



A VISION FOR A SHARED DIGITAL EUROPE

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INTRODUCTION

This document summarises the efforts undertaken by [Kennisland](#), [Centrum Cyfrowe](#) and [Commons Network](#) to develop a new vision for digital policymaking in Europe. To this end, we have created a new policy frame¹, in an effort to find solutions for a number of problems that plague the Internet. Over the past five months we have worked on developing a frame that can replace the existing Digital Single Market² frame of the European Commission. A new frame can guide policymakers and civil society organisations involved with digital policymaking in the direction of a more equitable and democratic digital environment, where basic liberties and rights are protected, where strong public institutions function in the public interest, and where people have a say in how their digital environment functions - **a Shared Digital Europe**.

The core of this frame was developed during a stakeholder workshop in October 2018 that brought together approximately twenty civil society experts, representing a broad range of perspectives and stakes from across the European Union. We have developed this frame in the context of the upcoming elections of the European Parliament.

THE OPPORTUNITY

Over the course of 2018, we conducted an analysis of the impact of the current framing of the Digital Single Market in Europe³. We observed that discussing digital policy questions within this framework reduces broad policy issues to questions about the proper functioning of markets. It also isolates policymaking in the digital space from the existing traditions of policymaking for offline public spaces in the area of culture, education or civil infrastructure in general.

Seeing the digital space only as a marketplace is short sighted and unrepresentative of its effect on our lives. The digital space is in effect our society – a society that is experiencing a digital transformation. Therefore we cannot accept to define the digital sphere as a place where only market dynamics rule.

¹ With policy frame we are referring to a set of narratives, principles and values that define a policy space, and as a result determines which policy interventions are valid and which ones are not (or less) valid. The policy frame provides guidance and general goals for a shared process of change.

² See: https://ec.europa.eu/commission/priorities/digital-single-market_en.

³ See our analysis of how the existing Digital Single Market framing was introduced into the EU policy discourse here: <https://reframe-digital.eu/origins-and-narrative-of-the-eu-digital-single-market/>.

When we think of digital we should not think of technology as an end in itself or a rigid force with a predetermined direction. We should think about society becoming digital. What do we want that society to look like? And what shape should technology take to facilitate this change? Similarly, we should not think of a digital transition as a simple process of modernisation tied to technical efficiency. **Digital changes the society, and we need to shape and design technology based on positive social objectives.** Digital technologies should facilitate a society that is equitable and democratic, where basic liberties and rights are protected, where strong public institutions function in the public interest, and where people have a say in how things work. **We believe that Europe has the capacity to shape such a digital society.**

The digital policy space as it exists today displays a number of issues that are perceived as problematic by policymakers across the political spectrum, and a wide range of civil society organisations. These challenges include (but are not limited to):

- A lack of control of (personal) data, and the absence of privacy as a result of a digital space increasingly governed by a handful of platform providers.
- The misguided perception that the digital space is only a marketplace, marginalising the role of public institutions and other non-market actors.
- The monopolisation of the Internet by large and primarily non-EU corporations, leading to loss of sovereign oversight of our digital space and economy.
- The deterioration of online public debate due to the increase of misinformation and the reinforcement of filter bubbles.
- A lack of democratic oversight over the digital space, leading to mistrust in the democratic process overall.
- A lack of EU-based digital development and service delivery, leading to a loss of innovation and opportunities for social and economic development in line with European values.

These problems exist in the digital space, but are caused or exacerbated by broader trends in the society. Importantly, these challenges will in turn be amplified on that wider society and the functioning of European democracies. Therefore, any solution to the problems in the digital space will need to take into account these societal dynamics in Europe in order to have a positive impact on European democracies as well.

REFRAMING DIGITAL EUROPE

Our analysis is elaborated in a number of background papers and blog posts.⁴ We conclude that without a different view on the digital space so that it also includes social, public, cultural and other values, a number of these current and expected problems will be impossible to resolve. This means that Europe needs a new vision for its digital society. Our reliance on platforms and services that have grown to dominance by appropriating the data produced by our daily lives has come to a point where its detrimental effects clearly outweigh the value provided by these services to citizens and Europe as a whole. We need an effort to reclaim our digital sovereignty to create a *Shared Digital Europe* that embraces our democratic values and strives for equity and social justice. We need an understanding of the digital space that takes into account that it is a hybrid space, both a market as well as a public space where the commons can also thrive.

