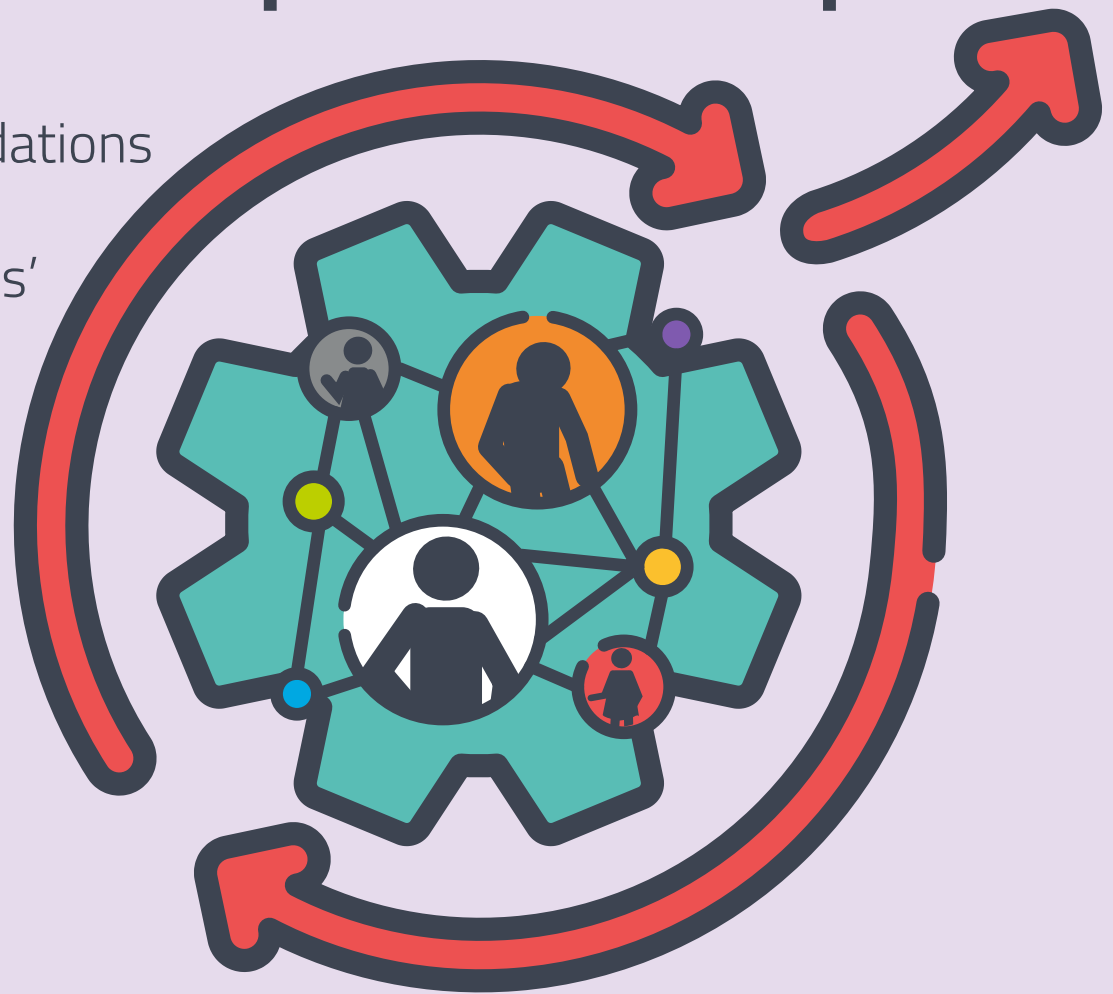




This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101069529 and from UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant No 10038991].

