Position paper of the Lorraine academic site on FP10

The Lorraine academic site is grounded in structured academic partnerships between the Université de Lorraine (UL), as a major regional institution of higher education, and national research organisations, namely the CNRS (a national research centre covering all scientific disciplines with 1100 research laboratories across France), INRAE (the national research center in the fields of agriculture, food and the environment, comprising 18 research centres and 14 specialised scientific departments), INRIA (the national research centre in the field of digital sciences and technologies counting 220 project teams in 10 research centres), and INSERM (the national institute for health research with 360 laboratories).

The Lorraine academic site is organised around **6 major thematic areas**: Health, Value Chain of Materials, Energy & Decarbonisation, Natural Resources, Industry 4.0 & Digital, Society.

The Université de Lorraine is one of the largest public research-intensive universities in France, based in Lorraine in the Grand Est region, and bordering Belgium, Luxembourg and Germany. Due to its strategic geographical position, the UL has a strong interest in the European Union's Research and Innovation (R&I) funding programmes and the European Research Area (ERA). The university brings together 9 colleges and 10 research clusters¹, fostering a strong connection between education, research and innovation.

1. Context

The upcoming 10th Framework Programme for Research and Innovation 2028-2034 of the European Union (FP10) aims to build on the successes of its predecessor, Horizon Europe (FP9). The Framework Programmes are the EU's primary funding mechanisms for fostering scientific and technological advancements across the Member States and globally. FP10 aims to address emerging challenges such as climate change, biodiversity loss, political instability and energy security. At the same time, it focuses on opportunities in R&I with high potential of driving progress in critical areas such as health, technology, and social sciences. By implementing targeted recommendations, FP10 aims to enhance collaboration, improve funding stability, and encourage innovative research to maintain Europe's leadership in global R&I. The partners appreciate the EU institutions' efforts to lay a strong foundation for the upcoming FP10 and welcome the opportunity to provide feedback and insights.

2. Our recommendations

2.1 Sector-specific clusters should be maintained despite the existence of thematic partnerships

Since the initial phase of Horizon Europe, certain topics have been excluded from the work programme on the pretext that they were sufficiently covered by existing partnerships. It is essential to consider that specific types of partnerships, such as co-funded partnerships, necessitate the participation of Member States to allow research institutions in the respective countries to be eligible for participation. Therefore, the partners support the EU priority to widen the participation in partnerships, as well as ensuring greater involvement and inclusion². The underlying objective is to enable basic research in the next FP10 even on topics that are already covered in high TRL partnerships.

¹ See: https://www.univ-lorraine.fr/en/the-universite-de-lorraine/colleges-and-science-clusters/.

² European Commission, 'Horizon Europe Work Programme 2023-2025' (Decision) C(2024) 2371.

Moreover, European projects with an applied focus (high TRL) rely on consortia involving many partners, whereas there is room for smaller and more efficient consortia, especially when the projects aim at fundamental research.

2.2 Strengthening fundamental research

An increasing number of stakeholders³⁴⁵⁶⁷ are advocating for enhanced support for fundamental research, particularly for the successor of Pillar 2 under FP10, through partnerships or collaborative research projects. A balanced approach to the demands of TRLs in cluster calls is often seen as crucial. Given that R&I is a continuous process, it is essential to ensure that FP10 maintains a balance between fundamental research and applied science⁸. To develop these links, the EU needs to invest more in the initial four TRLs under Pillar 2, which are not only essential for the innovation cycle, but could also be used as a means of bridging⁹ the lower and higher levels of maturity of the research. This approach can contribute to the EU's priorities by ensuring wider participation, e.g., attracting young talent and the creation of collaborative networks of young researchers, and thus provide added value to fundamental research, which should not be limited to ERC under current Pillar 1. Investing in lower TRL projects could also be used as a tool for developing a pool of young researchers who could be employed to support and advance higher TRL projects. This would lead to creating opportunities for dialogues between research communities. Finally, while making EU R&I a collective priority for all Member States with the end-goal of boosting EU competitiveness and strategic autonomy¹⁰, it is deemed important to ensure that all research levels, from lower to higher, will be equally represented in the forthcoming calls.

