Supporting the Commons:
Opportunities in the EU policy landscape

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Commons Network promotes access to knowledge and other social and ecological causes from the perspective of the commons. We are a non-profit organization and think-tank that engages in policy formulation as well as public debate, promoting the common good through commons-based solutions. We cooperate with civic initiatives, translating ideas and concerns into broader policy initiatives.

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Acronyms & Definitions:

EU:	European Union
GDP:	Gross Domestic Product
FLOSS:	Free/ Libre and Open Source Software
IP:	Intellectual Property
IPR:	Intellectual Property Rights
WHO:	World Health Organization
WIPO:	World Intellectual Property Organization
WTO:	World Trade Organization

Commons: *Commons refer to shared resources and social practices that are maintained by communities in a sustainable manner.*

The commons is an emerging paradigm in Europe embracing co-creation, stewardship, and social and ecological sustainability.

Common goods: *Goods that benefit all people in society and are fundamental to people's well-being and every day lives, irrespective of their mode of governance.*

PREFACE: EU POLICY – A BARRIER OR A FACILITATOR FOR THE COMMONS?

The current crisis facing the European Union (EU) demands new, unifying and constructive narratives. The 'commons' is an emerging paradigm in Europe – one that embraces reciprocity, stewardship, social and ecological sustainability and that could reinvigorate progressive politics and contribute to a more socially and ecologically sustainable Europe.

Commons refer to shared resources and social practices that are maintained by communities in a sustainable manner. The logic of the commons does not sit within one ideological framework of Left or Right, yet it is a concept that is able to give clear guidance on policy. It does not pretend to be an answer to all our problems. Yet it offers a clear ethical perspective and helps us understand what happens when people collectively manage and take stewardship over resources without the dominant, centralised roles of either the state or the market.

Commons often emerge from the bottom up; they are dependent on community processes, and their logic is mostly at odds with the EU's institutional logic. However, we believe there is an important role for EU politics and policy to create the right incentives, to remove hurdles and to bring support to this re-emerging sector.

This policy document has the modest aim of reflecting on some of the EU policy barriers and opportunities in the areas of participatory democracy, the urban environment and knowledge in the digital environment. It does not pretend to provide an exhaustive review of policy in these areas but instead points to a few key policies. This paper will consider new and established EU policies that are either blocking or facilitating the successful and sustainable creation of the commons in line with cultural changes on the ground. At the same time, the authors will try to point to EU policy opportunities that can stimulate and promote commons initiatives in Europe.

"Pretending that something doesn't exist if it's hard to quantify leads to faulty models. … Human beings have been endowed with the ability to count but also with the ability to assess quality. … No one can define or measure justice, democracy, security, freedom, truth, or love. No one can define or measure any value. But if no one speaks up for them, if systems aren't designed to produce them, if we don't speak about them and point towards their presence or absence, they will cease to exist."

Donella H. Meadows – *Thinking in Systems* [1]

1. INTRODUCTION: THE EU NEEDS THE COMMONS AND THE COMMONS NEED THE EU

The European Union (EU) needs policies that can renew citizen confidence in the European project. EU policies are widely perceived by citizens as excessively controlled by far-away elites, and strongly influenced by the converging interests of dominant market forces and those of large European states.

At the same time, major fault lines are starting to appear in the dominant worldview based on individualism, private ownership and an atomistic society. This outlook follows the logic of the *homo economicus* – the fictional abstract individual of standard economics who maximises his personal material gain through rational calculation. The underlying Cartesian subject-object dualism has led to the perception that the world is there for humans to dominate and use, with unlimited resources to extract value from. An ensuing focus on markets and growth has blinded us to the loss of social cohesion and rampant inequality. In the perceived need to quantify everything, Gross Domestic Product (GDP) is used as a measure of social wealth. Modern property rights – and the dominant concept of ownership as an individual right protected by the state, to allow short-term accumulation – are central to the materialistic orientation and extractive mentality that lie at the root of today's global ecological crisis. Privatisation and commodification of our common resources and even our online behaviour seems limitless.

Although science has moved from this linear industrial age worldview to one of systems, based on networks, access and relationships, this paradigm shift is hardly represented in politics, economy and law.[2] Accordingly, the predominant discourses that permeate political discussions in the EU are economic growth, competitiveness and efficiency – tending to trump everything else. The majority of EU policy is focused on macro-economic indicators and the promotion of large commercial actors. Citizens are often viewed simply as entrepreneurs or consumers.

However, the obvious limits of nature's resources can no longer be ignored, and people across Europe would like to be considered not merely as consumers, but as citizens with

a variety of social and cultural needs and capacities within society at large. Certain goods such as water, energy or culture are being identified as common goods that are fundamental to everyone's wellbeing. The successful and continuous emergence of social phenomena – such as the Europe-wide anti-TTIP (Transatlantic Trade and Investment Partnership) protests, DIEM25, Occupy and many national movements such as Nuit Debout in France, M15 and the Indignados in Spain – express widely held grievances that the EU can no longer disregard. We are also seeing the emergence of trans-local and trans-national social movements across Europe. These phenomena are not only about democracy and political demands but are also an indication of cultural change and how people want to lead their daily lives.

Commons perspective

The commons perspective stands in stark contrast with European policy priorities that currently dominate in Europe. 'Commons' refer to shared resources and frameworks for social relations managed by a community. 'Commons' also stand for a worldview and ethical perspective favouring stewardship, reciprocity and social and ecological sustainability. This outlook defines wellbeing and social wealth not in terms of narrow economic criteria like GDP or companies' success. Instead it looks to a richer, more qualitative set of criteria that are not easily measured – including moral legitimacy, social consensus and participation, equity, resilience, social cohesion and social justice. [3]

The commons discourse considers people as actors who are deeply embedded in social

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relationships, communities and local ecosystems, instead of conceiving of society as merely a collection of atomised individuals principally living as consumers or entrepreneurs. Human motivation is more diverse than maximising self-interest alone: we are social beings and human cooperation and reciprocity are at least as important in driving our actions.[4] This holistic perspective also tends to overcome dominant subject-

object dualisms between, for example, man and nature, and to consider human activity as part of the larger bio-physical world. Recognising the multiple domains of people's lives, these bottom-up, decentralised and participatory approaches to our major social and environmental dilemmas provide functional solutions to the crises facing our continent.

The commons use voluntary social collaboration and co-creation through open networks to generate social-environmental value in ways that large markets and exclusive private property rights do not and cannot. This value may not be able to be monetised. However, it constitutes a significant part of societal wellbeing in academic research, energy production, nature protection, health, creative sectors, drug development and digital innovation. And it is largely being ignored by EU policymaking and institutions. This disregard is unfortunate and could result in the weakening of such social value-creation.

The property arrangements favouring private ownership that have come to dominate European legal systems, which have long been taken for granted, are being called into question by new forms of collaborative production and community based stewarding and governance of resources. It could be argued that collective rights need to be recognised in our legal system, beyond narrow individual property rights and interests in market exchange.

Cultural shift

Across Europe people are cooperating, co-creating and co-governing resources and goods on many different levels. Many local and larger networked initiatives are overcoming the dualism of commercial and non-commercial, public and private, individual and collective, producer and consumer, to develop successful hybrid forms. These initiatives place the common good before pure individual economic self-interest. For example, a local renewable energy cooperative, an organic winery that grows with a traditional variety of grapes, or an open access medical research journal that backs up articles with complete trial data, prioritise either social cohesion, ecological sufficiency, community resilience, or the sharing of knowledge – representing social and cultural shifts in value models

While societal shifts are often cast in terms of economy or technologies, and are dependent on a favourable institutional environment, they are often rooted in cultural change. Our culture reflects and shapes our values and how we attribute meaning to our lives. Cultural change is therefore a key driver for social transformation.[5] Many current community-led and social innovation initiatives contain strong elements of practical cultural change. New social values and practices are enabling communities to be generative instead of extractive, outside of the market and state. This is creating a new civic and cultural ethic that is breaking with conventional notions of citizenship and participation. The regeneration activities of commoners showcase, above all, cultural manifestations of new ways of daily life.

Community supported agriculture, cooperative housing initiatives that ensure reasonable and lasting low rents, local energy cooperatives, do it yourself (DIY) initiatives, decentralised internet infrastructures, the scientific commons, community-

based art, music and theatre initiatives, and many other activities, all provoke practical on-the-ground cultural change.

What role for the EU?

