

POSITION PAPER

Towards Social Innovation Ecosystems: From linear pairwise forms of interaction to common purpose-driven networks for shared prosperity

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INTRODUCTION

This paper contributes to a Strategic Research and Innovation Agenda for Social Innovation Ecosystems in Europe. It is the result of a shared reflection about the nature, characteristics and evolution of social innovation ecosystems as an emerging phenomenon. It presents the main messages resulting from the round table panel on Ecosystems of Social Innovation that took place in Dortmund in October 2019 at the *5th Global Research Conference: Social Innovation and Socio-Digital Transformation* organised by the European School of Social Innovation (ESSI).


An international multi-stakeholder group composed of ten renowned experts (academics, policy makers and practitioners) discussed the following questions:

1. What are social innovation ecosystems?
2. What is the link between social innovation ecosystems, as an emerging phenomenon, and conventional innovation systems?
3. How are social innovation ecosystems impacting digital transformation and vice versa?
4. How are innovation policies being influenced by these emerging ecosystems and what could their impact be in the EU's next Horizon Europe framework programme?
5. What could be the future of social innovation ecosystems at global scale?

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Rapidly changing digital technologies, in particular the growing influence of artificial intelligence (AI) on science and society, and the growing influence of social media as a medium for output and communication will play a key role in:

- enabling new forms of information, interaction and relationship (i.e. interactive platforms, remote workforce, distance learning) that are already deeply changing the way in which we build communities;
- influencing policies (citizen science);
- raising research questions (impact driven, open science);
- innovation (disruptive technologies, collaborative innovation);
- understanding work and jobs, etc.

These technological innovations are becoming part of our daily lives and are an important driver for social innovation. However, the knowledge to properly address their consequences on society is limited, and is sometimes ignored. That is why these ecosystems are of the utmost importance.

The European Union's innovation policy has started to recognise the need for social innovation in the current Horizon 2020 Research and Innovation Framework Programme (2014-2020); and this trend seems likely to continue in the upcoming Horizon Europe Framework Programme, especially in the context of the missions and lighthouse components of the programme. To support this trend, there is a substantial need for a more coordinated, more inclusive approach based on high level research on ecosystems. Examples of innovative initiatives regarding social innovation and ecosystems are [ESSI – European School of Social Innovation](#), [EnoLL – European Network of Living Labs](#), [SIC – Social Innovation Community](#) and [All Digital – All Digital Enhancing Digital Skills Europe](#). They form part of a large social innovation community which is working on a number of relevant topics, including a relatively new challenge to organise new digital social innovation ecosystems.

This aligns with new Commissioner Ursula von der Leyen's political priority of 'an economy that works for people' and the upcoming mission-oriented Horizon Europe, in itself a co-creation exercise with online consultation that cast a wide net over all EU citizens to define its implementation strategy. **We need, and can build, a European strategic research and innovation agenda on social innovation ecosystems as part of the general EU innovation strategy for the 2021-2027 period⁴.**

⁴ As a reference see the Strategic Research and Innovation Agenda by VINNOVA "An Ecosystem for Social Innovation in Sweden", <https://muep.mau.se/bitstream/handle/2043/18345/An%20Ecosystem%20for%20Social%20Innovation-final.pdf?sequence=2>

KEY MESSAGES

1. We are in the middle of a new wave of digital technology, centred on digital data and Artificial Intelligence (AI) in which all countries, including EU Member States, have embarked on a race to design and build new AI data-based systems. Innovation is mostly seen from an entrepreneurship and business perspective and the future of industry (industry 4.0) depends on it. However, **every new wave of digital technology needs a new wave of social technology and of social innovation to really transform the full economy and society for the benefit of all.**
2. Accordingly, it is crucial **that the European Union sets up a social innovation strategy** to deal with the social challenges that this new wave of technology may usher in. The challenges defined in Horizon Europe are mainly social challenges that would benefit from a clear social innovation strategy in the EU.
3. **R&I systems and the services of our welfare states face critical challenges, beginning with the future of employment.** Employment, which lies at the core of the new social innovation ecosystems, is a major global issue that can shift the balance of our social market economies. EU workforce training must therefore include social innovation skills, and must cover economic, industrial, social, education and other policies.
4. **A major challenge for these ecosystems is how to integrate social innovation into ALL EU programmes and initiatives, from Research and Innovation to the European Social Fund, Structural Funds and Regional Innovation Strategies.**
5. **A multi-level approach is proposed for all EU community programmes:** not as an additional, parallel stream but as an integrated dimension in R&I programmes. Such integration is required at disciplinary level (interdisciplinary) and in terms of stakeholder co-design (transdisciplinary or intersectoral collaboration).
 - **Interdisciplinarity as a means of addressing societal challenges is increasingly recognised as a crucial dimension of ALL research and innovation initiatives,** but R&I systems and infrastructures, including their governance, are not yet aligned with this trend. There is a need for a radically different way of setting research agendas and of conducting research in collaboration with other disciplines and expertise outside academia: different allocation of roles (between civil society, government, academia and industry); different allocation of resources; different territorial (physical and virtual) patterns of R&I efforts.
 - **Intersectoral/transdisciplinary collaboration as a means of interconnecting diverse stakeholders in a globalised world.** The ability for mutual learning (learning social innovation ecosystems) will boost the possible outcomes of digitalisation, together with social and technological innovations. In this, a wide range of actors (business, authorities, universities, etc.) will have to develop modes of interaction, cooperation and collaboration. They will also have to develop mutual learning abilities, which will enable different interests, methodological approaches, or even worldviews to be attuned.

