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digital technologies and the social economy

*New technologies and digitisation:
opportunities and challenges for the
social economy and social enterprises*

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DG GROW



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Introduction and Approach

The ongoing digital transformation is crucial for the social economy as it presents both enormous opportunities and challenges.

Digital technologies, such as online platforms, software applications (apps), distributed ledger technologies, the Internet of Things (IoT), cloud computing and Artificial Intelligence (AI), offer a wide variety of tools to support the creation of social values and the development and further expansion of the social economy.

Budget constraints, digital skills shortages and technological gaps are clear barriers for the social economy to uptake new technologies.

“New technologies and digitalisation: opportunities and challenges for the social economy and social enterprises”:

- **Explores** opportunities and challenges of digital platforms and new/advanced digital technologies for the social economy and social enterprises;
- **Presents** empirical evidence to understand the process of uptake, use and integration of digital technologies in digitally enabled social economy organisations;
- **Explores** possible futures and trajectories driven by digital platforms and advanced technologies and analyses implications for the social economy;
- **Fosters** a better understanding of how design and implementation of policies may support the digitisation of the social economy, and
- **Provides** recommendations and practical guidelines to policymakers and social entrepreneurs for promoting the wider uptake of digital technologies by the social economy.

We selected 26 social economy organisations using innovative digital technologies effectively across Greece, Italy, The Netherlands and the UK. Our objective is to understand how they are working through the digitalisation process.

The study, based on primary information and insights collected via personal interviews, workshops and on relevant literature, sheds light on the key questions stated above. Here we present highlights of the study; the full report is available at: XXX



Going Digital?

The application and use of ICTs and digital technologies radically improves the performance of organisations and economies. Global trends evidence the shift of economic activities towards digital businesses.

Over the past two decades, global businesses based on digital designs and digital-born businesses have registered higher growth than any other business. The digital transformation of the social economy offers great opportunities as long as it enables social economy organisations to achieve social and societal impact more efficiently, effectively and sustainably.

Increasingly, modern social economy organisations are becoming able to offer novel social services and tackle societal challenges in new, innovative and effective ways. Innovation makes social economy organisations more efficient and effective in what they do. Introducing or developing new digital solutions stimulates organisational innovation, product innovation and service innovation.

The strategy of social economy organisations must be consistent with:

- the **social vision and mission** of the social economy organisation;
- the **approach** to tackling the social/societal issues; and
- the **business model** adopted, which will assure long-term sustainability of operations.

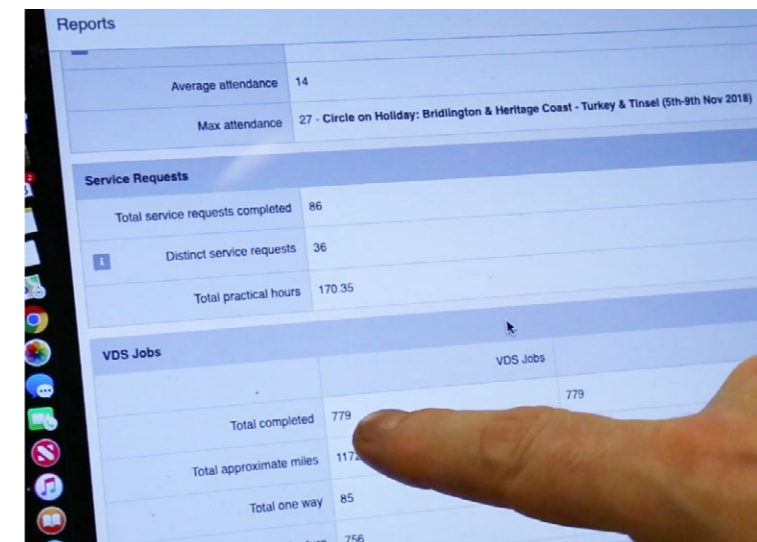
Established social economy organisations may approach their digital transformation by digitalising specific functions, gradually proceed towards a digital social organisation and eventually rely entirely on digital technologies. But social entrepreneurs and start-ups can **'think digitally first'** in tackling social and societal issues and gain their foothold in the digital social economy.

We have identified four main digitalisation strategies - or routes to digitalisation - undertaken by social economy organisations.

Digitalisation may be **specific**. It involves only certain functions of the organisation, such as accounting, user management or marketing (websites and internet sales). The effective implementation of such innovations may inspire, suggest or even sometimes require that other internal processes be digitalised.

Formichine offers opportunities for employment placements to people at risk of social exclusion. The technology deployed by Formichine is simple and easy to use. It supports the management of databases and the matching engine. It provides an efficiency gain that cannot be matched by analogue practices.

Digitisation may be **gradual** and eventually extend as more processes are automated. Specific functions such as sales, staff rotas or outreach may be automated first, subsequently they may be integrated within other organisation's operations. In some cases, personal relationships with users and stakeholders may not be fully digitalised. Digitalisation contributes to an efficient and effective digital social economy that still relies on essential human activities.



HMR Circle "supports older people to live flourishing independent lives" by providing on-demand digital and face-to-face individual services to its members. Technology consists of a customised integrated Customer Relationship Management (CRM) Platform solution to meet the organisation's requirements of faster response, fit for a complex environment and able to support new services. It is cost effective and efficient. Future technological developments will integrate the platform with more functionalities and support applications for older and frail people.

Social economy enterprises may rely entirely on digital technologies. Organisational processes (such as administration, accountancy, labour matching) can be fully automated. A digital social economy organisation may also automate external-facing functions. These include the interface with users, members and other stakeholders, as well as marketing (digital marketing) and sales (E-commerce)

Energia Positiva engages in sustainable energy production and consumption. Members share ownership of renewable energy production plants and may then use the energy produced. It uses a digital platform completely developed in-house to manage distributed share ownership in some 50 renewable energy plants and utilities for over 1700 families. New member subscriptions and management, including billing and contributions, and new complementary projects are supported by technology. As growth continues to be strong, AI and distributed ledger technologies (blockchain) solutions are being explored to improve processes and add further layers of security.

