA models, push for OA in joint negotiations with large commercial publishers. Ministry of Education, national science foundation a.o. academic funders progressive OA policies. Search and indexing in university repositories needs to improve	full text is only available with a subscription Publishers still apply traditional business models and avoid the sharing economy Universities face cost pressure just like public bodies; depend on the subscription services from commercial publishers, to get access to legal commentary. Initiatives to push open access publication though.

Table 5 CAMPO practices

The final category, Outcomes, is explained next and summarized in Table 6.

When it concerns the EU, European legal data was born 'open' as a result of the 1958 Official Journal policy and the resources devoted to multi-lingual and multi-national publication. This has been helped by the development – and now redevelopment – of EUR-Lex and efforts to integrate with national databases via N-Lex and now EUCases. This has been boosted by the stronger political commitment to open data in Commissioner Kroes' Digital Agenda and the European Council October 2013 conclusions which contain a strong endorsement of open data, linked to the revised Public Sector Information (PSI) Directive. This is shared by other major legal systems and governments' wider commitments to open data, for instance the June '13 G8 Open Data Charter. The European legal informatics space is unique in at least seven respects, leading to comparisons to our three country case studies.

1. There was no precedent for a multilingual economic and political area such as this,[9] with four original languages (French, German, Dutch, Italian) and a precedent setting 'Supreme Court' that worked in French and translated into the other three official languages. The decision was made to make access to documentation freely available at production, and then no charge was made in the context of no developed market actors to challenge the decision to 'super-nationalize' the state provision of legal information and case law reportage.[10]
2. The essential role of European law in creating the 'acquis communitaire' led to a political decision to make law as widely available at far below marginal cost as possible. The benefits in creating an essential knowledge of European law amongst a critical mass of advocates at national levels was considered so important from the 1950s onwards that there was no serious resistance beyond basic budgetary questions. The direct point of comparison might therefore be the bi-lingual European Court of Human Rights and its presentation of case law, rather than national court systems. Note in this regard the linguistic diversity of the EU and the severe budgetary constraints of the ECHR system.

The mixed market for case law publication is officially recognised.

[9] At least not with 24 languages, Switzerland has had 4 for many years.
[10] Note United Kingdom has two official minority languages – Welsh and Gaelic Scots – while Austria and Netherlands have smaller language minorities without official status.

3. European law was pushing on an open policy door, in that its expansion occurred at the same time as a massive expansion in European institutional competences and budget, compared to domestic budgets. The boom-bust cycle of many national legal reporting environments with far longer and more crisis-ridden history was not an EU feature of resistance to wider access to law.
4. European law expanded rapidly concurrently with the introduction of computer databases for legal informatics. Throughout the 1980s and onwards, the development of both EU law and legal databases has been a largely happy marriage – though with various standards-based and institutional strains (e.g. ELI/ECLI) that would be inevitable in any such system growing at such a rapid rate.
5. European law is pre-eminent over national law, leading to recognition of its power to influence national legislation not only in its legal effect but also in the salutary example of free access to the overarching law in so many national legal fields. European law is an example to national legislatures, courts and commentators. The use of judgments as precedent setting has parallels with the ECHR system and also national common law systems with Supreme Courts, such as England and the United States.
6. European court decisions and legislative reforms now affect 28 nations, and the importance of effective communication of these changes is evident in the same way (but arguably more powerfully) that United States Supreme Court decisions have 'ripple' effects at state, municipal and regional levels in the United States.
7. The law firms in Brussels and Luxembourg are enormously well-resourced compared to many at national level in all but the largest jurisdictions. Therefore, case commentary is frequently rapidly and comprehensively supplied freely as a 'loss leader' to attract both national and non-European clients to use the services of these highly competent and highly marketed law firms. Similar analysis may prove the same for European law journals, outranking national journals despite the very small turnover of EU legal information markets compared to national markets.

As a result, it may be argued that European legal data is so open to reuse and access that it is the 'exception that proves the rule' – in that the national systems under examination may have less a virtuous circle and more a system hampered by legacies of closed and restrictively licensed underfunded systems.[11] This will be a major research theme in national case studies. We can conclude that though European legal information may not be as widely reused and repurposed as US federal law, it is nevertheless a best of breed example for the Member States to emulate where possible.

When looking at the UK, the interviews were supported by the literature review, and the insights of workshops (including the Society for Computers and Law workshop of May 2014, and London workshop of January 2015, as well as the Open Data Institute seminar of March 2015) following which the version was edited. The UK context is a developed legal market, with a strong user base of local and multinational firms, advanced university libraries and researchers, and law reports published by both commercial publishers and two legal charities: British and Irish Legal Information Institute (BAILII) and Incorporated Council of Law Reporters (ICLR). Stronger legal information institutes, more government commitment to publishing state and case law databases in open formats, greater willingness by commercial publishers to experiment, and more law firms investing in open publishing of expert commentary, all lead to greater open access to law. What is still needed is to bring these together with a social layer, to create a community which sees collaboration as more than simply checking LinkedIn every month.