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- **In the long term, social innovation ecosystems will remain a kind of space for experimentation where new solutions to various social problems can be debated and co-created.** Working with a theory-of-change model, or any other tool, will help a) to develop smart, sustainable solutions for large and smaller challenges; and b) to overcome the fragmentation, individualism and consumerism that play against the current possibilities of accelerated change.
6. **Social innovation ecosystems have the potential to balance the competition and collaboration⁵ needed for more inclusive, sustainable human, environmental and socio-economic development for the common good, in alignment with the 2030 global agenda.** There is a need to make SDGs more transversal and integrate them throughout the curriculum, research and innovation initiatives, rethinking the role of the different stakeholders in the achievement of SDGs.

⁵ With international, interdisciplinary and intersectoral (or transdisciplinary) collaboration preferred to competition to maximise the possibilities of digitalisation and socio-technological innovations.

1. What are social innovation ecosystems?

Social innovation ecosystems are, in general terms, collaborative and enabling environments for the development of new arrangements in the social, cultural and/or economic spheres of society. They include the supply and demand sides and intermediaries to develop and scale innovations. The actors in the social ecosystem develop, disseminate and utilise innovation by targeting social issues or needs (Fulgencio & Le Fever, 2016a, p. 1).

Social innovation ecosystems are made up of a combination of actors from different sectors and environments of society, each with its legal and cultural norms, supportive infrastructures, links with others, driving forces and rules. To create such ecosystems, engagement of different stakeholders is essential to provide a coordinated response to an identified social challenge or to solve complex social problems in an innovative, systemic way.

This means a combination of the following elements: dialogue, a common understanding of the challenges, planning, prioritising and coordinating of responses, the use of efforts and resources and/or a common definition of the vision, values and principles governing achievements. Methods such as the theory of change can be used to work out ideas and perspectives on social innovation.

The Four Helix model, or better following Leydesdorff, N-tuple models (Leydesdorff, 2012), can inform the design of such complex communities consisting of people from academia, politics, business, the general public and their organisations working for a common goal, preferably in the context of the UN Sustainable Development Goals.

What is needed is a new level of social solidarity⁶ and collaboration transiting from linear pairwise forms of interaction to the formation of large-scale networks (so-called “spiral models” with many actors: business, universities, public authorities, civil society, etc. involved). When based on citizen-led needs and driven by open, transparent, common mindsets, social innovation ecosystems encourage mutually beneficial cooperation and new co-designed multi-stakeholder solutions to societal challenges emerge.

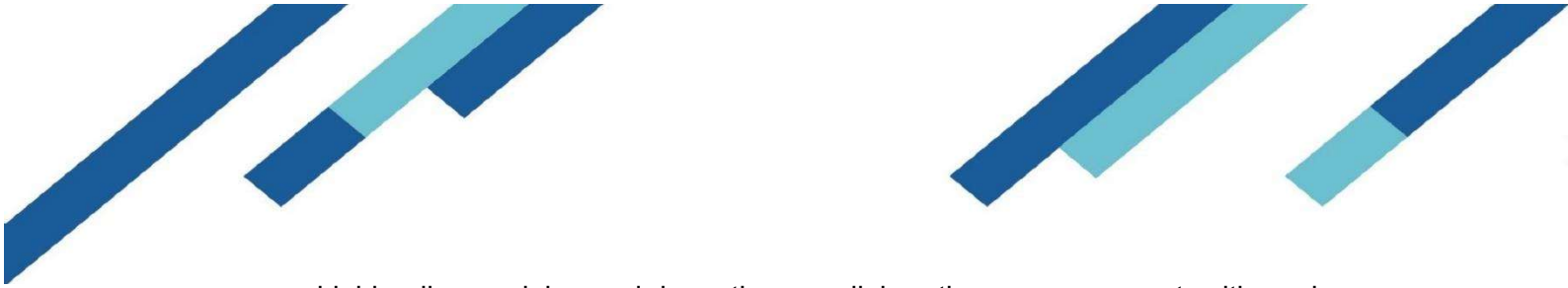
The confluence of social innovation and digitalisation offers responses to critical social issues such as unemployment, reskilling and social cohesion. It is therefore of the utmost importance that the benefits of the digital revolution are embraced in order to address and tackle societal challenges, taking the SDGs as shared targets. This calls for the coordinated effort of many social actors.

