Response SSH Council questions High Level Group Horizon Europe (HE) and the future Framework Programme (FP)

The SSH Council is the representative body of the entire SSH domain of the Netherlands, this includes the university faculties of the Social Sciences, Humanities, Law and Economics and Business, the SSH branch of the Dutch Research Council, and the SSH advisory councils of the Royal Netherlands Academy of Arts and Sciences. In answering the questions of the High Level Committee we would like to shed light on areas for improvement of the current and future FP's, so that the EU's R&I investments will contribute to tackling the most pressing challenges of our time more effectively. The recommendations outlined below address ways of producing better results, such as improving the sustainable utilisation of new R&I by integrating a more human-centred and interdisciplinary approach and removing structural limitations of the FP.

What major challenges (scientific, social, economic, technological) should still be attempted to be addressed in the second half of HE (2025-27) and further addressed by a future FP (FP10)?

From a scientific perspective, it is not only necessary to promote excellent science but also facilitate the necessary conditions for more interdisciplinary and bottom-up research. The EU FP offers investments in R&I aimed at addressing the challenges, priorities and crises of our time that are inherently complex and interdisciplinary in nature. Even technology driven challenges and the acquired solutions require expertise on human behaviour, economic- and financial markets, law and regulation, business models, public values, governance in order for their ethical development and sustainable utilisation. And applying a bottom-up approach is crucial to respond to Europe's needs in the long run. Research funded by the European Research Council (ERC) leads to scientific breakthroughs as well as impact beyond scientific knowledge influencing economy, society, industry or policymaking. Strengthening the ERC would therefore be a well-considered investment in addressing the scientific challenges around breaking down barriers between disciplines, enhancing societal impact, and increasing bottom-up research.

From a societal perspective, the urgency of the societal challenges we face must be the main starting point for the thematic approach in the FP. Therefore, the focus on climate change, the transition to a circular economy, safeguarding public values in new digital technologies, creating sustainable cities, tackling mental health problems and sustainable public health, etc. must be at the forefront of the FP. In addition, the themes of the current and future FPs should contribute to the objectives of the European Union. Some of these objectives are in line with the urgent societal challenges mentioned above, but others could be given more prominence, e.g. migration, growing inequality, social justice, rising political polarisation, geopolitical issues, etc. All societal challenges require an interdisciplinary and comprehensive mix of knowledge, expertise, disciplines, and research to develop new and holistic solutions. Even strictly technological innovations and solutions need to integrate SSH expertise in order to produce the desired results, or else risk violating national or EU law and regulations, risk desuetude due to absence of public support, risk social backlash, risk economic losses. Horizon Europe recognises the need

for an interdisciplinary and comprehensive approach, but still there is room for improvement.

Which are the major successes of the current HE (2021-2023) and which are the major "roadblock"/threats for success?

As stated above, a major success of the current FP is the focus on excellent research (ERC and research infrastructures) and more generally the balanced approach with three pillars. However, we see several "roadblocks":

- The current FT does not easily allow for the interdisciplinary and comprehensive approach that is needed to tackle the wicked problems we face. If this is not improved, this will be hindering further innovation: SSH should not only be seen as a pathway to impactful technological innovation, but as an equally valued area of research that contributes to social innovation. Without equal acknowledgement or funding of SSH research, there is on the one side a risk that the aforementioned complex social challenges get worse due to lack of knowledge and investment in social innovation, and on the other side there is a risk of new technological innovation producing suboptimal results and potentially being disruptive rather than constructive. Knowledge of SSH is necessary prerequisite for the effective utilisation and implementation of new technologies. Therefore, in the more technical clusters of pilar 2, the FP should include (more) calls that specifically invite a social innovation solution rather than focusing on a technical solution only. Additionally, the budget for **Cluster 2** should be increased so that more R&I can go into solving the urgent social challenges of our time which will contribute to more social cohesion, stronger democracies, a firm global economic presence.
- Currently, there is too much focus on **short-term results-oriented calls** with very specific and practical outputs. More room for strategic basic research (research actions) is needed in order to make a fundamental contribution to innovation. This is particularly the case for SSH research.
- The current trend to involve all stakeholders across regions and knowledge chains, often leads to **large consortia** that are (too) complex and absorb too many resources for management and administration. FP10 could experiment with smaller or medium-sized projects (in terms of budget, scope and expected number of partners).

Which sub programmes of HE should be to be preserved and strengthened in a future FP (i.e., FP10) and which should be altered? How far a future FP (i.e., FP10) should keep/alter the current basic three-pillar architecture of HE (i.e., Pillar 1: Excellent Science; Pillar 2: Global Challenges and European Industrial Competitiveness; Pillar 3: Innovative Europe)?

The current three-pilar architecture of Horizon Europe clearly reflects the EU's R&I priorities and while it contains many good elements, some parts could still be improved. The main recommendation for the future FP is threefold, (1) more interdisciplinarity in all research projects to enhance valorisation and utilisation, (2) to redistribute the budget of

the pillars and strengthen programmes to facilitate more interaction between the pillars to optimise impact and results, and finally, (3) more focus on allocating sufficient resources to fundamental research and prevent budget being diverted at the expense of research. In practice, redirecting some of the budget of pillar 3 to pillar 1 is the most compelling strategic decision, because it means investing more in programmes that have already proven to be very successful.