Social economy enterprises might pursue their digital strategies by **rooting the entire organisation in a pure digital concept** and adopting processes typical of the digital organisation. This may be the case of social start-ups emerging from a digital social innovation project. Digital social start-ups **'think digitally first'**.

Xenzone is using digital technologies to create new ways for people to access the very best mental health support and treatment, irrespectively of their location. Its main services include: (i) Kooth, which is a transformational digital mental health support service. It gives children and young people easy access to an online community of peers and a team of experienced counsellors and (ii) Qwell, which is an online counselling and emotional wellbeing service, provides adults with early intervention support. Currently, XenZone is looking into new technological applications such as Artificial Intelligence and Machine Learning, to help processing information more accurately in a faster and cost-effective way, but also to improve the way it provides support to users.

The digital strategy should not rely on single technological applications. Social economy organisations should explore how technological combinations may be integrated within the workflow. Combining technological solutions and applications is a critical aspect of the digital strategy but might not be sufficient to guarantee optimal reach of social impact.

The digital transformation of a social economy organisation should consider interactions with the users, members, beneficiaries and other stakeholders. The digital strategy must align technical and organisational requirements.

Tools for Digitisation

DIGITAL PLATFORMS

Digital platforms offer unprecedented opportunities for networking and collaborations. Their impact goes beyond physical reach. Social economy actors are increasingly using digital platforms to marshal community engagement and foster collaborations with public and private stakeholders more effectively and efficiently than ever before.

Traditional/off line means, such as word-of-mouth or face-to-face interactions, cannot compare with digital-platform-based interaction. For example, fundraising over crowdfunding and crowdsourcing platforms regularly outperform traditional fundraising events. Digital social economy platforms - digital platform technologies used for social economy purposes - are

technological ecosystems where different social economy actors, including producers, users, service providers, can create and combine flexibly their offerings of services, products and content by combining specific software applications. The digital environment governed by the social principles of democratic ownership, fairness and shared governance.

Digital social economy platforms are **disrupting long established sectors** such as banking, energy production and distribution, education, transport, health. They are changing established hierarchies and control of information. In platform-based utility cooperatives, for example, consumers are transformed into prosumers, a new term for people engaged both in production and in consumption.

TEM (Τοπική Εναλλακτική Μονάδα – Local Alternative Unit) is a local exchange trading system operating via an open-source digital platform (Cyclos). It **brings the citizens of a small community together and allows them to engage in alternative economic activities**. Between 2010 and today it has achieved transactions of more than 650.000 TEMs (Euros), denoting its wide uptake and use by the locals.

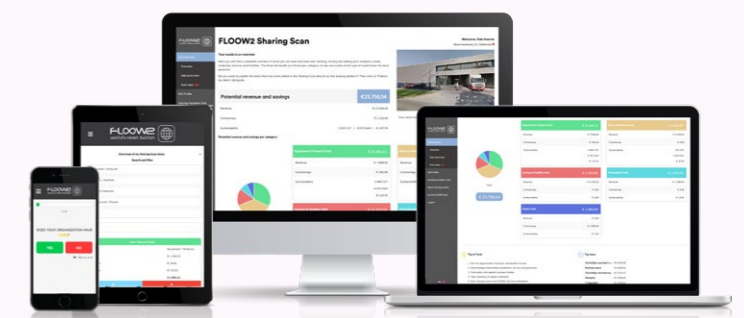
Digital social economy platforms are also used as means to offer specific **public services to beneficiaries**. They are used for the provision of supplementary support services to the primary activities of public agencies.

In April 2018, the UK Homelessness Reduction Act came into force, compelling the local authorities of the UK to prevent and relieve homelessness for young people. The Act has the potential to save lives, but implementation implies extra work for local authorities and currently in the UK there is still no official mechanism to collect data on youth homelessness, neither at the national nor at the local level. **Centrepoint collects relevant local information (and aggregates it to national scale), through the establishment of networks including volunteers and other organisations including governmental departments**. Such an important outcome could not be accomplished without the Centrepoint digital platform.

Digital social economy platforms can also help address local community needs by bringing together resources from outside the local communities over the Internet.

FLOW2 is a circular economy industry platform that enables companies, organisations, and government agencies to make use of overcapacity of idle assets, such as equipment, waste, materials, and services as well as to make the knowledge and skills of their personnel transparent and tradeable. They work together with **several business partners around the world**, from the UK, Belgium and Australia to Nigeria, Georgia and Scandinavia.

image © FLOW2



Individuals and communities can collaborate with other stakeholders **to reach unprecedented scales and scopes** including groups that are not geographically proximal.

Social Techno Srl is a social enterprise born from experiences of professionals and entrepreneurs committed for years in the field of technology and non-profit. Through the use of its digital platform it **promotes the computer culture and technological development of Italian non-profit organisations by enhancing synergies with for-profit IT companies**. It allows social economy actors to access innovation and exploit the advantages of an informed use of technology. As a member of the TechSoup Global Network, Social Techno acts as a hub among organisations that work for the progress and social change of their communities around the world, by leveraging and enhancing their capabilities and competences.



image © Paula Sgherza (@PaulaSgherza)

Digital social economy platforms create the positive conditions for social cohesion and may pave the way towards a transition to the digital social economy. Most importantly, they offer unprecedented opportunities for engagement and networking enabling the formation of virtual communities of not necessarily co-located individuals.

Digital platforms have transformative effects on *labour practices* since they have enabled the creation of new forms of work. Globally, for-profit enterprises increasingly use digital platforms to engage a workforce of independent contractors, activated 'virtually' through apps and working on their own account. Usually, they are paid on delivery and operate outside of the social security schemes of the enterprises

We collected evidence that social enterprises operating through digital platforms are particularly sensitive to the employment conditions of their workers. Social economy organisations are essentially human-centred and strive to achieve societal impact without affecting the rights and conditions of their workers. This is a key aspect of the digital social economy. Digital social economy platforms are particularly suited to enable flexible forms of employment, giving the workers options on deciding how to organise their jobs, lower the cost of production through the involvement of users and volunteers and safeguarding their working rights. **Digital platform cooperatives** are digital labour platforms controlled by workers allowing them to organise their productive effort balancing workers' needs for sustainable livelihoods. Within this technological and governance model, social economy principles and values – members' ownership and democratic governance – are enacted through digital technologies.