When designing the processes of change, a key point is bringing together people from the fields of economics, society, technology and arts and culture to generate impact, new disciplines and research fields⁷. Examples of such research project for new social innovation ecosystems include the following:

- the Catlabs programme and network (<http://catlabs.cat/>), which is evolving into a new project called "Col.laboratories 1.0" in the region of Catalonia in Spain. Catlabs initially focused on coordination and synergies between new grassroots structures. These included the economic and social fabric of the country involved in the innovation processes under the structure of the quadruple helix. "Col.laboratoris 1.0" focuses on the design of a lab comprising local labs, universities and businesses. The initial prototype in the southern part of Catalonia attests to the cross-synergies that can be generated between communities with

⁶ Social Solidarity is understood in a broad sense here (not only in the context of charity).

⁷ These emerge as a result of inter- and transdisciplinary collaboration.



highly diverse labs and how these collaborations can connect with major challenges and European and global missions.

- In Sweden, the Forum for Social Innovation⁸ plays an important role in the ecosystem for social innovation by developing and disseminating knowledge and acting as a meeting place for actors who are interested or actively involved in social innovation, social entrepreneurship and/or social business. The Forum for Social Innovation is being rolled out across the country, hosted by six universities, with the goal of scaling up and empowering knowledge creation and sharing on social innovation. It also contributes to the goal of promoting social innovation and social entrepreneurship to become a societal force for attaining the 2030 SDGs;
- In the Basque Country, Spain, there are initiatives such as 'the glocal.network' (<https://theglocal.network/>), a learning and collaborative digital platform developed by URBEGI, a highly socially committed company. Based on a smart working environment for knowledge, expertise sharing and community building, it promotes collaboration and participation in each community, where valuable projects and actions will be generated for individual and collective benefit. It generates and energises communities, defines objectives, develops and plans tasks in collaboration and in instant communication within teams;
- In the Netherlands, the Dutch National Science Agenda is an attempt to create a new collaborative structure between science and society: <https://wetenschapsagenda.nl/publicatie/engelstalige-investeringsagenda/?lang=en>

Summing up, Social Innovation Ecosystems are pertinent because they:

- provide knowledge, research and meeting places that meet the requirements of social policy in response to the demands of society;
- offer sound networks able to create and back social innovation, blending different actors and public-private partnerships with various needs, goals and diverse voices, cultures and backgrounds;
- develop co-creation and participatory work methodologies that can support all stakeholders so as to better understand, identify and seek solutions within these ecosystems through social innovation;
- develop openness, continuity, empowerment, experimentation, evaluation and measurement of impact;
- are able to channel private and public funding and create a market; and
- foster capacity building among all actors involved.

⁸ Partly funded by Vinnova, Sweden's Innovation Agency.

2. What is the link between social innovation ecosystems, as an emerging phenomenon, and conventional innovation systems?

Ecosystems are a natural evolution in dynamic and changing contexts throughout history. Conventional innovation systems are also examined through the prism of ecosystems, which is an acknowledged approach at various levels of social organisation (national, regional, corporate, etc.). Nonetheless, the main aim of this debate⁹ is to understand the distinctive features of social innovation ecosystems in relation to innovation ecosystems in general.

Broadly speaking, conventional industrial systems and their innovation models are focused mainly on economic issues, driven as they are by competitiveness and economic gains, as major actors in regulated economies in sustaining the welfare system by paying taxes, creating employment, generating regional development, boosting the economy, etc. Moreover, enterprise hubs and start-up-industry-led systems are mainly based on business and technology, industry and smart city thinking, with policy generally driven by top-down approaches.