As unpopular as it has ever been before, the EU has to engage with this cultural change and avoid alienating its citizens any further by pressing on with old dogmas. At the moment, almost all EU economic policy is

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focused on the promotion of purely commercial actors and the uni-dimensional view of people having the exclusively individual aims of selling, owning or buying goods or services. The dominant paradigm is rarely evaluated by applying clear indicators of social and ecological well-being to judge the success of an economic endeavour. A case in point is the consideration of the so-called "Agenda on the collaborative economy", where the European Commission reinforces these policy objective and narratives.[6] In contrast, the main drivers in the collaborative economy have been reciprocity-based sharing and co-creating through open networks.

However, in the scientific domain, the European Commission has a relatively progressive outlook and has made Open Science one of its three strategic priorities, recognising that making research results more accessible to all societal actors contributes to better and more efficient science and innovation. Initiatives supported under this priority could greatly contribute to knowledge commons. Under its Research framework programmes, the Commission also supports several large commons focused technology research projects (see below in Box 2). The projects combine open online social media, distributed knowledge creation and data from real environments in order to create solutions demanding collective efforts, enabling new forms of social innovation.[7] The EU Circular Economy package, launched in late 2015, is also a promising first step in the right direction.[8]

EU policy has the opportunity to strengthen, promote and facilitate commoning activities and commons-based production, so we can increase ecological sufficiency and resilience in a truly circular economy[9] – an economy that is restorative and regenerative by design. To support this shift in the social and production domain requires EU policy and institutions to produce incentives for the ecologically sustainable behaviour of individuals and companies. There must be a rejection of the avid accumulation and exploitation of resources belonging to all. To some degree this implies stimulating new economic identities, where individuals orients their economic activity towards caring for the common good of their community and their natural, social and cultural surroundings. As suggested by a European Unión Committee of Regions report, published in 2015:

> *""a commons-based approach means that the actors involved do not just share a resource but they are collaborating to create, produce or regenerate a common resource for the wider public, the community, they are cooperating, they are pooling for the commons ".*[10]

This means promoting and facilitating peer-to-peer collaborative production of resources and helping people and communities to generate and regenerate urban, cultural and natural commons as active citizens, producers, designers, creators, care-takers, artisans and local farmers. It requires, at a minimum, support for a healthy and legally protected commons sector and associated institutions.[11]

Calling for change

In these current times of crisis and the apparent disintegration of the EU, policy-makers need to recognise cultural changes, societal needs and these emergent structures as the beginnings of a shift in the way our local economies and societies can operate.

If there is one investment the EU should be making at this crucial time it is an investment in democracy. In the section below, we will first assess current EU channels of participatory democracy and discuss opportunities to broaden and deepen practical democratic engagement. Experiences of joint stewardship at the local level could provide valuable insights, as the EU will have to explore unconventional modes of **participatory democracy**.

Second, we will discuss the urban commons and policies affecting realities on the ground in cities. Both inequality and the commercialisation of daily life are most apparent in cities where a revolution of local community initiatives is taking place. Policies for **affecting the urban environment** are therefore key, especially when they can facilitate collaborative practices in communities to confront anomic urban decay, the lack of services and social integration of culturally diverse populations. This can best happen by engaging people in co-governance and responsibilities meeting societal needs where top-down centralised schemes often fall short.

Third, we will discuss policies affecting the governance and sharing of knowledge, zooming in on policy processes around the internet, the collaborative economy, copyright and science & innovation. European policies relating to **knowledge** are crucial for the commons sector. Knowledge and the internet are core components of our economy and societies at large. This ethically requires an open knowledge economy and the promotion of the internet as a digital commons based on open standards, universal access, flexible copyright rules, decentralised infrastructures and democratic governance.

In concrete terms, supporting these trends of democratic, cooperative and ecologically conscious initiatives means earmarking much greater slices of **EU funding programmes** with criteria and indicators that give preference to commons-based economic, environmental, cultural and research activities.

2. DEEPENING DEMOCRACY – CONNECTING CITIZENS TO POLICY

An important factor in the current crisis of the European Union is its perceived lack of democratic legitimacy. There is a lack of democracy in all it different forms: from lack of transparency of the Council, the lack of power of the EU Parliament, to the power of lobbies to the unaccountable role of national politicians *vis à vis* Brussels, or the lack of public debate on policies. There is a lack of citizen identification and co-responsibility in terms of policy decisions. Although EU policy-making processes are receiving more public attention on a national level and despite the perceived importance of EU politics for most EU citizens, the European Commission, the Council and the European Parliament, remain generally impenetrable, inaccessible and incomprehensible. The resulting lack of legitimacy of the political process needs to be urgently addressed.[12]

Large corporate actors dominate most EU policy proposals, thanks to a huge, highly professional lobbying machinery. As such, there is a stark mismatch between the participatory opportunities of dominant market forces and those of broad-based citizen initiatives in defence of the common good. The public consultation processes organised by the European Commission before proposing new laws are often granted very little political consideration (compared to the viewpoints of large businesses or large EU states) even when there is massive citizen participation. Nevertheless, millions of EU citizens are actively trying to reclaim EU democracy by making their voices heard in EU institutions through petitions and other actions.

The EU is not the only institution experiencing a crisis of legitimacy. All across Europe and around the world people are experimenting with new forms of participatory political processes.[13] How can we facilitate building vibrant civic spaces in EU policy making between market and state dominance? How can we create options for citizen to engage with EU policy making?

The commons perspective places confidence in the capacity of people to manage common resources in a sustainable and fair way. In order to achieve true democracy – in the sense of people co-governing resources and processes that impact their lives – we have to recognise the limits of our current form of electoral representative democracy.[14] We have to look for alternatives, for ways to complement and improve our current institutions. This has to be one of the EU's highest priorities.

This could be done through organised and moderated democratic discussions and decision: practices of deliberative, participatory democracy, co-governance and active citizenship. The EU institutions pose a particular challenge for these changes due to their scale.

Current channels of direct citizen participation

Entry points or channels of direct citizen participation in EU institutions include the Petitions Committee, Public Consultation process organised by the European Commission before proposing new laws and the European Citizens Initiative. These can

and should be improved or revitalised but we should also look at new and different alternatives.

The Petitions Committee is the European Parliament's main channel for participatory democracy. Over the past few decades it has permitted hundreds of campaigns in defence of local environmental and social commons to reverse unjust, illegal and destructive projects and policies initiated by local, regional and national authorities.[15] Unfortunately, however, the Petitions Committee is under-staffed, is granted very little political consideration and its institutional capabilities are quite limited due to a severe lack of administrative resources and/or political will. The Petitions Committee has recently closed hundreds of citizen petitions without taking any action on petitioners' concerns and other petitions will have to wait a number of years before getting the attention they deserve.

The European Commission that responds to the petitions before the European Parliament often applies rigid and narrow interpretations of the EU law to block procedures against EU Member States for the violation of EU laws concerning the environment, human rights and social justice.

As an instrument for participatory democracy, the European Citizens' Initiative (ECI) allows one million citizens to invite the European Commission to bring forward proposals for legal acts in areas where the Commission has the power to do so. The organisers of a citizens' initiative, a citizens' committee composed of at least seven EU citizens who are resident in at least seven different Member States, will have one year to collect the necessary statements of support. The Commission will then examine the initiative and decide how to act on it.

However, ECI has not been successful in initiating any legislative processes and has been far from satisfactory as a user-friendly instrument for EU participatory democracy. At the time of writing (summer 2016), there have been only four initiatives collecting signatures.[16] A report on ECI adopted in 2015 by the Petitions Committee not surprisingly said that it, "Deplores the Commission's reply to the few successful ECIs and regrets that there has been little follow up to the only instrument of transnational democracy in the EU."[17]

The public consultation process of the European Commission is a way for the EU to consult its citizens on upcoming policies. These consultations do not receive wide participation beyond the Brussels policy circles and corporate stakeholders tend to be overrepresented in the responses. They most certainly do not contribute to a meaningful discussion in the public sphere about EU policies, nor do they have a binding character.[18]

Exploring alternatives

Unconventional modes of participatory democracy should also be explored in the EU context: this means the creation of institutions that are more open, amenable to innovation and initiatives, more transparent and based on non-expert knowledge.

There is a rapid development of experiments in new forms of participatory politics and governance around the world. Many citizens are asking for greater involvement in

collective decisions. Many governments, non-governmental organisations and even some corporations are responding by experimenting with ways to increase public participation. Cities such as Madrid, Barcelona, Utrecht, Berlin and Rome are just a few examples. These democratic processes often supplement and sometimes compete with more traditional representative democracy.[19] For example, the model of 'sortition' – going back to Greek democracy in times of Aristotle and Plato, where citizens are randomly selected from a large pool to temporarily co-govern – is now gaining momentum.[20]

For now, civil society groups and online petition initiatives have facilitated citizen influence by encouraging *mass participation in EC consultation processes through online tools*. With the help of social media, these initiatives have been able to raise awareness on policy processes, and gather citizen support for pro-common good policies. A EU consultation on an investment to state arbitration mechanism (ISDS) regarding the TTIP EU-US trade agreement, for example, gathered hundreds of thousands of submittals opposing it, which the EU could not ignore. Other cases concerned net neutrality and several copyright reform proposals.