Strengthening the integration of Social Sciences and Humanities (SSH) in the Horizon Europe Partnerships

Policy recommendations for the Partnerships' Strategic Research & Innovation Agendas



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Social Sciences & Humanities for Climate, Energy and Transport Research Excellence

January 2025

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Suggested citation

Gaffuri G., Foulds C., Boekelo, M., Keseru, I., 2025. *Strengthening the integration of Social Sciences and Humanities (SSH) in the Horizon Europe Partnerships -Policy recommendations for the Partnerships' Strategic Research & Innovation Agendas*. Cambridge: SSH CENTRE. <https://doi.org/10.5281/zenodo.14747598>

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Executive summary

Target audience:

- European Commission: DG RTD as the DG managing the Partnerships, but also the DGs that support the implementation of the Partnerships topics: DG ENER, DG MOVE, DG CLIMA, DG ENV, DG EMPL, CINEA.
- EU associations leading the management and implementation of the co-programmed Partnerships selected by SSH CENTRE: A. SPIRE for Processes4Planet (P4P); BEPA for Batt4EU; Hydrogen Europe for Clean Hydrogen; ECTP and WorldGBC Europe for Built4People; Austrian Research Promotion Agency for Driving Urban Transitions (DUT); CCAM Association for Connected, Cooperative and Automated Mobility (CCAM); the seven Transition Initiatives (TRI) for the Clean Energy Transition Partnership (CTEP).

Goal: Inform and influence future EU research and innovation (R&I) priorities to accommodate a wide spectrum of socio-economic challenges faced in transitions with a particular focus on climate, energy, and mobility. Specifically, give recommendations for seven publicly available Partnerships' Strategic Research and Innovation Agendas (SRIAs).

Context: Since their inception in 2021, the Horizon Europe Partnerships bring the European Commission (EC) and private and/or public partners together, to address some of Europe's most pressing challenges and modernise industry through concerted research and innovation initiatives. Partnerships represent a key implementation tool of the Framework Programme 9 (Horizon Europe), and will continue until at least 2030, supporting the EU funding agencies to avoid the duplication of investments and to contribute to reducing the fragmentation of the R&I landscape in the EU¹.

Methodology: SSH CENTRE partners carried out a thematic review of the seven selected SRIAs. The focus was on the extent to which Social Sciences and Humanities (SSH) considerations had been accounted for thus far, and therefore what opportunities still existed to advance the integration of SSH further. The analysis concluded in August 2024.

Results: The review carried out by SSH CENTRE partners shows that the Partnerships' SRIAs already integrate and present different SSH topics in a relevant manner and at a significant extent, making these documents a reference within the EU energy, climate and transportation R&I documents. Moreover, as SSH CENTRE carried out the same review on the SET Plan Implementation Plans, which are the equivalent guiding documents at the EU level for specific energy technologies, comparing the two categories of documents led to the conclusion that Partnership's SRIAs include significantly more information on SSH than the SET Plan Implementation Plans.

This good starting point should, however, not lead to the conclusion that a better and further integration of SSH considerations within the SRIAs should not be achievable and desirable, as the following sections will show that a more holistic,

¹ EC, [European Partnerships in Horizon Europe](#)



demand-driven and bottom-up approach would significantly enrich the impact of the Partnerships' topics.

The core of this report thus presents three headline recommendations for the Partnerships' SRIAs:

1. Address Social Sciences and Humanities (SSH) considerations in a holistic way, always integrating them with technical ones (Section 2).
2. Include more co-creation and engagement of external stakeholders earlier in the drafting process (Section 3).
3. Address social complexity of the Partnership's topic (Section 4).



1. Introduction

1.1. Background context

Each Partnership drafts and updates a Strategic Research and Innovation Agenda (SRIA), which is the strategic reference document that identifies the main technological and innovation challenges to be addressed through their respective Partnership's activities. The SRIA outlines the research, demonstration and deployment activities that calls for EU research and innovation (R&I) funding calls should cover. Partnerships' SRIAs are drafted by the founding partners of a Partnership – the EC, and industrial partners – based on a comprehensive consultation of key stakeholders (research and academia, related EU and national initiatives, consumers' associations, etc.). The SRIA is, therefore, the basis for the multi-annual work plan of each respective Partnership.