Certain aspects of competitiveness have been proven to be, to some extent, obsolete and unsustainable. A case in point is a restrictive vision of competitiveness based almost exclusively on profit making, which is at the basis of increasingly unfair economic systems with more wealth concentrated in fewer hands and poverty killing thousands every day (*Inequality in Asia and the Pacific in the era of the 2030 Agenda for Sustainable Development* | United Nations ESCAP, n.d., pp. 62–75). To prevent social issues from being relegated to a position as the poor relative of the “market”, these conventional perspectives have been evolving for some years and have integrated aspects of social corporate responsibility or SDGs into their agendas.


However, there is a long way to go. Given that profit (and other benefits that increase competitiveness) is not the main target, one of the main differences is the underlying narrative for development, which is more inclusive and socially oriented.

A second big difference is the level of integration between stakeholders: in theory, it is much higher than in conventional innovation systems. Social innovations have some degree of influence on actors' behaviour in terms of the composition, motivation and roles of participants in the innovation process. Conventional innovation systems are described in terms of a triple helix, while social innovation ecosystems refer to Penta or N-helix¹⁰, involving the non-profit sector and citizens to help solve serious problems.

Various studies of social innovation, e.g. the one carried out by Vinnova (Swedish Innovation Agency), point to the ability of social innovation to find solutions to different societal challenges by absorbing ideas and innovation from society as a whole. This can seldom be done within the framework of conventional research and innovation approaches. The government's strategy on social business in Sweden is an effort by the public sector to contribute to and facilitate the efforts to innovate in society. This strategy sets out long-term goals for cooperation with all actors in the ecosystem to maximise the potential of each initiative, drawn up with different stakeholders from the public, private and idea-based sectors. Initiatives from different policy areas are thus coordinated to ensure that they reinforce each other and work for a bigger goal. For example, measurement of effects is often a prerequisite for creating long-term business models and to be able to attract capital and business (Regeringskansliet, 2018, p. 6).

⁹ As resulting from the debate held in Dortmund.

¹⁰ The crucial issue is not the precise number of actors but the collaborative endeavours integrating diverse voices and interests.



Most innovations are social innovations, or at least have socioeconomic and cultural consequences, which are often not included in development and can cause major problems.

With technology failing to keep pace in serving social innovation, some questions arise: what is the purpose of technology? Should we envisage and pursue a digital transformation without a social transformation based on fair, sustainable, inclusive principles in pursuit of a common, agreed agenda? It is possible to envisage Sustainable Development Goals and targets without principles such as 'no one left behind' or the ambitious agenda of the 2050 EU Green Deal? (European Commission, 2019; Renner, Bok, Igloi, & Linou, 2018).


In terms of the **role of technology**, information technologies have had a transversal impact on society as a whole and on innovation ecosystems since their introduction. They have become an acceleration of technology, driven by industry and economic purposes but not based on the needs of individuals or of society. Tech-driven innovation is smart but does it always serve people's needs? If the answer is no, then there is a danger of development focusing on profit-making objectives, which ultimately also harms society (inclusion, social protection of persons at risk, etc.).

Technological innovations embody inventions from industry, engineering, applied science and/or pure science (for example electronics, aerospace, pharmaceuticals and information systems). Such inventions become innovations only when they have been processed through production and marketing tasks and are transferred to the marketplace (contributing to the economy). The emphasis is therefore on the market and financial utility.

However, technology transfer and technological advancement in many countries have not necessarily created a fairer society. In fact, the development of information technology has had several unintended consequences with adverse effects on the population: *individualisation of labour* (the process by which the contribution of labour to output is defined specifically for each individual, with little reference to collective bargaining or regulated conditions), *overexploitation of certain groups of workers* (more employment but poverty wages for women, immigrants, young people and minorities), *social exclusion* (no access to social positions that would improve people's lives) and *perverse integration* (people not needed by the information economy are ostracised and move to illegal parts of the economy, including crime) (Castells, 1999, pp. 7–9)

For instance, it is difficult to imagine business investing considerable resources in the activities of social entrepreneurs, for whom public benefits outweigh economic ones. By contrast civil society, largely excluded from traditional innovation systems, occupies a core position in the development of social innovation. Examples can be found in mature regional innovation ecosystems such as that of the Basque Country, where companies such as Urbegi and Integrated Social Services S. Coop., to mention just two examples, are based on earlier learning from conventional innovation systems but have introduced a blend of social and technological innovations for the common good.

The structural shift in the Basque Country from an industrial society to a knowledge society has resulted in a spectacular increase in calls for innovation as a necessity in order to tackle a situation of permanent crisis in the economy, the welfare system, the education system, the environment, the family and governance. This paradigm shift has meant considering social innovation as a practice intrinsic to social action (Ezponda, 2011, p. 90). The three-way link between Basque society's relative size in quantitative and qualitative terms in the global context, the regulatory framework and character of its system of governance and the skills acquired and strategies implemented by individuals



in order to access the framework of opportunities that they encounter in their particular contexts are just some of the factors that have influenced the formation of the knowledge society in the Basque Country (Ezponda, 2011, p. 90).