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Also building on the possibilities of digital technology, there is a promising new programme approved by the European Parliament: EP Pilot Project - *Promoting linked open data, free software and civil society participation in law-making throughout the EU*.[21] Over the years, EU institutions have contracted proprietary software and non-compatible systems that have been barriers to communication, access to democratic processes. Instead, public institutions should set a positive example by using free and open software, which would facilitate citizen participation in Europe.[22] Yet this pilot links open data, free software and civil society participation in terms of influencing concrete law-making in the EU. It shows how open knowledge and free software solutions can contribute to enhancing the understanding and the participation of citizens in relevant phases of the legislative process that are usually only understood by skilled lobbyists. Participation would mean providing contributions in the form of comments or suggestions for amendments to the

official proposals. This would prove that policy is not just about political experts of the complex EU system and that the collaborative process can work in a concrete context.

The EU should devote time and resources to creative institutions of participatory democracy, and it should address the limits of trans-national representative democracy and the legitimacy problems it currently faces. Beyond new procedures and processes, the promotion and financing of bottom-up, community based, economic, social, cultural and environmental activities within European networks is the best way to strengthen European democratic institutions that are often captured by large corporate interests.

Recommendations

The European project sorely needs bottom-up innovation in order to address the limits of representative democracy and its current legitimacy problems. EU democracy needs an urgent dose of re-invigoration. Innovative models of participatory political processes are one way to address this.

- The EU should devote time and resources to **creative institutions of participatory democracy**, learning from innovative practices taking place in many European cities.

- **The European Citizens' Initiative needs changes in order to become a useful, accessible tool for citizen participation** with real possibilities for stimulating and influencing European legislative debates.

- **The European Parliament's Petitions Committee needs greater resources, more parliamentary power and more accountable responsiveness** from the European Commission in order to effectively channel and debate hundreds of citizens' petitions swiftly, effectively and in a transparent way.

- **New digital technologies can facilitate and simplify the democratic participation** of European citizens in the formulation, amendment and consideration of new EU legislation.

3. COMMONS IN THE CITY

Most Europeans live in cities, many of which suffer problems of environmental sustainability, lack of affordable housing, multi-cultural integration, youth unemployment and urban decay. How can we treat the city as a place that belongs to all its residents and that functions and is governed in accordance with their needs?

What's happening?

Investor driven city development fuelled by mass tourism, leads to many public held assets, such as buildings and land, to be sold off to the highest bidder in a globalised speculative market. This is a major factor in the increase in rents, gentrification and the erosion of social cohesion in European cities. The debt crisis and the shrinking of public-interest management of land have accelerated this process, making neighbourhood cohesion and identity problematic in many European cities.

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At the same time, in many European cities – including Barcelona, Amsterdam, Bologna, Warsaw, Athens Belgrade and Berlin – we can see collaborative initiatives such as co-housing projects that propose sustainable solutions to the lack of affordable and environmentally sound housing, renewable energy, community- based food culture and the creation of fair localised economic. Other relevant examples include self-managed community cultural and educational projects, renewable energy coops or urban gardening in open, abandoned or re-used urban spaces. Indeed, much of the revolution in terms of local initiatives is taking place in cities, where cultural and civic initiatives

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are claiming urban public spaces such as squares, parks, abandoned buildings and vacant lots as collective resources of urban communities. Sometimes local commons initiatives are sparked by the necessities created by economic crisis or in response to political powerlessness or just fuelled by the need for social-ecological connectedness, and a resistance to the commodification and privatisation of resources.

Culture and arts play an important role in fostering participatory practices and democracy.[23] Artistic interventions are able to provide visibility and understanding of this alternative social reality provided by the commons. As such they have been a catalyst for the proliferation and understanding of commons-based approaches.

> *"Art can provide an – albeit fictive – temporary ground, constituting a different social reality from where we can think about the social reality we have experienced so far. It is precisely this alternative experience that sometimes can bring people to realize, for the first time, that their living conditions or precarious social environment are not ideal. Through the artistic process or the work of art itself participants are give an experience of alternative possibilities."*

Pascal Gielen.[24]

The urban environment is intertwined with the way we manage knowledge and our web-based economies. For instance, open data initiatives and policies allow people to gain an insight into city policy, and to co-create initiatives for the city. Open data as such is having an important effect on how cities operate or are managed. Yet here is a need to respect privacy and data sovereignty. We need to move from the ideal of 'Smart Cities', which mainly favour centralised technology driven by tech optimism, corporate interests and city marketing, to an ideal of 'Collaborative Cities', more driven by citizen concern and initiatives favouring decentralised and community based initiatives.[25] Collaborative

approaches to managing and governing the city and its resources can contribute to the regeneration of cities, wellbeing, social justice and human flourishing. [26]

What do to? Levels and modes of governance

Many municipalities are deliberating how to manage and facilitate these developments. The question is, of course, how can policy support and facilitate these initiatives and new ecosystem where citizens go beyond the binary governance and provision of the market and the state?

The "subsidiarity principle" of the EU affirms that "in areas which do not fall within its exclusive competence, the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level".[27] The commons perspective takes this perspective further, yet not meaning an erosion of EU competences. Urban commons experiences point towards "horizontal subsidiarity". The principle of horizontal subsidiarity is intended to re-orient public authorities away from the central state to an active citizenry willing to govern common resources cooperatively.[28] This points to modes of collaborative governance of urban resources, and civil-public partnership, moving away from the paradigm of either publicly/state-governed or by means of public-private partnerships. The latter has led to the privatisation and liberalisation of many of our urban common goods, like water management, housing and transport.[29] Instead of partnering with private parties by default, governments should consider instances to partner with citizens and citizen initiatives as a way to enhance democracy and safeguard the public interest.

We see a reversed trend of remunicipalisation and communalisation of essential services like energy grids (Germany, Finland) and water services (France, Germany, Italy, Spain, Hungary and Sweden).[30] There are thousands of community energy coops across Europe, while recent successful water initiatives in Naples and Paris claimed water as a commons to be managed in the public interest without profit orientation.[31] Rules for international trade in services can have an impact on organisational autonomy in the area of water supply. Trade agreements like TTIP & the Comprehensive Economic and Trade Agreement (CETA) with Canada are likely to obstruct these remunicipalisations of public services.[32]

The need for a strong economic sustainability transition of our cities away from our present environmental predicament of our "throwaway" society has sparked dozens of urban initiatives in favour of a synergy between open-source software and hardware and building of a very low-waste circular economy that mimics biological processes.

Social housing as well as urban common spaces, gardens or community centres are dependent on the goodwill, or political fluctuations of the state. One way to avoid the encroachment of financial dynamics and to ensure long-term survival and protection of social value outside the logic of the market, is to acknowledge the commons as a form of organisation and thus as a legal category. An example of this is the Community Land Trusts that have been established in the UK or the recent regulation in Naples on vacant buildings considered areas of civic importance.[33]

Policies can facilitate commoning in cities; municipalities can adopt collaborative regulations to promote, facilitate and protect citizen collaboration and community practices in line with the common good. The Bologna Regulation on the Care and Regeneration of the Urban Commons is a good example that has produced over 100 collaborative projects for service, urban planning and economic ventures.[34]

> *"It starts by regarding the city as a collaborative social ecosystem. Instead of seeing the city simply as an inventory of resources to be administered by politicians and bureaucratic experts, the Bologna Regulation sees the city's residents as resourceful, imaginative agents in their own right. Citizen initiative and collaboration are regarded as under-leveraged energies that – with suitable government assistance – can be recognized and given space to work. Government is re-imagined as a hosting infrastructure for countless self-organized commons."* David Bollier [35]

Policies and EU competences

While urban policy is not a direct EU level competence, there is already ample space for Europe-wide exchange of best practices, the funding of pilot projects and guidelines. In this context, the 2016 Dutch Presidency of the EU released the Amsterdam 'Pact for an EU Urban Agenda'. This is a promising development and has three objectives: to improve EU regulations, for better use of EU financial instruments for urban areas and for sharing knowledge on city cooperation. The first four aims for partnerships between cities have been: clean air, poverty, transport and the integration of immigrants and refugees.[36] Furthermore, in order to enhance citizens' self-determination, the EU could generally contribute to the enhancement of democratic practices and exploration of new forms of participatory democracy on a local city level. Moreover, policies under EU competences in the areas of agriculture, energy, trade, internal market, transport, environment, research and competition can have a profound effect on urban policies. Below we highlight a few examples.