Investing in fundamental and excellent research is of crucial importance for innovation, which is why we recommend strengthening the ERC. Its focus on long-term research to improve Europe's scientific and technological base provides opportunities for the kind of new bottom-up research projects needed to drive new innovation. In order for the EU to become a world leader in science and innovation, more funding in excellent research is vital. This would create new opportunities for optimizing the research results and outcomes, think about introducing cross-linking synergistic bridges between EU funding instruments such as those in pillar 1 and 2. The societal and scientific impact of fundamental research is immeasurable, it provides the methods, the theory, and the rigour from which more specific innovative applications can be built. In other words, more funding for the ERC which will not only improve the scientific foundation necessary for new innovations, it will also allow for more efforts towards bridging the gap in the current FP between fundamental and applied research. Complex challenges require foundational theories as well as new innovative breakthroughs and research that takes on fundamental and applied research goals will more likely produce stronger outcomes[1]. The *research infrastructures* is another programme that must be strengthened, as they are of paramount importance and are increasingly becoming an integral part of research quality. More specifically, the breadth and complexity of SSH research infrastructures pose significant challenges and increased resources are needed for collaboration, coordination and long-term decision making (e.g. for harmonisation, standardisation and to ensure complementarity of data). These challenges deserve more attention and funding.

The programmes in pillar 2 reflect clear thematic choices for R&I which align with some urgent societal challenges and transitions, yet there is unobtained potential in the research conducted in the clusters due to structural limitations. The primary recommendation for pillar 2 is to enhance the interdisciplinary character and execution of research projects. The various transitions and global challenges cannot be addressed in isolation, as they are inherently interlinked and overlapping. Thus, funding programmes under this pillar must facilitate more cooperation across disciplines, private and public actors, sectors and borders. Furthermore, effective interdisciplinarity in R&I will improve the return-on-investment, efficient utilization of new innovations, and in turn contribute to the EU's industrial autonomy and economic competitiveness. Enhancing the level of interdisciplinarity in the clusters will generate more economic and societal benefits as it will improve the application of high quality research to urgent thematic

[1] Shneiderman, Ben, 'Combining Applied and Basic Research: The ABC Principle', *The New ABCs of Research: Achieving Breakthrough Collaborations* (Oxford, 2016; online edn, Oxford Academic, 24 Mar. 2016), https://doi.org/10.1093/acprof:oso/9780198758839.003.0002.

questions. Without integrating SSH in an interdisciplinary way, the research within the clusters will not sufficiently be able to take into account the societal complexities of any of the abovementioned challenges.

Lastly, the primary focus of pillar 3 is on developing disruptive and market-creating innovations. This fairly one dimensional approach limits the interaction between social innovation and technological innovation. Start-ups, SME's and scale-ups will benefit from applying more SSH-knowledge on international business, financial markets, circular economy models, responsible AI etc. Additionally, the programmes within the European Innovation Council (EIC) and European Institute of Innovation and Technology (EIT) must work on improving ways to measure the Societal Readiness Level of new technologies or innovations. Think about promoting more socially responsible enterprises and including a stronger narrative around corporate social responsibility. This approach will improve public support and also effective utilisation of new technologies and innovations.

A final observation highlights the need for creating better conditions for the way the programmes are put into practice. Most programmes do not lack clear goals or ambition, rather they produce sub-optimal outcomes due to structural limitations. Hence the need for a more human-centred approach across the whole FP, i.e. solutions and research that address the human and societal side of urgent challenges and (technological) innovation, and innovation for broader societal transitions (green, digital and social). As such SSH must be more integrally embedded in the existing technology-, health- and environment-oriented thematic programmes. Concrete examples on how this can be achieved can be found under the next question.

What would be a catalyst to overcome current roadblocks of HE and be implemented in a future FP (i.e., FP10)? What should be the most important innovations to be considered in a future FP (i.e., FP10)?

Firstly, as the previous paragraphs have already pointed out, the main catalyst to overcome current roadblocks of HE is to enhance the interdisciplinary character of research proposals and projects. This can be achieved by implementing a variety of changes, for example by better including SSH-experts in drafting and developing thematic topics, by better including SSH-experts in determining the call-topics and formulating call-texts, by better including true SSH-themed calls throughout all six clusters, by better including SSH-experts in the evaluation of the research proposals. Moreover, another way to achieve more interdisciplinarity is by removing structural barriers that SSH-researchers experience. This can be done by developing a wider variety of calls, so there is a better mix of large calls and calls that are smaller, less strictly defined and less complex. Broadening the scope of the call will improve accessibility for researchers from all kinds of backgrounds.

Secondly, increasing the budget for fundamental research and directing more efforts to the interaction of the activities between the three pillars will maximise the results of R&I as well as the EU's objectives regarding the green and digital transition. Concretely, enhancing knowledge exchange, collaboration, co-creation and talent development will foster long-term sustainability of the results and will contribute to addressing scientific and social challenges more effectively. Also, by including Research Actions (RA's) to

complement Research Innovation Actions (RIA's) within FP10, a better balance will be struck between open/bottom-up funding and challenge-driven/applied funding.

Finally, a future FP must adopt a narrative that highlights the equal value of social innovation and fundamental research in addition to technological innovation and applied research. By implementing the abovementioned changes, FP10 will be able to strengthen the EU's global position in R&I and improve the EU's ability to tackle some of the urgent complex challenges. The most important innovations to be considered by a future FP are not mainly technological in nature, they instead inherently include social, economic, legal, ethical, behavioural, organisational, institutional and political elements. It is therefore imperative that a future FP focuses on how its programmes apply and analyse all these elements in a cohesive and integral way.