In the first element identified above, BAILII remains highly motivated but poorly resourced, and is an unusual LII model in co-existence with ICLR's online provision. LIIs exist in most common law jurisdictions, but whereas the CANLII model in Canada is very well resourced and expanding into commentary with CANLII Connects, and AustLII in Australia continues to go from strength to

[11] Participants at the LAPSI2-Openlaws joint workshop 4/5 September 2014 in Amsterdam http://www.lapsi-project.eu/amsterdam-meeting-4-and-5-september-2014-amsterdam-netherlands and to participants at the 30th Annual BILETA conference, Bristol, 9-10 April 2015, https://twitter.com/hashtag/BILETA15?src=hash as well as to individual interviewees, provided feedback and constructive critique of these points.

strength, BAILII has struggled to establish a foothold in the UK legal information market. To what extent this is a result of the lack of a social entrepreneur leader within the academic system in the 1990s (for instance, Daniel Poulin of LEXUM[12] in Canada and Graham Greenleaf in Australia) as compared with the stranglehold of Big Two publishing and ICLR over a highly conservative and private sector-oriented judiciary and legal profession, would be a fascinating research question to explore.[13]

Stronger legal information institutes (LIIs such as BAILII), more government commitment to publishing state and case law databases in open formats, greater willingness by commercial publishers to experiment, and more law firms investing in open publishing of expert commentary all lead to greater open access to law. The 'Big data for law' project led by John Sheridan's team at the UK National Archives, funded by the Arts and Humanities Research Council and supported by the major commercial publishers and ICLR's resources, can begin to unlock some of the potential for us to use open access to law to create exciting insights and discoveries, which may transform the profession's relationship to society.

In conclusion, it may be argued that UK legal data is generally open to reuse and access with the exception of case law restrictions – where a virtuous open data circle has been hampered by legacies of closed copyright in the gift of individual judges and in practice their clerks, which remains unreformed. This led to restrictively licensed underfunded systems belonging to legal educational charities BAILII and ICLR. Reforms to case law release and funding would enable the UK to be seen as a 'best of breed' open legal data example.

For The Netherlands, it is clear that there are forces challenging the status quo of the current legal information market. Netherlands is a pioneer in the open (legal) data movement, enjoys a solid network of universities for a country its size, has a long-standing history of embracing professional publishing houses (e.g. Kluwer, Elsevier) who have started developing new business models, and has generally sophisticated users who are keen to experiment with new models (e.g. digital library licensing etc). Cable broadband and uptake of 4G mobile technology has vastly contributed to the digitalization of legal information. Dutch government has played a fundamental role opening up legal resources in the early days of the Internet and is today committed to the implementation of Open Access policies, especially for publicly-funded research. Further, it also supports Open Data policies for legal information.

Given the Dutch government's prominent role, it should be interesting to see how the public and private sector continue to run in parallel. The public sector understands that its open data policy, which includes accessibility as well as publication, is certainly not incompatible with the business model of commercial publishers, at least not as long as their commercial proposition includes value-added products instead of mere duplication of freely available datasets. If we agree to assume that publishing is a complex, and often expensive, endeavour, we can safely conclude that commercial publishers, in order to compete with the public sector, need to adapt their corporate structure. Many professionals certainly rejoice at the exciting prospect of raising the bar in legal publishing as regards innovation, prompted by the public sector. Further, this trend is not new and long-standing publishers such as SDU remember the distortion created in the market when some years ago the public sector decided to start publishing [border/customs information], previously under the exclusive grip of SDU. However, an ambitious public sector might also impact the willingness of the private sector to develop new products.

In turn, the more the public sector behaves (and even competes) like a private player, the higher the chances that private commercial activity will be scrutinized under public eyes. Could this lead to private parties holding substantial datasets or search intelligence eventually being analysed under the 'essential facility' criteria?

[12] See https://lexum.com/en/authors/daniel-poulin and Poulin (2012).
[13] See further D1.1.d1 State of the Art Report.