Commons as a Legal Category: The EU could acknowledge the commons as a way of organising and even give guidance on lawmaking for this category, which is quite relevant at the local or city level.

Online platforms, either collaborative commons based or capitalist centralised variations, are having a profound effect on cities and local economies. Supporting a decentralised community-

based sharing economy that supports urban commons is something that can come at an EU level and which will have an impact on realities on the ground in cities. (See section on collaborative economy below).

Trade & competition policies should protect essential services and not hamper the possibility remunicipalisation of services like energy and water supply, or a preference for local providers in procurement. Current policies favour the privatization of public services or/and public-private partnerships with multinationals while European cities are moving in the other direction: local providers, publicly governed and in collaboration with citizens and communities.

"Open source circular economy" experiences are great examples of complex urban commons responses to our problems that deserve concrete support from the EU as a means of achieving the aims of 2015 Action Plan on the Circular Economy.[37] A circular economy is restorative and regenerative by design, an economy that entails zero waste generation through much greater re-use, repair, recycling, sharing and closed-circuit industries. Today's linear 'take, make, dispose' economic model relies on large quantities of cheap, easily accessible materials and energy, a model that is reaching its physical limits.

Strengthening local civil society-actors that deepen democracy: to contribute to and question what is happening in cities, to build a critical position, defend their interests and to claim their role in the urban agenda and city co-governance.

Recommendations: In terms of policy opportunities for the urban commons at EU level, there are several steps that should be taken as a priority:

• **Encourage policies to enhance local control and public-civic partnerships**.

• **Trade and competition policies should protect and support the remunicipalisation** of public services and local procurement in the public interest.

• **The Urban Agenda for the EU could be strengthened on a profound level by emphasising culture and civil society.** Civil society should be allowed to play an active role in the partnerships in the Urban Agenda for the EU with culture as a cross-cutting issue in all partnerships.

• **Commons as a Legal Category:** The EU could acknowledge the commons as a way of organising and governing resources separate from public or private; it should even give guidance on law-making that takes the commons into account at the national or local level.

• **The agenda for the collaborative economy should be translated into regulations** that favour platforms with respect for local ecosystems; community based and democratic online platforms.

• The action plan on **the circular economy** could be an opportunity **if it is adapted to a localised/regional scale** as opposed to its present globalised scope.

• **Funding programmes should favour community based practices and civil-public partnerships.**

BOX 1: Follow up urban strategy: EU funding

One important instrument the EU has in order shape developments in Europe is its body of funding policies.

The EU could proactively earmark funding for urban commons and small-scale community projects in, for example, the FEDER funds, Social Cohesion funds, Life programme and Horizon 2020 Research and Innovation program, while taking away impediments for small initiatives. Currently large consortiums are needed with expensive complicated selection processes that favour large projects from institutions or companies.

The need for affordable, flexible, self-governed housing is fuelling forms of access to places to live that deserve more attention from the EU social fund and life programme. **Co-housing** is growing all over Europe and this demands greater support for these sustainable examples of the urban commons.

The **European eco-village network** is also a diverse showcase of commons housing experiences that deserve more EU support. RURBAN on the outskirts of Paris is one excellent example of a commons project that is benefiting from EU Life funding.

The renewable energy commons: There are over 1,250 energy cooperatives serving over 650,000 users in the EU in a business model where citizens jointly own and participate in community-based renewable energy or efficiency projects, some of which receive EU funding. One of the larger renewable energy cooperatives in the EU is **SomEnergia** based in Catalonia with over 80,000 members. **Rescoop** is the European Federation of Renewable Energy Cooperatives.

Support for crowdfunding for cultural initiatives: There are over 600 crowd-funding platforms in the EU that are finding alternative ways of funding mainly urban cultural activities. The European Commission is **funding research** into this and the European Parliament approved pilots for crowd-funding programmes in 2015.

The EU is offering important support for pilot programmes in Internet technology like free Wifi connections can play a key role in the regeneration of the urban commons, when combined with cultural activities, environmental demands and community identity like projects in the UK, Germany and Greece. (See Box 2 Under Digitial Commons, Knowledge and Peer to Peer Activity)

These are all to be found online [37]

4. DIGITAL COMMONS, KNOWLEDGE AND PEER-TO-PEER ACTIVITY

The sharing of useful knowledge brings significant economic, social and civic benefits. Knowledge is not a finite physical resource like land, but something that can actually grow as more people use it. The low marginal cost of sharing information in the digital age has major consequences for our economy and the management of public knowledge goods.

The digital revolution has opened the door to many collaborative forms of creating, mixing and sharing knowledge and culture. The past two decades have seen revolutionary changes in economic production due to these unprecedented forms of open collaboration in terms of creating knowledge. The success of free and open source software over the past generation, the tens of thousands of contributors to Wikipedia, and the flourishing open design and manufacturing community are but three notable realms in which collaborative activity have transformed 20th century models of knowledge production. Hackerspaces, makerspaces and Fablabs are massively pioneering new forms of distributed local production while tapping into a global knowledge ecosystem.[39]

Creative commons licenses use intellectual property law to place knowledge and culture in the commons. There are now over a billion creative and informational works around the world tagged with Creative common licenses to make them legally shareable.[40]

Developments in open science and open innovation are changing the knowledge ecosystem and are revolutionising the way science is done. Open science is an approach that makes scientific research, data and dissemination accessible to all levels of an inquiring society, amateur or professional. Making research results more accessible to all societal actors contributes to better and more efficient science and innovation.[41] A key vehicle for disseminating scientific knowledge and maintaining it as a commons is open access publishing. The Public Library of Science (PLOS) was one of the first to provide open access publishing that make articles freely available to everyone in perpetuity. Since its founding in 2003, PLOS has grown into the world's largest publisher of free to read, immediately accessible and openly licensed scholarly content.[42]

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As a networked public sphere, the internet empowers people to engage in these collaborative practices and knowledge sharing, creating vast economic value, yet even more importantly, huge social value. A generally open Internet has supported an

incredible productive innovation system, creating low barriers to access and allowing for robust competition.[43] Net neutrality to ensure the non-discriminatory use and access to the Internet is an essential pre-condition for an open and democratic internet to exist.

Commons-based peer production

The new interconnected digital and physical environment has catalysed a new collaborative and distributed form of organisation called **commons-based peer production**.[44] Due to technological capacity and social demand, peer production is an essential part of the evolving economy.[45]

The motor of a commons-based peer-to-peer economy is not just a consumer seeking to possess or purchase a service. Instead, this actor is at once a citizen whose search for an asset or service also takes care of or manages a material or immaterial common good. Many technological developments are no longer driven by top down centralised institutions but by dynamic, collaborative civic networks of social communities where the traditional monetary "profit motive" is not the primary motivation and ownership is collective or distributed.[46]

Successes in online collaborative production – such as free software, the creative commons, open science – have made clear that the model of human motivation assumed by dominant economic thought is flawed. Human motivation is diverse and is not only based on the maximization of individual material interest, as social beings reciprocity and cooperation are also our main drivers.[47] Peer production in information has proven even more productive than market-based or centrally controlled systems.[48]

Commons-based peer production creates social wellbeing because it is based on people's intrinsic positive motivations and cooperation among participants and users.[49] A collaborative economy in this sense relates to horizontal networks and participation of a community, based on developments in collaborative consumption fostering access over ownership and open knowledge, enabling the free use, reuse and distribution of knowledge such as content data or code.[50]

Managing knowledge as a common good

There is a clear potential to democratise access to knowledge and its production. Yet to succeed we need to create a structural environment that enables society to fully reap the social economic benefits of knowledge sharing and collaborative production.

In this digital age, people should be able to communicate freely online and engage in peer-to-peer activity, having a real say on how their personal information and other data are used, owned or commercialised. For this we need data infrastructures that allow individuals and communities to manage personal information in decentralised ways and with the affirmative consent of users.[51]

The techno-optimistic idea of the internet revolution leading inevitably to democratic decentralisation and a more just, collaborative economy has been shown to be an

illusion. Large commercial platforms extracting value from its users have come to dominate the internet, blocking the great social potential of online technologies.

"Open access", "open source", "open data" and sharing of all kinds of resources can be positive for urban, health, digital, academic, climate commons, among others. Yet only if, as Elinor Ostrom has confirmed at the local level, there are agreed upon governance regulations and limits in favour of democratic participation, equity and sustainability.[52] EU "Open policies" can sometimes easily be co-opted and lead to value being extracted by centralised, dominant actors with market power unless clear rules are instituted to guarantee social-environmental objectives and to assure a maximum public return on public investments.

