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Research Reconfiguring and Innovation Constellations

Open forms of innovation collaborations should become more inclusive and democratic to make them efficient

RiConfigure

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This research brief makes policy-oriented recommendations to assist Open Innovation 2.0 (OI2) or Quadruple Helix (QH) innovation collaborations in becoming inclusive, more democratic, and at the same time, efficient. Quadruple Helix is an alternative model of innovation in which government, industry, academia and representatives of civil society organizations (CSOs) work together⁹. Involving citizens and CSOs directly in a democratic innovation process allows rapid prototyping in real life and fosters entrepreneurship in Europe, creates jobs and boosts sustainable economic and societal growth¹⁰. Therefore, we strongly recommend that policymakers support such collaborations by providing:

(1) funding mechanisms for CSOs; (2) metrics and indicators to measure the success of innovation in terms of its democratic and social impacts; and (3) a compendia of 'best practices' as well as tested methods to set up efficient governance structures.

In the EU funded project RiConfigure¹¹ we explore and actively support projects that follow Quadruple Helix (QH) Innovation or Open Innovation 2.0

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⁹ Carayannis, E. G., & Campbell, D. F. (2009). 'Mode 3' and Quadruple Helix': toward a 21st century fractal innovation ecosystem. *International journal of technology management*, 46(3/4), 201-234.

¹⁰ <https://ec.europa.eu/digital-single-market/en/open-innovation-strategy-and-policy-group> (accessed July 29th 2019)

¹¹ www.riconfigure.eu

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Recommendations

- **Policy makers should strengthen appropriate funding mechanisms that assist Civil Society Organizations (CSOs) in receiving appropriate rewards when entering QH collaborations (e.g.: social innovation funds; QH collaboration funds targeted for CSO participation). Actors of the fourth helix ('civil society') often lack the funding to enter into QH collaborations that provide innovation rewards in later stages of the process. This hinders the participation of CSOs from early on. It also hinders market oriented players from including and later assessing social/non-market oriented outputs and effects.**
- **Metrics and indicators should be provided for practitioners to measure success of QH collaborations in terms of its democratic and social impact. QH collaborations lack an appropriate matrix, or currently available indicators (e.g., SDGs, KPIs) are not operationalized to the extent that they may be used by practitioners to measure success in non-market oriented output(s). This hinders the participation of CSOs with a societal mission.**
- **Compendia of 'best practices' of QH collaborations, as well as their methods, are required to help set up efficient governance structures, operational processes and modes of addressing internal conflicts. Effective methodologies support the active participation of CSOs within QH collaborations to promote a multidimensional view of innovation. 'How to' resources and 'best practice' examples, including, amongst other things, methods and formats for collaboration, help to address barriers and obstacles.**

(as quasi QH) models and aim at making such collaborations across sectors thrive by addressing and overcoming potential collaborative challenges. We find that QH collaborations are democratic when they involve all actors, or representatives thereof, in each level of the innovation process. On the one hand, this encompasses involving a strong (or dominant) agenda of social well-being in the respective mission. On the other hand, this also means giving civil society and/or public service entities a strong role in defining the mission as well as designing the governance model and cooperation practice of QH collaborations. The empirical study constitutes the basis for the recommendations in this brief.

Research results

OI2 is a new paradigm based on a Quadruple Helix (QH) model of innovation in which actors from government, industry, academia and civil society work together to co-create the future. RiConfigure focuses on the collaboration amongst actors involved in such multi-stakeholder innovation activities. It has been observed that the integration of all four helices is a major challenge, which is why most cases do not meet the theoretical ambition (democratic engagement of all types of actors) and hard criteria (all four helices involved in goal definition/governance/praxis) of the QH model. Our first analysis reveals that most QH collaborations emerge around joint efforts in shared collective innovation spaces (virtual or physical).

- Their specific challenges or missions affect the ways in which the four helices innovate together and may conflict with the interests of some actors involved.
- While many cases address social needs (such as SDGs or regional development) they are, at the same time, driven by economic/market interests.