On the 'production' side, traditional publishers have moved online but in many cases also retained print publications. Content is predominantly user paid, rather than Open Access (OA, author paid) or advertising funded models, even if the pricing structures are slowly changing (to e.g. pay per article). New entrants with a lower cost base and a quick 'time to market' (e.g. community-oriented, 'born-digital' services etc.) provide new services, and disrupt the traditional legal publishing market which is currently in the hands of Kluwer and SDU. The slow-paced changes paint the legal professional as someone reluctant to change acquired habits (fear of missing out, wariness in the provision of free advice, avoiding competition). In an increasingly competitive environment, where the Internet eases the flow of information, lawyers seem very conscious of how the old adage that information is power holds up. On the one hand, they experiment with new business methods, at a time when artificial intelligence and big data are offering 'El Dorado', hoping to benefit from a first mover advantage (better adjusted client tariffs, more flexible outsourcing, efficient search etc.). However, moving too fast in a traditionally conservative industry might be financially and reputationally counterproductive (contributing to underfunded and 'untested' OA journals etc.). The Dutch legislature introduced in July 2015 a revision to the Copyright Act, which gives authors of short academic works a right to publish open access. The Dutch Ministry of Education and the National Science Foundation – together the largest public funders of research in the Netherlands—have enacted open access and open research data policies as the default for research funded (largely) with Dutch public money.

To date, OA initiatives adopted by commercial publishers still lack mainstream adoption by legal authors and readers alike and we can only venture some of the reasons. Arguably, lack of visibility and user-friendliness might be the main cause OA publications have slow uptake. It might also bear relation to the nature of the legal profession and, perhaps, to potentially underestimated costs of OA (i.e. the Gold model requires author pays funding whereas the Green model is only an intermediate step in which the subscription model still prevails). An added difficulty is the delicate process of quantifying the socio-economic benefits of Open Data policies in the public sector, which complicates any 'cost and benefit' analysis.[14]

Large-scale adoption of OA initiatives could just simply be a matter of time. In the academic setting policies are now firm. For private practice, public sector and academia, the rise of content aggregators makes OA content accessible to users as part of their full content package (subscription based and other).

Table 6 shows a summary of the CAMPO analysis outcomes.

CAMPO	EU	UK	Netherlands	Austria
Out comes	1. Multilingual economic and political, with four original languages (French, German, Dutch, Italian) and a precedent setting 'Supreme Court'. 2. Role of European law in creating the 'acquis communitaire':	1. Stronger legal information institutes, more government commitment to publishing state and case law databases in open formats, greater willingness by commercial publishers to experiment, and more law firms investing in open publishing of	1. Search intelligence software, reduced time-to-market and standardization/ indexing are key issues, both public and private sectors are working in the area. 2. The public sector developing ambitious linked open data	1. The four commercial publishers in Austria have paired off: content of one publisher is now searchable within the portal of one other. In the future, all legal commentary may be searched in all systems of the four

[14] See D2.3.d1 for a more in-depth discussion.

	political decision to make law as widely available at far below marginal cost as possible. Access to documentation freely available at production and then no charge in the context of no developed market actors to challenge the decision to 'super-nationalize' the state provision of legal information and case law reportage. 3. European law expansion occurred at the same time as a massive expansion in European institutional competences and budget, compared to domestic budgets. The boom-bust cycle of many national legal reporting environments with far longer and more crisis-ridden history was not an EU feature of resistance to wider access to law. 4. European law expanded rapidly concurrently with the introduction of computer databases for legal informatics. 5. European law is	expert commentary, all lead to greater open access to law. 2. Boom-bust cycle in IT provision for courts, with new IT spend in 2015 first attempt since failed 2002 attempt. Consequent loss of e-publishing of court decisions. 3. Boom-bust cycle also in private and not-for-profit provision of legal information to non-subscribers and to commercial publishers. 4. BAILII highly motivated but poorly resourced – unusual model in co-existence with ICLR online provision. 5. Government recent commitment to open data since 2009 – reflected in ODI interest in legislation.gov.uk and UK ranking for legislative open data.	initiatives (LIDO project) where it blurs the boundaries with the traditional role of private sector (editing functions, commentary). Bulk (open) data work-in progress. 3. Legal professional: selective consumer, cautious author, paying for value propositions. 4. Policy and legislative measures in place to promote OA initiatives. Promotion of OA and opening up government legal data for free use dates to 1990s.	publishers. While this collaboration of publishers may be beneficial in terms of finding all relevant commentary, it raises anti-trust questions if the oligopoly works together. 2. Federal open data portal (including legal data set) to implement PSI Directive https://www.data.gv.at. The nine federal states follow this practice and publish state datasets themselves. 3. In addition, an open data portal for economy, cultural organizations, research and NGOs is currently emerging https://www.opendataportal.at 4. Legal professionals continue their work with public databases and offerings from commercial publishers. Trend away from print products towards database access. 5. According to Austrian commercial publishers, they make approximately 50% of their revenues with database products.

	pre-eminent over national law, leading to recognition of its power to influence national legislation not only in its legal effect but also in the salutary example of free access to the over-arching law in so many national legal fields. 6. European court decisions and legislative reforms affect 28 nations, communication of precedent essential. 7. Brussels and Luxembourg law firms are enormously well resourced. Case commentary is frequently rapidly and comprehensively supplied freely, despite small turnover of EU legal information markets compared to national markets.	