1.2. Methodology

SSH CENTRE partners carried out a thematic review of the current versions of seven publicly available Partnerships' SRIAs. The following seven Partnerships were selected, on the basis of being the most relevant for climate, energy and mobility:

- Clean Energy Transition (CET) Partnership
- Batteries Partnership
- Clean Hydrogen Partnership
- Processes4Planet (P4P) Partnership
- Built4People (B4P) Partnership
- Driving Urban Transitions (DUT) Partnership
- Cooperative, connected and automated mobility (CCAM) Partnership

These Partnerships' SRIAs were evaluated in terms how they have accounted for Sciences and Humanities (SSH) considerations to date, and thus also what future opportunities could be explored. Specifically, the thematic review focused on following SSH domains and topics: Societal Actor Engagement, Public Perception, Justice and Equity, Employment Dynamics, Economic Factors, Behavioural Aspects, Ethical Considerations, Local vs. Global Dynamics, Infrastructure and Spatial Planning, Social Innovation and Community Initiatives, Gender Perspectives, and User Relevance. This list was defined by the EERA Joint Programme on 'clean Energy transition for Sustainable Society' (JP e3s) and the EERA JP Wind sub-programme work on 'Social aspects of wind energy'.



All the spreadsheets used for (and produced by) the review are available Zenodo². They are freely available, in accordance with SSH CENTRE's Open Access commitments.

Given the target of SSH CENTRE on the EU energy, climate and transportation policy, the same review exercise was also carried out for the strategic documents of the SET Plan Implementation Working Groups³. As explained in more detail in Box 1, Partnerships' SRIAs scored significantly better than the SET Plan documents in terms of SSH-related components.

1.3. Report aim and structure

The aim of this report is to provide recommendations on how Horizon Europe Partnerships can continue their fruitful progress to date, in doing more to account for SSH considerations. Specifically, the report focuses on the Partnerships' SRIAs, which are the strategic reference documents that guide R&I policymaking and investment priorities for each Partnership's technology area.

This short report is divided into three main headlines policy recommendations aiming to further make the Partnerships inclusive and complete in terms of SSH-related topics.

Each recommendation (Sections 2-4) details what the current status in the SRIAs reviewed is, and provides a set of sub-recommendations and additional indications on how to close the existing gap. Positive examples detected during the review are included to help illustrate the discussion, in a bid to help drive more inclusive and socially impactful Partnerships.

Box 1. Social Sciences and Humanities (SSH) integration in Horizon Europe Partnerships versus SET Plan

Why have the Horizon Europe Partnerships' Strategic Research and Innovation Actions (SRIAs) better integrated Social Sciences and Humanities (SSH) considerations, compared to the equivalent guiding R&I documents of the SET Plan's (Strategic Energy Technology Plan) Implementation Working Groups (IWGs)?

The following factors can be considered:

1. Wider scope: While the SET Plan aims at implementing strategic energy technologies for the EU, Partnerships address topics that are wider than the development of a single technology or energy system, overall covering four main aspects: 1) green transition, 2) innovative Europe and open science, 3) health resilience, and 4) digital and industrial transition. This

² SSH CENTRE content analysis of SET Plan Implementation Plans and HEU Partnerships SRIAs available here: <https://doi.org/10.5281/zenodo.14760509>

³ Gaffuri et al., 2025. *Strengthening SSH integration in the SET Plan: Policy recommendations for SET Plan Implementation Plans*. Cambridge: SSH CENTRE.



thus allows for a broader coverage of societal, economic and environmental topics, ranging from education and skills to public health.