The government of the Basque Country is actively involved in fostering social innovation. In the Plan for Science, Technology and Innovation (PCTI), the Basque Government sets out, in line with relevant policies and programmes of the European Commission, to define innovation in the context of social challenges. The strategic plan sees technology as the key factor in addressing employment, education and the ageing society (Consejo Vasco de Ciencia Tecnología e Innovación, 2014, p. 54). The strategic objectives of the plan stress the importance of public-private partnerships in industrial leadership, the development of human capital and smart specialisation to respond to social challenges and gender equality on the horizontal axis (Consejo Vasco de Ciencia Tecnología e Innovación, 2014, pp. 45–46).

Governance of such ecosystems is **one of the main challenges** faced in seeking to ensure effectiveness and impact. How can principles, mechanisms and tools be put in place that integrate the often separate top-down and bottom-up approaches? It is possible to define profiles of enablers? And could the necessary capacity building and training tracks for these intermediary profiles be designed?

Summing up, new social ecosystems tend to build innovative ways of understanding community building. This only works if serious attention is being paid to differences between the various stakeholders regarding interests, methods and approaches, and to issues such as co-creation and joint agenda development.

3. How are these social innovation ecosystems impacting digital transformation? And vice versa?

Digital transformation is currently primarily technology-driven: new (digital) solutions are developed simply because scientific and technological progresses make them possible (we do it because we can), while it should be driven by a more decisive, more transparent take-up of social needs.

Following up a linear vision of the digital world, based mainly on the belief that more digital technologies will automatically bring about social changes, has resulted in digital and technological solutions which have connected the old social institutions without reforming them. It can be argued that changes are also taking place without many people realising that suddenly a few high tech companies rule the world. Typically, ICT and automation have been used first to ensure control functions (checking results against planned objectives), then manufacturing (e.g. robotics), then design (e.g. CAD, expert systems). But a key component of the equation has been left out: a discussion of the objectives, the 'what is it for?'


This paper argues that this no longer works, since the process of change calls for an additional, distinctive effort of innovation. Changes in societal structures need to go hand in hand with a process of social innovation based on generating new structures and adapting old ones to the new era.

The digital transition makes (or should make) it easier to co-design, thanks to the availability of easy-to-use digital venues to create consensus on objectives. However many such new digital venues are being misused: the consensus that they create is based not on confrontation, negotiation and agreements but rather on taking into account actual needs of communities and local beneficiaries.

Due to their distributed and peer-to-peer nature, many digital technologies and platforms enable processes of creativity and exchange to take place that are characteristic of social innovation ecosystems. This means that as it continually takes shape through people's interactions, social innovation is both enabled by and results from digitalisation. People are producers and consumers (prosumers) at the same time. Many digital social innovations also contribute to the sharing economy.

The appearance of social innovation ecosystems is an emerging process, an initial answer to the problems generated by the digital transformation. They have a significant impact on the digital transformation, as many initiatives are inseparably linked to far-reaching changes in long-standing reality. Social demand is increasingly embedded in projects based on providing e-services or the use of digital platforms. For example, Digital Social Innovation (DSI) is a growing movement of innovators in civil society, technology and social entrepreneurs who are developing inspiring digital solutions for various social challenges in areas such as health, democracy, consumer affairs, money, transparency and education (Digital Social Innovation, 2015).

The institutionalisation of such practices only strengthens the digital transformation. In this regard, a space for implementing new ideas is formed within the framework of social innovation ecosystems. By introducing advanced technologies, it helps to consolidate ideas about digital society in public mindsets. On the other hand, a social innovation ecosystem is open to external influences, just as any other system is. In the case of digital transformation, this is manifested primarily in the development of e-communication and the expansion of the range of possible digital solutions in project activities. There are promises of more speed and efficiency, which come with the danger of losing control and perspective on matters of content.



Social innovation ecosystems pave the path for technology and digital innovation to accelerate change, because within such ecosystems there is usually a process of prior reflection and understanding and a meaningful response to specific challenges in a given context. When applied within these settings, technology and digitalisation acquire their full potential for transformation: there is a purpose for their application.

The most promising DSI projects are those which combine novel technology trends such as open data, open hardware, open networks and open knowledge in new ways to achieve social impact. Examples of collaborative online platforms for network democracy, such as Open Ministry and Your Priorities (part of the European D-CENT project funded under the EU CAPS initiative) and Safecast (which has made possible large-scale crowdfunding of environmental sensor data) show how communities can mobilise collective intelligence, create awareness, promote collective action and then contribute to meaningful social change (Digital Social Innovation, 2015).