2.3 Encouraging innovative research proposals through open-calls

The partners encourage the **exploration of innovative perspectives** beyond the boundaries of mainstream or prioritised topics. Since it is not always possible to predict the direction of research and innovation, as demonstrated by the recent crises¹¹, CESAER and Helmholtz highlight the importance of flexible approaches to R&I that allow researchers and innovators to guide their own work¹². To ensure openness and competitiveness in research funding, we propose **open calls under FP10 to allow new innovative ideas and research to emerge**. This would leave enough room for bottom-up project design throughout the entire Framework Programme to leverage the scientific community by **fostering innovation and fresh perspectives in response to key global societal challenges**. **Open calls for collaborative projects** should be launched on **very broad themes** aiming at encouraging the **contribution of multiple fundamental disciplines to one of the topical clusters** in the future Pillar 2 of FP10. These topics should have an **application horizon of at least 15 years** and should **promote breakthroughs**, which are essential for driving more disruptive innovations (e.g., basic science for decarbonisation, circular economy, energy, etc.). It is up to the consortia to demonstrate how the research actions they propose will contribute to the thematic area.

⁹ Ibid at Fn. 7. Position of March 2024.

³ CESAER, 'Towards next framework programme for research & innovation 2028-2034 ('FP10') ', (December 2023).

⁴ <u>Helmholtz</u> 'Policy Considerations on the future EU Framework Programme for Research and Innovation' (February 2024).

⁵ EUA et al., 'Investing more in RD&I as a strategic move for Europe's future prosperity' (January 2024).

⁶ <u>ALLEA, 'ALLEA Statement on the Guiding Principles for Framework Programme 10', (December 2023).</u>

⁷ Eurotech, 'Key messages for FP10' (March 2024).

⁸ For the first two years of Horizon Europe there was a decrease from 20% to 14% in the adoption of calls having TRLs from 1 to 4 compared to the first two years of Horizon 2020. See the position of CESAER (December 2023) at Fn. 3.

¹⁰ European Commission, 'Evidence Framework on monitoring and evaluation of Horizon Europe' SWD(2024).

¹¹ Namely the Russia-Ukraine war (2022) disrupting global energy and food supplies; the COVID-19 pandemic (2019) causing illness and death, straining healthcare systems, leading to significant economic instability and triggering global supply chain disruptions; as well as political instability and climate change. ¹² Ibid at Fn. 8. Position of December 2023.

2.4 Dual-Use implementation in the next FP10

Earlier this year, the UL released a position paper¹² on <u>dual-use technologies</u> in response to the EU Commission's public consultation and publication of a White paper¹³. We endorsed the option that involves removing the exclusive focus on civil applications in specific parts of the successor program to Horizon Europe (Option 2), considering it the most favourable solution as it would have minimal impact on current financial planning and would not complicate the research landscape. Additionally, the partial opening of Horizon Europe's successor programme could facilitate the development of applications that proactively address defence sector requirements. Conversely, should these requirements not be prioritised, significant challenges may arise in transitioning civil applications to the defence sector for dual-use exploitation. We also supported incorporating the dual-use aspect into the forthcoming FP10 provided that it does not directly affect the intended budget allocations and additional funding is made available to address any emerging needs or disrupting events. In any case, specific topics should not be limited only to military applications and should remain open also for civil application. To ensure a seamless implementation of dual-use research, an increase in the FP10 budget is considered necessary. This alignment is needed to maintain continuity and a smooth transition from the development phase to the practical application and exploitation stage¹⁴. We are in favour of increasing the programme's budget to facilitate the integration of dual-use technologies, and enhance support for fundamental research¹⁵, which serves as the foundation for applied research and innovation, including for defence-oriented concepts and technologies.

2.5 Creation of a Social Sciences and Humanities (SSH) umbrella cluster

The previous funding programme has already seen an increased role of SSH with allocating over 20% of its budget to related topics¹⁶. Nevertheless, since the level of integration of social sciences and humanities was uneven across different parts of the programme, Horizon Europe was revised to introduce new measures for their more robust integration¹⁷. The partners recommend to allocate funds for a new tool for a stronger structural involvement of SSH research, including transversal SSH projects across other disciplines, with the goal of unifying them under an 'SSH umbrella'. The main objective of this tool, further supported by France Universités¹⁸, would be to strengthen the involvement of SSH in other clusters of the FP10 to increase its effectiveness and address societal needs and allow more fundamental research in SSH, rather than often being the high TRL/SRL part of other projects (social acceptability of technical solutions etc.). It would also address major challenges, such as public health, green transition, social inclusion, etc., and would contribute to increasing the overall SRL¹⁹. The umbrella cluster would be an addition to the FP10 equivalent of Pillar 2, allowing interdisciplinary approach to a range of research questions under SSH leadership. However, the implementation of such measures would necessitate a budget increase in the FP10 to cover the additional funding needs. In addition, this initiative aligns with the existing recommendation²⁰ for interdisciplinary approaches that integrate SSH expertise from the conception to the evaluation stage of research. The UL, in its recently

¹² Universitéy de of Lorraine, 'Response to the public consultation on R&D on dual-use technologies - options for support' (30 April 2024).