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A comprehensive approach

So, how can the EU respond to epochal shifts in technology, commerce and social practice and devise policies that are appropriate to the current age? How can knowledge be managed in a way that favours its socially and ecologically sustainable stewardship?

We propose that EU institutions should take a more comprehensive approach to policy by combining collaborative, participatory principles with a broad integrated appreciation of social, cultural and environmental objectives.

In the area of science and research and development (R&D), the EU has recently adopted laudable open access and data publishing requirements that will greatly benefit the public return on public investment. However, although great progress has been made with regards to sharing knowledge in science, most EU policies in the knowledge area still tend to focus on the narrow benefits of Intellectual Property based innovation for individual companies.[37]

Knowledge commons need flexible institutional and legal frameworks that at the same time permit self-organisation and limit unfair centralisation and appropriation of knowledge. Internet infrastructures need to favour democracy, openness and transparency. Copyright regimes should be flexible, protect the public domain and provide for exceptions and limitations to allow for the broad sharing and access in the realms of culture and science.

In the following section we will discuss policies and make concrete recommendations in the areas of i),Internet infrastructure and collaborative production ii) Cultural goods co-creation and copyright, and iii) Open science, research & public goods.

4.1 INTERNET INRASTRUCTURES AND COLLABORATIVE ECONOMY

The internet should be approached from a comprehensive societal perspective, as a sphere where we can all equally participate and make use of, as a space where the capacity to engage in private and peer-to-peer social and economic activity is protected. The internet provides access to a wealth of information and knowledge, and the possibility to participate, create and communicate. Access and use of the internet has become an integrated element of people's lives in its many different social and economic spheres.

What is happening?

This public space made up of internet infrastructures is increasingly under pressure from two sides – from the centralisation and commercialisation through the dominant positions held by giant telecom and internet companies, as well as from an increasing trend in state surveillance and censorship. As much as people expect a broadly and equitably accessible internet open to diversity, we seem to be moving away from it. Even the formal "openness" of internet infrastructures and software of the "knowledge economy" can be used to manipulate consumers, and lead to massive trade in private data and the privatisation of civic resources.

The central role of data to our economies has landed us in the era of surveillance capitalism; when multinational corporations like Google and Facebook own and control both your personal data and the means of collecting, analysing and deriving value from it, having this as their main aim and business model.[54]

The further erosion of our digital public sphere arises through greater corporate control over the daily lives of much of the population, which has little to do with promoting the common social and environmental good. In fact, we can observe the weakening of social guarantees under the guise of the new digital economy, for example, through platforms like Amazon Mechanical Turk where workers are paid far below minimum wage standards.[55]

This poses important questions about how we choose to organise and regulate our digital societies, and how internet governance models can be developed and implemented to ensure fair and democratic participation. The management of data has an impact that goes beyond knowledge management itself. Digital era data ownership and management has a profound impact in domains such as labour or taxation systems, as the corporate sharing economy shows.

Platforms, democracy and data sovereignty

In the online economy, platforms are used to provide access to services and connect people. A platform requires an external ecosystem to generate complementary product or service innovations and to build positive feedback between the complements and the platform. Platforms benefit from 'network effects', where the value of the service increases with the number of users; scale increases the platform's value, helping it

attract more users, which then makes the platform even more valuable, etc.[56] The platform economy is growing in its centrality to social and economic life: "There is hardly an area of economic and, arguably, social interaction these days that is left untouched by platforms in some way" DG Connect Officer.[57]

Collaborative or sharing economy platforms (eg, Blabla car, Airbnb) are one type of platform among others such as search engines, news aggregators, social media and video sharing platforms.[58] An online platform can be designed in various ways, with various forms of governance, ownership and levels of centralisation of a platform infrastructure. When a platform is democratic, with some type of co-governance, this will enhance technical and data sovereignty as well as benefiting sharing. In this case the platform is not only a tool to connect people, and to provide access to a service, but the user is often a producer at the same time and is involved in the platform governance that is serving a given community such as with Wikipedia or Platform cooperatives (hence commons-based peer production).[59]

Multinational, centralised platforms such as Uber do not represent a democratic, community-embedded, socially sustainable model of collaborative economy. Instead they are primarily centralised, highly profitable platforms extracting value from peer-to-peer activity. Similarly, Airbnb, a very convenient platform efficiently allowing for p2p apartment rental, is entirely centralised in its governance and ownership model. Instead of supporting communities, it has exacerbated housing affordability problems in many European cities, as well as adding to urban environmental stress on energy, waste and transport with little internalisation of costs or civic responsibility.[60]

Furthermore the mountains of data being collected contribute to more accurate profiles of us are being put together and sold to whoever has an interest. Uber for example collects data on where its clients go at what time, how long they stay, their credit card information, etc and uses them in a way that does not respect individual rights. Another example of innovation and social rights threatened by an exclusivist for-profit control of data is the area of health insurance. If companies like Google that hold a great deal of information about individuals sell it to insurance companies, the information asymmetry between people and insurance companies increases, resulting in more individually tailored insurance rates and more people being excluded from access to certain basic rights.[61]

Moreover, with the emergences of the 'internet of things', a model based on private and exclusive ownership of data by corporations would result in them being the only ones deciding how data can be used to transform production, consumption, delivery of products, etc.

A vision for the future and a role for the EU

When one considers the different possibilities in terms of how the internet will evolve, the key discussions are those around **infrastructures and data management**; who owns, governs and controls them? The internet has many layers of infrastructure. For instance, the fibre running along the bottom of the ocean, internet service providers (ISPs), Wifi networks, algorithms, data repositories, social media platforms, to name just a few. We have to consider all of these when we think about how to manage the internet. The

current default is that these are privately owned and controlled. The question is: in what way should they be governed in order to create the best outcomes for society?

The democratisation and decentralisation of infrastructures and activities are essential to keep an open and democratic internet. A combination of private, public, commons-based control modes of ownership and control and regulation of the various layers of internet infrastructure are needed to help achieve this. Only then can we begin to imagine infrastructure management in line with citizens' interests. For example, in order to be aligned with the public interest, repositories of data need to be under broad non-commercial management.

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Moreover, in the short term regulation is necessary to ensure that new technologies and commercial undertakings safeguard fundamental rights and empower citizens rather than commodifying their activity on the internet. Helpful policies would insist on maintaining space for non-commercial social activity and the strict protection of the social value created online. As such we urgently need to look for ways to manage the internet that embodies structural respect for citizens' own data while facilitating alternatives to the current commercial dogma. Regulation should not, however, become a tool for powerful industries to prevent innovation.

There are considerable public benefits to be gained by supporting robust, open ecosystems of network-based collaboration. Locally governed and embedded platform

economies contribute to resilience and wellbeing in European cities. This would involve the creation of more closed environmental and social cycles of materials, energy flows, solidarity, commerce, mobility, agriculture and culture that benefit general social cohesion and ecological sustainability. The EU needs to do more to support projects with the criteria of community control, social cohesion and ecological sustainability.

Policy processes and opportunities to enhance digital commons

What are the relevant processes in the European policy context? We will look at some policy processes and proposals to facilitate community or publicly governed and commons-oriented infrastructures and to facilitate collaborative economic activities.

The recently adopted *General Data Protection Regulation*[62] is a very important milestone in terms of protecting people's privacy and informational self determination. The reform establishes crucial principles to minimize data collection by business, regarding informed consent and to provide transparency on what data is collected about us and with which entities it will be shared. The Data Protection Reform's correct application above commercial and state interests will be a tremendous task and monitoring and shaping of the proper implementation will be key. However, we also have to go beyond individual privacy, and focus on the governance and ownership of data. Otherwise we will not likely succeed in moving away from the commodification of users towards public interest management of data.

The Digital Single Market Strategy currently under discussion will create many proposals that will impact how we organise the internet and our economies and will affect social-economic value creation, equity, resilience and social cohesion in the foreseeable future.[63]

As part of the Digital Single Market strategy, the European Commission released its *"European Agenda for the Collaborative Economy"* on 2 June 2016, with the revealing sub-title: "The collaborative economy creates new opportunities for consumers and entrepreneurs". The communication includes guidance on how to apply existing law nationally.[64]

The EC agenda deals with issues of taxation, market liability, contractual agreements and consumer clarity. However, it does not pay attention to democratic participation, data governance or ownership, or other social ecological factors. The EU uses collaborative economy interchangeably with online platform economy, and disregards the initial use of the term as diversely motivated social peer-to-peer interaction.[65]

In its Agenda for the Collaborative Economy, the EU seems to be embracing the centrally owned platform models, exempting them from social safeguards in, for example, employment relations that more traditional companies have to abide by, and which our societies have gained through class struggles and democracy. With only a few technical caveats, the Agenda welcomes multinational "collaborative" platforms such as Uber and Airbnb despite their extractive, non-embedded nature and their tendency to undermine national laws that ensure fair competition and worker protection.[66]

The European Commission considers: "The collaborative economy leads to greater choice and lower prices for consumers and provides both growth opportunities for

innovative start-ups and existing European companies, both in their home country and across borders. It also increases employment and benefits employees by allowing for more flexible schedules, from non-professional micro jobs to part-time entrepreneurship. Resources can be used more efficiently, thereby increasing productivity." [From the EU Agenda for a Collaborative economy][67]

Here the EU only seems to appreciate the objectives of consumption, jobs and growth. The EU should instead explore a regulatory approach that also acknowledges the value of localised social relations, self-governed technologies and social equity. These two objectives are not utterly contradictory. However, in order to make them compatible, an approach is needed with clear social-ecological indicators that will help shape a platform economy that is not stuck in the false dichotomy of traditional industries vs a corporate exclusivist platform economy.