Regulation of platforms is a hot topic in policy. Regulation is needed to ensure that digital platforms are not being used to weaken workers' rights and at the same time allow enough room for innovation and social entrepreneurship. Digital platform regulations extend to digital social economy platforms and can have consequences in critical areas such as insurance schemes, social security, taxation and ownership and governance of data.

The possibility of digital platforms owned and governed by users is a great opportunity for the social economy. Users are enabled to build large-scale platforms, in economic terms, they may greatly benefit from economies of scale and network externalities, whilst retaining shared governance and control of their own data. Such platforms are moving some important steps in the social economy.

A digital social economy platform is completely different from a commercial one. The former is driven by the underlying values of the social economy, oriented to social impact, characterised by a participatory governance system and the business model is based on social economy ethical principles. Digital social economy platforms can be used to empower users, be they workers, associates or customers, to operate fairly and sustainably, to foster social capital development and to promote the creation of social value in communities.

*Dutch aWEARness has developed and currently utilises a Competent Content Management System (CCMS), to do **Circular Track and Trace: CCMS is a cloud data-based platform software program, where partners in the extended supply chain can share selected information related to the products they make.***

It is a proprietary system where all partners participate and disseminate information under the principle of transparency. The system also includes a portal where customers can buy products and other features to link supply chain partners and the government. Moreover, it incorporates tracking and tracing of each step in the supply chain (RFID chip, tags, recently invisible watermarks).



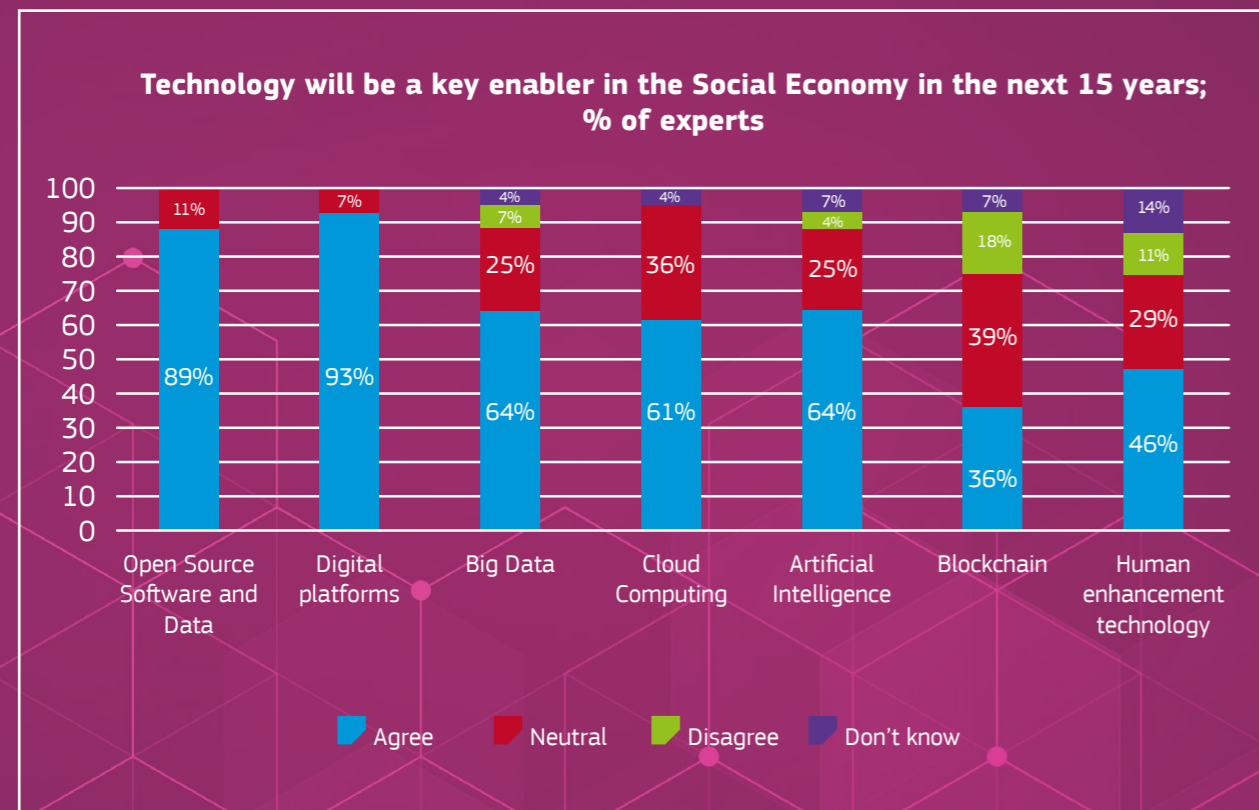
image © Dutch aWEARness

The implementation of a digital social platform may rely on open Application Programming Interface (API, the engine of a digital platform). Many such technologies are available as a service (i.e. Platform as a Service or PaaS) where an organisation may 'rent' cloud-based platform services, therefore avoiding initial investments in hardware (servers) and software (API). Also, there are many off-the-shelf options and specific applications may be easily plugged-in without particularly advanced coding skills ("no-code" software). There are also many open source options, which can be employed to enhance digital platform capabilities for e-commerce (OpenCart, Magento, PrestaShop amongst others), payment technologies (OmniPay, ActiveMerchant, etc.), GPS-enabled apps (OpenStreetMap), subscription management applications (OpenIAM), etc., which are compatible with most open APIs. It is possible to experiment and use already functioning code available on GitHub and other open source software repositories. Finally, increasingly no-coding software options are made available. These do not require particular coding skills and applications may be plugged in simply by *drag & drop*.

Tools for Digitisation

NEW / ADVANCED TECHNOLOGIES

The technology categories addressed in this study include: Open source technologies, Internet of Things (IoT), Distributed Ledger Technology (including Blockchain), Big Data, Cloud Computing and Artificial Intelligence.