Through consultation with stakeholders, including several workshops, we collectively identified four principles that we see as foundations for a new project to build a shared, European digital space that is not just market-focused. Policies framed on the basis of these principles ensure that the balance between private and public interests is safeguarded. These principles for a Shared Digital Europe are interconnected yet distinct, and form a consistent proposal for a new framework for thinking about the digital space in Europe. They are: [Enable Self-Determination](#)⁵, [Cultivate the Commons](#)⁶, [Decentralise Infrastructure](#)⁷ and [Empower Public Institutions](#)⁸. They apply to all layers of the digital space from the physical networking infrastructure to the applications and services running on top of the infrastructure and networking stack. Likewise they apply to the social, economic or political aspects of society undergoing digital transformation. The four principles are summarised in the diagram below.

⁴ The blog posts and background papers are available at <https://reframe-digital.eu/>.

⁵ See: <https://reframe-digital.eu/enable-self-determination/>.

⁶ See: <https://reframe-digital.eu/cultivate-the-commons/>.

⁷ See: <https://reframe-digital.eu/decentralise-infrastructure/>.

⁸ See: <https://reframe-digital.eu/empower-public-institutions/>.

**CULTIVATES
THE COMMONS**

By providing a networked public space, the internet empowers people to engage in collaborative practices and knowledge sharing, thereby creating substantial economic value. And even more importantly, huge social value for all Europeans.

**DECENTRALISES
INFRASTRUCTURE**

Decentralising our technological infrastructure is an approach that will increase Europe's technological sovereignty by reducing dependency on non-European technology providers. It is also a way to strengthen our democratic traditions and historic diversity.



**A SHARED
DIGITAL
EUROPE**

**ENABLES
SELF-DETERMINATION**

It must be possible to fully participate in (online) social life without having to give up your personal data to commercial entities. This includes the right to privacy and the need for more democratic models of data governance and algorithmic transparency.

**EMPOWERS
PUBLIC INSTITUTIONS**

Our public institutions are best placed to assure broad democratic civic participation on how our knowledge, science and culture are governed. They must be empowered to provide meaningful online services and to provide the public with online spaces that are protected from the surveillance practices of commercial platforms.

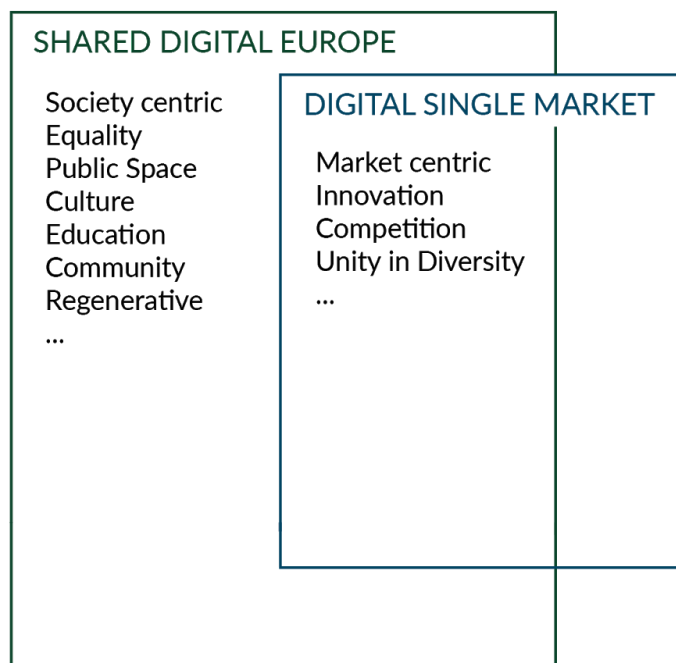
A NEW NARRATIVE

It appears that most of the policy makers and other stakeholders across the political spectrum agree on two connected issues:

- Europe needs to be able to shape the digital space for its citizens, communities, innovative businesses and policymakers.
- The unique identity of Europe as a collection of diverse communities - bound by democratic values, bottom-up self-governance, individual freedom and social rights - needs to be reflected in that digital space.

In proposing our new frame we are making use of dissatisfaction with the current way the digital space is organised to form a coalition for an alternative vision. While it may be difficult to coalesce around a common frame with these different actors, rejecting the current one and agreeing on a number of common principles will open up the opportunity for significant change. And at a minimum, the need to create a new kind of shared public space in Europe through digital technologies is a common objective across a broad section of the political spectrum. This includes such basic issues as ensuring that (social) innovation remains possible for European businesses and civil society, and protecting the fundamental rights of Europeans online.

In the diagram below, we have summarised key elements of the proposed frame and how it expands on the the current Digital Single Market frame.