¹³ European Commission, 'White paper on options for enhancing support for research and development involving technologies with dual-use potential' COM(2024) 27 final.

¹⁴ DFG, 'The DFG's proposals for a future EU Framework Programme for Research & Innovation that meets Europe's needs and ambitions' (May 2024).

¹⁵ Position supported by, *inter alia*, EASSH, ALLEA, EUA, EARTO, Science Europe, Helmholtz, CEA, DFG, EERA, EuroTech and the German Federal Ministry of Education and Research.

¹⁶ European Commission, 'Ex post evaluation of Horizon 2020, the EU framework programme for research and innovation' COM(2024) 49 final.

¹⁷ Ibid.

¹⁸ European Commission, 'Annual Report on Research and Technological Development Activities of the European Union and Monitoring of Horizon Europe and Horizon 2020 in 2023' COM(2024) 231 final.

¹⁹ SRL: Societal Readiness Level.

²⁰ EERA, 'EERA Position Paper on Framework Programme 10: Guiding Principles and Perspectives'.

published position paper on SSH research integration for the FP10²¹, also emphasised **the necessity of enabling bottom-up approach within consortia to enhance the implementation of interdisciplinary cooperation**. This resonates with the request for funding collaborative low TRL research, and thereby leveraging the creativity of researchers to provide solutions to contemporary societal challenges²². Finally, we strongly support the priorities of the European Commission such as promoting wider participation, gender equality, and social inclusion²³, as a means of ensuring that SSH contributions drive social sustainability in research projects, thus fostering a comprehensive understanding of societal developments linked to contemporary transitions.

2.6 Administrative simplification and harmonisation of operating rules

Further administrative simplification of the rules of participation, grant proposals²⁴, and the harmonisation of operating rules with other EU funding programmes would enhance participation, and render the overview of these programmes more accessible and interoperable. Although the European Commission has previously acknowledged the necessity for such reforms²⁵, the partners believe that there remains room for improvement. Therefore, we welcome and endorse the recommendations made by the EIC, namely: to introduce a lump sum funding for most calls that will remove financial reporting requirements for beneficiaries; to update specific IP rules to empower Technology Transfer Offices; and to enable EIC Transition funding to follow up on results from Horizon collaborative projects, in addition to results from ERC Proof of Concept, EIC Pathfinder and European Defence Fund projects²⁶. In this context, the notion that researchers should have the possibility to focus almost exclusively on the content of their proposals, without the burden of addressing the existing overly complicated requirements applied to calls for proposals²⁷, can be regarded as a beneficial measure for European research.

2.7 Enabling project cooperation on sectoral basis in support of excellent science

The Marie Skłodowska-Curie Actions (MSCA) programme plays a crucial role in enhancing the quality of research, promoting international collaboration, developing skilled researchers, and addressing societal challenges through the mobility of researchers and the exchange of doctoral students. These elements collectively contribute to the advancement of science and technology, the growth of a knowledge-based economy, and the overall societal progress. The European Strategy Forum on Research Infrastructures (ESFRI) is equally important for developing and coordinating large-scale research infrastructures across Europe²⁸, enabling cutting-edge scientific research and fostering international collaboration to address complex global challenges. The second half of the Horizon 2020 programming period brought about new measures which helped to maintain the level of **international participation**²⁹, thereby boosting the advancement of knowledge. In this regard, the European Commission has strengthened R&I cooperation with strategic partners worldwide³⁰. The ERC also aims to attract **excellent scientists from all over the world** and 18% of its research teams come from outside ERA³¹. Academic research associations such as ALLEA³², CESAER³⁴ and many others³³ argue in

²¹ Université de Lorraine, 'Université de Lorraine position on the integration of SSH research in FP10' (9 July 2024).

²² The Guild, 'Beyond Horizon: ; Creating an ambitious framework programme for Europe's R&I excellence' May 2024.

²³ European Commission, 'Horizon Europe Work Programme 2023-2025' (Decision) C(2024) 2371.

²⁴ <u>ALLEA, 'ALLEA Statement on the Guiding Principles for the Framework Programme 10' (December 2023)</u>.

²⁵ Ibid at Fn. 17, COM(2024) 49 final.

²⁶ EIC, 'EIC Work Programme 2024' (December 2023).

²⁷ Ibid at Fn. 15. Position of May 2024.

²⁸ INRAE Champenoux is leading the development of the In-Sylva Europe infrastructure.

²⁹ Ibid at Fn. 17, COM(2024) 49 final.

³⁰ European Commission, 'Annual Report on Research and Technological Development Activities of the European Union and Monitoring of Horizon Europe and Horizon 2020 in 2023' COM(2024) 231 final.