Open-source may refer to software or hardware. Open-source software is a type of computer software in which source code is released under a license and the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose. This does not mean that open source is automatically "free", as often assumed. Still, access is usually not granted upon financial basis but rather on 'values' and 'conditions of use'. Open-source hardware consists of physical artefacts of technology designed and offered by those that develop them through the use of publicly shared design information. Open-source hardware is closely linked to the Maker movement and Do-It-Yourself community. The motivations for using Open Source technologies are certainly lower costs compared to their licensed versions. Users are not locked in contracts for updates. Because open source technologies are produced by a community of contributors, they are often linked to the core values of accessibility, transparency and (digital) commons. There are many repositories of open-source technologies including software and hardware blueprints such as GitHub, SourceForge and Beanstalk amongst others. Moreover, there are several use agreements such as software as a services (SaaS), Infrastructure as a service (IaaS), such as PaaS, seen above, that may facilitate access to digital technologies without heavy investments in digital technologies and may serve the digitalisation of the social economy well.

Internet of Things (IoT) is the virtual and physical environment wherein sensors and actuators blend seamlessly with the environment and the information is shared across platforms. The technology allows the development of a common operating picture. It is enabled by the wireless sensor technologies all around us. Examples of applications developed and used by social economy organisations may be found in health and social care, such as IoT applications for independent living of the elderly and frail people through for instance automated driving in wheelchairs, smart homes, smart villages and wearable sensors.

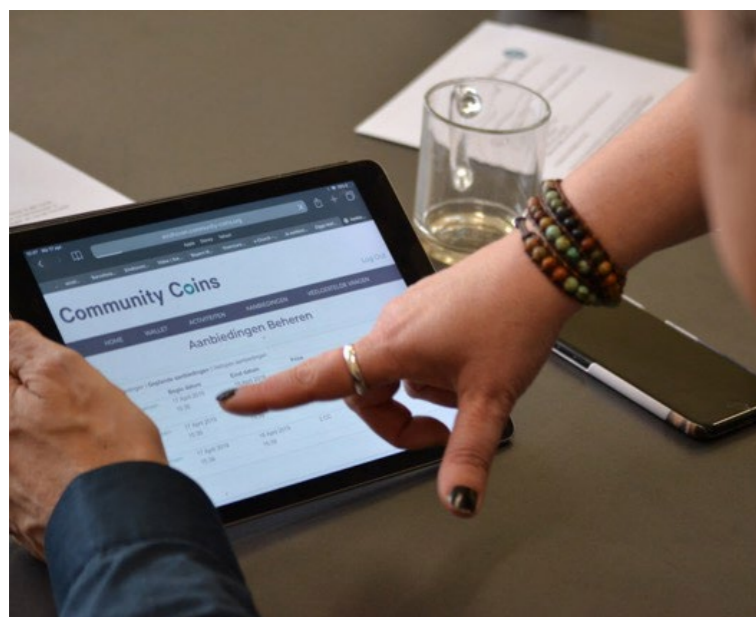
Commons Lab is a social cooperative utilising and developing open source technologies (both software and hardware). Its aim is to offer customised, adaptable, future-proof and unrestricted solutions while at the same time promote free sharing of knowledge and reinforcement of the commons and solidarity networks. IoT projects implemented include a bio-ink print head, a solar-powered insect guard for pest-control, a winery monitoring system, and a smart metering energy demo IoT.

Impact Institute's mission is to empower organisations and individuals to realise the impact economy. It does this by creating a "common language" for impact through the publication of open source standards and by providing the tools, training, and services to implement these standards.





Distributed Ledger Technology (DLT), including Blockchain are employed to record, validate and store securely transaction data and information including asset transactions and personal identifications. The technology refers to a system of electronic records enabling users to establish a consensus around a shared 'ledger'. Therefore, it does not rely on a central coordinator to provide the authoritative version of the records. DLTs and blockchain operate as data management technologies whereby true versions of the ledgers are shared across an interconnected network. The existence of many 'copies' of the records make DLTs and blockchain very secure. Moreover, governance and control of DLTs are not centralised but shared across various nodes of the network making the system 'resistant' to monopolistic behaviours. Other uses of DLTs and blockchain in the social economy include traceability and origin of products along the value chain.



Community Coins Eindhoven is an initiative of the Possible Today Foundation. The idea, originally inspired by a Greek initiative, is to **use blockchain to strengthen civil society initiatives in Eindhoven**. The founders of CCE did not have advanced coding skills; they sourced, tested and co-developed with researchers in Hull (UK) a blockchain application.

Other innovations are being developed through interactions with partners within the initiative. For example, an idea supported by the Fontys University of Applied Sciences consists in developing Social CVs, so that people can list in their CVs what they have done for their community, by integrating AI. This may be offered as a new service to volunteers. New ideas for social economy initiatives to be developed on the platform will likely come from the Eindhoven community.

Artificial Intelligence (AI) refers to the computational, inferential and learning ability of digital tools (machines) to process, interpret and act upon data and information in a manner similar to humans. The very 'cognitive' functions of AI, digital tools that can learn and solve problems autonomously, implies that the technology can integrate meaningfully within a technological infrastructure such as a digital platform. This aspect is particularly conducive of new uses of the technology to solve societal problems in new ways. Examples of uses of AI for social good are increasingly emerging, spanning from crisis response, financial inclusion, education, health and social care.

"We also work with a company from Silicon Valley in the US that helps us with self-learning algorithms that can learn to predict when some severely disabled people that have mental abilities of a 2 years old, can develop seemingly out of the blue aggressive behaviour, that can then be prevented".
Academy het Dorp



Innovation in the social economy is based on entrepreneurial discovery and learning-by-doing rather than on scientific discovery. Therefore, it is necessary that the social economy has access to such technologies at an early stage and experiment before these are 'mainstreamed' through the traditional market logic into dominant designs and monopolies that do not fit the purposes and values of the social economy.