2. **Dedicated resources:** Partnerships are also a more recent priority of the EC, which established them and is involved directly in their implementation. What distinguishes the EU-funded Partnerships from the SET Plan IWGs is that, in the former, the EC is supported by one or more private entities that co-manage the Partnerships; while for the SET Plan, most efforts come from voluntary or in-kind contributions from Member States representatives. This enables Partnerships to have resources from the public and the private side, resulting in more means available for drafting dedicated sections, and for the creation of various expert groups that bring SSH topics into their activities, whereas in the SET Plan most of the efforts are often limited to the technological targets' definition.
3. **External support:** Partnerships' SRIAs are often co-authored by technical studies or consultancies, which carry out sectorial analysis that cover the topics in a deeper and more complete way, compared to SET Plan Implementation Plans, written by the Implementation Working Group Experts and/or the Secretariats supporting them through grants.



2. Recommendation #1: Address Social Sciences and Humanities (SSH) considerations in a holistic way, always integrating them with technical ones



2.1. Progress so far

The review carried out by SSH CENTRE shows that while the SRIAs of the Partnerships taken into account do include a different range of SSH considerations, these topics are treated in isolation rather than being integrated into the specific research topics defined in the SRIAs. Moreover, even acknowledging the effort to include several SSH aspects, in different SRIAs they are vague and not specifically tailored to the subject of the Partnership's topics.

A positive example of this integration is the Processes4Planet SRIA⁴, as it already integrates non-technological aspects within the main objectives, targets and assumptions for the agenda implementation. Moreover, these aspects appear as prominent topics throughout the document, for example through being the main foci of several sections and sub-sections⁵.

The SRIA from Batt4EU⁶ (Batteries) instead represents a peculiar case, given that the agenda comprehensively addresses environmental sustainability (particularly in its focus on circularity and safety), yet it lacks a direct discussion on how these aspects relate to social sustainability. As a recommendation, incorporating social Life Cycle Assessment (LCA) and explicitly addressing social sustainability would be a direct way to structurally integrate SSH within this SRIA.

Nevertheless, it needs to be stressed that Batt4EU represents a case in which the Partnership has an equivalent ETIP (European Technology and Innovation Platform) within the SET Plan framework, and they collaborate over R&I targets, together with the EU reference association (BEPA). Specifically for this case, the Batteries Europe Roadmap (so the R&I document produced by the ETIP and not by the Partnership), appears to be more comprehensive in terms of SSH dimensions (e.g. social sustainability is explicitly mentioned as one of the transversal aspects), relying on the Task Force that the ETIP established specifically for SSH⁷.

It is therefore recommended that Partnership Managers increase collaboration and synergies with the relevant SET Plan body or equivalent initiatives whenever

4 [Processes4Planet, Strategic Research and Innovation Agenda, 2021, Brussels](#)

5 See for example sections: §4.15 non-technological aspects, §A.14.a Integration of non-technological aspects in calls, §A.14.b human resources, skills, and labour market

6 BEPA, [BATT4EU Strategic Research and Innovation Agenda](#), 2024, Brussels.

7 <https://batterieseurope.eu/workstream-bodies/cross-cutting-task-forces/>



possible, to avoid duplication and benefit from best practices, in this case related to SSH integration. SSH CENTRE partners include the European Energy Research Alliance (EERA), which is the Research pillar of the SET Plan and has a dedicated research Joint Programme on ‘clean Energy tranSition for Sustainable Society’ (e3s), and well-positioned actors like the Vrije Universiteit Brussel (VUB) and the Norwegian University of Science and Technology (NTNU), which can facilitate exchanges between each Partnership and the SET Plan bodies (e.g. ETIPs, Implementation Working Groups). In particular too, Anglia Ruskin University (ARU) has coordinated three Horizon projects that have now directly addressed SSH integration in EU R&I (e.g. SET Plan, Missions, Partnerships, etc.)

Lastly, there is a need for more integrated research projects and multidisciplinary teams, to avoid tunnel vision and cognitive biases in the drafting of the R&I priorities of each sector, technology or topic. SSH researchers could facilitate this work, enriching the content and the impact of the Partnership topics.