Table 6 CAMPO outcomes

3 STAKEHOLDER MAPPING FROM THE BUSINESS VIEWPOINT

With the increased adoption of new ICTs, individuals, communities, institutions, cities, countries and regions have increasingly become "networked," with transformative implications for how we live, work, play and learn. We can detect a transition from the initial "Internet of links" with a focus on search, to the "Internet of data" (associated with variety, velocity and volume of open and big data), to the "Internet of people" (enabled by social and collaborative software), and now to the "Internet of things" (where connecting devices such as refrigerators and watches produce data quantities that promise further innovations and insights). The shape of these changes and how they affect society, economy and polity is likely to greatly depend on domestic and international developments in the widest sense of (ICT) governance. What is more, new understandings (or better, paradigms) are needed, supported by keywords such as global, distributed, openness, collaboration, and inclusiveness, thereby respecting human rights and freedom of expression. And all this, in a capitalist setting of increasing globalization guided by marketization as its central force and logic laying bare a dynamic, or tension, between private interest and public good that, arguably, it is exacerbating.

While public policy efforts are strained, privatization moves forward, and the abuse of private power seems to be blatant and commonplace. In particular, where ICTs are concerned, various articulations of power are being (re)produced, contributing to the maintenance of deeply-rooted inequalities in today's so-called 'information' or 'knowledge' societies. Without sufficient attention to power structures and processes, we can only guess about how inequality seems to be reproduced and incorporated, generating a 'natural' outcome of innovations in ICTs. A synthesis of past and current contributions to the traditions of, particularly, any political economy-related stance, points to an interest in what gives rise to newly-emergent power structures and asks about the consequences for the capacity of ICTs to mediate people's lives in ways that recreate social and economic inequality. In other words, when certain enabling technologies emerge, their widespread appropriation can challenge the hegemony of earlier modes of social and economic organization, and this should be kept in mind in the development of the OpenLaws governance framework.

Thus, against this initial reflection and underlying rationale, this chapter seeks to articulate a context for the development of a socio-economic and governance framework for OpenLaws that is inclusive, distributed, open and collaborative (D2.3.d2). Rather than drawing out a perspective on a transition from a fully centralized approach to the increasingly prevalent multi-stakeholder or decentralized ones, here we wish to promote the development of a (decision-making) mechanism that supports and joins together the need for an inclusive perspective on innovation and the need for more cooperation and coordination among public and private stakeholder groups from a *business* viewpoint. In this view, with OpenLaws we seek to contribute to opening access to existing legal information systems and to involving and integrating communities of individuals and businesses, legal professionals and public bodies, guided by open data, open source software and open innovation principles.

As we have seen in previous Deliverables, a vast amount of legal information seems to remain published and administered by a limited number of organizations, typically in closed structures in public authorities and public-private partnerships. Yet, legal texts are basic information of democratic states and, hence, legal information must be accessible to all members of society to the widest possible extent, to aid inclusiveness and to enable participation in public decision-making. In recognition of this, the EU and its Member States are working to make laws, court decisions, and so forth publicly available online. The challenge, however, is to *link* (local) legal information and to have structures in place to enrich it through aggregation and derive value for various stakeholder groups. Against this backdrop, OpenLaws has initiated a platform underpinned by a vision for Big Open Legal Data (BOLD), emphasizing an open framework for legislation, case law, and legal literature from across Europe. This contributes to better access to legal information and ultimately to better governance, both of which support higher social welfare goals. In the remainder of this Chapter, we introduce a "business model thinking" approach to contextualize our OpenLaws interest and, hence, complement our initial BOLD report drawing out business models for stakeholders (D2.4.d1) based on a practical assessment using feasibility studies.

3.1 A Business Model Viewpoint

ICT systems are increasingly characterized by technical and product/service modularity. Modularity refers to the design of systems and artefacts as sets of discrete modules that connect to each other via predetermined interfaces, and is a practical approach for dealing with the increasing complexity and systemic nature of ICTs (Baldwin and Clark 2000). This development has prompted some authors to expect an era of market modularity, in which competition between small, unbundled companies flourishes, and regulatory concerns dissipate (cf. Langlois 2003). Instead, it is now becoming accepted knowledge that, in such a context, platforms arise as central components that enable their providers to operate as gatekeepers of information and value flows between multiple groups of stakeholders. The emergence of this so-called multi-sided platform thinking, however, should not take for granted that simply allowing and facilitating the convergence between IT, Internet, telecommunications and media services and technologies will result in an unbundled, open marketplace in which competition will flourish (Ballon 2009).