"We don't want to see a new elite emerging, of people who are familiar with the new technologies and end up excluding others from the economy and the market".
EESC 2019, public hearing 'Blockchain: technology for the social economy 4.0'

At the 2017 edition of **Hack4SmartServices** at Brightlands Smart Services Campus in Heerlen (NL), **ConSense** won the first prize for their data exchange platform offering solutions for health problems, including a community linked to this platform for both patients and doctors. The platform is based on big data and blockchain technology to guarantee the security and privacy of the users.

Big data are voluminous amounts of structured and unstructured data. The potential value of big data is unlocked only when leveraged to drive the decision-making process. Data management applications and analytics (Big Data Analytics) are therefore necessary to trawl through the data to obtain meaningful information and intelligence. Big data analytics in medicine and healthcare for instance, covers integration and analysis of large amounts of complex heterogeneous data, such as genomics, biomedical and electronic health records data. Challenging issues of big data that are often underlined include privacy and security.

It is important that the opportunities and challenges of advanced technologies are discussed at an early stage of development with the stakeholders of the social economy and society at large. Specific research on the interplay of technologies and citizens/society is key. Several pioneering organisations are active in this field. They paved the way for online presence of communities researching and developing technology for the common good such as WAAG, La Coop des Communs, SOGA, SMart, Simplan, Nesta, P2P Foundation and many more. They are often linked to a digital commons community.

Waag studies emerging technologies as instruments of social change. As pioneers they move with the technological frontier, rather than maturing and producing technology themselves. This is done through spin-offs, like Fairphone, an ethical modular mobile phone. Currently, Waag is exploring the opportunities and challenges of quantum computing.



Conclusions and Recommendations

The social economy is a key player in modernising society and a modern social economy has the potential to yield important advantages. Its modernisation would mean a social economy fit for the digital knowledge society.

Social economy organisations should set out their digital strategy by integrating offline activities and face-to-face interactions, to address the needs of those who are not connected or cannot connect digitally.

Social economy organisations "should carefully select the digital tool(s) to exploit as they must be properly adjusted to their needs and more importantly to the needs and characteristics of their beneficiaries - 'keep-it-simple' principle"
(Cit. Workshop Participant)

The **social economy is a key player in modern society** and a modern social economy has the potential to yield important advantages. Its modernisation would mean a social economy fit for the digital knowledge economy. The social economy may become an attractive career option for tech-savvy digital natives, who may find employment, entrepreneurial opportunities and can contribute to its innovativeness.

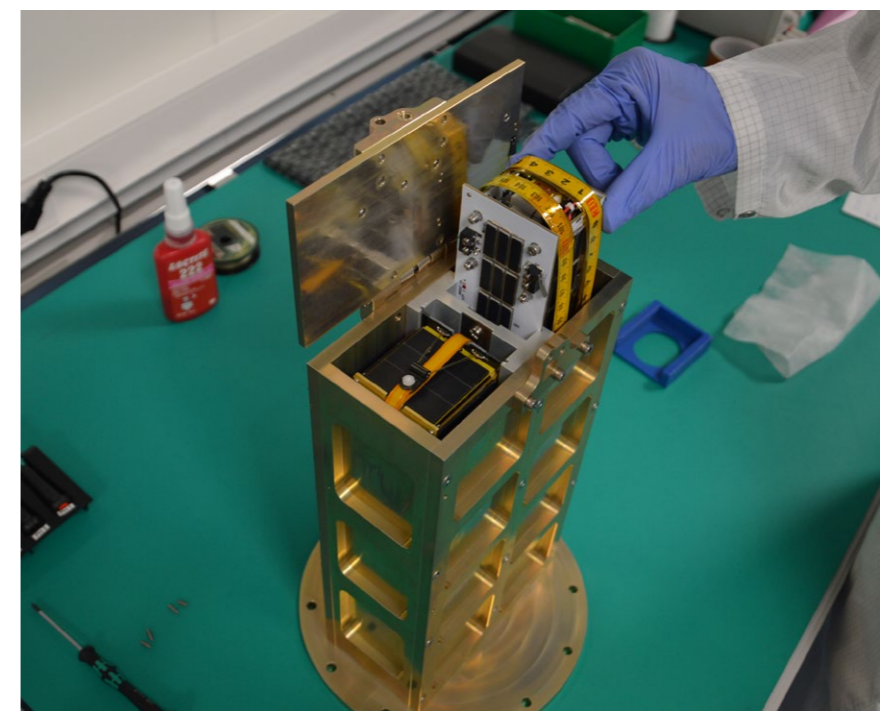
The social economy will have to eventually move towards "using digital tools one way or another"
(Cit. Workshop Participant)

European-wide institutions should support and spearhead initiatives that open new ways for the digitalisation of the social economy, providing harmonisation of national contexts, visibility and support for the social economy. We show that countries have unique social economy histories and traditions. **Member States** should provide harmonised regulations and institutional support for the creation of a friendly social economy ecosystem, provide suitable digital infrastructure such as connectivity through high-speed broadband and new generation wireless technologies (WiFi, 4G and 5G). They should enable new approaches to social and societal impact favouring the application of digital technologies in the social economy. **Local governments** should take up a leadership role and act as a community manager. They have direct experience of local social needs, of budget constraints and insights into social impact models to foster local community welfare. They can bring the right partners together locally. Innovative SMEs with available technology (such as 3D printers, labs, IT infrastructure) can open their spaces for social enterprises and schools to run common research projects besides normal day-to-day activities or even promote joint investments in technology.

For **digital social economy platforms**, the key areas identified and discussed in the study that should be addressed via policy action at EU, national, regional levels, involve: the **regulation** of digital platforms, the design of solutions able to **address local social and societal problems via the use of international resources** and the promotion of testing and experimenting with **ethical and sustainable practices**.

Advanced technologies considered in this study rather than being used in isolation, as they often overlap, should complement and enable each other. This is especially true when they are integrated on digital platforms.

The expectations for **Open Source technology** as future enabler in the social economy are very high. The philosophy of open source and open source communities fit very well with the values and principles of the social economy. Investments in research and development of Open Source software and hardware have a high public or social return and a low private return. As a consequence, this constitutes a strong rationale for public subsidy for development of open source technology especially considering that these investments will generate efficiency gains and a win-win for many state-supported (social) services.