The time is clearly right to establish a new frame for digital policymaking, one that breaks with the market focus of the Digital Single Market.. In fact, several efforts are underway to search for such a frame.

First, there is growing awareness of "tech ethics" within the business community, especially in relation to the development of artificial intelligence technologies. This value-based approach is visible for example in the EU's "Strategy for AI in Europe" and could be applied to other issues and technologies.

Second, a growing number of actors is talking about a "human-centric" or "user-centric" approach. These terms are being used both by civil society actors (such as OSEPI and BEUC) and by businesses - in 2018, the Spanish telecom company Telefonica has launched its "Digital manifesto for human-centric digitalisation"⁹. This concept, which has been well-developed in reference to user-experience design, is now being extended to encompass digital policy design.

⁹ Compare <https://reframe-digital.eu/human-people-centric-digital-space/> for more details on these examples of user-centric / human-centric framing.

Third, many civil society organisations have been working within a policy frame based on the idea of digital human rights, and focusing their efforts on the protection of these rights through appropriate regulation. Europe's GDPR regulation can be seen as developed within this frame.

We agree with the general vision of "human-centric digital policy", especially as a break from the market-centric dogma of the last decade. Yet the term "human-centric" on its own is insufficient to secure policies that are beneficial for users of digital technologies.

Furthermore, a "digital-human-rights" or "human-centric" approach focuses on individuals and individual rights in the design and governance of the Internet. A "tech-ethics" approach additionally works with a simplistic model of technology regulation that puts faith in individual decision-making and power to control technologies.

Individual users cannot and should not be burdened with governing a part of society which is as enormous and complex as the digital space. What if we would say we are going to design a human-centric economy, or human-centric finance? That would again put the onus for making these parts of society better on individuals rather than on society as a whole.

We consider this individualistic approach as too weak to facilitate a fundamental change in how digital policymaking is approached. We therefore prefer the term "society-centric", to define digital regulation that by design pays attention to the social dimensions and consequences of technological development.

To this end, we have developed our four principles in which the human-centric approach can be made more precise and meaningful. With our frame, we put greater focus on collective rights and the collective dimension of regulating technologies, seen as a complex ecosystem. We thus propose a way forward which balances individual rights and the collective.

TOWARDS A SHARED DIGITAL EUROPE

From our analysis of the problem, the policy landscape in which these questions are debated, combined with the work already being done by numerous CSOs, it becomes clear that there is a way forward. Yet the lack of alignment of visions and goals hinders civil society's ability to create an alternative to the dominant market-focused frame.

A new frame should bring a wide coalition of CSOs together to work towards a common aim through different means. This could offer policymakers a fresh take on a problem many of them are stuck with,

and it could offer a way to introduce the many solutions that have already been developed, including our own four principles for the architecture of the digital space.

Such a frame would need to incorporate a number of different principles to be broadly relevant yet coherent. These include:

- An acknowledgement that the digital space is not exclusively, or even primarily, driven by market forces;
- That Europe instead needs a digital space which serves its public by allowing culture, innovation, privacy and civic debate to flourish;

This means that it needs to build on the core values that distinguish Europe and make it resilient and competitive in a global economy, including:

- strong public institutions to protect the digital space and people's digital lives;
- democratic governance and control of these public institutions to ensure individual and community sovereignty;
- cultural diversity and space for creativity and initiative to maintain and strengthen Europe's innovative edge;
- human rights and social justice ensuring that all Europeans have the actual opportunity to enjoy the digital space equally.

All of the above needs to be understood in the context of an effort to promote a regenerative economy based on circular principles and with the aim to maintain a sustainable system for people and the planet. By supporting the emergence of technological solutions that champion these values, Europe can foster growth of a technology sector that offers services and products that are distinct from the offerings of other global players. A society-centric approach can be a source of innovation and competitive advantage for Europe.

To achieve this, we should aim for a digital space that is truly European, which contributes to making Europe stronger, more democratic and sustainable, and which offers a shared experience for Europeans in all their diversity. In proposing a Shared Digital Europe as a new overarching frame for the digital policymaking in Europe we try to bring together some of these concerns to form a broad support base for an alternative to the Digital Single Market frame.

A NEW VISION FOR A SHARED DIGITAL EUROPE

For the last 10 years, we have focused on regulating the digital space towards building a Digital Single Market in Europe. This approach does not suffice to address challenges that are ahead of us.

