



SCIENCE, SOCIETY AND CITIZENS: SUGGESTIONS (AND HOPES) ON HOW TO FOSTER RRI IN HORIZON EUROPE

Towards an inclusive European innovation policy

Bjørn Bedsted, Lise Bitsch, Lars Klüver, Rasmus Øjvind Nielsen and Marie Louise Jørgensen

Abstract

With “Horizon Europe”, the European Commission sets out the framework for research and innovation in Europe over the next seven years. The proposal outlines the contours of an innovative science policy that is open and responsive to societal needs, and where societal actors jointly undertake missions to discover sustainable solutions to present-day and future challenges. In our commentary we point to a number of modifications needed to strengthen the cross-cutting implementation of activities for societal engagement and responsible research and innovation.

Keywords

Participation and science governance

DOI

<https://doi.org/10.22323/2.17030303>

With “Horizon Europe”, the European Commission sets out the framework for research and innovation in Europe over the next seven years. The Commission’s proposal is commendable as it puts societal value at the centre of its proposal. The proposal outlines the contours of an innovative science policy that is open and responsive to societal needs, and where societal actors jointly undertake missions to discover sustainable solutions to present-day and future challenges. As a foundation that works to ensure that society’s development is shaped by informed and forward-looking cooperation between citizens, experts, stakeholders, and decision-makers, we strongly support such an ambition for “Horizon Europe”.

What makes the Commission’s focus timely and necessary are the well-known threats to the coherence of the European project, which is closely linked to the role of science in society. In a February 2018 conference document, the High-Level Strategy Group on Industrial Technologies points out the striking dissimilarities in GDP growth between EU member states (from 0.4 % to 4.4 %), and differences in rates of unemployment (from 4.6 % to 15.5 %), and youth unemployment (8.3 % to 35.7 %). They argue a lack of diffusion and implementation of technological

Author names listed in alphabetic order with all authors contributing equally to the writing of this flash commentary based in the Foundation’s more than 30 years of experience working for the democratisation of research and innovation and coordination and participation in a large number of framework programmes with projects developing participatory methods.

innovation as well as poor alignment between EU policies and national research and innovation policies as two key factors behind the inequality among member states. The expert group also argue for the twin dynamics of strong and stable democracies and economic and political growth. Indeed they identify the support of an inclusive and democratic society as key mission for a secure Europe with social and economic equality [High-Level Strategy Group on Industrial Technologies, 2018].

There is thus an urgent need to act to reduce the manifest types of inequality and support the democratisation of research and innovation processes with increased opportunities for citizens and societal actors to actively take part. Such participation should not be limited to mere acceptance or rejection of ready-made results but should take the form of active participation in policy formulation, agenda setting, project definition, and contributing to the research and innovation process itself. Democratisation plays the key role of aligning innovation policies and new technological innovations with the values and needs of citizens, societal actors and policy. Without such alignment the desired benefits of innovation are less likely to manifest. Fearing that such alignment may not result from the current framework proposal, our concern is that in its present form Horizon Europe may not properly support the implementation of its ambitions across the three research pillars “Open Science”, “Global Challenges and Industrial Competitiveness” and “Open Innovation”.

Towards strong horizontal integration of societal engagement in Horizon Europe

In its orientation towards societal needs and challenges Horizon Europe builds upon and underlines a commitment to societal impact of European research. Through previous framework programmes a strong knowledge basis and community of practitioners developed for involving and engaging with citizens and societal actors. In Horizon2020 the concept of “Responsible Research and Innovation” (RRI) rapidly gained currency as way to organise research and innovation processes to ensure that “[...] *Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products.*” [von Schomberg, 2012]. Horizon Europe in many respects is a proposal to continue along the path pioneered by RRI drawing on methods and approaches “co-creation”, “multi-stakeholder collaborations” and “multi-actor living labs”.