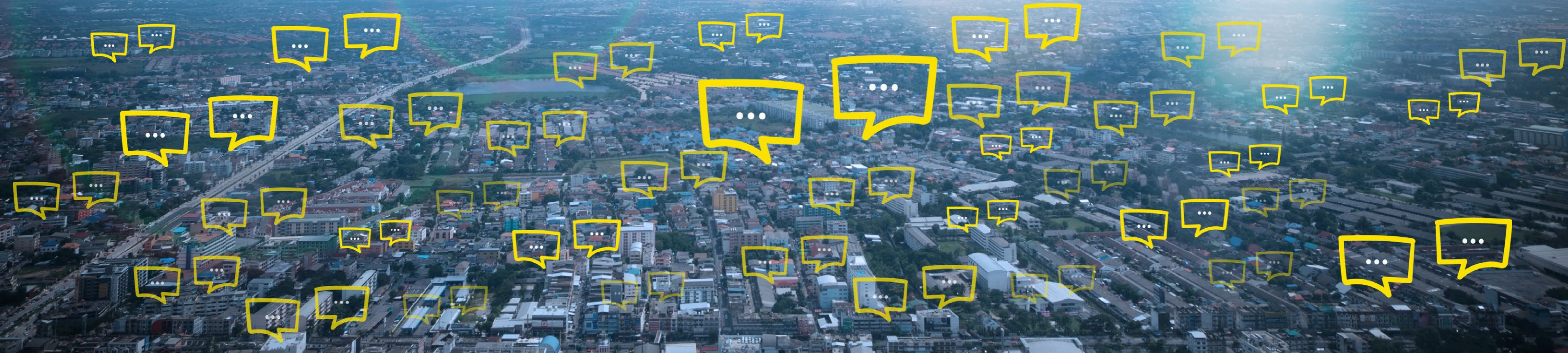


Promoting open source is firmly rooted in the missions of many of our case studies (Libre Space Foundation, P2P Lab, La Scuola Open Source). There are also publicly funded initiatives involving students, education and public research institutes in the development of Open technologies.

An example is the public hearing 'Blockchain: technology for the social economy 4.0' organised by the European Economic and Social Committee (EESC) on 29 May 2019 where opportunities and challenges for the social economy have been discussed from different angles: research, social economy start-ups, trade union, lab's, the European Commission and the European BlockTech Federation.

[See link here](#)

Recently, **Distributed Ledger Technologies** emerged with a broad range of applications in the social economy. Stakeholders organise events (or platforms, such as the Dutch Blockchain coalition) to raise awareness, identify stakeholders, map the ecosystem, discuss opportunities and challenges, demonstrate use-cases, suggest policy initiatives and update regulations.



Despite the advantages, overuse or misuse of **Artificial Intelligence** has shown negative consequences as well, especially in terms of reducing human control. The social economy is more sensitive about such risks, more so in cases where there is no regulation, because it could be counterproductive in generating social impact. On the other hand, fear, ignorance, misplaced concerns, or excessive reaction may lead society to underuse AI technologies, which translates into societal opportunity costs.

Initiatives promoting good use of AI includes 'AI for Good', a global initiative involving the European AI ecosystem in contributing to positive impact projects through AI. The aim is to put AI at the service of social innovation to support the digital transformation of the humanitarian field and find concrete solutions to the pressing modern humanitarian issues.

AI for Good operates in the fields of environment, health and education. Activities include events where teams can pitch AI solutions. The AI for Good lab consists of spaces where people meet to develop prototype solutions. It is recommended to set up similar initiatives at national level.
[See link here](#)

Unlocking resources for the social economy

The digitalisation of the social economy requires **two important resource streams** besides philanthropic donations: income from the social and societal activities to reinvest in a digital strategy, and resources for Research and Innovation (R&I) to experiment and develop technological solutions.

An increasing number of digital social economy start-ups 'think digitally first' and provide interesting digital social value propositions. However, in many areas of the social economy, for example in social services and in deprived areas, the revenue of established organisations may not suffice for technology investments. In these contexts, the public administration, government and public authorities remain the biggest source of (social) innovation capital. **Innovation procurement** may be used for two purposes: 1) to procure or fund digital social innovation projects where technologies are developed and applied to respond to social and societal needs and 2) introduce digital social clauses in procurement procedures, e.g. include digital accessibility and social impact requirements elements.

Innovation procurement should include clear objectives targeting the digital transformation of the social economy (i.e. fund digital social innovation projects) and refer to specific advanced digital technologies, their combination and applications to foster social impact through promoting accessibility and digital inclusiveness. Preference in commissioning should be accorded to open technological applications and released under open source licensing.

In innovation procurement involving social services, the terms of the contracts should include platform-type relationships, a secure digital data management plan (using DLTs) and shared (secure) archives on the cloud.

The establishment of **Social-Public-Private Partnerships** or consortia, including members from the government, the for-profit sector and social economy organisations, can be enablers of digital social business activities. They involve direct social economy organisation in the provision of social and societal services and may constitute an important source of revenue for the social economy.

The Scottish Government is engaged in 6 such strategic partnerships investing some £3.5 mil from 2012 to 2018. These have been employed to redesign social services and their delivery in key strategic areas, such as mitigate the chances of reoffending, local/community transport partnerships, in health & social care, lifelong learning for adults with learning disabilities and recovery from substance abuse.

[see link here](#)

Other forms of public support may leverage capabilities already available in the local economy. This is accomplished by establishing incentive programs to help *pro-bono* social economy enterprises to implement a digital strategy, through coaching (specific digital capacity building support) and the provision of digital technologies or by providing tax incentives for transferring digital technologies and expertise from the private sector to the social economy in the form of **technology transfer of software solutions or on-the-job training**.

In France, the legislation on Mécénat de Compétences provides up to 60% tax incentive to private companies that "lend" (for free) their staff and dismissed ICT equipment to social enterprises. By doing so, private companies transfer their knowledge through their employees to the social enterprises providing exceptional resources for digitisation.