Europe needs to establish its own digital space that embodies our values: strong public institutions, democratic governance, sovereignty of communities and people, diversity of European cultures, and equality and justice. A space that is common to all of us, but at the same time diverse and decentralised.

Today, market orthodoxy limits our ability to deal with the domination by corporate monopolies that constrain both individual freedom online and the emergence of a truly European civic space. This market focus needs to be replaced with an approach that is society-centric at its heart.

A new project to build a Shared Digital Europe will be our source of strength, by supporting social and economic innovation, as well as new, regenerative modes of production.



A SHARED DIGITAL EUROPE

A Shared Digital Europe is a vision of a digital space that facilitates diversity, empowers communities and favours an overall people-centric and public-interest approach to technology development and innovation.

HOW TO GET THERE?

Having identified this frame we will now need to start inserting it into policy discussions. Initially this means going back to key players from CSOs and aligned policymakers and discuss with them how framing digital policies as an attempt to create a *Shared Digital Europe* contributes to their objectives.

In a next step we will need to work with other stakeholders to translate the four principles for a Shared Digital Europe into concrete policy proposals and agendas. These principles should serve as high-level objectives guiding the development of new policy proposals. They should also be used for evaluating existing and proposed policies. We believe that the frame is broad enough to accommodate a wide range of progressive voices advocating for better digital policies.

In this project we did not only come up with an overarching frame to shape the debate, but we also provide four broad solutions that point the direction for potential policy interventions. The four principles for a *Shared Digital Europe* are shared by our peers - and emerged through a collaborative creation process. This comprehensive approach and narrative gives us the opportunity to present a full-scale agenda and push ahead in a time when there will be a certain vacuum with regard to digital policymaking and a clear need for vision and new ideas.

A SHARED
DIGITAL EUROPE
ENABLES
SELF-DETERMINATION

It must be possible to fully participate in (online) social life without having to give up your personal data to commercial entities. This includes the right to privacy and the need for more democratic models of data governance and algorithmic transparency.

A SHARED
DIGITAL EUROPE
CULTIVATES THE
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By providing a networked public space, the Internet empowers people to engage in collaborative practices and knowledge sharing, thereby creating substantial economic value. And even more important, huge social value for all Europeans.

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DECENTRALISES
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Decentralising our technological infrastructure is an approach that will increase Europe's technological sovereignty by reducing dependency on non-European technology providers. It is also a way to strengthen our democratic traditions and historic diversity.

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EMPOWERS PUBLIC
INSTITUTIONS

Our public institutions are best placed to assure broad democratic civic participation on how our knowledge, science and culture are governed. They must be empowered to provide meaningful online services and to provide the public with online spaces that are protected from the surveillance practices of commercial platforms.

Any effort to bring this Shared Digital Europe to life will rely on these four core principles that underpin it. In the next phase we will further develop these into concrete policy objectives that illustrate the Shared Digital Europe approach.

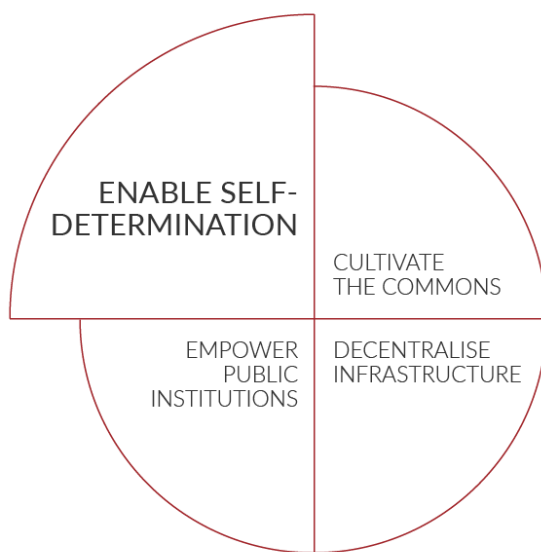
ANNEX: FOUR PRINCIPLES FOR A SHARED DIGITAL EUROPE

Europe needs a new vision for its digital society. Our reliance on platforms and services that have grown to dominance by appropriating the data produced by our digital lives has come to point where its detrimental effects clearly outweigh the value provided by these services to citizens and Europe as a whole.

We need an effort to reclaim our digital sovereignty to create a Shared Digital Europe that embraces our democratic values and strives for equity and social justice. We need to reclaim control over the digital realm that is shaping our education, housing, transport, environments, and identities.