However, reading through the proposal we ask ourselves how it supports the actual continued development and implementation RRI. The realisation of successful co-creative processes and outcomes is an area of expertise in itself. Clear and believable means are therefore needed to ensure:

- **Horizontal coordination** of RRI activities in vertical R&I programs
- **Ongoing learning** among different actors about how to design and carry our RRI activities
- **Competency development** in good practices of RRI
- **Capacity building** across, disciplines, sectors and countries

- **Lighthouse projects** that show the way in terms of next practices
- **Evaluation research** to document and compare practices and their effects

In other words, what is needed is to build on and to strengthen the use of a generation of Science-in-Society research, supported through successive framework programmes. The practical organisation of such an effort can be imagined in many different ways. Our suggestions points towards an independent programme/unit that has a clear role and mandate to support societal engagement in and across Horizon Europe. This unit would ensure an active and targeted uptake of RRI activities as well as support diffusion of knowledge and competencies across Horizon Europe.

Furthermore, there is also a need for a strong incentive and perhaps even some form of reward mechanism. From our 30 years of experience working with engaging publics, researchers and civil society in innovation and political processes, and building on previous experiences from projects under the SWAFS programme and its predecessor, we can testify to the challenge of motivating research and innovation actors to engage with citizens and societal actors; particularly where the benefits of such engagement are more long-term and unrelated to the immediate interests of the actors themselves.

Finally, one would need to consider what the appropriate amount of resources would be. In Horizon Europe the cross-cutting programme called “Reforming and Enhancing the European R&I System” (REERIS) collects a number of important support functions for enhancing the interaction between research innovation and society. Already in Horizon2020 some of these support structures were organised under the “Science with and for Society” (SWAFS) programme. However, new functionalities are also envisioned under REERIS as it should support a larger research programme than SWAFS — on a decreased budget. According to the proposal, REERIS receives 400 million EUR that should be shared with the “Sharing Excellence” programme. The 400 million EUR budget should be compared to the 460 million EUR SWAFS received in Horizon2020. The European University Association (EUA) recommends that REERIS should receive 700 million EUR alone. Whether that is the right amount is difficult to say, but it would seem that the budgetary allocation should be growing rather than diminishing if a focus on RRI is to be maintained.

Ensuring the practical ability to deliver on societal priorities

What would be the reason to support these changes to the Commission’s proposal? Recent findings indicate that societal engagement is crucial to the ability of European research and innovation to deliver on citizens’ priorities. Through SWAFS and its predecessors a European community of practice has blossomed, that has produced a wealth of new ideas, practices and methods for undertaking research and innovation in an open, interactive and co-creative manner [Mejlgaard et al., 2018b]. Already evidence of the effect of “RRI” approaches to R&I are starting to manifest [Bührer et al., 2017; Deblonde, 2015; see also the commentaries of Mejlgaard et al., 2018a; Braun and Griessler, 2018, in this issue].

In research agenda-setting the recent H2020 CIMULACT¹ project showed that co-created research topics differ from research topics developed by experts in that they [please see also Rosa, Gudowsky and Warnke, 2018; Citizen and Multi-Actor Consultation on Horizon2020, 2018]:

- Apply a human-centric perspective to analysing challenges and ways forward compared to a technology-centred view in proposals written by experts alone;
- Take into account and start from local and cultural context in proposing ways forward;
- Consider community and personal well-being as key priorities across focus areas such as health, and nutrition; education and training;
- Apply holistic cross-disciplinary thinking instead of basing solutions in one disciplinary area of research;
- Break down societal challenges to smaller units, thereby focusing on local conditions, and networks and opening up for multiple types of solutions compared to an expert tendency to focus on larger units (like a city) and limiting the number of possible solutions and understandings of a societal challenge;
- Propose education and training for increased participation of citizens in research and innovation and political decision-making processes.

Similar effects of alignment are documented for: the formulation of overall research and innovation policy; program and project definition; and for the involvement of citizens in co-creation of research and innovation results (see e.g. projects like Engage2020).² Experience thus show that RRI projects drawing on deliberative approaches, dialogue, co-creation and collaboration between research, citizens and civil society organisation deliver research and innovation that are aligned with actual societal needs.

In conclusion, we support the broad ambitions of the Horizon Europe proposal, but recommend the following modifications to heighten the chance of realising its ambitions for research and innovation as contributors to strong European democracies as well as social, economic and sustainable growth:

- Responsible Research and Innovation as a continued cross-cutting ambition of European R&I
- A solution for ensuring horizontal coordination; ongoing learning; competency development; capacity building; exemplary 'lighthouse' projects; and evaluation research.
- A dedicated unit or program with a clear mandate and a sufficient budget.