Thus, organised social innovation ecosystems will give place to more impactful policies and coordinated responses to '*glocal*' challenges. The multilevel approach needed in social innovation ecosystems will need methodologies, tools and trained enablers able to:

- determine the interests, concerns, potential and capacities of all stakeholders involved;
- create awareness;
- promote collective action;
- mobilise and encompass the collective intelligence of communities; and
- put in place feedback loop processes where learning, respect and understanding will be the key mechanisms for connecting multilevel needs that can contribute to meaningful social change with sustainable inclusive solutions.

These technological innovations must be accompanied by social innovations that enable society to address the challenges that face it in a more integrated manner, with the possibility of new dynamics and dilemmas generated to be addressed through different social, technology and digitalisation applications.

4. How are innovation policies being influenced by these new ecosystems and what impact could they have in the next EU programme for 2021-2027?

New ecosystems will be more sensitive to the needs of citizens, practitioners and consumers, their desires, commitments, inputs and outputs, and will adapt dynamically to the specific needs of each vulnerable group. New actors with agency will be able to identify the problems, address the challenges and define the values and principles of a given society. The local and regional levels, plus cities and historic and rural areas, are becoming more and more significant for building social ecosystems in terms of approaching the type of society that they want to be in a given context. This means understanding beyond one's own interests in the search for the common good with sustainable, inclusive development goals that blend the local and the global, the individual and the systemic and are able to build strong institutions and policies.

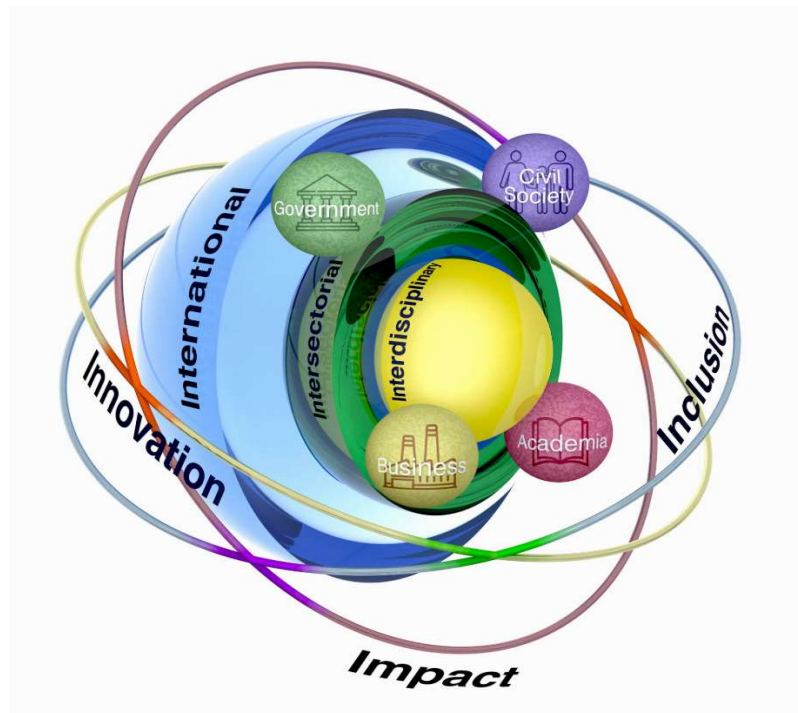
Glocal responses need to be factored into innovation policies more strongly as responses must not be unrelated to the globalised world in which we live. Therefore, a multilevel approach is proposed for all EU community programmes, involving European, national and regional/local levels. One example is the key complementary role, focused on key societal challenges, that regional collaborators have in the Knowledge and Innovation Communities (KICs) launched by the European Institute of Innovation and Technology (EIT). The interesting thing about KICs is that they are new structures, not single projects, with different financing schemes, including funding from Horizon 2020. If the territorial level is poorly represented in these schemes, their impact in a region will be limited.

Building sustainable inclusive ecosystems requires more collaborative efforts (international, inter-, trans- and multidisciplinary or intersectoral) to understand all parties involved and how value chain and win-win mechanisms work and will help in running healthier, wealthier, more sustainable economies, environments and societies for all.