2.2. What is needed?

- Foster cross-disciplinary collaboration with similar bodies and initiatives on best practices of SSH integration.
- Equally consider and give space to societal, environmental, and economic aspects of each Partnership topic, especially for the topics covering demonstrations of flagship projects where users could play a pivotal role.
- Incorporate societal impacts measurement methods (e.g. social LCA and social sustainability) of Partnership topics.
- Create the space for input and reflection from SSH researchers from outside the Partnership area, to avoid tunnel vision with professionals all aiming at the same goal (e.g. an SSH advisory board set up in collaboration with or within the SSH CENTRE activities).



3. Recommendation #2: Include more co-creation and engagement of external stakeholders earlier in the drafting process



3.1. Progress so far

As the key document for the implementation of each Partnership, the SRIA represents the capacity of each Partnership to align technological developments with societal and industrial goals. It thus needs to take into account all of the Partnership's challenges, goals and topics of interest, as well as the external synergies and complementarities that could be generated.

As Partnerships target multiple pre-identified groups of users, these individuals or communities need to be considered at different stages of the technology development, from design to use and beyond (second life, decommissioning, recycling, etc.), to ensure inclusivity, fairness, and continuous feedback.

However, during the review carried out by SSH CENTRE, limited early engagement and limited transparency on the drafting process appear as two points with high potential for improvement.

Indeed, only four out of the seven SRIAs reviewed included information on the drafting process: DUT, CETP, CCAM and P4P can all be considered the benchmark in terms of transparency, highlighting the role of civil society involved through dedicated sections or appendices⁸. The other three (Clean Hydrogen, Batteries, B4P) completely lack references to the drafting process, and therefore we can only assume that there was no co-creation with relevant stakeholders.

Moreover, only two SRIAs mention the involvement of civil society and/or citizens: CETP mentions civil society as a stakeholder involved in their co-creation phase, although it is unclear if citizens' associations were directly involved in the drafting process. DUT sets the standard with a clear description of the co-design phase held with “representatives from municipalities, city administration, research organisations, civil society actors and business in a process that spanned over more than two years”⁹.

For these reasons, in spite of the progress achieved and the commitment of several Partnerships, more evidence needs to be added to make all SRIAs a benchmark for co-creation, and to clarify the way each stakeholder group has been involved.

⁸ The positive examples can be found in the current SRIAs of the following Partnerships: CETP (pp. 10-11, *A co-creative process towards the CETP SRIA*), P4P (p. 268, APPENDIX B *Process to arrive at this SRIA*), DUT (pp. 4-6, *Development process of the DUT Strategic Roadmap*), CCAM (pp. 12-16, *Steps taken for the development of the SRIA*)

⁹ Bylund et al., 2022, *DUT Roadmap 2022, Driving Urban Transitions to a Sustainable Future Roadmap*, p.8.



3.2. What is needed?

- Involve civil society in the drafting process: citizen associations, NGOs, youth associations, and trade unions, are all valid examples of civil society organisations that should be involved within the co-creation step of the SRIAs. They could be brought inside the discussions as panel groups, which should ideally involve and represent vulnerable groups as well.
- Include a section or appendix explaining the drafting process details, making transparent any involvement of external stakeholders (in person/online, workshops, surveys, open consultations, etc.), the different bodies and entities involved in each step, and the timeline used.
- To increase co-creation, Partnership Managers could consider having a checklist of who will facilitate the process, what will be co-created (i.e. what can be possible milestones in the development of a SRIA), where co-creation may be useful and feasible, and what resources (e.g. time, skills) this would require from the participants (since co-creation is usually resource-intensive).
- A clearer identification of the steps to increase co-creation could also lead to the definition of the steps in which SSH experts could be involved, and therefore of which could be the most suitable SSH expertise(s) needed for each Partnership.
- Citizen and stakeholder engagement initiatives should focus not only on the late/commercial stages of technology adoption, but also during the early stages of technology design and prototyping (i.e. across the spectrum of Technology Readiness Levels), identifying the societal needs for a specific technology or solution.



