



UK Academy of Medical Sciences Response to questions from the High-Level Expert Group responsible for the Interim Evaluation of Horizon Europe and Framework Programme 10

The Academy of the Medical Sciences is one of the four UK national Academies. We represent over 1,400 Fellows across the biomedical sector in the UK. This response is informed through consultation with a group of Fellows that have direct experience in applying and managing European Union (EU) Framework Programme (FP) grants. This response relates to the current and future programme.

Major challenges

- A number of global health challenges were identified by our Fellows that should be addressed by the remainder of FP9 (Horizon Europe) and fully embedded in FP10. These include Artificial Intelligence (AI), (including both scientific and societal dimensions), digital health, climate change, including green energy and sustainability, engineering biology, mental health, and the future of health and care.
- To tackle these major challenges requires underpinning discovery research and interdisciplinary collaborations. To ensure that technology and innovation is developed responsibly, safely, and inclusively, expertise and research from social sciences and the humanities need to be embedded within the scientific development of key technologies.

Successes and roadblocks

- There have been a number of successes in FP9 including the scope of funding opportunities, variety of infrastructures, public-private partnerships, the focus on impact and innovation, and the introduction of the new European Innovation Council (EIC). In addition, the increasing international outlook of the FPs with the multiple non-EU countries associated to the programmes are seen as a success.
- A key roadblock highlighted to us is the dominance of EU Commission policy directions and topics in the funding calls within the clusters. This is perceived as restricting discovery-driven research. The next FP should recognise that the knowledge, technologies, and approaches necessary to find solutions to address major global challenges are underpinned by discovery research.
- Another potential threat is budget stagnation. The FP budget should be increased to meet the challenges outlined in this consultation response. It should be ringfenced, to ensure stable conditions for research and innovation, including support for researchers throughout all career stages. Our Fellows noted that many high-quality projects go unfunded, and that translation research remains underfunded, especially in comparison to the US and increasingly China. The establishment of the EIC in FP9 was commended, but the adequacy of funding for translation research should be carefully considered in the development of FP10.
- Other key threats identified by our Fellows include:
 - The removal of the 'high-risk high-gain nature' from the dimensions of research excellence, which means less disruptive projects with more

immediate impacts are likely to be favoured over projects with potentially higher impact.

- The complexity of the Challenge structure across all levels and the proposal forms of the Work Programme.
- The low number of calls for early-stage projects, which leads to fewer collaborative, discovery science-driven research projects.
- The lack of equality, diversity and inclusion across organisation, operation, and funding of Horizon Europe. Presently, gender is the only diversity dimension considered as part of the programme, and there is a lack of diversity on ERC council membership.

FP Structure

- There was general agreement that the 3-pillar approach of Horizon Europe should be maintained for FP10. It is coherent, complementary and a well-established structure within the European R&I funding landscape.
- The **Excellent Science pillar** and its mechanisms including European Research Council (ERC) and the Marie Skłodowska Curie Actions (MCSA) are globally respected, competitive, and distinctive in its ability to attract and retain leading research talent to the EU and associated countries; the prestige carries more weight than national schemes. The scale and duration of these awards can be transformative for researcher's careers, whilst cross-continental review and competition can also act to drive up standards across all participating nations. Its focus on discovery-led and basic research should be maintained and strengthened.
- The **Global Challenges pillar** is the right place to focus multi-state collaboration; and this is a distinctive feature of the framework programmes that has no comparators of any scale globally. The current themes facilitate international collaboration, and it is hard to argue against any of them or develop a list of alternatives to be added or existing ones to be deprioritised.
- Going into second half of Horizon Europe and then into FP10, it is expected that AI and Machine Learning will become more prominent both as a standalone theme as well as being pervasive and enabling across multiple themes. Therefore, mechanisms to strengthen the connection between the **Innovation pillar** and the other pillars will be vital in FP10.

Catalysts for change and innovation

- The catalysts for unblocking the potential of the next EU FP include:
 - Increased, ringfenced budget commitment from the Commission,
 - In-depth consultations with stakeholders and sector bodies in member states and associated countries to ensure the topics and missions are informed by both the academic, patients, public and private organisations in a balanced and equitable manner,
 - Ensuring that R&I funding is vision and mission-driven, not dominated narrow EU policy priorities,
 - Ensuring greater representation of discovery-driven research calls and more funding to facilitate translation research across the Programme.

- If Pillar 2 is retained, the application process would benefit from simplification. It is important to increase bottom-up calls and topics within the challenge-led structure.
- Equality, diversity, and inclusion (EDI) needs to be strengthened within the structure and funding of Horizon Europe. This should include an EDI working group and plan that covers all forms of diversity, including, but not limited to, gender, ethnicity, and disability; collecting and reporting of diversity data on the organisation and funding recipients; implementing a dedicated funding scheme to address the lack of diversity; reviewing the funding process and identifying areas for improvement, such as potential bias in the peer review process; and having a dedicated EDI representative on the ERC council.
- Within collaborative consortia in the Health Cluster of FP9, an innovative approach will be encouraging more thematical diversity and interdisciplinarity. Challenges, such as ageing populations, will benefit from a multi-lens approach. A similar approach could be taken in FP10 if the Cluster structure is retained.
- Our Fellows felt that there were insufficient number of calls on tackling globally pressing challenges such as infection prevention, tackling diseases, climate, because of a prevalence of partnerships and infrastructure calls in the Work Programme. A rethink of the current topical distribution and the interactions between Clusters, should be achieved in the next FP.