[see link here](#)

Experimenting and developing digital technology solutions for the social economy is critical for the modernisation of the social economy. **The European Union** is investing greatly in Research and Innovation (R&I) and several initiatives at the European level involve actions, which have direct relevance for the social economy, however not always taking stock of their specific characteristics in the design or eligibility (for example on the basis of legal form). **The EU should boost active measures of inclusion for social economy organisations in R&I and engage the social economy in those technological areas (digital platforms and advanced technologies) that may contribute to its modernisation and achieve social and societal impact.** It is key to make sure that the access for social economy to these resources is not hindered.

Additionally, R&I programmes should provide follow-on funds for piloting/ prototyping, testing and deployment of technologies for social good. Implementing follow-on activities with earmarked resources may provide the necessary financial support underpinning a successful exploitation strategy and creating the pre-condition for valuable social and societal impact

The Horizon Europe programme, which begins in 2021, has earmarked some €100Bn for research and innovation. Critical areas supported by the Horizon Europe Programme overlap with key social and societal challenges such as building an inclusive society, climate change, social transformation and the environment, energy & sustainability.



Establishing or strengthening European, national and local **prize competitions, capacity building and partnership events** for social economy enterprises may be used to validate different aspects of the social enterprise or its digital/social strategy and provide an important signal for social investors.

The European Social Innovation Challenge has been ongoing since 2013.

Wheeliz, a platform for sharing cars adapted for drivers with disabilities was one of the winners of 2015. Two years later, it raised €1mil in investments from two national investors (one operating in Insurance and another in Transport).

National efforts may leverage specific SBRI-types programmes, which have been revealed to be very efficient public investments for the development of specific applied technologies and particularly effective to bring new innovations to market in many Member States. **Digital social economy organisations should be involved in such programmes and if necessary, SBRI-type initiatives should target digital social innovation.** Partnerships may be encouraged in order to obtain maximum leverage for the development and scale up of digital solutions.

SBRI are public Small Business Research and Innovation investments assigned competitively to strategic technology and innovation projects carried out by small business. The schemes are particularly well suited for social economy innovators since they support social and societal challenges, environment, energy & sustainability and social security.

At the **local level**, hackathons and bootcamps, hands-on demonstrations and open lab spaces are relatively new sources of R&I activities in the social economy. **The EU should seek ways to introduce these practices in other cities and regions as well.** The monetary investments to develop hackathons and bootcamp initiatives, including local technology pilots, are usually rather limited but these are extremely effective to spur local engagement. They are particularly efficient in recombining, trying and testing, on the field, advanced digital technologies. **Hackathons, Bootcamps, and other hands-on tinkering, experimenting and demonstrations activities should be sustained and encouraged.** It is necessary to stimulate a permanent local culture of innovation and technological development. This can be achieved by establishing long-term specific partnerships between governments, innovation & research agencies, education, SMEs, civil society organisations operating in common/open physical spaced for the development of local social MakerSpaces and FabLabs. Ultimately, it is important to generate economies of scale by bringing investors on board.

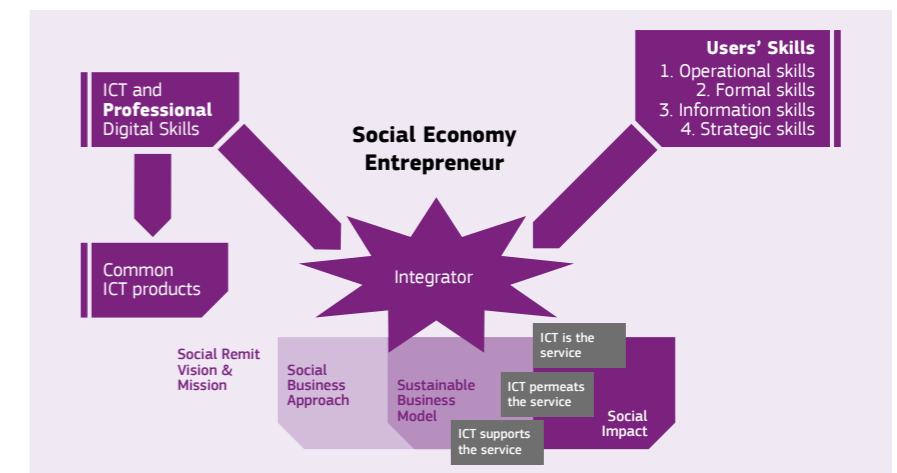
4P DIH, involving the University of Ljubljana, Interreg and the local Digital Innovation Hub managed to grow an impressive network of 91 partners including about 30 FabLabs distributed across Slovenia, 1 mobile FabBox and rural-urban linkages.

[see link here](#)

Digital Innovation Hubs, operating at the local level may be involved more actively in supporting the agenda of the digital transformation of the social economy. **Regional and local authorities should engage in national and European programmes promoting digital social innovation initiatives at the local level.** Too often social innovation is considered separate from technological innovation. DIH should be organised in a more decentralised way and promote civic tech partnerships locally. In doing so, central advanced technology knowledge of a DIH should find its way to small cities and rural communities. Together with appropriate infrastructure, this will generate local economic and social impact through digital uptake.

Education and Training: Building up the skills of the digital social economy

Skills, education and training present rather complex issues spanning several domains, including digital infrastructure, ICT and professional digital competences, social economy labour relationships and user skills. **Digital social economy entrepreneurship skills involve a blended set of varied skills ranging from entrepreneurship, the social economy and digital competences integrated in the design and operations of a digital social economy business model.**



One of the most important policy objectives is to provide the framework conditions for a digital social economy by **'developing and nurturing a tech-friendly environment for social economy entrepreneurship'**. This includes an adequate level of digital infrastructure, access to technologies such as open Application Programming Interfaces (the engine of digital platforms), open source software/hardware and other advanced technologies, management, strategic and other soft skills for social entrepreneurs.