4. Recommendation #3: Address social complexity of the Partnership's topic



4.1. Progress so far

EU Partnerships in Horizon Europe represent a unique feature within R&I funding instruments, as they aim to address some of Europe's most pressing challenges through concerted R&I initiatives¹⁰, thus combining socio-economic and technical topics in a particular way. This results in a different coverage of specific sectors, innovative technologies, and the specific transition challenges that result from each Partnership scope.

When enlarging the scope of each Partnership's impact, and therefore the impact of all projects funded within each of them, it is of utmost importance not to underestimate the social complexity of each sector, technology and challenge.

Social complexity has significant consequences on the limitation of current energy and climate models and forecasts, and integrating SSH expertise within these models could provide an improvement in their functionalities and performance¹¹. Indeed, not accounting for non-technical dynamics can result in suboptimal identification of the R&I priorities of a Partnership, eventually leading to a misalignment with the topics to be funded.

Within the Built4People SRIA¹², for example, the social complexity of the built environment from the perspective of justice (especially spatial justice; i.e. the distribution of space and the opportunities arising from its resources), equity and accessibility is omitted. Moreover, while the needs of some vulnerable groups (e.g. elderly) are partially addressed, other categories of vulnerable people are not explicitly mentioned, such as children and persons with disabilities. Fully addressing these elements in each SRIA would increase the impact of future projects, as future buildings and public spaces taking the needs of more diverse groups of people into account and involving them in the design phase might be more socially sustainable.

In a similar way, multiple SRIAs address IT-based solutions as key, while the danger of digital exclusion for several groups of the EU society is not mentioned. This has practical implications especially when talking about vulnerable groups, and the topics of affordability, accessibility and fairness of business models and practices, that remain a core element for the Partnership's topics impact.

Furthermore, only two of the SRIAs currently mention justice topics: for DUT, models integrating "inclusiveness, accessibility, equality, and justice as key

¹⁰ EC, [European Partnerships in Horizon Europe](#)

¹¹ Natalini, D., 2023. *Modelling and Social Sciences & Humanities: Integration of social insights into technical models*. Cambridge: SSH CENTRE.

¹² [Built4People Strategic Research Innovation Agenda](#), Brussels, 2021



principles in urban development” (p.57) are expected to be tested and replicated, however only in the last phase of the Partnership (2029-32). CETP goes a bit further, setting its document as a reference for including social justice and fairness principles within the clean energy transition KPIs.

In order to address at best the diverse challenges that are in the scope of each Partnership, SRIAs should be ‘demand-driven’, able to accommodate the different internal and external stakeholders, and integrate their needs and strengths. This also links with [Recommendation #2](#), as co-creation processes provide a space for involvement and discussion with additional groups of stakeholders, which can provide a more complete picture of social complexity in which R&I projects are carried out.

4.2. What is needed?

- A demand-driven approach can help source input from a wider and diverse set of stakeholders who better represent the complex social reality of the SRIA in question.
- Interdisciplinarity remains key in the Partnerships’ topics: STEM and SSH disciplines always need to go hand in hand.
- Social complexity affects models and forecasting efficacy, and integrating SSH dynamics can help to better identify R&I priorities and funding open calls.
- Justice and fairness aspects should be included in the design and implementation of the solutions to be funded under the Partnerships.
- Justice principles should address procedural, recognition and distributional aspects of each Partnership’s technology or topic, as included in the CETP SRIA, but also inter-generational justice and any other multidimensional considerations (e.g. empowerment, knowledge, transparency, well-being, environmental protection, etc.).



5. Acknowledgements

This report is part of a deliverable for the SSH CENTRE project. The project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101069529 and from UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [Grant No 10038991].

Essential contributors for this work were Mónica de Juan, Ganna Gladkykh, Spyridon Pantelis (EERA), who carried out the review of several Implementation Plans together with the authors. The authors want to thank also the EERA Policy Director Rosita Zilli, as well as Ami Crowther (ARU), for their valuable reviews.

Finally, thanks to the wider SSH CENTRE consortium for their feedback on the development of these recommendations, particularly at the annual consortium meeting in Granada, October 2024.





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This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101069529 and from UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant No 10038991].