Community Wifi refers to local network infrastructures, which are operated as a commons. These network contribute to resiliency, sustainability, democracy, self-determination and social integration. They can provide connectivity in underserved regions and to underserved groups. As described in Netcommons.eu, "Community-based networking and communication services can offer a complement, or even a sustainable alternative, to the global Internet's current dominant model. Community networks not only provide citizens with access to a neutral, bottom-up network infrastructure, which enhances possibilities for data sovereignty, but they also represent an archetype of networked collective cooperation and action, mixing common ownership and management of an infrastructure with a balanced set of services supported by the local stakeholders."[68]

There are several successful community-run Wifi networks in Europe, such as guifi net in Catalonia Spain and freifunk in Germany, but also in France, Italy, Netherlands, Portugal, Greece and Belgium. This movement of local communication infrastructures is growing, yet policy makers have not been responsive and regulation is often hampering the networks. The EU has ample opportunity to support these networks through their telecommunications regulation. Supporting community Wifi would also entail the expansion of existing programmes in support of community-based initiatives (see Box 2) within the Horizon 2020 programme.

For EU policy, this would mean among other things the urgent modification of EU spectrum policy to the creation of "open" or "blank" space in certain bandwidths that are earmarked by EU specifications for community-based, small-scale or non-commercial use for Wifi and other mobile services. Recent Joint Policy Recommendations by European community networks and civil society groups provide clear proposals for *Telecommunications regulation reform*.[69]

EU spectrum legislation under discussion could obstruct or facilitate these commons structures. The European Parliament and the Council are now considering a framework for the use of radio spectrum bandwidth for broadband digital services.[70] This is an opportunity for a spectrum policy that promotes community controlled and/or non-

profit internet services guided by principles of net neutrality, privacy, universal high-speed access at affordable prices and open, interoperable standards.

A significant part of bandwidth that is liberated by the "digital dividend" could be devoted to, and legally earmarked for local, community-controlled and small-scale businesses or non-profit initiatives. This should be a key objective of EU internet policy to strengthen decentraliszed, open-source and pluralistic internet infrastructure. Yet, in the present debate the voices of the internet commons are barely heard in the midst of an aggressive spectrum turf war between broadcasters and large telecommunications companies. It remains to be seen whether there will be any concrete proposals to keep a significant part of the spectrum uncommitted and unlicensed, to the benefit of public interest community based initiatives

Net neutrality is essential for sustaining the ecosystem of open internet and its productive innovation system. The net neutrality principle requires Internet Service Providers (for example, Vodafone or O2) to treat internet traffic equally. It prohibits them from blocking or slowing down certain data, and from dividing the internet into "fast lanes" and "slow lanes". Net neutrality laws are crucial to ensure fair competition between online services, to protect innovation and diversity, and ultimately to safeguard online expression and media pluralism. What needs to be fixed to assure net neutrality is the negative use by Telecom operators of "specialised services", "zero rating" and "traffic management".

In October 2015, the EU passed its net neutrality Regulation, which aims to uphold net neutrality, but at the same time contained some ambiguities and loopholes. The telecommunication regulators in Europe, unified at the EU level in BEREC, have published guidelines on the recently passed package, clarifying the loopholes and demanding that the net neutrality principle is applied rigorously, ensuring the web remains open to any kind of service without discriminatory practices.[71]

Pro-commons initiatives under Digital Single Market strategy: support & expand

One important development made possibly by technology is online Crowd-funding, which allows communities to fund creativity and innovation that may be overlooked by traditional investors. Crowd-funding could be matched by public funding as is happening in some regions – effectively a 'civic-public partnership'. There are already examples on the ground. One successful initiative in crowd financing the commons is Goteo in Spain, which has led to hundreds of funded initiatives.[72] For example, the "match-funding" of crowd-funding by the Basque Regional Government, which could serve as an institutional example.[73]

On an EU policy level, this means modifying and flexibilising the technical financial requirements on certain earmarked EU programmes (including those within Horizon 2020, structural funds and LIFE programmes) to include flexible ways of showing financial solvency by means of many micro-contributions that are typical of crowd-funding.

Open source software makes interoperability possible by providing technically compatible tools, open codes to build on or to modify and advantages for cyber-security. It creates openness and the possibility of modifying key layers of internet

infrastructure and leads to enormous (public) cost savings compared to working with proprietary software. This means strengthening EU policies across the board, both on normative and institutional levels (public procurement) to assure the swift transition to open source software. There are already pilot programmes approved by the European Parliament with this objective such as EU-FOSSA – the Free and Open Source Software Auditing Pilot Project.[74] These kinds of initiatives should be supported and expanded.

Recommendations: Maintaining an open democratic internet within the principles of net neutrality, interoperability, open standards, decentralisation and private data protection and sovereignty is key.

• **Internet infrastructures should be managed in the public interest** and, when possible, governed and/or owned by the public or community.

• **We need investment in data infrastructures** that allow individuals and communities to manage personal information in decentralised ways with the affirmative consent of users.

Digital Single Market (DSM)

• The follow up to the EU Agenda for the Collaborative Economy should acknowledge the **problems with centralised platforms through regulation**. This would include ensuring:

  • **a socially sustainable collaborative economy where workers' rights are protected;**

  • **the support of community based alternatives;**

  • **the enhancement of data sovereignty.**

• **Spectrum legislation determining radio spectrum bandwidth for broadband digital service** should include a significant amount of bandwidth that is legally earmarked for local, community based small-scale businesses or non-profit initiatives.

• To ensure the open internet, **net neutrality should be upheld in a truly non-discriminatory way**.

Further pro-commons initiatives that should be supported and expanded under DSM would include:

• **the support and enablement of community Wifi;**

• **EU public-civic partnerships through crowdfunding;**

• **investments in open source software (such as the FOSS Pilot).**

BOX 2: EU support for technology based commons-based initiatives

The EU offers a series of financing and policy opportunities for Community-run Wifi network projects under 'Broadband Europe'.

Furthermore, the EU framework Research programmes have supported – and are currently supporting – a number of positive commons-based initiatives that institute participative, non-extractive management of data and decentralised internet infrastructure. A key programme is CAPS (see next paragraph), with projects such as D-CENT, p2pvalue and netCommons.

Collective Awareness Platforms for Sustainability and Social Innovation (CAPS) are ICT systems combining open online social media, distributed knowledge creation and data from real environments ("Internet of Things") in order to create awareness of problems and possible solutions requesting collective efforts, enabling new forms of social innovation.

Decentralised Citizens Engagement Technologies (D-CENT) are a Europe-wide project bringing together citizen-led organisations that have transformed democracy over the past few years, and helping them to develop the next generation of open source, distributed and privacy-aware tools for direct democracy and economic empowerment.

P2Pvalue: A project that fosters the commons-based peer production (CBPP) phenomenon by providing a techno-social software platform specifically designed to facilitate the creation of resilient and sustainable CBPP communities.

netCommons is a Horizon2020 research project that proposes a novel transdisciplinary methodology on promoting and supporting the creation of network infrastructures as commons, for resiliency, sustainability, democracy, self-determination and social integration.

Mazizone is working on alternative technology, developing a Do it Yourself toolkit for building local networks.

All these projects and initiatives can be found on the Commission website or dedicated project websites.

All these projects and initiatives can be found on the Commission website or dedicated project websites. [75]

4.2 CULTURE GOODS, CO-CREATION AND COPYRIGHT

Our books, our songs, our movies and stories form the pillars and the mosaic of our culture, constituting our cultural commons. Unfortunately, however, over-restrictive copyright laws have had the impact of limiting access to culture. While creators should be rewarded for their work, the one-sided expansion of copyright law at the expense of users has meant that dominant players in copyright industries have been able to criminalise and inhibit creativity in diverse fields – education, literature, media, music, film, publishing and the internet. Meanwhile, access to scientific publishing is burdened with high subscription prices and strict copyright limitations even though a great deal of research is funded by taxpayers.