In fact, both public and private entities are faced with a significant challenge in this regard, which mainly pertains to an inclusive understanding of multiple stakeholder groups (stemming from public and private bodies and user groups), the high speed of innovation, a shift in culture and mind-set of the organization, and the actual organizational aspects related to creating, providing and supporting services and, often, associated applications in a complex ecosystem. In addition, with the rise of the open and shared data movements across the globe, it is widely held that access, innovation, and transparency are the guiding mantras. Much speculation can be detected about the value of these data (trillions of data!), yet little is known about how open and shared data impact society, or the economy at large, where the vast majority of data used to be tightly controlled by governments, corporations, and other entities. Indeed, over the last few years, the trend towards releasing more data for public consumption has grown stronger, thereby highlighting freer, less restricted flows of information that potentially fuel innovation and economic growth. The OpenLaws project aims to contribute its BOLD vision in this context, focusing on legal data services.[15]

If we take a look at, for example, the public sector, we can say it often tends to be under some form of pressure to innovate at the speed of the market, both internally as an organization and externally, towards the services it provides to citizens and other stakeholders. This high expected pace of innovation, such as the current focus on open data, can only be seen to grow, together with demands and expectations from the public. As a strategy geared towards meeting some of these demands, organizations at different levels of government have begun to initiate or commission the development of various ICTs such as mobile applications ("apps") supported by open data initiatives, as a new or complementary channel of (two-way) communication with citizens and other stakeholders such as SMEs (Hung et al. 2013), or as a means of increasing user participation in government processes (de Reuver et al. 2013).

It is in this complex multi-stakeholder and open context that we propose 'business model thinking' as a framework to tackle some of these public-private challenges. Business models as a concept need to be defined in their wider context here and not, for example, be confused with business cases or the revenue models of single enterprises (Janssen and Kuk 2007). Rather, we consider the entire value network surrounding a particular legal (and platform) service and offer a framework that allows public and private organizations to find their "strategic fit" (Stabell and Fjeldstad 1998) within this complex ecosystem (Al-Debei and Avison 2010). Thus, we see this approach as 'a blueprint for how a network

[15] More specifically, while the concept of open data is contested, we understand open data in the legal domain as data that is publicly available which can be universally and readily accessed, used, and redistributed, in general, free of charge. Open data is released in ways that protect private, personal, or proprietary information. It is structured for usability and computability. Only few (kinds of) data actually possess all attributes and, rather, exist on a continuum. In fact, often data tend not to be strictly "open" yet are nonetheless shareable and usable by third parties (e.g. with restrictions or nominal cost) in ways that can enhance social or economic value.

of organizations co-operates in creating and capturing value from technological innovation' (Chesbrough/Rosenbloom in Müller, Kijl & Martens, 2011: 5). In general terms, it deals with how new technological possibilities can be applied for strategic goals. To better frame the discussion and help public and private entities prioritize their strategy in this context, we propose a mapping methodology that allows the direct inclusion and possible comparison of services, based on the level of stakeholder (e.g. government) involvement required in their development, as well as the potential public/private value they may generate.

More specifically, we approach the concept of a business model similarly to e.g. Chesbrough (2006) and Gawer (2010) as a value network consisting of actors, roles and relationships that need to find a (strategic) fit to deliver value to various (end) users. Using this operationalization, the underlying logic when applying it to technological innovation such as the OpenLaws solution is that it is not the technology as such that is a determinant of success, but rather the way in which the network of actors is configured in generating added value around the technology (Panagiotopoulos et al. 2012).[16] In this sense, business modelling can serve as a means of bridging the gap between theoretical work and the daily practice of various private and public actors such as SMEs, policy makers and government representatives.

Note that applying a business model logic or thinking to a more open, commons-driven or public sector does not have to be contradictory. Yu (2013) also shows how the concept of value proposition (an integral part of business modelling theory) can be a guideline in developing an integrated framework for analysing and designing inclusive public and private strategies, such as those related to OpenLaws. In other words, rather than imposing a "business logic" to the public sector, it can serve as a framework that allows entrepreneurs, policy makers, and government organizations to think about their position within a complex value network and to prepare strategies as a response to potential issues of control and value, as explained in the next section. This approach is suitable thus for assessing ways of collaboration that are capable of confronting prevailing power configurations and emphasising people's real needs when developing and implementing technology in the legal data and services environment. The approach is enabled by technology, which facilitates the building of such collaborations on non-hierarchical and de-centralized understandings of control and value. We can therefore apply this approach to OpenLaws, especially as we have seen in the previous chapter that based on our CAMPO framework our Actors encompass government and non-government actants as well as non-profit actors and users.