"The EU is lagging behind China and the US in many high-tech sectors, including training for tech-enabled applications in manufacturing and services and many talents are currently migrating to these countries. Europe has a long tradition in welfare state institutions, policies and organisations on the ground with a wealth of practical knowledge of social intervention and this advantage may be capitalised on through technical, management and leadership skill upgrade through an EU-wide upskilling agenda".

(Cit. Workshop Participant)

A tech-savvy approach to the digitalisation of the social economy includes training programmes for (digital) social entrepreneurs, to enhance the digital skills of social entrepreneurs and promote socially oriented business training.

Education and training are critical barriers to the digital transformation of the social economy. Social economy entrepreneurs often lack awareness, understanding and access to the skills to integrate digital technologies/tools in their operations.

At the EU level, digital skills are very high in the policy agenda and there are several initiatives already in place.

*Initiatives such as the **New Skills Agenda for Europe** and the **Digital Skills and Jobs Coalition** have the ambition to develop a comprehensive education and training framework aimed at a digital social economy fit for the 21st century.*

Based upon the positive experience gained during the development of the Digital Competence Framework (DigiComp), the Entrepreneurship Competence Framework (EntreComp) and the positive outcomes and impact they are achieving, **the EU should commit to a 'DigiSEComp' (Digital Social Economy Competence Framework) to develop the skills and competences of the Digital Social Economy.**

The higher education sector has an important role to play in the digital transformation of the social economy.

In several universities, for example the University of Trento and the University of Bologna, (IT), there have historically been departments researching and delivering courses on social economy issues. Social innovation subjects, such as digital social innovation, are being developed and obtaining increasing success with social economy organisations and social entrepreneurs.

There are numerous programmes including undergraduate and graduate courses, executive and further education programmes engaged in training and education for the social economy. The offer extends to learning programmes and academic research activities including social entrepreneurship, digital technologies for the social economy, often with the participation of incubators and accelerators.

National governments should encourage federations of national research centres and universities to conduct **research and training for social good**. Also, start-ups and established social economy organisation should be encouraged to **join training opportunities through training and innovation vouchers**.

Local authorities should endeavour to work with schools, universities, clusters, local technology incubators and accelerators and other instituted organisations to **promote and provide incentives for the integration of social economy start-ups in existing technology and innovation incubators**.

*In 2012 Universities UK, the association of UK Universities, began to deliver on its strategy "**University Enabling Social Enterprise – Delivering benefits for all**" in order to enhance graduate employability, enterprise growth and community benefits. Recently a group of 14 Universities in the Netherlands coalesced around a similar strategy positioning digitalisation and new technologies research for the social economy up in their agenda.*

Manchester Science Park caters to more than 300 science and technology start-ups including several Community of Interest Companies (CIC) in their incubators/accelerators. One, Blockchainers CIC founded by a former MSc Entrepreneurship graduate is focusing on blockchain development and training. Another example is the award-winning Keep on Keep up, founded by two academics of the University of Manchester and the Manchester Metropolitan University, focusing of gamification and new technology applications for active and healthy ageing and fall prevention.

Fostering a collaborative digital social economy

Policymakers and the social economy should exploit the enabling features of collaborations. Through collaborations, social entrepreneurs and organisations can work towards specific tasks that each alone would not be able to tackle. Collaborations also spur shared learning. During collaborative work, each party may learn from their peers.

Collaborations with other social economy organisations and social enterprises that share the same values are fundamental for successfully addressing social needs in a wider context. These collaborations may be undertaken within associations of social economy organisations and may be European-wide or national. Social Enterprise UK and Lega Coop or ConfCoop in Italy periodically organise collaborative events.

The creation of clusters of social economy enterprises will facilitate the exchange of expertise for the calibration of technologies to user and beneficiary needs and to co-develop/co-implement business models, to achieve economies of scale.

Social economy organisations may engage in collaborations with other **organisations outside the social economy**. These typically include governmental agencies and for-profit companies. Collaborations between social economy and for-profit organisations may provide ample space for learning in a fast-paced digital world.

Larger scale initiatives may create opportunities and incentives to engage in multi-stakeholder collaborations for EU R&I projects or private R&I collaborations. For example, the European Commission is promoting the Social Economy action under the Smart Specialisation Platform. JRC's Smart Specialisation Platform for the Social Economy aims to stimulate cross-border partnerships so that the social economy may make good use of the single market. One of the priorities of such action is the promotion of social economy clusters to face the fragmentation of the social economy, by creating a European value chain.

Critical to a successful digitalisation strategy is the **direct involvement of members, users, consumers or groups of beneficiaries**. They inform the social economy on the digital behaviours and skills of the counterpart. Users should be involved in the digital strategy to engage more effectively.

*Energia Positiva in Italy and Electra Energy in Greece show that digital platforms and integrated advanced technologies, such as blockchain can originate from a shared and open design process and reflect user-centric principles. **Direct involvements of users early on in the process helps generate invaluable insights into design and implementation of community digital applications.***



Laws and regulations for the European social economy

Advanced technologies developed by and for the business economy may not be directly transferable to social economy applications. Social economy organisations use digital platforms and advanced technologies in accordance with the principles and values of the social economy, such as inclusiveness, democratic governance (including data sovereignty) and generally, not to extract profits. This aspect implies that ethical and regulatory issues may affect the uptake of new technologies by the social economy. **Exploring new regulations may be conducive to digital social innovation** emerging from the use of digital social platforms and advanced technologies (from AI to DLTs).

The EU and national governments should promote desirable regulatory solutions by conducting ex-ante constructive technology assessments and/or ex-post regulation evaluations. These shall include monitoring and evaluation of the social impact of technologies. Creating specific targets and non-financial criteria might help to make social tech more visible, certainly when the EU plays a procuring role.



Policy makers should also consider introducing **regulatory sandboxes** to co-draft regulations with stakeholders balancing business models and societal outcomes. **Through sandboxes, regulatory bodies, social economy organisations and technology developers may learn and improve on the ways and modes technology may be developed and deployed for the common good.**

Sandboxes are tools, where regulators try out new regulations in collaboration with the interested party of the social economy. This regulatory tool proved to be adequate to test out regulatory and societal consequences of innovative business models before they had been implemented in society



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