A model of change that blends these collaborative endeavours is the 6i integrative model¹¹ envisaged and developed at the University of Deusto, Spain (Caro-Gonzalez, A., Ferreira-Lopes, 2020; Caro-Gonzalez, 2019). The 6i integrative model is an innovative model for change arranged around 6 elements all with the initial "i": (1) internationalisation; (2) interdisciplinarity; (3) intersectionality; (4) innovation; (5) impact; and (6) inclusion. These six elements embody three principles of collaboration (international, interdisciplinary and intersectoral).

The 6i model acknowledges the robust learning space that exists throughout geographical, sectoral and disciplinary boundaries, and takes the international, intersectoral and interdisciplinary dimensions as vital parts of its proposal.

¹¹ The 6i model has been acknowledged by the Horizon 2020 project SHAPE_ID: Shaping the Interdisciplinary Practices in Europe which is analysing the growing number of inter- and transdisciplinary projects and initiatives in Europe.



Source: Own elaboration (Caro-Gonzalez, A., Anabo, I. (in press))

The three remaining i's -- innovation, impact and inclusion – are its three rationales for action: the transversal, underlying principles that guide the 6i's collaborative elements, acting as a compass with which actors¹² can steer their institutional activities. Creativity and ingenuity through collaboration is paramount for actors to thrive and successfully adapt.

It employs a systems perspective and a multilevel approach and draws on top-down and bottom-up feedback pathways that enable flexible support structures and mechanisms to emerge, thus maximising its relevance and take-up of the institution. One of the challenges faced is identifying who facilitates the meeting in the middle, the capacity building of intermediary profiles, and the enablers.

The 6i model provides a framework that can usher institutions towards a position that is proactive rather than reactive. When adopted simultaneously and strategically, these elements can advance universities' or other actors' multi-level spheres of action and replace the often disjointed, slow process of institutional change evident in higher education or other type of institutions. Thus, taken as a whole, the 6i model serves as a tool for stakeholders to develop robust internal and external ecosystems as they adapt to contemporary challenges.

This approach is aligned with the Horizon Europe missions and is geared towards social innovation. The implications of this for funding and assessment policies are still to be explored in the coming years. The social economy and new ways of understanding the global economy, wealth sharing and welfare systems will be goals of more coordinated social ecosystems, seeking to achieve shared prosperity and sustainable welfare systems based on redistribution, reprioritisation in the public sector, etc. Policy will be more focused on developing intersectoral/transdisciplinary collaboration, deepening

¹² Which may be universities, public bodies, companies, NGOs, etc.

cooperation between the various actors in social innovation (e.g. through the development of infrastructures for innovation and the improvement of existing support mechanisms).

The Invest EU Programme builds on the successful model of the Investment Plan for Europe (the Juncker Plan). It will bring together under one roof the European Fund for Strategic Investments and 13 EU financial instruments currently available. Triggering at least €650 billion in additional investment, the programme seeks to give an additional boost to investment, innovation and job creation in Europe” (European Commission, n.d.). The programme consists of the following:

- The InvestEU Fund: Mobilising public and private investment using an EU budget guarantee;
- The InvestEU Advisory Hub: Providing technical advice on investment projects needing financing; and
- The InvestEU Portal: An easily accessible database that matches projects with potential investors worldwide. (European Commission, n.d.)

To be successful, future research and innovation programmes need to go beyond lip service in recognising the importance of appraising societal needs to define R&I objectives. Barriers must be removed, e.g. misalignment between scientific progress and societal problem solving; the language used must be understandable to all stakeholders, starting with civil society, which must be involved in the defining of objectives, with a long term perspective; academic bad habits of working in disciplinary isolation must be broken, especially as regards STEM and SSHA (the fish tank syndrome); Social Cost Benefit Analysis (emphasis on Social) must be adopted, thus promoting the development of new knowledge to allow for social costs and benefits to be included.


The EU did not invent information technology and it is not the main economic superpower in this field. However, the new Horizon Europe 2021-2027 programme could turn the dream into reality: Europe as The Lab, an inclusive, universal innovation ecosystem. This dream can only be achieved through social innovation ecosystems.

In this case, the main emphasis will be placed on increasing activity in business and research. Furthermore, the role of social outsourcing and other forms of public-private partnership will inevitably increase, since many ongoing initiatives have proven to be effective. There also seems likely to be a blurring of the lines between social innovation and innovation in general. One of main challenges is how to make sense of all the existing ecosystems, with the growing number of actors and networks.

Support for any innovation project will be seen through the prism of social effects to some extent. All these changes will require the development of human resources in the sphere of science, education, technology and innovation.