3.2 Business (Mapping) Model Parameters

In recent years, the focus of business modelling has gradually shifted from the single firm to networks of firms, and from simple to much more all-encompassing concepts (cf. Linder and Cantrell 2000). As a consequence, the guiding question of a business model can be summarized by 'Who controls the value network and the overall system design' and 'Is substantial value being produced by this model (or not)'. Based on the tension between these two questions, Ballon (2009) proposes a holistic business modelling framework that is centred around control on the one hand, and creating value on the other. It examines four different aspects of business models: the value network, the functional (technical) architecture, the financial model and the value proposition. This matrix can be expanded to include qualitative parameters that are of additional importance when, for example, a public entity contributes to the value proposition. The following Table presents an overview of the expanded business model matrix (Walravens and Ballon 2013). The left-hand side of the matrix offers parameters pertaining to control and governance, whereas the right-hand side parameters offer more insight into value and public value issues.

[16] The role of a commons or 'base' as a prerequisite for technological innovation has in fact a long history and was originally pointed out by Schumpeter (Gudeman 2001: 102).

Value network	Technical architecture	Financial architecture	Value proposition
Control parameters		**Value parameters**	
Control over assets	**Modularity**	**Investment structure**	**User involvement**
Ownership vs Consortium Exclusive vs other Influence	Modular v integrated	Concentrated v distributed	
Vertical integration	**Distribution of intelligence**	**Revenue model**	**Intended value**
Integrated vs disintegrated	Centralized v distributed	Direct v indirect	Price/Quality Lock-in effects
Control over customers	**Interoperability**	**Revenue sharing**	**Positioning**
Direct v mediated Profile & identity management	Enabled, Encouraged, Dissuaded or Blocked	Yes or no	Complements v substitutes Branding
Governance parameters		**Public value parameters**	
Good governance	**Technology governance**	**ROPI**	**Public value creation**
Harmonizing existing policy goals & regulation Accountability & trust	Inclusive v exclusive Open v closed data	Expectations on financial returns Multiplier effects	Public value justification Market failure motivation
Stakeholder management	**Public data ownership**	**Public partnership model**	**Public value evaluation**
Choices in (public) stakeholder involvement	Definition of conditions under which and with whom data is shared	PPP, PFI, PC…	Yes or no Public value testing

Table 7 Expanded business model matrix

Following Walravens (2015) the parameters presented in Table 7 draw out the following:

Value network

- Control over assets: anything tangible or intangible that could be used to help an organization achieve its goals.
- Vertical integration: the level of ownership and control over successive stages of the value chain.
- Control over customers: looks into the party maintaining the customer relationship and keeping the customer data.
- Good governance: refers to a striving towards consensus and harmonization of interests (and related rhetoric).
- Stakeholder management: refers to the choices that are made related to which stakeholders (be they public, semi-public, non-governmental, private etc.) are involved or invited to participate in the process of bringing a service to end-users.

Technical architecture

- Modularity/integration: refers to the design of systems and artefacts as sets of discrete modules that connect to each other via predetermined interfaces.
- Distribution of intelligence: refers to the particular distribution of computing power, control and functionality across the system.
- Interoperability: refers to the ability of systems to directly exchange information and services with other systems.
- Technology governance: highlights the importance of transparency, participation and emancipation in making technological choices and relates to the digital divide.
- Public data ownership: concerns the terms under which data is opened up and to which actors.

Financial architecture

- Investment structure: deals with the necessary investments (both capex and opex) and the parties making them.
- Revenue model: deals with the trade-off between direct/indirect revenue models.
- Revenue sharing model: refers to agreements on whether and how to share revenues among the actors involved in the value network.
- ROPI (return on public investment): refers to the question whether the expected value generated by a public investment is purely financial, public, direct, indirect or combinations of these, and how a choice is justified.
- Public partnership model: explores how the financial relationships between the private and public participants in the value network are constructed.

Value proposition

- Positioning: refers to marketing issues including branding, market competing services.
- User involvement: refers to the degree to which users can contribute to the value proposition.
- Intended value: lists the basic attributes that the product or service possesses, or is intended to possess, and that together constitute the intended customer value.
- Public value creation: refers to the justification a government provides for initiating a specific service, rather than leaving its deployment to the market.
- Public value evaluation: questions whether an evaluation of the generated public value takes place and if this occurs ex-ante or ex-post.