During the stakeholder workshop in October 2018, we collectively identified four principles that we see as foundations for a new project to build a shared, European digital space that is not just market focused. Policies framed on the basis of these principles ensure that the balance between private and public interests is safeguarded. These principles for a Shared Digital Europe are interconnected yet distinct, and form a consistent proposal for a new framework for shaping the digital space in Europe. They apply to all layers of the digital space from the physical networking infrastructure to the applications and services running on top of the infrastructure and networking stack. Likewise they apply to the social, economic or political aspects of society undergoing digital transformation.

Based on these four principles we can create a Shared Digital Europe that leverages the power unleashed by the digital revolution to the benefit of society:



ENABLE SELF-DETERMINATION

Self-determination in the digital environment refers to the right to privacy and the need for more democratic models of data governance and algorithmic transparency. The call for self-determination in the digital environment is a reaction to the growing market power of a handful of platform providers who increasingly control the digital space. It is also a call for using digital tools to support sovereignty at community, municipal and regional levels. Technology should serve the common good and support broad citizen participation, instead of solely aiming for purely commercial objectives and outcomes.

We need to regain control over ourselves within the digital space, not only individually, but also collectively. This relates to self-determination, choice and control of individuals, communities and Europe as a whole. People deserve to have a say in the way their digital environment functions, hence we need participatory shaping and governance of this environment.

Dominant global market forces have undermined our ability to govern ourselves

While states were the most powerful entities throughout most of history, that is certainly not the case anymore. Today major tech companies, most of which have built their business on the free use of personal and other data, are bigger and more powerful

than many nation states, although their forms of wielding power are different from the traditional force of a nation state.

Our daily lives are impacted by a globalised market in which such commercial entities are exceptionally wealthy and powerful. We not only use their products and services, but, especially within the digital space, share data about ourselves in exchange for free or discounted use of these products and services. Once we do that, we often lose control over what happens with this information. Data-driven corporations extract value from users, and process, trade, and commercialise this information to maximise profit. Within this process, data is used to manipulate users and to further increase the consumption of products.

At the level of individuals, this translates into challenges with regard to users' personal data and privacy. At the level of the society, this becomes an issue of a market capture of data as a resource that is being produced. This resource is shaping our education, our housing, our transport, our environments, as well as our identities, according to commercial interests without any democratic debate on the direction taken. Citizens have no agency in this process, and lack control. The moment users engage in online activities, they have to provide their data to online platforms. They cannot choose whether they actually want to do this (outside of simply not using the product/service), nor can they in practice set conditions on how their data will be used.

Yet, the lack of control over data is not just an issue with regard to commercial products and services. The public sector is increasingly relying on data analysis and algorithmic decision-making within, for example, healthcare and social services, education or the judicial system. There is a growing body of examples of detrimental effects from this type of automated decision-making on people in marginalised positions - and algorithmic bias can ultimately adversely affect all citizens.

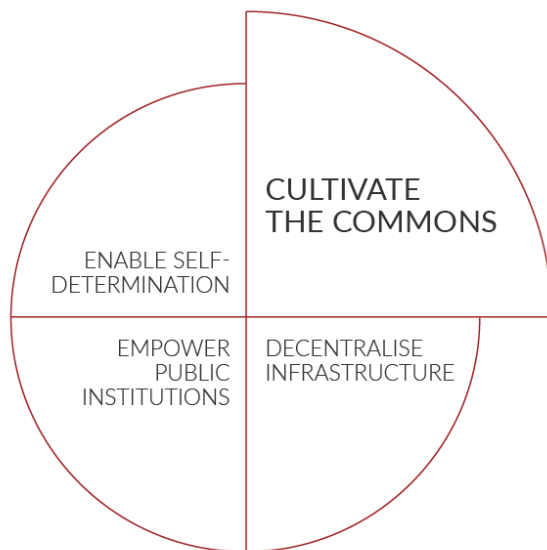
Towards self-determination in the digital environment

By calling for self-determination in the digital environment we ask for something more fundamental than the individual legal right to privacy. It must be possible to fully participate in (online) social life without having to give up your (personal) data to commercial entities. The role of data and how it is used in surveilling and influencing

users needs to be made transparent to the general public, and users need to have meaningful opportunities to minimise data collection, and control its use.

Yet, self-determination cannot be achieved by only thinking about protecting privacy in terms of individual rights. We need to rethink privacy as a public good, because the increasing use of personal data by tech companies and governments is not only impacting the individual, but has larger societal consequences. More broadly speaking, there is need for democratization of data governance aimed at improving and tightening our standards with respect to personal data extraction and processing. We need more robust oversight of these practices.

