As we adjust to a new normal, the contribution from research and innovation to building a more sustainable world and preparing for a better future must be fully recognised and supported. With the launch of a new seven-year EU Framework Programme for Research and Innovation around the corner, it is time to equip the European Research Area with an excellent, open and inclusive Horizon Europe to strengthen the resilience of European societies. The European University Association (EUA) outlines the following recommendations as its contribution to the discussion on the future European research and innovation landscape.

PRIORITISE EXCELLENT, COLLABORATIVE AND MULTIDISCIPLINARY RESEARCH

- **Excellent, fundamental and frontier research must remain at the centre of Horizon Europe.** Such research builds and sustains an indispensable reservoir of knowledge for societies to tackle current and future challenges. Therefore, Europe must step up its commitments to research investments through a strong “Excellent Science” pillar within Horizon Europe.

- Ground-breaking research is usually of long duration and breakthroughs are often unexpected. Europe should not overemphasise research investments for short-term goals that can only address current challenges. This should be supported by the possibility of looping back and forth between innovation and research.

- **Only multidisciplinary and collaborative research can provide answers to the major societal challenges of today.** Universities are key actors in this regard and, together with other public and private sector research organisations, provide new, innovative and evidence-based solutions.

- The success of these solutions will require the full integration of social sciences and humanities. Societal analysis can bolster the innovative potential of scientific and technological advances and also safeguard their added value in a strengthened European Research Area.

- International openness should remain at the core of the Framework Programme. Horizon Europe should allow for close cooperation, including association where appropriate, with partners around the globe.

SUPPORT THE MISSION-BASED APPROACH WITH ADEQUATE EVALUATION METHODS AND GOVERNANCE

- Europe should strive for the right mix between curiosity-driven and mission-oriented research and innovation.

- Research should be a cornerstone in both the governance and the practice of missions, to ensure that these will involve a productive collaboration between research and innovation.

- The scope and priorities of missions should be broad to flexibly integrate bottom-up proposals or emerging global priorities. Their systemic nature requires new evaluation methods that can trace causality in a changing reality which includes learning processes and sometimes changing goals.
• Implementing the mission-based approach will require more multi-level, holistic and large-scale programmes and systems of governance. It therefore depends on being mindful of multidisciplinarity and on including diverse stakeholders beyond the usual research and innovation performers.

• Accordingly, funding levels must be adequate to attain this inclusion through synergies between different European, national and regional research and innovation programmes. Synergies between missions, as well as with relevant Horizon Europe clusters, will also be crucial.

MAINSTREAM OPEN SCIENCE

• Mainstreaming Open Science practices in Horizon Europe is undeniably a positive development. However, Horizon Europe should empower research and innovation actors with supportive measures to build capacity and infrastructure in the transition to Open Science.

• Research and academic career assessment practices should be reviewed in the transition to Open Science, with recognition, rewards and incentives for a broad range of research outputs. This is a shared responsibility and requires a concerted approach unifying the main actors. Horizon Europe has the potential to act as a lighthouse programme for Open Science in Europe and beyond.

• Scholarly publishing needs measures to support open access to publications, including measures to support a more competitive and transparent environment in the scientific publishing market. EUA supports a mandate that aligns with the ambitions of Plan S.

• To give Europe a global lead in research data management, proper support to FAIR data management is needed. Actions to develop FAIR standards in various disciplines should be undertaken and aligned with efforts to establish the European Open Science Cloud.

PROMOTE INCLUSION AND DISTRIBUTE EXCELLENCE

• Europe should embrace the concept of “distributed excellence” in order to narrow research and innovation gaps between countries and regions. Distributed excellence is achieved when all regions and member states are capable of participating in global research activity in a competitive way, at least in some selected fields.

• Horizon Europe should capitalise on unique research and innovation ecosystems to address national and regional disparities in terms of funding distribution, without compromising on excellence criteria.

• On missions for instance, Horizon Europe should include flexible systems for preventing the emergence of fewer and larger consortia that capture funding streams. Multiple stand-alone projects with clustering of different disciplines through a “hub and spoke” model could make missions more inclusive.

• European research and innovation initiatives to widen the participation across Europe are essential for an inclusive and performing Europe. Necessary actions include lowering risks to participation through enhanced simplification, a broader acceptance of the usual accounting practices of beneficiaries, cross reliance of audits and an enhanced consistency in the interpretation of rules.

DEVELOP A BROADER CONCEPT OF IMPACT

• Horizon Europe should make use of a broader and clarified concept of “impact”; including societal, cultural and long-term impacts. The impact of investment in research and innovation does not allow for quick measurement, first, because it is a process; and second, because universities deliver the key impact of project results through high-level teaching activities. The interplay of these aspects, together with the intersectoral mobility of researchers and institutions are likely to reveal entrepreneurial potential and amplify overall impact.
UNLEASH THE POTENTIAL OF INNOVATION

- Horizon Europe, via the “Innovative Europe” third pillar, should set in motion an innovation chain that fully integrates all the different sources of disruptive thinking in Europe. Be it in the public or private sectors, in academia or in industry, innovation will only flourish if embedded in ecosystems allowing collaboration and exchange. This dynamism must be ensured by investments that go beyond marketable products, so that education and fundamental research can provide a steady pipeline of fresh talent and ideas.

- A fully-functioning European Innovation Council, particularly through the Pathfinder instrument, will be pivotal in enabling Europe’s top-level research output to fulfil its commercial potential and achieve societal impact. Moreover, in synergy with the European Institute of Innovation & Technology and with targeted investments of Structural Funds in less-developed ecosystems, it can release further creative energies through mentoring and advisory services to early-stage researchers and entrepreneurs.

- Horizon Europe should prove that the diversity of ecosystems and the distributed excellence of research across countries and regions can be an asset and not a hindrance to achieving the common goals of sustainability and digitalisation.

- Concurrently, while streamlining new and existing innovation instruments, the Framework Programme must be guided by a vision that also preserves regional specificities and does not overemphasise market valuation at the expense of societal welfare.

Adopting and implementing the above recommendations will pave the way for an excellent, open and inclusive Horizon Europe. But to achieve our common ambitions, the programme requires both excellent design and enhanced funding. The proposed allocations to Horizon Europe agreed during the European Council summit on 21 July 2020 will not be sufficient to achieve these ambitions. Funding to the programme as a whole, and to fundamental research in particular, needs to be increased. The EU must enhance its knowledge and capacities by boosting support to fundamental research and new generations of scientists. EU funding to the European Research Council and Marie Skłodowska-Curie actions not only must be protected from the latest cuts, but further boosted.