A mapping exercise consisting a horizontal and a vertical axis can now be developed (as a basis for upcoming Deliverables, such as D2.3.d2) to shed light on our CAMPO framework. In particular, we need to explore our Actors (non/government, non-profit and users), thereby producing a public-private value grid (ranging from direct to indirect) and public-private governance (ranging from strong to limited). More specifically, this grid can present on the vertical axis two governance-related parameters (corresponding to the two left columns of the business model matrix above) and provide an indication of the level of control public-private entities may have in providing their services. The horizontal axis can yield insight into the type of value that is generated by these services (corresponding to the two right columns of the matrix above) and whether this value is in/direct. Direct public-private value refers to a more individual, short-term value and relates to "what the public values"; while indirect public-private value is more collective and long-term, and relates to "what adds value to the public sphere" (cf. Benington 2011). Note that to determine the precise relative position of the cases on the grid, a value or weight is attributed to each of the parameters in the updated business model matrix. In this sense, qualitative indicators can be translated to quantitative ones in order to allow their direct comparison in a structured way (cf. Michailidis and de Leeuw 2000). This approach is, therefore, enhanced by the institutional mapping from a community viewpoint presented in the next Chapter.

3.3 Discussion

Figuring out how to evolve the governance of ICT systems in ways that are effective and legitimate is essential to ensure their continued potential. Flexible and innovative decision-making mechanisms are needed in order to enable disparate governance actors to address and respond effectively as changes in the ecosystem occur. Actors need mechanisms to coordinate and cooperate around a variety of different governance approaches that may be used to address urgent issues that impact users in various ways from the local to the global level. This chapter has sought to address the need to develop an effective and legitimate governance ecosystem by proposing a distributed yet coordinated framework that can accommodate a plurality of existing and emerging decision-making approaches, and that enables inclusion and participation, independent of notions of public-private memberships, by embracing new kinds of collaboration between and among institutions and actors across borders and

sectors. This proposed framework builds on already emerging (paradigm) shifts in the ICT ecosystem toward more collaborative, global and decentralized models of service creation and decision-making.

In doing so, we can foster an understanding of pressures towards the commodification of ICTs and its consequences for the way in which power is distributed through the (im)material conditions of the capitalist system – and which can also narrate or highlight issues of citizenship and democracy, governance and globalization. Moreover, insight is generated into the way that power is embedded in ICT-related services and practices and influences how people's lives are being mediated, such as via legal information services within the OpenLaws context.

It is our goal that any OpenLaws entity can use the grid to map any of their legal service-related initiatives it has running or plans to undertake, to identify whether their level of involvement has the desired results related to the public or private value it wants to generate, and thus if the actions they take are aligned with the service or policy goals they want to achieve. The main value of the analysis lies in the business model approach taken to this challenge. By proposing a mapping of a wide range of business model aspects pertaining to legal service initiatives, and including parameters that are specific to public-private sector involvement, it has been our aim to provide various OpenLaws stakeholders at the local, regional or national level with a way to better consider the implications of their strategies. In this view, business modelling as a framework should not only be associated with commercial initiatives, but rather be seen in a broader context. A limitation of this work, however, may pertain to the focus of the original matrix on the relations between firms and organizations and not so much on the internal organizational structures; that is, as a system of systems with different actors and roles, and, hence, this aspect may be further explored. The next chapter begins to address these aspects.

4 STAKEHOLDER MAPPING FROM THE INSTITUTIONAL/COMMUNITY VIEWPOINT

As we have seen in Chapter 2, institutional actors engaged in the creation and management of law-related information are different within the same country and vary from country to country. They can be grouped in four classes:

- Legislative actors (i.e. Parliaments)
- Judiciary actors (i.e. Courts)
- Executive actors (i.e. Ministries)
- Operational actors (i.e. public offices and civil servants managing law-related information, publications etc.)

The first point to be taken into consideration in paving the way for a BOLD governance model is this double level of diversification: different institutional actors within the same country and different actors in different countries. With reference to the first aspect it is clear that these actors will have different roles and different levels of engagement with OpenLaws BOLD:

- Legislative actors and judiciary actors could be, in some countries, important sponsors of OpenLaws by recognizing the need and the legitimacy of an easier access to laws for citizens. They could go further and support OpenLaws economically or as the *de facto* standard for providing such an access, but this will be possible in some countries more than in others. In all cases, at the present stage a direct engagement with the management of OpenLaws BOLD databases and community on the part of information providers, users, or members of the boards of participating organizations does not seem likely.
- The role of executive actors, in most countries, will be similar to those of legislative and judiciary actors, even if, in some countries such as Austria, some Ministries directly manage the publication of laws and regulations, in this way becoming information providers for the OpenLaws BOLD database.
- Operational actors include stakeholders such as the Office of Official Publications of the EU, the Office of Public Sector Information (OPSI) and the Legislation.gov.uk unit in the UK, and the Knowledge Center for Official Government Publications (KOOP) in the Netherlands. These offices are currently responsible for making available laws and related information as open data (raw legal open data). In some countries they can exploit the value of law-related open data directly (developing apps, offering personalized services for different actors, etc.), while in other countries this is not possible so that they only guarantee access to the raw legal open data. These actors could be relevant for the BOLD governance not only in the role of information providers, but also as active community members engaged in the development of services. Moreover, they can receive from the community inputs for the updating and maintenance of the open data not only in the form of suggestions and requirements but also in the form of economic resources for the constant database maintenance work that is required (see D2.3.d.1, Scenario 2, Figure 5).

As discussed in Chapter 3, the public sector tends to be under an ever-greater pressure to innovate at the speed of the market. The capability of institutional actors as data providers to develop in-house services – or to commission ad hoc, high-quality ICTs services as those offered by OpenLaws or needed for participation in OpenLaws – varies considerably from country to country. Thus, in some countries public operational actors will be able and willing to participate in the OpenLaws community while in others this will not be possible. In this way we reach the second point envisaged at the beginning of this chapter: the differences between countries.

It will be important for the BOLD governance to be sufficiently **flexible** to support different levels of engagement of institutional actors. In other words, the governance model should first of all define different roles that in some countries will be played by institutional stakeholders while in other countries will be played by business or not-for-profit actors. In doing so it is important, however, to

ensure interoperability between different local BOLD governance structures so that BOLD will remain a European, or at least transnational, endeavour.

Another important aspect to be considered is the potential role of institutional actors in the organization of the BOLD community. As described in D2.3.d1 following Elinor Ostrom work (1990), the management of 'local community-based commons' as BOLD requires some organizational characteristics:

1. A clear definition of group boundaries and membership mechanisms (who can belong to the group and who cannot).
2. Clear rules governing the use of common goods (how common resources can be used, for how long, etc.).
3. Presence of a self-governing body, which ensures that those affected by the rules can participate in modifying them.
4. A system, carried out by community members, for monitoring members' behaviour.
5. Use of graduated sanctions for members who violate the rules.
6. Accessible, low-cost instruments/processes for dispute resolution
7. External authorities' recognition[17] of self-governing bodies of the Commons and of their rules.

If legal, judiciary, and executive actors can cover Point 7, whether or not operational actors will be considered full members of the BOLD community needs to be established (Point 1). For example, they could be included if they can become guarantors of the monitoring system or part of the self-governing body of the community. This cannot be decided once and for all and for all the countries engaged in OpenLaws because in each country and even within different communities of the same country (business community *vs.* not-for-profit community, for example) the level of trust towards the institutional actors may vary considerably.[18] In some contexts they are seen as useful unbiased actors, while in others they are identified with excessive bureaucracy and inefficiency. For this reason, again, the BOLD governance framework will need to be flexible in order to adjust to local specificities and needs without losing the transnational character of its community.

[17] PAs that have a statutory duty and responsibility for providing access to legal government information (laws, parliamentary records, caselaw) will need to uphold their status as authoritative source and might thus be hesitant to endorse, or be seen to endorse, community. Therefore, we will need to address this point of 'recognition' in the governance report (D2.3.d2). In this report, for the moment we have only listed Ostrom's rules for the commons. In principle, the PAs who are interested in becoming members of the BOLD community will need to recognise the governining bodies of the community itself. Recognition can also be informal, as in being aware and accepting that an OpenLaws comunity exists and uses open data in a certain way.

[18] It is not yet clear how the management/operation at the supra-national level will be organised. At this point we can say that a need for reciprocal recognition between communities seems likely. This point will be further analysed and discussed in D2.3.d2.

5 CONCLUSION

This intermediate report has provided an initial summary of the legal open data stakeholder mapping at EU level and in the UK and The Netherlands. The Austria country case study will be included in the final report (D1.3.d2). A value network-based perspective at business modelling was presented and discussed, along with an initial set of community governance principles. Some reflections were offered on the basis of capitalism in the form of the medium of exchange as a precious commodity, and on how questioning this ontological assumption may open new horizons for alternative and complementary economic systems better suited to harbour societal value creation based on the BOLD and PSI commons on par with market activity.

The aim of this report was not to reach definitive conclusions. Several questions were left open and will be addressed by D1.3.d2 and D2.3.d2.

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