In this context we also see self-determination relating to solidarity. Solidarity in terms of not leaving everything to the individual but facing these challenges of the digital transformation as a collective. Collectively and in solidarity with each other we can set standards for a society that is democratic and where citizens are protected from commodification, privacy intrusion and surveillance. We should collectively work to realise a digital environment that instead facilitates self realisation, creativity and diversity.



CULTIVATE THE COMMONS

Commons are shared resources and social practices maintained by communities. Commons consist not only of resources such as land, knowledge, culture, fresh water, scientific research or software, but also describes the community of people managing these resources. Their collaborative, democratic, equitable governance establishes the commons as a model for organising, and as a sector in society which appears when people collectively manage and take stewardship over resources without the dominant role of either the state or the market.

The digital age has opened the door to many collaborative forms of creating, remixing and sharing knowledge and culture. The success of free and open-source software, tens of thousands contributors to Wikipedia, and the flourishing open-design and manufacturing community are notable realms in which collaborative activity has transformed 20th century models of knowledge production. Hackerspaces and fab labs are massively pioneering new forms of distributed local production while tapping into a global knowledge ecosystem.

Creative Commons licenses use intellectual property law to place knowledge and culture in the commons. Developments in open science and innovation are changing the way science is being performed. Open science makes scientific research, data and

publications accessible to all levels of inquiry: society, amateur, or professional. A key vehicle for disseminating scientific knowledge and maintaining it as a commons is open access publishing. The platform cooperativism movement, which sees digital platforms themselves as forms of the commons, is another example.

The digital-networked environment allows us to put a bigger emphasis on supporting commons-based alternatives to the market. By providing a networked public space, the Internet empowers people to engage in these collaborative practices and knowledge-sharing, thereby creating substantial economic value. And even more importantly, huge social value.

Developing digital spaces that are managed as a commons with appropriate governance structures is essential to creating a digital environment that is democratic and supports values at the heart of European societies. Spaces, resources and projects managed as a commons need to be seen as equal alternatives to market mechanisms.

The commons captured by global markets

Yet today, the digital commons are pushed to the margins of the online environment by commercial monopolies that over the years have overtaken the open sharing and peer-to-peer communication channels of the Internet. Pathologies related to the reliance of all mainstream projects on advertising revenue - disinformation, hate speech, weakening of social bonds and destruction of individual attention - are proof that an exclusively market-driven logic fails to support a democratic and fair digital environment.

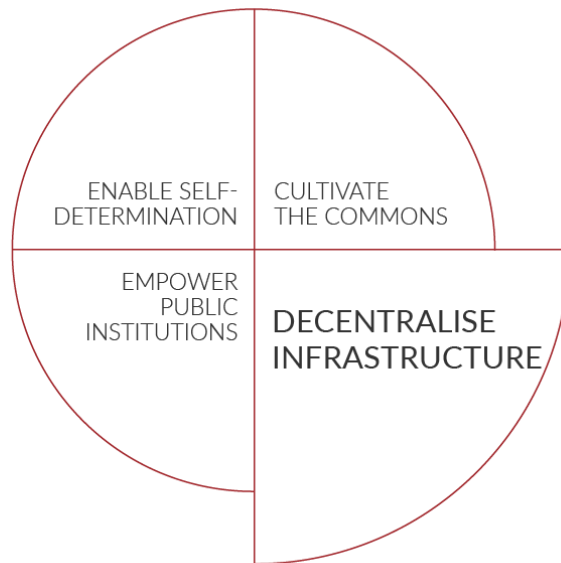
For each success of the digital commons - such as Wikipedia, which remains one of the most popular non-commercial, online platforms in Europe; or the adoption of free software as a standard for much of the online infrastructure - we observe even more places where market logic limits the potential of the commons. The potential of digital technologies to offer open access to crucial knowledge and cultural resources is not being fulfilled. Similarly, spaces in which digital technologies are employed to share resources are quickly captured by dominant market platforms that seek a commercial rent on the basis of the contributions of users. The term "sharing economy" has lost its original meaning, and today instead denotes a class of monopolists that extract profits

from the use of housing, vehicles and other goods and services. Most of these profits are not re-invested in the well-being or regeneration of local communities.

Commons-based digital transformation

The commons approach overlaps with or feeds into an emerging political discourse where wellbeing and social wealth are not defined in terms of narrow economic criteria like GDP or corporate profit. Instead it looks to a richer, more qualitative set of criteria that cannot be easily measured: moral legitimacy, participation, equity, resilience, social cohesion and social justice. It promotes a regenerative economy based on circular principles and its primary aims are to maintain a sustainable system for people and the planet. Local community and participatory culture are core building blocks of such a system.