Copyright now often has the effect of locking away cultural goods and limiting access to educational resources and our cultural heritage. The overreach of global copyright law has in effect excluded tens of millions of people, especially in the Global South, from access to all sorts of knowledge goods, spurring the emergence of huge underground markets for "pirated" information, music, films and other content.[76] Although originally intended to provide incentives for creativity and innovation, copyright protection has become increasingly divorced from reality of social practice, becoming a protectionist tool for dominant industries and a powerful legal deterrent to innovation.[77] There is now a need to reform copyright law and preserve the public domain, so that the use of cultural heritage, the ability to share and reuse, which has always been an important part of economic activity, is not penalised.

What is happening?

The proposal to create a single digital market could have a favourable impact on the cross-border flow of cultural works. The new EU Copyright Directive now under discussion as part of the Digital Single Market Strategy is an important focal point for discussion about the future of copyright policies in Europe. Its outcome will profoundly affect the vitality of scientific research, creative communities, economic performance and democratic culture. It will also determine how flexible, open and fair the copyright system will be – and how healthy or crippled countless knowledge commons will be.

The harmonisation of such changes throughout Europe is important because currently all European countries have slightly different laws; a harmonised copyright regime could greatly benefit consumers and creators, especially since diverse licensing regimes across Europe are difficult and expensive to navigate for smaller enterprises, academics and non-commercial endeavours. Libraries are also limited by the current patchwork of rules and outdated copyright laws. They have vast collections that they cannot preserve, store or share digitally: another instance of copyright law stifling rich opportunities.

What the EU can do: Enabling creativity and research through copyright reform

The European Commission proposal of September 2016 contains a few timid advances for the knowledge commons and quite a few worrisome uncertainties. Copyright exceptions and limitations are necessary to legalise widespread social practices in the digital sphere and to promote the socially fruitful sharing of cultural, scientific and educational commons, eliminating the barriers for "creator-user" communities and of allowing natural access to knowledge that our societies need.[78] It is important that the EU should consider proposed legislation that would expand exceptions and limitations to include text and data mining; access to cultural materials for persons with disabilities; non-commercial sharing; user generated content; e-book lending and conservation by librarians. The EU should therefore introduce Europe-wide minimum standards for exceptions and limitations.[79]

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Public domain

The reproduction of cultural works, specifically their digitisation, will be the most powerful tool over the coming years not only for preserving the commons but also for providing access to it to researchers, students and the general public. If such digitisations (those that are faithful reproductions of the works they depict and do not constitute a creative transformative use of the works) were themselves copyrighted, access to the commons would be jeopardised. The EU must therefore safeguard the

commons by clarifying that, once a work is in the public domain, any digitisation of the work that does not constitute a new, transformative work stays in the public domain.

In particular: The EU must legislate a binding *freedom of panorama commons*. Public space should not be enclosed and commodified. "Freedom of panorama" is currently being legislated in the European Parliament within the new copyright reform.[80] Buildings and art in public spaces need to be able to be photographed without permission or payments.

Also, an EU copyright exception for Text and Data Mining, commercial and non-commercial, is necessary to strengthen the scientific and academic commons by making it easier to conduct digitally assisted research with a large amount of data without the barriers of copyright protection by academic publishers. Thus libraries, scientists and academics all over Europe are demanding copyright reform in favour of the data commons.[81]

Open data for the EU would mean making all scientific research data that is at least 50% funded by public money accessible and shareable for the advance of science without the enclosures of copyright, patents or commercial confidentiality (see more on this below in science section). The recent *'Draft Council Conclusion on Open Data, intensive and networked research as a driver for faster and wider innovation',* published on 29 May 2016 took note of initiatives "aiming at sharing and governing advanced digital services, scientific instruments, data, knowledge and expertise that enable researchers to collaborate more effectively, such as the Open Science Commons".[82]

Copyright protection for databases should be eliminated because it is also a great barrier for the public interest of researchers, educational institutions, libraries, museums and archives.[83]

Regressive reform

The European Commission is also proposing a number of troubling regressive changes in EU copyright law that would further enclose access to information and knowledge.

Two of these are "ancillary *copyright*" and "*neighbouring rights for publishers*". According to German MEP Julia Reda, "The European Commission is preparing a frontal attack on the hyperlink, the basic building block of the Internet as we know it. This is based on an absurd idea that just won't die: Making search engines and news portals pay media companies for promoting their freely accessible articles.[84]

This "link tax" would mean restricting one of the key aspects of peer-to-peer digital collaboration and favouring a privatisation of short summaries of news, articles and web pages. While it could be argued that it aims to redistribute the profits of one giant search engine, a much greater burden would be placed on any start up search engine and on non-commercial users in general.

> *"Extending neighbouring rights to the publishing sector would just lead to another, unnecessary layer of rights, in a digital market place already overgrown by rights."* Law Professor Bernt Hugenholtz, University of Amsterdam [85]

Neighbouring rights for publishers have been included in the European Commission copyright proposal in autumn 2016, giving publishers of books and news the same rights as music and film producers have against any linking, aggregation or mention.

On a global level, and concretely at the World Intellectual Property Organization (WIPO), the EU is one of the principal supporters of a new *Broadcasters Treaty*. This ostensibly aims to prevent "signal piracy", which would give broadcasters yet another new layer of copyright protection and economic rights for intermediaries and distributors, at the expense of performers, authors and citizens and without proven benefits.

Unfortunately, EU international trade policy is seeking even stronger and broader copyright law and enforcement mechanisms (with the opposition of the Global South) both in bilateral agreements and within the WIPO, such as EU support for a Broadcasting Treaty to project telecommunication signals.

At WIPO the EU is mostly opposing all new pro-knowledge commons proposals for new exceptions and limitations to copyright. This is the case whether they are those proposed by librarians or by countries from the Global South such as Brazil's "Open Collaborative Projects proposal, which seeks to promote innovation without intellectual property rights allowing for the creation of public goods in a cooperative fashion".[86]

Recommendations: Culture goods, co-creation and copyright

In order to favour access to knowledge and culture and a dynamic knowledge economy, the forthcoming copyright reform needs to favour the public domain, use and re-use and knowledge commons.

- The EU should recognise that, once a work is in the public domain (i.e. copyright and related rights in a work have expired), **the works should stay in the public domain**.

- **The EU needs to expand exceptions and limitations** to include: i) text and data mining; ii)improved access to cultural materials for people with disabilities; iii) non-commercial sharing; iv) user-generated content; v) e-book lending and conservation by librarians; vi) freedom of panorama; and the elimination of copyright for databases.

- **Adding ancillary copyright and neighbouring rights** will add additional layers of rights hampering the free flow of knowledge and should not be further pursued.

- **The EU's stance in EU trade agreements and at WIPO should focus** more on the public interest instead of the expansion of rights and more enforcement.

4.3 OPEN SCIENCE, RESEARCH & PUBLIC GOODS

The EU under its research framework programmes finances enormous amounts of scientific and academic research. This public funding has traditionally come without conditions for public access to the published results and scientific journals often have the copyright on the ensuing publications.

Under the grassroots pressure of the "academic spring" in 2010-2012, EU institutions were forced into taking steps to question the enclosure of the scientific knowledge commons. As expressed by Professor Jean-Claude Guédon:

> *"In almost every country in the world, research is supported by public funds. When researchers publish their results in academic journals, they do so for free. Peers also review results for free. And journals often require researchers to give up their rights to these articles. Then, major publishers or learned societies sell their journals at exorbitant prices to libraries… which are also financed by public funds! It's a vicious circle in which taxpayers pay for the production and access to researchers while publishers and societies make profits of 30-45% before taxes. It's outrageous!"* [87]

The EU has now embraced Open Science – an approach to the scientific process based on cooperative work and new ways of diffusing knowledge by using digital technologies and new collaborative tools. *"Open science is the approach of making scientific research, data and dissemination accessible to all levels of an inquiring society, amateur or professional."* Wikipedia

What is happening?

Open Science is one *of the three strategic priorities* of the European Commission, set out in June 2015. The EU is already leading by example in this area by requiring that all research publications funded under Horizon 2020 should be openly accessible, free of charge. Recent open science council conclusions on open science are very promising.[89] Open science also implies greater flexibility in intellectual property rules and certain publishing models that are barriers to the sharing and dissemination of scientific knowledge.