We witness that the commercial drive expands across a number of cases and affects the purpose and practice of the collaboration. This, in some of the cases, relates to more narrow conceptions of innovation that hinder the mutual democratic exchange of the four helices, and make innovation path-dependent and pre-defined, especially as market-oriented partners determine goals and processes.

One of RiConfigure's main cases is concerned with public service initiated QH collaboration¹²: a public mobility service provider that experiments with establishing an

OI2 ecosystem. The design of the ecosystem involves both market orientation, as the publicly owned mobility provider needs to comply with market rules and principles (e.g. being profitable), and public service goals which include public benefits, gender/social aspects, well-being

and SDG principles. This creates conflicts on multiple levels (internally in corporate settings; between potential partners and other key stakeholders) and the company tends to revert to an OI 1.0 /TH model, hindering the potential of transforming innovation to an OI2/QH ecosystem and the democratic nature of the ambition.

Lessons learned

Our initial wave of empirical research shows that aligning the interests of stakeholders who represent social needs also requires democratic alignment of the goals or missions of the innovation collaboration. We find that

- the barriers and obstacles of the cooperation of 'all four helices' are generally not addressed in a democratic and open manner. This is especially relevant for actors whose primary calling is not to create new markets or foster a stronger culture of entrepreneurship.
- traditional innovation ecosystems, even when experimenting with open formats, have a strong economic/market drive for innovation that may hinder or outright obstruct the eye-level engagement of some of the potentially relevant actors in the innovation ecosystem.
- many actors expect the 'mission' to be as much social as purely market oriented. Instead of only focusing on new products and services as market drivers, the innovation thinking should also aim to address social needs and goals.

¹² <http://riconfigure.eu/social-lab-3-public-sector/>

In general we observed that in order for OI2.0/QHI to deliver on its promise, marketization cannot be the only driver for innovation and must be complemented by other societal values – such as sustainability, equity and democracy. This also makes innovation more efficient: prototyping in real life may be faster, impacts more wide ranging, and societal values better incorporated in the innovation process. These drivers of the innovation process must be defined through equal participation of all collaboration partners. Such reorientation requires QH collaborations to align multifold potential goals and interests. Thus, within a specific project legitimate commercial interests of some of the participants in the collaboration need to be reconciled with social needs of other actors.

Innovating *with, by and for the people* through QHs may bring the much-needed change in our thinking to address 'Grand Challenges' in a way that strives towards the interests of all helices being met.

What is RiConfigure?

The RiConfigure project, funded by the EC Horizon 2020 Framework Programme, empirically investigates versatile research ecosystems and experiments within new research and innovation constellations. Innovation setups like these assist in changing traditional knowledge hierarchies, institutional collaboration practices, and modes of governance, as well as foster the inclusion of civil society. QHs create innovation through interactive processes in which different groups of actors contribute with their knowledge based on their given resources. Thus, they aim to create a more transparent innovation process based on the principles of responsible research and innovation (RRI). To assist the mainstreaming of QHI we look at five different cases across Europe and in South America. In total, we have identified more than 100 cases of Quadruple Helix Collaborations, of which we have analyzed more than 25 in greater detail via desktop research, interviews and engagement in our social labs.

Within our action research methodology, we co-create what is called social labs¹³ to investigate:

- 1 A research institute led open innovation platform for 'Industry 4.0' technologies in East Westphalia-Lippe, Germany that aims to foster collaboration between all QH actors in order to jointly shape the digital transformation within the region.
- 2 An industry focused sustainable water and energy experiment inviting actors from all the four Helices in the Netherlands.
- 3 An open innovation platform being built by the publicly owned Austrian Railways complementing their Open Innovation Lab.
- 4 A multi-stakeholder collaboration on new facilities for water management and recreational activities in a housing area in Roskilde, Denmark, where solutions are being locally developed and implemented.
- 5 An ideas laboratory to develop new concepts of knowledge production for sustainability, a governmental program initiated by public servant 'entrepreneurs' working for Colciencias – the Colombian Research Council.

¹³ Cf. <http://riconfigure.eu/what-is/>

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