Europe has the opportunity to strengthen, promote and facilitate commoning activities and commons-based production. We can increase ecological resilience in a truly circular economy - an economy that is restorative and regenerative by design. European policymakers need to adopt a hybrid approach, in which market-based and commons-based solutions are considered side-by-side as governance models for core aspects, spaces and layers of the Internet stack. We need to identify situations in which a "commons-first" approach should be adopted. European policies that support open science and open access to scholarship and data in the European Research Area are a great example of such an approach. Supporting a decentralised, community-based sharing economy that supports local commons is something that can be legislated at the EU level and which will have a real impact on the ground.



DECENTRALISE INFRASTRUCTURE

Decentralisation is the basic shift caused in the past by core network technologies, from the original packet-switching networks, through peer-to-peer content networks, to currently developed blockchain-based solutions. Decentralised infrastructure is open, distributed and shared. It is an infrastructure that can also function as a commons, and can be governed in a democratic and self-determined manner.

Infrastructure captured by global markets

In the last decade, centralised and even monopolistic services have been built on top of the decentralised infrastructure of the Internet. Since these are all very large and often non-European commercial entities, the centralisation of control over the digital networks is a form of market capture of a resource that should be treated as a universal basic service that needs to be governed as a commons. Centralisation of the Internet and the creation of online monopolies has been fueled by a range of factors that include the success of online-based advertising models, market advantages of platforms that function as two-sided markets, and a successful shift to business strategies that focus on monetisation of data instead of content. This development has led to a concentration of power in the hands of a few dominant platforms, most of which are located outside of Europe either in the US or China. As a result, much of the development of the Internet and related areas of information technology is being shaped outside of the EU.

As the Internet becomes more and more ubiquitous, with Internet-of-Things solutions diffusing in the real world, the issue of (de)centralisation concerns more than just online data and content flows. 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 local initiatives. We need to move from the idea of 'Smart Cities', which mainly favour centralised technology driven by tech optimism, corporate interests and city marketing, to an ideal of 'Collaborative Cities', primarily driven by citizen concerns and community-based initiatives.

Similarly, the current wave of technological change and disruption related to the broad class of artificial intelligence technologies has the potential to exacerbate centralisation. Early adopters of AI solutions - which are all big tech companies - gain increased power by tapping into the capacity of centralised control through aggregation, analysis and acting upon of broad swathes of data collected on the Internet. Adverse effects of this change include increased political and commercial control of citizens, and the reduction of information and media pluralism. Centralising the management and control of transport and energy systems or housing infrastructure will make our societies less equal and sustainable.

Towards a decentralised digital space

In the last few years, Europe has attempted to counter the dominance of big technology companies by leveraging antitrust regulatory policies, which can be seen as targeting centralisation of the Internet within the boundaries of market-focused policies. Yet, decentralisation policy cannot function solely on the basis of regulation aimed at managing market competition - although it is a step in the right direction.

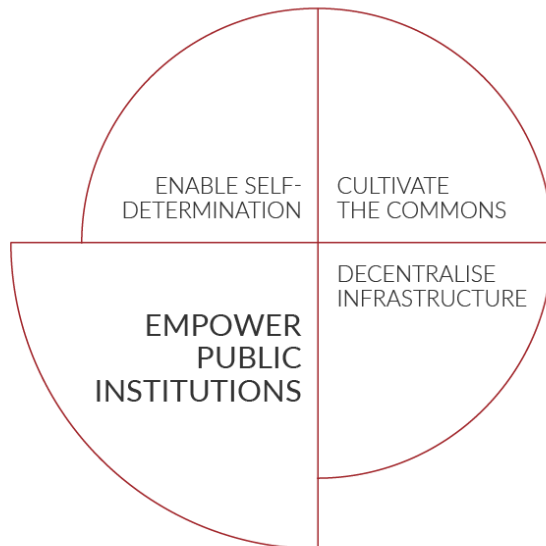
Decentralisation is also a necessity because it can contribute to increasing democratic control. At the same time decentralization will not be the answer to all challenges, and should be regarded as being a rule that allows exceptions where it makes sense.