¹Citizen and Multi-actor Consultation on Horizon2020 engaged citizens and stakeholders in the co-creation of European research agendas based on real, validated and shared visions, needs and demands (<http://www.cimulact.eu/>).

²Engaging Society in Horizon 2020 looked at how members of society are involved in research, innovation and related activities and indexing methods for engagement (<http://engage2020.eu/>).

Competing interests

The authors declare that they have received and are currently the beneficiaries of Horizon2020 and its 'Science with and for Society Programme', as well as other framework programmes.

References

- Braun, R. and Griessler, E. (2018). 'More democratic research and innovation'. *JCOM* 17 (03), C04. <https://doi.org/10.22323/2.17030304>.
- Bührer, S., Lindner, R., Berghäuser, H., Woolley, R., Mejlgaard, N., Wroblewski, A. and Meijer, I. (2017). *Monitoring the evolution and benefits of RRI: report on the researchers' survey*. Brussels, Belgium.
- Citizen and Multi-Actor Consultation on Horizon2020 (May 2018). *Outlooks of citizens-based future-oriented agenda setting*. Policy brief. URL: http://www.cimulact.eu/wp-content/uploads/2018/05/CIMULACT_Policy-brief4.pdf.
- Deblonde, M. (2015). 'Responsible research and innovation: building knowledge arenas for global sustainability research'. *Journal of Responsible Innovation* 2 (1), pp. 20–38. <https://doi.org/10.1080/23299460.2014.1001235>.
- High-Level Strategy Group on Industrial Technologies (23rd February 2018). *Re-finding industry: report from the high-level strategy group on industrial technologies*. Conference document. URL: https://ec.europa.eu/research/industrial_technologies/pdf/re_finding_industry_022018.pdf.
- Mejlgaard, N., Woolley, R., Bloch, C., Bührer, S., Griessler, E., Jäger, A., Lindner, R., Madsen, E. B., Maier, F., Meijer, I., Peter, V., Stilgoe, J. and Wuketich, M. (2018a). 'A key moment for European science policy'. *JCOM* 17 (03), C05. <https://doi.org/10.22323/2.17030305>.
- Mejlgaard, N., Bloch, C., Madsen, E. B., Griessler, E., Wuketich, M., Meijer, I., Woolley, R., Lindner, R., Bührer, S., Jäger, A., Tsipouri, L. and Stilgoe, J. (2018b). *Monitoring the evolution and benefits of responsible research and innovation in Europe*. Ed. by V. Peter and F. Maier. Brussels, Belgium: European Commission.
- Rosa, A. B., Gudowsky, N. and Warnke, P. (2018). *Report on comparison of research topics from CIMULACT with those from expert oriented foresight studies*. Deliverable to the European Commission. Grant agreement No. 665948. European Union.
- von Schomberg, R. (2012). 'Prospects for technology assessment in a framework of responsible research and innovation'. In: *Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methoden*. Ed. by M. Dusseldorp and R. Beechcroft. Wiesbaden, Germany: Springer VS, pp. 39–61. https://doi.org/10.1007/978-3-531-93468-6_2.

Authors

Bjørn Bedsted, Deputy Director at the Danish Board of Technology Foundation.
E-mail: bb@tekno.dk.

Lise Bitsch, Senior Project Manager at the Danish Board of Technology Foundation.
E-mail: lb@tekno.dk.

Lars Klüver, Director, at the Danish Board of Technology Foundation.
E-mail: lk@tekno.dk.

Rasmus Øjvind Nielsen, Project Manager at the Danish Board of Technology Foundation. E-mail: rn@tekno.dk.

Marie Louise Jørgensen, Senior Project Manager at the Danish Board of Technology Foundation. E-mail: mlj@tekno.dk.

How to cite

Bedsted, B., Bitsch, L., Klüver, L., Øjvind Nielsen, R. and Jørgensen, M. L. (2018). 'Towards an inclusive European innovation policy'. *JCOM* 17 (03), C03. <https://doi.org/10.22323/2.17030303>.



© The Author(s). This article is licensed under the terms of the Creative Commons Attribution — NonCommercial — NoDerivativeWorks 4.0 License. ISSN 1824-2049. Published by SISSA Medialab. jcom.sissa.it