> *"Open Science describes the on-going transitions in the way research is performed, researchers collaborate, knowledge is shared, and science is organised. In the short term, Open Science is expected to lead to more transparency, research integrity, openness, inclusiveness and networked collaboration."* EU Commission

The European Commission has just created the stakeholder-driven Open Science Policy Platform, which could ideally promote and defend the science commons. [88]

The EC will be implementing their *Open science agenda* with the *Open science policy platform* and, amongst other things, will consider incentives for researchers to share their data, including action on extending the *Open Research Data Pilot* to all areas.[90] Recently the European Commission has announced the creation of an open, repository cloud of scientific data for millions of European researchers and academics.[91]

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The *Communication on the European Cloud Initiative* considers how to build science data repositories and how to promote ways of storing data.[92] This is in principle quite positive, since the initiative basically intends to create a large knowledge commons with European infrastructure. However, the European Cloud initiative as laid out in the 2015 Communication raises concerns about the way the open science is developing. No clear distinction seems to be made between Big Data and Science data and the cloud service seems to be mainly put in function of business, innovation and growth. Nothing is stated about the common good, or even the progress of science. This blurring of boundaries and concepts raises concerns about data sovereignty, the use of public data and the EU's approach to science.

Citizen Science, according to the European Commission:

> *"Citizen Science refers to the general public engagement in science where a growing number of volunteers contributes actively in the scientific knowledge generation and improves the way science is done. This open, participatory and inclusive approach is gaining force in all corners of Europe thanks to the massive use of new technologies, presenting a great potential to address societal challenges."*

This could be quite positive for the science commons and the building and dissemination of knowledge. This means non-experts, community groups and civil society can do "crowd science" or "bottom-up science" on issues that are important for their communities.

What to do

Totally new scientific reputation and incentive systems are needed so that   academic promotions and diplomas do not overly depend on publishing in closed, non-democratic

for-profit, academic journals that are often controlled by large commercial interests and not oriented towards the common good of advancing science, innovation and knowledge. Also needed are profound changes in the way the quality and impact of scientific research are both evaluated, with much greater citizen participation in the establishment of scientific objectives at all stages and greater transparency at all levels.

Important EU legislative changes are needed to further promote knowledge ecosystems that are favourable to society as a whole. The exceptions to copyright mentioned above – to allow text and data mining, or flexible copyright rules to allow public libraries to preserve, copy and lend articles and e-books more easily with legal certainty as well as the mandatory transparency and sharing of all animal experiments and human clinical trials – are just a few of the moves towards the much-needed elimination of barriers to a strong open science policy.

Crucially, Open Science should be combined with and complemented by public-interest reforms in the way the EU manages intellectual property. Of course there are the copyright reforms we mentioned earlier in the culture section. However, we also need reforms to promote socially responsible licensing of knowledge and inventions advanced with public funding. Social knowledge generation needs to be matched by the socialisation of knowledge returns

New socially responsible rules on intellectual property rights need to ensure that public investments revert back into public goods and the knowledge commons, particularly in the fields of health, environment and the internet. The ability to use, re-use and share scientific data has long been a demand of the European science commons movement.

What else could the EU do: Developments and opportunities

Review of the Research and innovation programme Horizon 2020 (H2020).[93] Currently, the public interest in H2020 is not sufficiently protected. Knowledge generated by public funding should maximise public benefits and result in public knowledge goods.

The Review of Horizon 2020 might provide the opportunity to improve some of the terms and condition in favour of commons-based innovation. For now, all results generated are owned by the grantee. How can the Commission and the public claim a stake in these results? Can we think about this ownership in a different way? What could be useful criteria and conditions to apply to ensure the public interest and to ensure public return on investment? There is a need for an open and inclusive public debate on this so that the next framework programme ensures public return.[94]

In light of this, it is key to look at the management of intellectual property generated with the funding. The condition of socially responsible licensing, or *non exclusive* licenses on patents generated with EU funds, could enable the sharing of knowledge, and enable broader and less expensive access to these innovations and knowledge goods, as well as immediate follow up innovation by competitors. The EU should favour those forms of knowledge management and licensing that generate the highest possible social benefit, particularly when public funding is involved.[95]

Horizon Prizes: Innovation inducement prizes could serve as an alternative or additional incentive to patents and monopolies to stimulate investment and reward innovation.

Current EU experimentation under H2020 with innovation prizes is a promising development. However, it is still limited to modest monetary quantities, and unfortunately not mandating the use of non-exclusive intellectual property rights licenses.[96] At the current funding level, such a prize is more a signal of recognition, than an incentive to spearhead innovation. It would be important for the horizon prizes programme to attach public interest (license) conditions.[97]

Additionally, the EU could also explore the idea of *'open or social patents'* for the European Patent Office. Patents are expensive to obtain, prohibitively so for hobby inventors who want to share with society. The issue is that, if you do not patent your invention and just share it, someone else can come along and patent it in their name, thereby locking the knowledge up.

One solution could be for patent offices to add a new category to their services – the registry of open patents. Thus enabling inventors, small- and medium-sized enterprises (SMEs), social innovators and even students to register their inventions, releasing the knowledge to the public but also acquiring the recognition and protection they deserve and the corresponding points to the indexes that use patents.[98] In order to obtain such an open patent you would have to do what Elon Musk of Tesla did: open it up for everyone to use freely. This would empower people to contribute machines, tools, medicines and methods to society, thereby boosting their development – while leaving inventors a choice and keeping trolls in check.

Recommendations: Open Science and public goods

The EU has made huge progress over the last five years in terms of embracing Open Science and citizen science initiatives. Open Science describes the on-going transition in the way research is performed, researchers collaborate and knowledge is shared. Citizen Science is an open, participatory and inclusive approach for knowledge generation. However, there are still important steps to be taken in terms of intellectual property and data management. Particularly:

- **EU public funding should result in public knowledge goods**, ensuring a clear return on public investment.

- **The EU Cloud initiative should ensure** the use of data in the collective interest.

- **The EU should explore and implement public interest conditions**, including for IP management and knowledge sharing for its research funding programmes (eg, Horizon 2020).

- Equally, **the EU should implement conditions on limited intellectual property rights** for its innovation inducement Horizon Prizes, which are meant to create incentives for innovation through the granting of a monetary prize.

- In order to move towards an adequate incentive framework for a sustainable innovation system and to encourage knowledge sharing, t**he EU should explore the idea of registering open patents**.

CONCLUSIONS

The EU needs the commons and the commons need the EU. On the one hand, the EU needs new visions, new narratives and value frameworks that connect to what people find important. The EU project is in deep crisis and needs a roadmap towards more participatory democracy and a more just and ecologically sustainable society. The commons can be, and should be, an important part of that roadmap, providing an alternative narrative – a positive and constructive discourse that is at once transnational and trans-local. Furthermore, the commons approach points to specific ways to reform the EU and its policies.

On the other hand, the commons need to be nurtured, protected and supported by EU policies. Neo-liberal policies are destroying our natural and social commons but have also led to people's embracement of self-managed initiatives as a resistance to the overreach of the markets and capital in every aspect of people's lives and the incapacity of the state to counter the injustices provoked by the financial crisis. Both tough austerity measures, as well as discontent with individual consumerism, have led to the pursuit of these alternatives.

The cultural shift towards community, collaborative practices, local ecosystems, sustainability and citizen participation and deep democracy manifests itself in many ways, while the advance of digital technologies is creating countless opportunities. The EU needs to respond and acknowledge this shift, as well a framing technological developments and guiding developments through responsible institutions.

If there is one investment to make for the EU that will pay off, it is an investment in democracy. The EU's democratic deficit has been plaguing the project for a long time, now it might even contribute to the EU's unraveling. A major flaw in the current system is the lack of transparent accountability of national policy-makers in their relationship with the EU project; structural changes are needed to increase this accountability. One key step would be to improve the current channels of participatory democracy in the institutions. However, it is even more urgent for the EU to proactively engage in exploring complementary democratic institutions and the creation of instruments for participatory democracy – for which technological development has created immense opportunities.

In order to support urban commons practices, the EU needs to support the engagement of citizens in the creation and governance of their direct environments. Additionally, there need to be conscious, tailored support of small initiatives and just collaborative online platforms contributing to local ecosystems and a circular economy.

A rich and growing Digital commons should be part of the EU roadmap, putting an end to the shrinking of the commons through further privatisation and monopolisation of internet infrastructures, (publicly funded) science and culture. We need public interest-copyright reform, true open science, and internet infrastructures governed in the public interest to favour a just and decentralised collaborative economy. The EU has to prioritise and address the management of data in the collective interest.

There are diverse movements of commoners who are alive and kicking across Europe, but they still need strong financial support, regulatory facilitation and political visibility. We urgently call on the EU to become a leader in freeing us from a chronic industrial-age worldview by embracing the up and coming revolution of peer-to-peer collaboration, economic decentralisation and cultural sharing. Time is of the essence

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