A decentralised approach to digital infrastructures should be applied at different levels of the technological stack of the Internet: First, decentralisation should remain a basic principle of the Internet, and should underpin projects like the European Next Generation Internet initiative. Decentralisation relates to concepts such as net neutrality and also sets clear guidelines for Internet governance. Second, decentralisation should

be applied to the level of online services and should be seen as an alternative to the current model, in which data and content flows, communication and social interactions is captured by monopolistic aggregators. Decentralisation at this level entails a shift from monopolistic silos to a federated structure, in which commercial entities are regulated in how they may share data, thus breaking their monopolies. Decentralisation also means ensuring real control of users' own data either at the individual or collective (for example municipal) level. In this way, efforts to break data monopolies also support self-determination of citizens and societies.

An effort to decentralise the digital infrastructure must provide more room for public institutions, and abstain from traditional approaches to solving societal challenges built on top-down control. We see public institutions as important drivers of a decentralised network of actors, who cooperate on solving "missions" – societal challenges defined at grand scale. Decentralisation of digital infrastructures that increasingly govern our societies could be such a mission.

Decentralising our technological infrastructure must aim at increasing Europe's technological sovereignty by reducing dependency on non-European technology providers, and to enable fair competition and ensure accountability of service providers. It must also take into account democratic traditions and historic diversity. As such it should provide more agency to European cities - cooperating in the municipalist movement - that are looking for ways to develop decentralised solutions that gain from the relative power and independence of cities as actors.



EMPOWER PUBLIC INSTITUTIONS

Europe has a long and rich history of delivering public goods and services through public institutions. Publicly-funded cultural heritage institutions contribute to our identity, and encourage learning and creativity. Public libraries serve as knowledge hubs and play an important role in providing access to marginalised groups. Public schools and universities are the bedrock of our educational systems, and public service broadcasting organisations ensure the provision of quality news and information and allow for diversity of cultural expression. Public institutions are also best placed to assure broad democratic civic participation on how our knowledge, science and culture are governed.

Public institutions in the online environment

The digital revolution has created the preconditions that would allow these institutions to better fulfill their missions by actively involving communities in decision making and the generation of culture. The Internet provides them with more ways to reach (new) audiences and to decouple their activities from the restraints of place and time. At the same time these institutions and the values that are embedded within them are under attack. This challenge comes in two different forms. In many countries, there is increasing pressure on the independence of these institutions by governments. In parallel, large commercial market players question the very logic of public provision of public goods and services in attempts to grow their own markets. As a result, the

potential of public institutions and small and medium sized digital companies to uphold inclusivity, democracy, and equality of our societies in the digital age has been largely dormant; many of these institutions struggle to find their role in the digital environment.

If we understand the Internet as a market-driven platform dominated by global conglomerates and not as a basic universal service and a public infrastructure, we abandon our ability to protect our democratic systems and to shield citizens from over-commodification. Our current policies in the digital area fail to empower public institutions, and instead hold them back from innovation in the delivery of public services. Outdated and inflexible copyright laws are limiting research and education and prevent cultural heritage institutions from sharing their collections online. Public service broadcasters are reduced to continue providing linear programming that mimics the radio and television channels of the 20th century instead of developing online-first strategies that can challenge the attention-monopolies of social media platforms. Education and learning is confined to formal educational institutions instead of embedded in the fabric of everyday life.

The majority of these limitations are undertaken in order to "protect" the market from undue competition. Instead of envisioning the Internet as a true public space in which publicly funded institutions play an important and visible role as producers of content, they are confined to the margins. The lack of strategies for a digital transformation of public institutions means that we have largely surrendered the digital environment to the ever-increasing influence of commercial online platforms that erode our democratic values.

Towards public online spaces

A Europe that seeks to develop its own position in the digital age that is true to its decades-old tradition of public institutions needs to empower these same institutions to provide meaningful services and to provide the public with shared online spaces that are protected from the surveillance practices of commercial platforms. It should also support institutions that need to transform digitally, in order to be strong stewards of these spaces.

Europe must embrace its public institutions as key elements of building a Shared Digital Europe that protects our democratic values and strives for equity and social justice. This

requires investment in these institutions and updates to the regulatory frameworks to remove the limitations that have been placed on them.

Instead of slowly eroding these institutions in the interest of an ever-expanding market sector, it is necessary to create strong public institutions that can compete with commercial platforms when it comes to access to information, knowledge, culture. Public institutions should take the lead in ensuring that our values and democracy can flourish in the digital age.

Public institutions should put a focus on using digital solutions to build partnerships with citizens and establish online public-civic spaces. In this way, democracy will be enhanced and the public interest safeguarded. In such partnerships, citizens must be provided a greater role in the stewardship and governance of such spaces and available resources. This also requires regulation that favours decentralised and community-based initiatives and governance.