³¹ European Research Council, 'Statement by the ERC Scientific Council on the next EU framework programme for research and innovation (FP10)' (24 January 2024).

favour of cultivating international scientific cooperation and supporting excellence-driven international research. The latter refers to the 'Stick to Science' campaign³⁴ which considered open and barrier-free collaboration and leveraging the research and innovation capacity of the entire continent to be of utmost importance. With the objective **to encourage scientific excellence**, the partners support the position of France Universités³⁵ to **allow third country participants to join the programme and sign association agreements on a sectoral basis**. This would **enable new countries to participate in the next framework programme under specific sectors**, such as health, **without waiting for broader political debates and negotiations between the EU and the country of origin**. In the health sector, it's crucial to consider that the value of human life influences how we study changes and their causes and how we assess high TRL/SRL public health interventions. For this reason, it is crucial to open funding for long-term longitudinal research, i.e., at least 5-year programmes. This strategy would foster collaboration with more countries and international partners in critical areas.

2.8 Consistent funding throughout the entire programming period

We advocate for the **establishment of a fixed budget for the entire programming period to avoid frequent cuts** experienced during the implementation of Horizon Europe. In order to avoid budget constraints as reported in the Ex-post evaluation of Horizon 2020³⁶, according to which 74% of proposals assessed as high quality by independent experts could not be funded, we strongly favour the **adoption of a transparent, reliable ring-fenced budget**. This would **facilitate sustainable funding for research and innovation under stable conditions**, while allocating at least €200 billion to FP10. The ERC also emphasises the importance of modernising and doubling the budget for research and innovation in the next EU research framework programme³⁷. Furthermore, it is essential to make sure that additional financial resources are allocated to new areas of research, such as dual-use technologies. The approach has already been supported by vast majority of stakeholders³⁸. It will lead to more stable funding and avoid unnecessary cuts in specific programme areas from one year to another due to reallocation of funds. This, in turn, **will translate to increased funding opportunities and a higher success rate** for research communities.

2.9 Research, innovation and education serving strategic industrial sectors

Pillar 2 of Horizon Europe addresses global challenges³⁹, aims to re-industrialize Europe and master the values chains of the critical technologies for decarbonisation and IT by integrating research, innovation, and training within the industrial sector as outlined in the EU's 'New Industrial Strategy'⁴⁰ and the 'European Green Deal'⁴¹. The Université de Lorraine is a key participant in this effort. The 10th Framework Programme should **aim at enhancing the European industrial sector by coordinating national policies, boosting European investments, and improving cooperation** among European Commission DGs. A project of the Hungarian presidency⁴² seeks to establish a competitiveness fund

³² Ibid at Fn.8. Position of December 2023.

³³ See, e.g., the position papers of France Université, IRD, IMT, EU LIFE, Helmholtz, DFG, EERA, EuroTech, the German Federal Ministry of Education and Research, and the Latvian Ministry of Education and Science.

³⁴ See : <u>https://stick-to-science.eu/.</u>

³⁵ France Universités, 'Proposed recommendations for FP10 : A program serving European policies and issues' (31 January 2024).

³⁶ Ibid at Fn. 17, COM(2024) 49 final.

³⁷ Ibid at Fn. 30. Statement of 24 January 2024.

³⁸ E.g., ALLEA, CESAER, IMT, EUA, EARTO, Science Europe, EU-LIFE, Helmholtz, Fraunhofer, and DFG.

³⁹ European Commission 'Directorate-General for Research and Innovation, Horizon Europe, pillar II - Global challenges and European industrial competitiveness', Publications Office of the European Union, 2021.

⁴⁰ European Commission, 'A New Industrial Strategy', COM(2020) 102 final.

⁴¹ European Commission, 'The European Green Deal', COM(2019) 640 final.

⁴² Council of the EU, 'Programme of the Hungarian Presidency of the Council of the European Union in the Second Half of 2024' (2024).

and a reinforced innovation system that will converge financing from various DGs to support innovation from research to market, focusing on industrial and deep tech sectors, which include the development of the necessary skills (education dimension). Such an initiative would be well aligned with EU's 'New Innovation Agenda'⁴³ which stresses the importance of fostering innovation ecosystems, particularly in deep-tech sectors. The EC should also **invest heavily in large-scale research platforms and infrastructures to enable effective experimentation and to reduce pre-industrialization risks**. Finally, **integrating research, innovation, and education into industrial policy** will justify increased funding for FP10, strengthen EU cooperation, create new products and services, enhance labour force skills and meet the needs of the labour market, while supporting appropriate state aid policies.

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⁴³ European Commission, 'A New European Innovation Agenda', COM(2022) 332 final.