In relation to the forthcoming EU programmes for 2021-2027, the features indicated are already reflected in the *Orientations towards the First Strategic Plan for Horizon Europe*: ‘to fully harness the potential of innovation involving researchers, entrepreneurs, industry and society at large, the EU must improve the environment within which innovation can flourish at all levels. This will mean contributing to the development of an effective innovation ecosystem at EU level, and encouraging cooperation, networking, and the exchange of ideas, funding and skills among national and local innovation ecosystems’ (European Commission, 2018, p. 68).

The ability of social innovation to address societal challenges is often evident in political agendas and there seems to be a consensus that social innovation creates value for



society, but the ability to use the results is low. This leads to a tendency to favour conventional research and innovation systems. In Sweden, social entrepreneurs often apply a hybrid organisation where one part is non-profit and another business driven. This hybrid nature leads to difficulties in getting financial support since such organisations do not fit into the fixed definition of organisations eligible for funding from public sources. Hence, there is a need to adjust and develop legal and judicial frameworks and forms of organising business.

Furthermore, the social innovation system lacks the functions that exist in the conventional innovation system, such as networks, financial support, meeting places, knowledge and supporting policies. Forum for Social Innovation Sweden is funded by Vinnova to address these questions in Sweden. These areas should be addressed in Horizon Europe 2021-2027. Knowledge should be created for social innovation to address the challenges of financing, monitoring and measuring impact, market creation, meeting places, policy, legal structures and capacity building. These are some of the issues that will benefit from being addressed and solved in collaboration across countries.

5. What future is there for social innovation ecosystems at global scale?

The future of social innovation ecosystems is a matter of considerable controversy. It all depends on what kind of society we want. Global challenges such as ageing, human mobility, poverty, unemployment, health outbreaks, etc. need to be addressed at local and global levels taking advantage of the global scope of digitalisation and technological progresses. Effects differ from one region of the world to another and there will be catch ups between regions or communities.

A *glocal* approach that takes into account diversity and contextual differences is essential and everything will depend on the place that social innovation ecosystems take in social policy. Social Innovation ecosystems align collective intelligence connecting grassroots to policy change, predicating the rights of citizens and democratic engagement and seeking to increase impact at all levels.

It all depends on what kind of society we want. Do we want a society able to attune economic, social and sustainable values; one that is socially fair, environmentally responsible, diverse and inclusive? If so, social innovation systems will have a great future. It is crucial to keep working on building social innovation ecosystems by improving the way in which interaction works between partners with different interests, methods, approaches, etc.

Will authorities seek to shift their functions to society? Or will it be a space for developing tools to overcome the failures of the state and the market? Options may be very diverse. As a result, it is difficult to say whether any universal model will be formed in an increasingly reticular world. Technological advances will favour globalisation, so the ethical and human rights issues related to technology must be agreed globally, but it will be necessary to observe what effects they produce and limit the negative ones.

Collaborative efforts among researchers, innovators, regions and citizens and work with vulnerable people / groups as protagonists will foster a common understanding of the challenges ahead. We think that as the community of academics and practitioners come together, we may be able to determine how a specific actor within the social innovation system should actively participate, collaborate and capture social value and transform that value relative to the actor's preferred value (Fulgencio & Le Fever, 2016b).

Narrowing down actors with a social innovation agenda might provide insight into policy change predicating the rights of citizens and democratic engagement using the possibilities of big tech, and increasing impact at all levels.

Knowledge and meeting places should be created for systemic social innovation to address the challenges of financing, knowledge, impact measures, creation of market, policy, legal structures and capacity building. These issues should preferably be addressed and solved in collaboration across countries.

It is important to keep working on building social innovation ecosystems by improving the way in which interaction works between partners, which will promote and imply epistemic diversity. We need to wear as many 'hats' as possible to view the same complex reality from different but complementary interests, methods and perspectives (Filippetti and Peyrache, 2011).



CONCLUSIONS

The digital phenomenon is global, and current societies are also becoming global. These planet-wide problems can only be solved by holistic, innovative ecosystems able to handle the social, economic, organisational, political, cultural, digital, technological, environmental and other challenges derived from the processes of globalisation, digitalisation and development. We believe that the future lies in moving forward global social and digital ecosystems on a worldwide scale, as we are still at the outset of a major social and digital transformation of our world.

The combination of *glocal* approaches offers the possibility of creating a digital civilisation based on a collaborative, complex process of social innovation, where each culture could make its own contribution to the common project. These social innovation ecosystems are considered as *glocal* networks of digital social innovation communities that can deal with the problems generated by humans on Earth (e.g. climate change, plastics in oceans, increase of the inequality gap, etc.).

Europe could be at the forefront of social innovation policies at global level in the digital era, and could become the leading continent in designing and building the first universal innovation ecosystems where every citizen can be part of the knowledge society.

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